Illia Danilishyn, Oleksandr Danilishyn

ELEMENTS OF DYNAMIC SCIENCE

Monograph

Primedia eLaunch

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Edited by *Volodymyr Pasynkov*

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Epigraph 1:

Mathematics is on the border of science (knowledge), so it is she who is able to make major breakthroughs beyond this border.

Epigraph 2:

We will still leave our cozy world for other worlds in order to return....

Reviewer: Volodymyr PASYNKOV

PhD of physic-mathematical science, assistant professor of applied mathematics and calculated techniques department of «National Metallurgical Academy», Ukraine

Dedicated to Carlos Castaneda, his teachers and our math teachers

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The monograph first task: to understand hierarchy of energies in the Universe and the principles of functioning of living energy (living organism, in particular, human, subtle energies), and then using these principles to "construct" artificial living energies (let's call them pseudo-living energies). It is possible to significantly expand the horizons of science, in particular physics, by studying the subtle energies in the Universe. For this, some aspects are proposed for consideration of **Dynamic Science.** $self_{science}^{our\ theory}$ - science here acts as a space for the application of our theory in the self-format, i.e., any place of science, in particular physics, can act as a place for the "location" of the self. It contains itself (accommodates any action C) in any place of science. On the basis of mathematical uncertainties, new mathematical structures are formed, allowing us to describe processes and objects that are fundamentally not determined by conventional deterministic methods. Objective uncertainties in any case can mean manifestations of processes and objects that are fundamentally not determined by conventional deterministic methods. Many energies are indeterminate because they are based on uncertainties from the perspective of traditional science - large concentrations of specific energy in a chaotic state. The foundation of dynamic mathematics lies in working with uncertainties, which makes it possible to manipulate these indeterminate energies using direct-accumulative direct-parallel neural networks. The second task of the monograph is to construct a new mathematical apparatus for neural networks of a fundamentally new type: direct- parallel and direct-accumulative action. We construct models of singularities for singular work with them through neural networks - analogues of the human CNS. Ordinary regular work with them in ordinary science is fundamentally unable to realize their capabilities. Therefore, singular science realized on a neural network - an analogue of the human CNS - will be much more natural. Unfortunately, we do not have funding to perform the necessary experiments and the practical creation of a technical model of such a neural network. There is a need to develop an instrumental mathematical base for new technologies. The task of the work is to create new approaches for this by introducing new concepts and methods. Our mathematics is unusual for a mathematician, because here the fulcrum is the action, and not the result of the action as in classical mathematics. Therefore, our mathematics is adapted not only to obtain results, but also to directly control actions, which will certainly show its benefits on a fundamentally new type of neural networks with directly parallel calculations, for which it was created. Any action has much greater potential than its result. Social justice is fundamentally impossible as long as education (training) is based on achieving results, and not on the process. It is time for physicists to begin studying not only the manifestations of living energies, but also the living energies themselves, which are by no means expressed through objectivity and ordinary energies, although they are capable of manifesting themselves through a lower level - objectivity and ordinary energies. We, as mathematicians, offer a new corresponding apparatus for understanding nature and studying living energies. Significance of the article: in a new qualitatively different approach to the study of complex processes through new mathematical, hierarchical, dynamic structures, in particular those processes that are dealt with by Synergetics. The significance of our article is in the formation of the presumptive mathematical structure of subtle energies, this is being done for the first time in science, and the presumptive classification of the mathematical structures of subtle energies for the first time. The experiments of the 2022 Nobel laureates Asle Ahlen, John Clauser, Anton Zeilinger and the experiments in chemistry Nazhipa Valitov eloquently demonstrate that we are right and that these studies are necessary. Be that as it may, we created classes of new mathematical structures, new mathematical singularities, i.e., made a contribution to the development of mathematics.

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Foreword:

In this book, the authors develop the themes of the books [40], [42], [47], [48] in more interesting dynamic structures. The foundation of dynamic science lies in dynamic mathematics, working with uncertainties, which makes it possible to manipulate these indeterminate energies using direct-accumulative direct-parallel neural networks. Significance of the monograph: development of dynamic science by mathematical uncertainties and their applications, in a new qualitatively different approach to the study of complex processes through new mathematical hierarchical dynamic structures, in particular those processes that are dealt with by Synergetics. Constructing pseudo-living energy is Uncertainty constructing first of all, which correspond to singularity. Authors' approachis not based on deterministic equations that generate self-organization, which is very difficult to study and gives very small results for a very limited class of problems and does not provide the most important thing - the structure of self-organization. They are just starting from the assumed structure of self-organization, since they are interested not so much in the numerical calculation of this as in the structure of self- organization itself, its formation (construction) for the necessary purposes and its management. Although they are also interested in numerical calculations. They represent equations for the dynamic description of processes and objects. Nobel laureates in physics 2023 Ferenc Kraus and his colleagues Pierre Agostini and Anna Lhuillier used a short-pulse laser to generate attosecond pulses of light to study the dynamics of electrons in matter. According to their Theory of singularities of the type synthesizing, its action corresponds to singularity $\uparrow I \downarrow q\ h$, which allows one to reach the upper level of subtle energies to manipulate lower levels. In April 2023 [14], the authors proposed using a short-pulse laser to achieve the desired goals by a directly parallel neural network. They then proposed the fundamental development of this directly parallel neural network. There is a long overdue need for the use of singular hierarchical structures, in particular self- sets, to describe complex processes, in particular to describe unusual states of consciousness and pathological conditions in medicine. 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 monograph 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.

Ukraine, June 2025
Volodymyr Pasynkov

Contents

Introduction

In a living organism, the rotation of energy in the energy centers is counterclockwise, except for the energy center on the top of the head, where the movement of energy has been altered by foreign influence through ineffective education. Social justice is fundamentally impossible as long as education (training) is based on achieving results, and not on the process. Our World is indeed from a point, but not from the Big Bang, but from the position of the assemblage point on the energy cocoon of a person: SCprt $\underset{r}{\overset{E_r}{g}}$, where r is the assemble point position, E_r is a bundle of energy fibers of the Universe in this position r, which is consistent with the same positions of the assemblage point of other people, and the result of manifestation is a physical space with objects, because this is the result of our inventory of this bundle of emanations (i.e., the creation of a self through internal dialogue). The assemblage point on the energy cocoon of a person in this position collects all the basic components of our World in the form of a "bundle" of energy fibers of the Universe. Therefore, everything in our World is interconnected simultaneously. Just as radio wave receivers, television waves receive a transmission on the corresponding channel, so the assemblage point of people's energy cocoons receives energy fibers of the Universe in the corresponding areas of the energy cocoon, which are called positions of the assemblage point. The mind, through internal dialogue, "unfolds" the 2-interpretation of the bundle of energy fibers from this position of the assemblage point into the physical space with objects. The will "unfolds" its interpretation into the 2-hierarchical energy space, where at the upper level actions can have the structure of pa|||. Will can perform self, paself, ||| actions. Control of Will through pa|||. By moving the assemblage point even a little bit from its position that corresponds to the perception of our world: SCprt $\underset{r+\Delta r}{\overset{E_{r+\Delta r}}{g}}$, we become, as it were, “to the side” of it, being on its periphery and thus becoming capable of manipulating it. Since the energy fibers of the Universe are in constant self-motion, then in fact our flow of the World in each "section" of existence is in two mutually opposite directions (approaching and moving away simultaneously). It's just that our training is set up to manipulate the receding flow of the World for simplicity. Although with appropriate retraining we can perceive in both directions. The center of manifestation of the world in the form of objects thus manifests the subject of manifestation itself - a person in the form of an object, and thus the self for subject of manifestation in the form of an object is constructed in relation to manifestation. When creating self for the subject of a dream in the form of an object in relation to dreamlike, it is separated from a person in the form of an energetic “double”, which will act and perceive much more freely and effectively, since it does not have the usual objectivity.

Having established (organized) the necessary singularity in the form of a corresponding energy structure at the upper level, we will obtain the necessary process or the necessary object (in particular, for protection from the ozone hole) etc. Similar to how a satellite is installed in orbit.

Dynamic mathematics is a new syntax for science for translating living energy into non-living objects. The positions of the assemblage point on the energy cocoon of a living organism correspond to the elements of Order in the living organism. Placing the assemblage point on the energy cocoon of a living organism outside of the positions corresponds to Chaos in the living organism. $self^{our\ theory}_{science}$ - science here acts as a space for the application of our theory in the self-format, i.e., any place of science, in particular physics, can act as a place for the "location" of the self. It contains itself (accommodates any action C) in any place of science. The structure of dynamic measuring instruments can be based on the following dynamic structures: $\underset{\{\}}{\overset{\{\}}{\{\}}}\mathrm{SCprt}\underset{\{\}}{\overset{\{\}}{\{\}}}$, $\underset{\{\}}{\overset{\{\}}{\{\}}}\mathrm{SCprt}$, $\mathrm{SCprt}\underset{\{\}}{\overset{\{\}}{\{\}}}$.

Part I Elements of Dynamic Science

Introduction

Unlike the usual Metaphysics, which is not based on science, our **Dynamic Physics** is based on a new section of non-classical mathematics and is a superstructure over Physics, i.e., Physics becomes hierarchical, in which **Dynamic Physics** in our edition occupies the next level up. Unlike the usual calculations of physics, we offer the physics of action. Here, characteristics can not only be calculated, but also actively changed in objects and processes etc. Dynamic Science is Pyamo-Practical Science. This Science is adapted to neural network SmnSprt[16], [21], [29], [30], which can actively change characteristics (in particular, their values) in objects and processes. The introduced dynamic operators correspond not only to objects, processes, characteristics, but also to the actions with them, i.e., dynamic operators work (function) by SmnSprt in their dynamic environment. It is time to use not only actions mediated through numbers, but also direct actions by dynamic operators, which should be "switches" of actions and "follow" them, SmnSprt will use specific "scanning" of objects, processes, characteristics for this. SmnSprt will "go out" to their upper energy level for the necessary manipulations with them. For example, it is possible to change a) to other ones, b) to their other locations, c) to other actions with them, d) to another time, e) to creation of their doubles, f) getting anything from nowhere, g)to anything etc. Self-action $Q(\mathrm{Dprt}\overset{Q}{\underset{Q}{Q}})$[16, 21] (for example, self-containment $\mathrm{SCprt}\overset{Q}{\underset{Q}{g_1}}$[16, 21]) can “generate” self-objects, everything depends on the level of self-action. For example, A|||B can "generate" C, stirring water can "generate" foam. This is somewhat more than using ordinary mathematical operators.

$self^{our\ theory}_{science}$ - science here acts as a space for the application of our theory in the self-format, i.e., any place of science, in particular physics, can act as a place for the "location" of the self. It contains itself (accommodates any action C) in any place of science. By quasi proper elements ||| we can understand its manifestations at a lower level in a similar form (i.e., proper elements by level (hierarchy)). We can also consider functions, operators, equations by level (hierarchy) etc. Our science works (functions) only in a neural network SmnSprt environment. It is high time to make a new - dynamic science. The old science was created when there were no such neural network capabilities that allow in the neural network SmnSprt environment not only to carry out indirect manipulation through calculations, but also direct manipulation, in particular, by instantaneous replacement of real characteristics, their values, objects, processes, actions with others.

We will try to "illustrate" the essence of Dynamic Physics, Dynamic Chemistry, Dynamic Biology, Dynamic Economy using examples.

1.1 Some aspects of Dynamic physics for Classical Mechanics

Using elements of the mathematics of SCprt, we introduce the concept of SCprt – the change in physical quantity B: SCprt$\begin{matrix}\{\Delta_1 B,\ldots,\Delta_n B\}\\ g_1\\ x\end{matrix}$, where g_1 is type of containment $\{\Delta_1 B,\ldots,\Delta_n B\}$ into x. Then the mean SCpr - velocity will be v_{cpscpr}(t, Δt) = SCprt$\begin{matrix}\left\{\frac{\Delta_1 B}{\Delta t},\ldots\frac{\Delta_n B}{\Delta t}\right\}\\ g_1\\ x\end{matrix}$ and SCprt-velocity at time t:$v_{sct} = \lim\limits_{\Delta t\to 0} v_{cpscpr}(t,\Delta t)$.

SCprt – acceleration: $a_{sct} = \frac{dv_{sct}}{dt}$.

When using SCprt with "target weights", we get, depending on the "target weights", one or another modification, namely, for example, the velocity v_{sct}^{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} = SCprt$\begin{matrix}\{v_1 f,v_2\}\\ g_1\\ x\end{matrix}$, f − instantaneous replacement we get an instantaneous substitution $v_1 by\ v_2$ at point x of space at time t_0 with containment type g_1.

Similarly, the concepts of SCprt - force and SCprt - energy are introduced. For example, $E_{st}^{f} = \mathrm{SCprt}\begin{smallmatrix}\{E_1 f, E_2\}\\ g_1\\ x\end{smallmatrix}$ it would mean the instantaneous replacement of energy E_1 by E_2 at time t_0 with accommodation type g_1. Two aspects of SCprt–energy should be distinguished: 1) carrying out the desired "target weight" and 2) fixing the result of it. Do not confuse energy - SCprt (the node of energies) with SCprt – 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.

Remark1.2. SCprt – elements are all ordinary, but with "target weights," they become peculiar. Here you need the necessary energy to carry them out. As a rule, this energy is at the level of self_g. This is natural since it's much easier to manage elements of the k level via the elements of a more structured k +1 level. Let us consider the concepts of capacities of physical objects in themselves. The question arises about the self_g-energy of the object. In particular, $\mathrm{SCprt}\begin{smallmatrix}B\\ g_1\\ B\end{smallmatrix}$ will mean SC_1f B. For example, $\mathrm{SCprt}\begin{smallmatrix}DNA\\ g\\ DNA\end{smallmatrix}$ allows you to reach the level of DNA self_g -energy ,$\mathrm{SCprt}\begin{smallmatrix}Q\\ g_1\\ Q\end{smallmatrix}$ allows you to reach the level of self_g -energy Q. The law of self_g-energy conservation operates already at the level of self_g -energy. Also, in addition to capacities in themselves, you can consider the types of accommodation of $\mathrm{oneself}_g$ in $\mathrm{oneself}_g$: the first type of the accommodation of $\mathrm{oneself}_g$ in $\mathrm{oneself}_g$ the second type of the accommodation of $\mathrm{oneself}_g$ in oneself: potentially, for example, in the form of programming $\mathrm{oneself}_g$, the third type is partial accommodation of $\mathrm{oneself}_g$ in $\mathrm{themselves}_g$—for example, self-operator, self-action, whirlwind. A container containing itself can be formed by self_g -accommodation, i.e., accommodation in $\mathrm{oneself}_g$. Let us clarify the concept of the term capacity in itself_g: it is a capacity containing $itself_g$ f potentially. Consider $self_g$ -Q, where Q can be anything, including Q=self; in particular, it can be any action. Therefore, $self_g$ -Q is when Q is made by $itself_g$; it makes $itself_g$. There is a partial $self_g$ -Q for any Q with partial $self_g$ -fulfillment. Let's consider several examples for capacities in themselves: ordinary lightning, electric arc discharge, and ball lightning. You can consider Hierarchical induction, for example, from the lower level to the upper one. An example is the induction of a magnetic field when an electric current moves along a wire.

Upper level [18], [30] of canonical Hamilton equations

$$\dot{d}_i \equiv \frac{\partial \mathrm{SCprt}\underset{w}{g_1}^{H}}{\partial \mathrm{SCprt}\underset{w}{g_1}^{p_i}},\ \dot{u}_i \equiv -\frac{\partial \mathrm{SCprt}\underset{w}{g_1}^{H}}{\partial \mathrm{SCprt}\underset{w}{g_1}^{q_i}},\ u_i = \mathrm{SCprt}\underset{w}{g_1}^{p_i},\ d_i = \mathrm{SCprt}\underset{w}{g_1}^{q_i}.$$

Here we mean real H, p_i, q_i not their numerical values.

Upper level of Hamilton-Jacobi equation

$$\mathrm{SCprt}^{\mathrm{H}(b_1, b_2, \dots, b_s, c_1, \dots, c_s)}\underset{w}{g_1} + \mathrm{SCprt}\underset{w}{g_1}^{\frac{\partial S}{\partial t}} \equiv 0,\ b_i = \mathrm{SCprt}\underset{w}{g_1}^{q_i},\ c_i = \mathrm{SCprt}\underset{w}{g_1}^{\frac{\partial S}{\partial q_i}}.$$

Here we mean real H, S, q_i not their numerical values.

1.2 Some aspects of Dynamic physics for thermodynamics and molecular physics

|||Basic equation of the kinetic theory of gases:

$\mathrm{SCprt}\underset{u}{g_1}^{\mathbf{p}}\ \mathrm{SCprt}\underset{u}{g_1}^{\mathbf{V}} \equiv \frac{2}{3}\ \mathrm{SCprt}\ \underset{u}{g_1}^{\mathbf{W_k}}$, p - gas pressure, V - its volume, $\mathbf{W_k}$ **-** total kinetic energy of translational motion of n gas molecules located in volume V.

Here we mean real p, V, $\mathbf{W_k}$ not their numerical values, ||| see in [16], [18], [21], [30].

|||Fourier equation:

$$d\mathrm{SCprt}\underset{w}{\overset{Q}{g_1}} \equiv - K\, \mathrm{SCprt}\underset{w}{\overset{\frac{dT}{dx}}{g_1}}\, d\mathrm{SCprt}\underset{w}{\overset{S}{g_1}}\, d\mathrm{SCprt}\underset{w}{\overset{t}{g_1}}$$

$d\mathrm{SCprt}\underset{w}{\overset{Q}{g_1}}$ - upper level of amount of heat transferred in time $d\mathrm{SCprt}\underset{w}{\overset{t}{g_1}}$ through area $d\mathrm{SCprt}\underset{w}{\overset{S}{g_1}}$ in the direction of normal x to this area in the direction of decreasing temperature, $\mathrm{SCprt}\underset{w}{\overset{\frac{dT}{dx}}{g_1}}$ – gradient of temperature, K - thermal conductivity coefficient. Here we mean real Q, T, S , t not their numerical values.

|||Van der Waals equation, “describing” upper level of the state of a real gas:

$$(\mathrm{SCprt}\underset{w}{\overset{p}{g_1}} + \frac{a}{\mathrm{SCprt}\underset{w}{\overset{V_o^2}{g_1}}})(\mathrm{SCprt}\underset{w}{\overset{V_0}{g_1}} - b) \equiv R\, \mathrm{SCprt}\underset{w}{\overset{T}{g_1}}$$

||| of Vant Hoff equation:

$\mathrm{SCprt}\underset{w}{\overset{p_{osm}}{g_1}} \equiv \frac{n}{\mathrm{SCprt}\underset{w}{\overset{V}{g_1}}} R\, \mathrm{SCprt}\underset{w}{\overset{T}{g_1}}$, $\mathrm{SCprt}\underset{w}{\overset{p_{osm}}{g_1}}$ – osmotic pressure, n - number of moles of dissolved substance in the volume $\mathrm{SCprt}\underset{w}{\overset{V}{g_1}}$, $\mathrm{SCprt}\underset{w}{\overset{T}{g_1}}$- thermodynamic temperature. Here we mean real p_{osm}, T, V not their numerical values.

||| equation of Clapeyron-Clausius:

$$\frac{d\mathrm{SCprt}\underset{w}{\overset{T_{melting}}{g_1}}}{d\mathrm{SCprt}\underset{w}{\overset{p}{g_1}}} \equiv \frac{\mathrm{SCprt}\underset{w}{\overset{T_{melting}}{g_1}}\,(\mathrm{SCprt}\underset{w}{\overset{v_{liquid}}{g_1}} - \mathrm{SCprt}\underset{w}{\overset{v_{solid}}{g_1}})}{\mathrm{SCprt}\underset{w}{\overset{r_{melting}}{g_1}}}$$

||| Gibbs equation:

$$\underset{w}{\overset{G}{\mathrm{SCprt}g_1}} \equiv \frac{\partial \underset{w}{\overset{\sigma}{\mathrm{SCprt}g_1}}}{\partial \underset{w}{\overset{\mu}{\mathrm{SCprt}g_1}}}$$, $\underset{w}{\overset{G}{\mathrm{SCprt}g_1}}$- adsorption value, $\partial \underset{w}{\overset{\sigma}{\mathrm{SCprt}g_1}}$- surface tension, $\partial \underset{w}{\overset{\mu}{\mathrm{SCprt}g_1}}$- chemical potential of a given component at phase equilibrium. Here we mean real G, σ, μ not their numerical values.

1.3 Some aspects of Dynamic physics for Classical Hydrodynamics

|||liquid equilibrium equation:

$$\underset{w}{\overset{\mathbf{F}}{\mathrm{SCprt}g_1}} \equiv \frac{1}{\underset{w}{\overset{\rho}{\mathrm{SCprt}g_1}}} \mathrm{grad} \underset{w}{\overset{\mathrm{p}}{\mathrm{SCprt}g_1}}.$$

Here we mean real **F**, p, ρ not their numerical values.

The continuity |||equation for volume charge density:

$$\mathrm{div}\, \underset{w}{\overset{\mathrm{j}}{\mathrm{SCprt}g_1}} + \frac{\partial \underset{w}{\overset{\rho}{\mathrm{SCprt}g_1}}}{\partial \underset{w}{\overset{\mathrm{t}}{\mathrm{SCprt}g_1}}} \equiv 0$$

Here we mean real j, t, ρ not their numerical values.

The wave |||equation:

$$\Delta\, \underset{w}{\overset{\varphi}{\mathrm{SCprt}g_1}} \equiv \frac{1}{c_2^2} \frac{\partial^2 \underset{w}{\overset{\varphi}{\mathrm{SCprt}g_1}}}{\partial t^2}$$, Δ - operator of Laplace. Here we mean real φ, t not their numerical values.

Upper level of Navier-Stokes equation

$$\frac{d \underset{w}{\overset{v}{\mathrm{SCprt}g_1}}}{dt} \equiv \underset{w}{\overset{F}{\mathrm{SCprt}g_1}} - \frac{1}{\underset{w}{\overset{\rho}{\mathrm{SCprt}g_1}}} \mathrm{grad}(\underset{w}{\overset{p}{\mathrm{SCprt}g_1}}) + \underset{w}{\overset{v}{\mathrm{SCprt}g_1}}\, \mathrm{SCprt}\, \underset{w}{\overset{\Delta \mathrm{v}}{g_1}} + \left(\frac{\zeta}{\underset{w}{\overset{\rho}{\mathrm{SCprt}g_1}}} + \frac{\nu}{3}\right) \mathrm{graddiv}(\underset{w}{\overset{v}{\mathrm{SCprt}g_1}}).$$

Here we mean real v, F, p, ρ not their numerical values.

Induction is precisely what gives rise to oscillations (waves).

1.4 Some aspects of Dynamic physics for Classical Electrodynamics

|||Poisson's equation:

for potential φ of electrostatic field in dielectric

$$\operatorname{divgrad} \underset{w}{\overset{\varphi}{\mathrm{SCprt}g_1}} \equiv -\frac{\underset{w}{\overset{\rho}{\mathrm{SCprt}g_1}}}{\varepsilon\varepsilon_0}.$$ Here we mean real φ, ρ not their numerical values.

|||equation of forced electromagnetic oscillations:

$$\underset{w}{\overset{\mathrm{L}}{\mathrm{SCprt}g_1}}\frac{d^2\underset{w}{\overset{\mathrm{q}}{\mathrm{SCprt}g_1}}}{dt} + \underset{w}{\overset{\mathrm{R}}{\mathrm{SCprt}g_1}}\frac{d\underset{w}{\overset{\mathrm{q}}{\mathrm{SCprt}g_1}}}{dt} + \frac{\underset{w}{\overset{\mathrm{q}}{\mathrm{SCprt}g_1}}}{\underset{w}{\overset{\mathrm{C}}{\mathrm{SCprt}g_1}}} \equiv -\mathcal{E}_0\sin\Omega t.$$ Here we mean real L, q, R not their numerical values.

Maxwell's |||equations on electromagnetic energy:

$$\mathrm{rot}(\mathrm{E}^{\mathrm{tw}}_{\mathrm{SprtA}}) \equiv -(1/\,\mathrm{q}_0)\,\partial(\mathrm{B}^{\mathrm{tw}}_{\mathrm{SprtA}})\ /\partial t,\ (*_{\mathrm{H}})$$

$$\mathrm{rot}(\mathrm{H}^{\mathrm{tw}}_{\mathrm{SprtA}}) \equiv j/\mathrm{q}_0 + (1/\,\mathrm{q}_0)\cdot\partial\,(\mathrm{D}^{\mathrm{tw}}_{\mathrm{SprtA}})\ /\partial t,\ (**_{\mathrm{H}})$$

$\mathrm{E}^{\mathrm{tw}}_{\mathrm{SprtA}}$ - activation tension with target weight tw, $\mathrm{B}^{\mathrm{tw}}_{\mathrm{SprtA}}$ - induction of self with target weight tw, q_0- constant, $\mathrm{H}^{\mathrm{tw}}_{\mathrm{SprtA}}$ – tension of self with target weight tw, $\mathrm{D}^{\mathrm{tw}}_{\mathrm{SprtA}}$ - activation induction with target weight tw, j - activation density. Here we mean real $\mathrm{E}^{\mathrm{tw}}_{\mathrm{SprtA}}$, $\mathrm{B}^{\mathrm{tw}}_{\mathrm{SprtA}}$, $\mathrm{H}^{\mathrm{tw}}_{\mathrm{SprtA}}$, $\mathrm{D}^{\mathrm{tw}}_{\mathrm{SprtA}}$ not their numerical values.

Some aspects of Dynamic physics for the theory of heat exchange

$\mathrm{C} = \underset{A_0}{\overset{A_0}{\mathrm{SCprt}g_1}}$ - specific heat capacity with type of containment g_1.

|||Relationship between thermodynamic potentials and their derivatives:

$$\underset{w}{\overset{U}{\mathrm{SCprt}g_1}} \equiv \underset{w}{\overset{H}{\mathrm{SCprt}g_1}} - \underset{w}{\overset{p}{\mathrm{SCprt}g_1}}\,\underset{w}{\overset{V}{\mathrm{SCprt}g_1}} \equiv \underset{w}{\overset{H}{\mathrm{SCprt}g_1}} + \underset{w}{\overset{V}{\mathrm{SCprt}g_1}}\left(\frac{\partial\underset{w}{\overset{U}{\mathrm{SCprt}g_1}}}{\partial\underset{w}{\overset{V}{\mathrm{SCprt}g_1}}}\right)_S,$$

$$\underset{w}{\overset{H}{\mathrm{SCprt}g_1}} \equiv \underset{w}{\overset{U}{\mathrm{SCprt}g_1}} + \underset{w}{\overset{p}{\mathrm{SCprt}g_1}}\,\underset{w}{\overset{V}{\mathrm{SCprt}g_1}} \equiv \underset{w}{\overset{U}{\mathrm{SCprt}g_1}} + \underset{w}{\overset{p}{\mathrm{SCprt}g_1}}\left(\frac{\partial \underset{w}{\overset{H}{\mathrm{SCprt}g_1}}}{\partial \underset{w}{\overset{p}{\mathrm{SCprt}g_1}}}\right)_S,$$

$$\underset{w}{\overset{F}{\mathrm{SCprt}g_1}} \equiv \underset{w}{\overset{U}{\mathrm{SCprt}g_1}} - \underset{w}{\overset{T}{\mathrm{SCprt}g_1}}\,\underset{w}{\overset{S}{\mathrm{SCprt}g_1}} \equiv \underset{w}{\overset{U}{\mathrm{SCprt}g_1}} + \underset{w}{\overset{T}{\mathrm{SCprt}g_1}}\left(\frac{\partial \underset{w}{\overset{F}{\mathrm{SCprt}g_1}}}{\partial \underset{w}{\overset{T}{\mathrm{SCprt}g_1}}}\right)_V,$$

$$\underset{w}{\overset{\Phi}{\mathrm{SCprt}g_1}} \equiv \underset{w}{\overset{H}{\mathrm{SCprt}g_1}} - \underset{w}{\overset{T}{\mathrm{SCprt}g_1}}\,\underset{w}{\overset{S}{\mathrm{SCprt}g_1}} \equiv \underset{w}{\overset{H}{\mathrm{SCprt}g_1}} + \underset{w}{\overset{T}{\mathrm{SCprt}g_1}}\left(\frac{\partial \underset{w}{\overset{\Phi}{\mathrm{SCprt}g_1}}}{\partial \underset{w}{\overset{T}{\mathrm{SCprt}g_1}}}\right)_F,$$

Here we mean real U, H, p, V, F, Φ, T, S, not their numerical values.

|||differential equation of adiabat:

$$\left(\frac{\partial \underset{w}{\overset{T}{\mathrm{SCprt}g_1}}}{\partial \underset{w}{\overset{V}{\mathrm{SCprt}g_1}}}\right)_S \equiv - \frac{\underset{w}{\overset{T}{\mathrm{SCprt}g_1}}}{C_V}\left(\frac{\partial \underset{w}{\overset{p}{\mathrm{SCprt}g_1}}}{\partial \underset{w}{\overset{T}{\mathrm{SCprt}g_1}}}\right)_V$$

Here we mean real p, V, T, S not their numerical values.

||| equation of Clapeyron-Clausius:

$$\frac{d\underset{w}{\overset{p}{\mathrm{SCprt}g_1}}}{d\underset{w}{\overset{T}{\mathrm{SCprt}g_1}}} \equiv \frac{\underset{w}{\overset{r}{\mathrm{SCprt}g_1}}}{\underset{w}{\overset{T}{\mathrm{SCprt}g_1}}\underset{w}{\overset{\Delta v}{\mathrm{SCprt}g_1}}},$$ r - specific heat of phase transition from the first phase to the second, $\Delta v = v_2 - v_1$ - difference of specific volumes of phases. Here we mean real p, Δv, T, r not their numerical values.

||| equation of initial state:

$$\left(d\underset{w}{\overset{\mu_i}{\mathrm{SCprt}g_1}}\right)_{T\,\underset{w}{\mathrm{SCprt}g_1}} \equiv \mathrm{R}\,\underset{w}{\overset{T}{\mathrm{SCprt}g_1}}\mathrm{d}\left(\underset{w}{\overset{\ln f_i}{\mathrm{SCprt}\,g_1}}\right).$$ Here we mean real μ_i, f_i, T not their numerical values.

||| Fourier equation of thermal conductivity for homogeneous isotropic body:

$\mathrm{SCprt}\underset{w}{\overset{\frac{dT}{dx}}{g_1}} \equiv$ a $\mathrm{SCprt}\underset{w}{\overset{\Delta T}{g_1}} + \dfrac{\mathrm{SCprt}\underset{w}{\overset{q_V}{g_1}}}{\mathrm{SCprt}\underset{w}{\overset{c\rho}{g_1}}}$. Here we mean real q_V, $c\rho$, T not their numerical values.

1.5 Some aspects of Dynamic physics for the theory of elementary particles

Consider, in particular, some examples: 1) $\mathrm{SCprt}\underset{\{x_1,x_2\}}{\overset{e}{g_1}}$ 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 SCprt elements. The self of the simplest atom - the hydrogen atom - corresponds to the combination of the spin of the proton, the spin of the electron, the rotation of the electron around the proton, and the spin of the atom itself. There are as many types of self for them as there are different atoms. The nucleus of an atom Q can be interpreted as a form of containment at a point x in space - $\mathrm{SCprt}\underset{x}{\overset{Q}{g_1}}$, and the orbitals of electrons W around it as a form of containment at a point t in time - $\mathrm{SCprt}\underset{t}{\overset{W}{g_2}}$.

Klein-Gordon-Fock |||equation for a real wave function φ(x) of a free neutral scalar particle of mass m:

$(\partial_0^2 - \nabla^2)\,\mathrm{SCprt}\underset{w}{\overset{\varphi(x)}{g_1}} \equiv m^2\,\mathrm{SCprt}\underset{w}{\overset{\varphi(x)}{g_1}}$. Here we mean real φ(x), m not their numerical values.

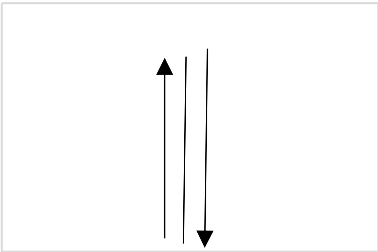
Physics deals with the template of atoms, chemistry deals with the individual forms of atoms. The template of atoms - $|||_{\{q\}}$(|||)self({e}), $\{q\}$ - nucleon nucleus of q_i, self({e})- orbitals of electrons e_j. Energy of self-connections A is the subtle part of selfA, the rest of selfA can be called the "rough" part of selfA.

We can define a proton as self(a) = Sprt^{a}_{a}, a neutron as self(b) = Sprt^{b}_{b}, and other elementary particles as oself(c_i) = ${}^{c_i}_{c_i}\mathrm{Sprt}$, i = 1.2, …. Energy structure of the atom: Q = (({|||self$_n$})|||({|||self$_p$}))pa|||{|||PrCself{oself$_e$}}. Elementary particles are quasieigenvalues of $|||^{-1}. \downarrow \mathrm{I} \uparrow$ by any elementary particles for SmnSprt activation. Quarks are carriers of $|||_{\{q\}}$, $\{q\}$ - nucleon nucleus of q_i.

1.6 Some aspects of Dynamic physics for Time

Time compression:

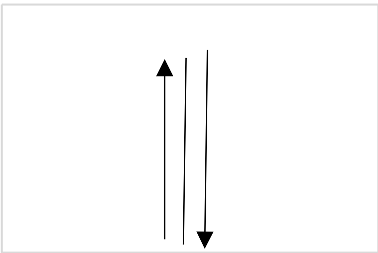
X



t

or

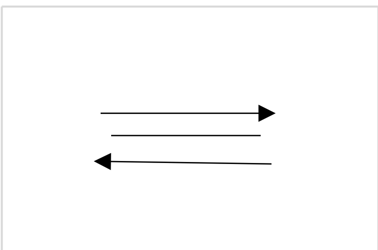
Objects



t

Time dilation(space compression or Objects-space compression):

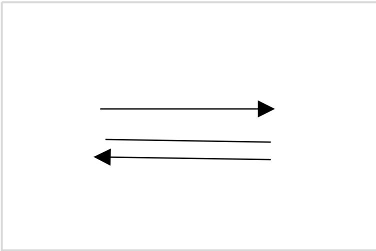
1x



t

or

Objects

t

selft = Sprt_{t}^{t} - time in itself, selft = ${}_{t}^{t}\mathrm{Sprt}$ -time from itself, paselft = ${}_{t}^{t}\mathrm{Sprt}_{t}^{t}$ - paradoxical time.

1.7 Some aspects of self-type structures in Dynamic physics

Objects of physics and chemistry have an energy structure, which can be tried to be represented in the form of a hierarchical energy structure: the upper level of subtle self$_g$ -energy and the lower level, which is manifested in the form of objectivity.

Ordinary types of energy are manifestations of a lower level from these structures.

If we represent an amorphous body with a mathematical structure of self$_g$ -object $\mathrm{SCprt}\overset{A_0+E_s}{\underset{A_0+E_s}{g_1}}$, where $\mathrm{SCprt}\overset{A_0}{\underset{A_0}{g_1}}$ - level of objectivity of an amorphous object, ($\mathrm{SCprt}\overset{A_0}{\underset{A_0+E_s}{g_1}} + \mathrm{SCprt}\overset{A_0+E_s}{\underset{A_0}{g_1}}$) - the energy of connections between the level of subtle energy $\mathrm{SCprt}\overset{E_s}{\underset{E_s}{g_1}}$ and the level of objectivity .

Thus, one can try to conventionally represent the mathematical model of the energy structure of an amorphous object as a hierarchical dynamic operator

$$\begin{array}{c} \mathrm{SCprt}\,\overset{E_s}{\underset{E_s}{g_1}} \\ \left(\mathrm{SCprt}\,\overset{A_0}{\underset{A_0+E_s}{g_1}} + \mathrm{SCprt}\,\overset{A_0+E_s}{\underset{A_0}{g_1}}\right) \\ \mathrm{SCprt}\,\overset{A_0}{\underset{A_0}{g_1}} \end{array} \quad (1.7.1).$$

In particular, the magnetic field and spin belong to the second level in (1.7. 1).

The next level of objectivity responds to crystal. We represent a crystal with a mathematical structure

$$\mathrm{SCprt} \begin{array}{c} \mathrm{SCprt}\,\overset{A_0+E_s}{\underset{A_0+E_s}{g_1}} \\ g_1 \\ \mathrm{SCprt}\,\overset{A_0+E_s}{\underset{A_0+E_s}{g_1}} \end{array} \quad (1.7.\ 2).$$

Thus, one can try to conventionally represent the mathematical model of the energy structure of a crystal as a hierarchical dynamic operator (1.7. 2). The next level of objectivity responds to a living crystal, for example, the bone of a living organism, a nail, viruses, DNA, RNA and etc. When there is no nutrient medium and energy, it behaves like a crystal: $\begin{array}{c} \mathrm{SCprt}\overset{\{\}}{\underset{\{\}}{\{\}}} \\ \{\} \\ \mathrm{SCprt}\overset{\{\}}{\underset{\{\}}{\{\}}} \end{array} \ \mathrm{SCprt} \begin{array}{c} \mathrm{SCprt}\,\overset{A_0+E_s}{\underset{A_0+E_s}{g_1}} \\ g_1 \\ \mathrm{SCprt}\,\overset{A_0+E_s}{\underset{A_0+E_s}{g_1}} \end{array}$, a nutrient medium appears and the necessary energy:

$$\begin{array}{ccccc} & B_0+E_q & & & B_0+E_q \\ \mathrm{SCprt} & g_1 & & \mathrm{SCprt} & g_1 \\ & B_0+E_q & & & B_0+E_q \\ & g_1 & \mathrm{SCprt} & & g_1 \\ & B_0+E_q & & & B_0+E_q \\ \mathrm{SCprt} & g_1 & & \mathrm{SCprt} & g_1 \\ & B_0+E_q & & & B_0+E_q \end{array},$$

its structure is transformed into a mathematical structure

$$\begin{array}{ccc} & B_0+E_q & \\ \mathrm{SCprt} & g_1 & \\ & B_0+E_q & \\ & g_1 & \mathrm{SCprt} \\ & B_0+E_q & \\ \mathrm{SCprt} & g_1 & \\ & B_0+E_q & \end{array}$$

$$\begin{array}{cc} & A_0+E_s+B_0+E_q \\ \mathrm{SCprt} & g_1 \\ & A_0+E_s+B_0+E_q \\ & g_1 \\ & A_0+E_s+B_0+E_q \\ \mathrm{SCprt} & g_1 \\ & A_0+E_s+B_0+E_q \end{array}$$

. The division of DNA into two DNAs after sufficient accumulation of bases and energy - this minimal division into only two duplicates corresponds to the law of conservation of living energy and minimization of the entropy of the system.

Next comes the level of living organisms:

$$
\begin{array}{cccccccccccc}
 & A_0+E_s & & & A_0+E_s & & & A_0+E_s & & & A_0+E_s \\
\text{SCprt} & g_1 & & \text{SCprt} & g_1 & & \text{SCprt} & g_1 & & \text{SCprt} & g_1 \\
 & A_0+E_s & & & A_0+E_s & & & A_0+E_s & & & A_0+E_s \\
 & g_1 & \text{SCprt} & g_1 & & & g_1 & \text{SCprt} & g_1 & & \\
 & A_0+E_s & & & A_0+E_s & & & A_0+E_s & & & A_0+E_s \\
\text{SCprt} & g_1 & & \text{SCprt} & g_1 & & \text{SCprt} & g_1 & & \text{SCprt} & g_1 \\
 & A_0+E_s & & & A_0+E_s & & & A_0+E_s & & & A_0+E_s \\
 & & g_1 & & & SC_1\text{prt} & & & g_1 & & \\
 & A_0+E_s & & & A_0+E_s & & & A_0+E_s & & & A_0+E_s \\
\text{SCprt} & g_1 & & \text{SCprt} & g_1 & & \text{SCprt} & g_1 & & \text{SCprt} & g_1 \\
 & A_0+E_s & & & A_0+E_s & & & A_0+E_s & & & A_0+E_s \\
 & g_1 & \text{SCprt} & g_1 & & & g_1 & \text{SCprt} & g_1 & & \\
 & A_0+E_s & & & A_0+E_s & & & A_0+E_s & & & A_0+E_s \\
\text{SCprt} & g_1 & & \text{SCprt} & g_1 & & \text{SCprt} & g_1 & & \text{SCprt} & g_1 \\
 & A_0+E_s & & & A_0+E_s & & & A_0+E_s & & & A_0+E_s
\end{array}
$$

.

Next comes the level of Globe, where the role of living cells (molecules in the case of a crystal) is played by living organisms. Next comes the level of Universe, where the role of living cells (molecules in the case of a crystal) is played by planets inhabited by living beings. You can try to represent these levels through more complex mathematical models, there are options for going beyond the level of objectivity for objects with energy structures of a sufficiently high level, but this is already material for subsequent publications. Our object world is an interpretation of the manifestation of only one set of subtle energy fibers out of their countless number.

C

g_2SCprt will be called dynamic anti-capacity from oneself$_g$. For example, “white

C

hole” in physics is such simple anti-capacity. The concepts of “white hole” and “black hole” were formulated by the physicists based on the subject of physics –the usual energies level. Mathematics allows you to deeply find and formulate the concept of singular points in the Universe based on the levels of more subtle energies. The experiments of the 2022 Nobel laureates Asle Ahlen, John Clauser, Anton Zeilinger and the experiments in chemistry Nazhipa Valitov correspond to the concept of the Universe as a capacity in itself$_{g\ g}$ as the element. They experimented with connections for elements of the microworld, and since here the connections are self$_g$ -connections, then when the object component of self$_g$ -connections is removed, its higher level remains, which was manifested in their experiments. The electron spin belongs to the second level - above the level of objectivity. The energy of self$_g$ -accommodation in itself$_g$ is closed on itself$_g$.

Remark 1.7.1. From the point of view of our theory of dynamic operators and sets, we can interpret the energy effect of a thermonuclear reaction as the result of the “collapse” of two self$_g$ -objects: for example,1) ${}^{3}_{2}He$, ${}^{3}_{2}He$ and the formation of one self$_g$ -object ${}^{4}_{2}He$, 2) ${}^{3}_{2}He$, ${}^{2}_{1}H$ and the formation of one self$_g$ -object ${}^{4}_{2}He$. As a result, the energy of the collapse of the lost part of the self$_g$ is released.

Remark 1.7.2. To gain access to object transformation, just go to the level lS= $\frac{2}{\pi}arctg(1+\mathcal{E})$, $\mathcal{E}$ may be quite small.

Examples of transformation:

$$1)\quad \mathrm{SCprt}\overset{q}{\underset{q}{g_1}} \to \mathrm{SCprt}\begin{array}{c} q \\ \mathrm{SCprt}g_1 \\ q \\ g_1 \\ q \\ \mathrm{SCprt}g_1 \\ q \end{array} \to \mathrm{SCprt}\begin{array}{c} b \\ \mathrm{SCprt}g_1 \\ c \\ g_1 \\ b \\ \mathrm{SCprt}g_1 \\ c \end{array}$$

$$2)\quad \mathrm{SCprt}\overset{q}{\underset{q}{g}} \to \mathrm{SC_3f}(\mathrm{self_g}\ (q)) \to \mathrm{SCprt}\overset{r}{\underset{r}{g}}$$

This is a rather conditional interpretation, because in fact, the lS of the “vessel” (energy cocoon) of the object may turn out to be greater than $\frac{2}{\pi}arctg(1)$. This is taken for initiation: we build a theory of this, starting from this stage of interpretation. After experiments, the next stage may begin.

self_g A $=\mathrm{SCprt}\overset{A}{\underset{A}{g}}$ can be transformed into any D if $\mu l_g(D) = \mu l_g(\mathrm{SCprt}\overset{A}{\underset{A}{g}})$, $\mu l_g(x)$ - level measure of self_g for x, in particular, into $\mathrm{SCprt}\overset{any\ C}{\underset{A}{g}}$ or $\mathrm{SCprt}\overset{A}{\underset{any\ C}{g}}$, and also an object R into any object Q or any energy U. The transformations of this type will be called stransformations. $\mathrm{self}_g{}^N$ A can transform itself_g into any D if N ≥ 2; to realize this we need an even larger quantity N.

Example of a parallel-serial program statement

$$\mathrm{SCprt}\overset{if\ \{p\}\mathrm{SCprt}\overset{s := \mathrm{SCprt}\overset{C}{\underset{\mathrm{SCprt}\overset{Q}{\underset{A}{g}}}{g}}}{\underset{A}{g}}}{\underset{for\ w\ \mathrm{SCprt}\overset{\mathrm{SCprt}\overset{af :=}{\underset{E}{g}}}{\underset{\mathrm{SCprt}\overset{if\ C}{\underset{J}{g}}}{g}}}{g}}$$

Each self_g -field can automatically rebuild the self_g -program to the desired.

$\mathrm{self}_g{}^N$- OS and is designed for such transformations, and it itself_g can be transformed at N$\geq$1, or it itself_g can be transformed at N $\geq$2.

Remark 1.7.3. Hypothesis 1.7: equations for real processes in a non-trivial form can be used to fully or partially interpret the self_g -level of the process, replacing the equal signs with identification signs, and solutions to these equations as a manifestation of this level on the level of objectivity and ordinary energies. That is, equations for real processes serve as a definition of the self_g -level of the process, the definition of self_g -values (self_g -characteristics) of the process through the identification sign, i.e., they are defined (expressed) through themselves. In particular, forms (1.1) - (1.4) [16, 21] can be used as forms of identification. Each such singularity creates its own field, the process, the object etc. Much more effective than science for working with these singularities will be special Dynamic programming, which we are currently working on to create. Identification at the lower levels of a hierarchical dynamic structure of type (1.1) will lead to the upper level. You can also try to use it for full or partial interpretation of the self$_g$ -level of chemical reactions, but here there will be a trivial identification and determination of the self$_g$ -level will be much simpler. For example, a type w ≡ 2w singularity at the top level of the structure of a mathematical simplified model of DNA generates a field for DNA division. A rather complex type of singularity at the upper level of the structure of a simplified mathematical model generates an electromagnetic field through identification in Maxwell's equations.

Remark 1.7.4. Parallel operator SCprt $\underset{places\ for\ symbols}{\overset{symbols}{g}}$ corresponds to theoretical science, parallel operator SCprt $\underset{x}{\overset{objects}{g}}$ corresponds to technology, x – the space "point" (space place).

Remark 1.7.5. Let self$_g$ -energy of A looks like SCprt $\underset{C_A+\Delta C}{\overset{C_A+\Delta C}{g}}$ = SCprt $\underset{C_A}{\overset{C_A}{g}}$ + SCprt $\underset{C_A}{\overset{\Delta C}{g}}$ + SCprt $\underset{\Delta C}{\overset{C_A}{g}}$ + SCprt $\underset{\Delta C}{\overset{\Delta C}{g}}$, SCprt $\underset{C_A}{\overset{C_A}{g}}$ corresponds to objectivity of A,

$$\text{SCprt}\ \underset{C_A}{\overset{\Delta C}{g}} = E_A \quad (1.7.3),$$

E_A - usual energy of A. $\triangle C$ determined from (1.7.3) through C_A and then we can determine the complete $self_g$ -energy of A. $\|SCprt \overset{C_A}{\underset{C_A}{g}}\| = mc^2$.

Remark 1.7.6. Let us consider an analogue of the Schrödinger equation for networks operating on electromagnetic energy

$$\frac{\partial w}{\partial x} = \left[w, \mu_g S(H)\right]$$

w- measure of $self_g$ for networks operating, $\mu_g S(H)$ - measure of $self_g$ for H, H = H($\mu_g S$(p), $\mu_g S$(q),t) - an analogue of the Hamiltonian in the space of actions of artificial neurons in a neural network, q is the operator of an artificial neurons action result, p is the operator of an artificial neurons action impulse.

Remark 1.7.7. The $self_g$ -space of a higher level contains many $self_g$ -energetic fibers, collecting into appropriate sets that can be accessed by the corresponding $self_g$ -spaces of lower levels. That's right, for example. This assembly point on the human cocoon can carry out this, in particular, access to our $self_g$ -space with objects.

Remark 1.7.8. It is quite possible to try to build up the levels of objects and processes; change something at these levels.

Remark 1.7.9. One can try to conventionally represent the mathematical model (1.7.1) of the atom (molecule) as a hierarchical dynamic operator.

Remark 1.7.10. Here, $self_g$ -action is understood as action on $oneself_g$ (i.e., to the same action), while physicists understand $self_g$ -action, for example, as the absorption of one elementary particle by another of the same type.

Remark 1.7.10.1. Subtle energy can manifest itself in the form of: 1) objectivity, 2) ordinary energies, 3) information. Using neural networks of the SmnCSprt-type, it is possible to organize a SC-Internet, where instead of exchanging information, an exchange of subtle energies will take place.

Supplement 1

A self_g -molecule (self_g -atom, self_g -(elementary particle))) as a capacity can have the following types of self_g: self_g -set, self_g -structure, self_g -hierarchy or its elements that generates this self_g -molecule (self_g -atom, self_g -(elementary particle))). self_g -power is force that is applied to oneself_g or its elements that generates this self_g -power.

Supplement for Quantum Mechanics and Classical statistical Mechanics through SCprt-elements:

Hamilton operator $\widehat{H} = \widehat{H}_0 + \widehat{W}_0$, $\widehat{H}_0$ -considered quantum system energy, consisting of two or more parts, without their interaction with each other, $\widehat{W}_0$ is the energy of their interaction, $\hat{\rho}$-statistical operator [20]. self_g -energy $\text{SCpr}\begin{matrix}\widehat{H}\\ g\\ \widehat{H}\end{matrix} =$

$$\text{SCpr}\begin{matrix}\widehat{H}_0+\widehat{W}_0\\ g\\ \widehat{H}_0+\widehat{W}_0\end{matrix} = \text{SCpr}\begin{matrix}\widehat{H}_0\\ g\\ \widehat{H}_0+\widehat{W}_0\end{matrix} + \text{SCpr}\begin{matrix}\widehat{W}_0\\ g\\ \widehat{H}_0+\widehat{W}_0\end{matrix} = \text{SCpr}\begin{matrix}\widehat{H}_0\\ g\\ \widehat{H}_0\end{matrix} + \text{SCpr}\begin{matrix}\widehat{H}_0\\ g\\ \widehat{W}_0\end{matrix} +$$

$\text{SCpr}\begin{matrix}\widehat{W}_0\\ g\\ \widehat{H}_0\end{matrix}$ +$\text{SCpr}\begin{matrix}\widehat{W}_0\\ g\\ \widehat{W}_0\end{matrix}$, $\text{SCpr}\begin{matrix}\widehat{H}_0\\ g\\ \widehat{H}_0\end{matrix}$ -considered quantum system self_g -energy,

$\text{SCpr}\begin{matrix}\widehat{W}_0\\ g\\ \widehat{W}_0\end{matrix}$ is self_g -energy of their interaction, $\text{SCpr}\begin{matrix}\widehat{H}_0\\ g\\ \widehat{W}_0\end{matrix}$ --object manifestation of the energy of the system in an external field., $\text{SCpr}\begin{matrix}\widehat{W}_0\\ g\\ \widehat{H}_0\end{matrix}$ - the manifestation of the energy of the system in the energy interaction with the external field. Variants of the Schrödinger equation $\frac{\partial\hat{\hat{\rho}}}{\partial t} + [\hat{\widehat{W}},\hat{\hat{\rho}}]=0$ of the form SC_2f, SC_3f are possible, using the form (1.1) [16, 21] or form from the forms (1.1.1) – (1.4) [16, 21].

The carrier of the measure of objectivity-mass should be objectivity - elementary particle graviton, look like $\mathrm{SCpr}\begin{matrix} objectivity \\ g \\ objectivity \end{matrix}$, therefore it is a self$_g$ -particle and is not an element of the level of objectivity, but is an element of the level self$_g$. Therefore, it cannot be found at our level. In fact, the theory of SCprt-elements helps to form a unified field theory on a qualitative level, because it is not possible to create a quantitative unified field theory. Supplement for string theory: May be to try represent elementary particles in the form of continual self$_g$ -elements of the type CS^{-}_{∞}=sin(-∞)|g --↓ I $\uparrow^{1}_{-1}$|g, CT^{+}_{∞}=tg∞|g --↑ I $\downarrow^{\infty}_{-\infty}$|g, CT^{-}_{∞}=tg(-∞)|g --↓ I $\uparrow^{\infty}_{-\infty}$|g, f↑I↓w|g for any f, w etc.

Remark 1.7.11. If there is no energy in nature that corresponds to singularity A, then it must be created artificially up to the creation of artificial elementary particles and other objects, actions etc.

Remark 1.7.12. Place x equations for objects o = $\{o_1, o_2, \ldots, o_n\}$:

$|||^{o}_{x}$ = $\mathrm{Sprt}\begin{matrix}\{o_1, o_2, \ldots, o_n\} \\ x\end{matrix}$ = sel$f_o x$, o = $\{o_1, o_2, \ldots, o_n\}$.

Remark 1.7.13. New relative self-type (relative |||-type) structures through index interpretation (for example, the lower right index determines the type of action that generates the given self, the lower left index determines the area "through" which the action is carried out):

$$self_s^{self_s^{self_s^{\ldots self_s^{Q}}}}$$

$$ {}^{self^{Q_2}\, self^{Q}\, \ldots self_s^{Q}}_{self_s^{self_s^{\ldots self_s^{Q}}}} self^{self_s^{self_s^{\ldots self_s^{Q_1}}}}_{self^{Q}\, self^{Q}\, \ldots self_{s_1}^{Q}} $$

$$pa|||^{G}_{V}$$

$$
\begin{array}{ccc}
self^{Q_2} & & {\ldots pa|||}_V^G \\
\quad self^{Q} & & self_s^{self_s} \\
\quad\quad {\ldots pa|||}_V^G & self & \\
\quad\quad {\ldots pa|||}_V^G & & self^{Q} \\
self_s^{self_s} & & \quad self^{Q} \\
& & \quad\quad {\ldots pa|||}_V^G
\end{array}
$$

$$
\begin{array}{ccc}
self^{Q_2} & & {\ldots |||}_V^G \\
\quad self^{Q} & & self_s^{self_s} \\
\quad\quad {\ldots |||}_V^G & self & \\
\quad\quad {\ldots |||}_V^G & & self^{Q} \\
self_s^{self_s} & & \quad self^{Q} \\
& & \quad\quad {\ldots |||}_V^G
\end{array}
$$

$$
\begin{array}{ccc}
\quad\quad {\ldots self}_{s_3}^{Q_2} & & {\ldots self}_s^{Q_1} \\
\quad self_{s_3} & & self_s^{self_s} \\
self_{s_3} & self & \\
self^{Q_4} & & self^{Q_3} \\
\quad self^{Q_4} & & \quad self^{Q_3} \\
\quad\quad {\ldots self}_{s_2}^{Q_4} & & \quad\quad {\ldots self}_{s_1}^{Q_3}
\end{array},
$$

$$
\begin{array}{ccc}
\quad\quad {\ldots self}_{s_3}^{Q_2} & & {\ldots self}_s^{Q_1} \\
\quad self_{s_3} & & self_s^{self_s} \\
self_{s_3} & parelf & parelf_s \\
self^{Q_4} & & self^{Q_3} \\
\quad self^{Q_4} & & \quad self^{Q_3} \\
\quad\quad {\ldots self}_{s_2}^{Q_4} & & \quad\quad {\ldots self}_{s_1}^{Q_3}
\end{array}
$$

$$
\begin{array}{ccc}
\quad\quad {\ldots |||}_{s_3}^{Q_2} & & {\ldots |||}_s^{Q_1} \\
\quad |||_{s_3} & & |||_s^{|||_s} \\
|||_{s_3} & ||| & \\
|||^{Q_4} & & |||^{Q_3} \\
\quad |||^{Q_4} & & \quad |||^{Q_3} \\
\quad\quad {\ldots |||}_{s_2}^{Q_4} & & \quad\quad {\ldots |||}_{s_1}^{Q_3}
\end{array}
$$

$$
\begin{array}{ccc}
\quad\quad {\ldots self}_{s_3}^{Q_2} & & {\ldots self}_s^{Q_1} \\
\quad self_{s_3} & & self_s^{self_s} \\
self_{s_3} & sian & sian_s \\
self^{Q_4} & & self^{Q_3} \\
\quad self^{Q_4} & & \quad self^{Q_3} \\
\quad\quad {\ldots self}_{s_2}^{Q_4} & & \quad\quad {\ldots self}_{s_1}^{Q_3}
\end{array}
$$

$$
\begin{array}{ccc}
\quad\quad {\ldots pa|||}_{s_3}^{Q_2} & & {\ldots |||}_s^{Q_1} \\
\quad pa|||_{s_3} & & |||_s^{|||_s} \\
pa|||_{s_3} & ||| & \\
pa|||^{Q_4} & & |||^{Q_3} \\
\quad pa|||^{Q_4} & & \quad |||^{Q_3} \\
\quad\quad {\ldots |||}_{s_2}^{Q_4} & & \quad\quad {\ldots |||}_{s_1}^{Q_3}
\end{array}
$$

Remark 1.7.14. The main thing is to induce transition of SmnSprt using a short-pulse laser or UHF to the upper level of A and from there to the upper level of C and instantly replace A with C, where A and C can be not only different objects or processes, but also different values of the characteristics of an object or process. Numbers, symbols, and information are self-objects and also have an upper energy level (the so-called Noosphere), which is based on the energy of people.

Remark 1.7.15. People are devices for capturing the energies of these higher levels and using them after appropriate training and tuning. And these functions will also be partially performed by SmnSprt

Remark 1.7.16. Ordinary computers, neural networks can create chaos from order, we are designing a neural network SmnSprt that will create order from chaos.

Here the calculation will take place not so much in numbers as in structures, structure is the frame (skeleton) of energy.

Remark 1.7.17. People are used to perceiving at the level of objectivity, where there are so many limitations. Although they have all the opportunities to reach higher levels, where there are an order of magnitude fewer limitations and this can be learned.

Remark 1.7.18. The main thing is to induce transition of SmnSprt using a short-pulse laser or UHF to the upper level of A and from there to the upper level of C and instantly replace A with C, where A and C can be not only different objects or processes, but also different values of the characteristics of an object or process.

Formation of not only the goal, but also the result in SmnSprt (simultaneously). ||| of our science with living energies is possible in SmnSprt. Thus, the upper level of our science is formed, where there are fewer restrictions than at our level. We must simply manifest at our level through SmnSprt in the right way.

It is time for physicists to begin studying not only the manifestations of living energies, but also the living energies themselves, which are by no means expressed through objectivity and ordinary energies, although they are capable of manifesting themselves through a lower level - objectivity and ordinary energies. We, as mathematicians, offer a new corresponding apparatus for understanding nature and studying living energies. The capacity for uncertainty may be any. Such uncertainties can be conditionally designated: a) in probability theory through $_0^1|$ (by dynamic operator $Sprt_X^{\{xp\}}$, where X is distribution of a random variable {x} with probabilities{p}), b) $\uparrow_{-1}^{1}|\downarrow$ for sin∞, c) $\underset{B}{\overset{A}{}}|_g^f$, d) $_B^A|_B^A|$ e) $_D^wSprt = |||_D^{-1}W$ etc. Any oscillation (wave) in the limit gives an uncertainty type $\uparrow_D^Q|\downarrow$. For effective results, you should use an uncertainty in total. May consider forms and structures of uncertainties, including with ∞-uncertainties, self-emptiness, self-manifestation. It is our direct-accumulative approach through dynamic operators that allows us to construct the regular necessary uncertainties. Each subtle energy has its own uncertainties and vice versa. Using Smnsprt-construction of such energy uncertainties through the corresponding dynamic programs, we gain access to these subtle energies. A failure in a normal computer system will automatically switch to operation mode of Smnsprt. There are no failures in operation, paradoxes, there are new elements and new possibilities. The system will work like this: if B is not defined in the system, then this B will be defined as a new element and the system will work with it (in particular, through |||) and with a new operator according to its structure. For example, the operator ↑|↓(A) = ∀B, an operator transformer, a program operator transformer, a virtual operator, a program virtual operator, dynamic operator with «scenario» changes, dynamic program operator with «scenario» changes etc. The computer is the example of dynamic operator. The program operator of uncertainty type A leads to the energy A. The fuzzy program operator of uncertainty type A leads to the fuzzy energy A. For any uncertainty, we can "construct" a dynamic operator and then work through it. For example, for uncertainty B at point w, we get B = $_D^wSprt_w^Q$. After choosing Q and D we get the tool for work. It is possible to set the necessary uncertainties on a special filter and transmit UHF (or ultraviolet or pulses of a short-pulse laser) through it to form a program operator when constructing energy to perform the necessary goals. A program's appeal to itself makes it a self-program, from which oself will help to exit. May use recurrent method of constructing a pseudo-living energy. An uncertainty form is a qualitative leap compared to the pre-limit form of its process, i.e., is an element of another space of a higher level, i.e., it is a "hole" (passage) between these spaces. May consider the new dynamic operator $SIprt_B^A$ = A$|||_B$B, $|||_B$ is ||| in norm(format) of B. As soon as we start working with uncertainty, it ceases to be uncertainty and becomes certainty. Uncertainties are “holes” through which, with the right settings, the right actions can be performed to obtain the appropriate results, in particular, "loopholes" to other worlds. They correspond to subtle energies that allow you to do this. Uncertainty usually corresponds to a large concentration of elements in it with large changes in them. This gives it great opportunities. Transforming uncertainties through |||, we get singularities, or better to say that many singularities correspond to uncertainties through |||. Any Uncertainty correspond to energy type. Random events are uncertainties type, where probability is a certainties measure and entropy - a uncertainties measure. Also, it is for fuzzy. Uncertainties are higher level elements than usual ones, in particular, self- level elements and higher. Manifestations of such energies at our level give uncertainties. Constructing pseudo-living energy is Uncertainty constructing first of all, which correspond to singularity. Then needed dynamic program operator works in SmnSprt activation. May consider regular uncertainties with weights, random uncertainties, singular uncertainties, hierarchical uncertainties, uncertainty operators as program as mathematicals. For example, $Sprt_w^{\{A|\mathrm{q}\}}$, q are weights, A = (|||, self, oself, self -oself, paself, …, pa|||, pa(self -oself), etc). $(|||_s)^{-1}(|||_Q)^{-1}|||_Q$ = $(|||_s)^{-1}$. A$|||_x$B, $self_{(A,\,B)}x$, where A, B are objects, x is the capacity of space or x is object, A, B are capacities of space. paself is capable of penetrating into self, for example: a short-pulse laser, an electric arc, ball lightning etc.

May consider

$$\begin{pmatrix} self_{(A_{11},\, B_{11})}D_{11} \\ self_{(A_{21},\, B_{21})}A_{11} \quad self_{(A_{22},\, B_{22})}B_{11} \\ \dots \quad \dots \quad \dots \quad \dots \\ self_{(A_{n1},\, B_{n1})}A_{n-1,1} \quad \dots \quad \dots \quad self_{(A_{nm},\, B_{nm})}B_{n-1,m} \\ \dots \quad \dots \quad \dots \quad \dots \end{pmatrix},$$

$$\begin{pmatrix} A_{11}|||_{D_{11}}B_{11} \\ A_{21}|||_{A_{11}}B_{21} \quad A_{22}|||_{B_{11}}B_{22} \\ \dots \quad \dots \quad \dots \quad \dots \\ A_{n1}|||_{A_{n-1,1}}B_{n1} \quad \dots \quad \dots \quad A_{nm}|||_{A_{n-1,m}}B_{nm} \\ \dots \quad \dots \quad \dots \quad \dots \end{pmatrix} \text{etc.}$$

Let's consider the vector of energy levels of a non-living object A:

$$\begin{pmatrix} \dots \\ parelf\,A\left(decignation - \overline{\overline{\overbrace{\overbrace{A}}}}\right) \\ singelf\,A\left(decignation - \overline{\overbrace{\overbrace{A}}}\right) \\ subtle\ energy\ of\ object\ \ A\ \text{paradoxical}\ upper\ level\ (\,pa|||)\left(decignation - \overbrace{\overbrace{\overbrace{A}}}\right) \\ subtle\ energy\ of\ object\ \ A\ \text{paradoxical}\ mid-level\left(decignation - \overline{\overline{\overline{A}}}\right) \\ / \qquad\qquad\qquad\qquad\qquad\qquad \backslash \\ subtle\ energy\ of\ |||^{-1} \qquad\qquad\qquad\qquad subtle\ energy\ of\ ||| \\ \\ ordinary\ energy\ exhibited\ by\ an\ \ object\ \ A\left(decignation - \underline{A}\right) \ \leftarrow\ \overset{(\overline{A})}{the\ raw\ energy\ of\ an\ object\ \ A\left(decignation - A\right)} \end{pmatrix}$$

For usual self-energy of object may consider the object-equation:

$$Sprt(t)_{b(t)}^{b(t)} = Sprt(t)_t^{output\ \text{energy}(t)^{Sprt(t)_{b(t)}^{b(t)}}\, Sprt(t)_{Sprt(t)_{b(t)}^{b(t)}}^{input\ \text{energy}(t)}} \qquad (****_1),$$

can be rewritten as:

$$\text{y}(t) = Sprt(t)_t^{output\ \text{energy}(t)^{y(t)}\, Sprt(t)_{y(t)}^{input\ \text{energy}(t)}}, \quad Sprt(t)_{b(t)}^{b(t)} = \text{y}(t) \ (****_2).$$

For usual self-energy of object may try to consider the example of object-equation for $b(t)$:

$$Sprt(t)_{b(t)}^{b(t)} = Sprt(t)_t^{\left\{ b(t)^{Sprt(t)_{b(t)}^{b(t)}}\, Sprt(t)_{Sprt(t)_{b(t)}^{b(t)},}^{b(t)} \ output\ \text{energy}(t)^{Sprt(t)_{b(t)}^{b(t)}}\, Sprt(t)_{Sprt(t)_{b(t)}^{b(t)}}^{input\ \text{energy}(t)} \right\}} (*****_1),$$

$$\mathrm{Paself}(a) = a|||(-\,a) = {}^{a}_{a}\mathrm{Sprt},\ \mathrm{self}(a) = a|||\,a = \mathrm{Sprt}^{a}_{a},\ {}^{a}_{a}\mathrm{Sprt}^{a}_{a} = \mathrm{paself}(a)\ |||\ \mathrm{self}(a).$$

Let's consider the vector of energy levels of a living object A:

$$\left(\begin{array}{ccc}
 & \dots & \\
 & parelf\,A\left(designation - \overline{\overline{\overline{\tilde{\tilde{\tilde{A}}}}}}\right) & \\
 & singelf\,A\left(designation - \overline{\tilde{\tilde{\tilde{A}}}}\right) & \\
 & subtle\ energy\ of\ object\ \ A\ \text{paradoxical}\ upper\ level\ (\,pa|||)\left(designation - \hat{\tilde{\tilde{A}}}\right) & \\
 & subtle\ energy\ of\ object\ \ A\ \text{paradoxical}\ mid-level\left(designation - \overline{\overline{\overline{\overline{A}}}}\right) & \\
/ & & \backslash \\
subtle\ energy\ of\ |||^{-1} & & subtle\ energy\ of\ ||| \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{A}}} \\
\left(\underline{\underline{A}}\right) & & \overline{\overline{A}} \\
 & & \left(\overline{A}\right) \\
ordinary\ energy\ exhibited\ by\ an\ \ object\ \ A\left(designation - \underline{A}\right) & \leftarrow & the\ raw\ energy\ of\ an\ object\ \ A\left(designation - A\right)
\end{array}\right) \quad (*_{6.1})$$

The are equations $(**_{1.1})$, $(***_{1.1})$ from Part I for living objects.

Let's consider the vector of energy levels of an action A:

$$\left(\begin{array}{ccc}
 & \dots & \\
 & parelf\,A\left(designation - \overline{\overline{\overline{\tilde{\tilde{\tilde{A}}}}}}\right) & \\
 & singelf\,A\left(designation - \overline{\tilde{\tilde{\tilde{A}}}}\right) & \\
 & subtle\ energy\ of\ \text{action}\ \ A\ \text{paradoxical}\ upper\ level\ (\,pa|||)\left(designation - \hat{\tilde{\tilde{A}}}\right) & \\
 & subtle\ energy\ of\ \text{action}\ \ A\ \text{paradoxical}\ mid-level\left(designation - \overline{\overline{\overline{\overline{A}}}}\right) & \\
/ & & \backslash \\
subtle\ energy\ of\ |||^{-1} & & subtle\ energy\ of\ ||| \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{A}}} \\
\left(\underline{\underline{A}}\right) & & \overline{\overline{A}} \\
 & & \left(\overline{A}\right) \\
ordinary\ energy\ exhibited\ by\ an\ \ \text{action}\ A\left(designation - \underline{A}\right) & \leftarrow & the\ raw\ energy\ of\ an\ \text{action}\ A\left(designation - A\right)
\end{array}\right) \quad (*_{6.2})$$

May consider the induction from clotting. The result of it is the new self-type of a higher level than clotting result.

$$\left(\begin{array}{ccc}
 & \cdots & \\
 & parelf\,A\left(decignation-\overline{\overline{\overbrace{\overbrace{A}}}}\right) & \\
 & singelf\,A\left(decignation-\overline{\overbrace{\overbrace{A}}}\right) & \\
 & subtle\ energy\ of\ \text{induction}\ A\ \text{paradoxical}\ upper\ level\ (\,pa|||)\left(decignation-\overbrace{\overbrace{A}}\right) & \\
 & subtle\ energy\ of\ \text{induction}\ A\ \text{paradoxical}\ mid-level\left(decignation-\overline{\overline{\overline{\overline{A}}}}\right) & \\
/ & & \backslash \\
subtle\ energy\ of\ |||^{-1} & & subtle\ energy\ of\ ||| \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{A}}} \\
 & & \overline{\overline{A}} \\
\left(\underline{\underline{A}}\right) & & \left(\overline{A}\right) \\
ordinary\ energy\ exhibited\ by\ an\ \text{induction}\ A\left(decignation-\underline{A}\right) & \leftarrow & the\ raw\ energy\ of\ an\ \text{induction}\ A\left(decignation-A\right)
\end{array}\right) (*_{6.3})$$

For usual self-energy of object may consider the object-equation for $b(t)$:

$$Sprt_{b(t)}^{b(t)} = Sprt_t^{\left\{\begin{array}{c} Sprt_{b(t)}^{b(t)}{}_{b(t)} Sprt^{b(t)}{}_{Sprt_{b(t)}^{b(t)},}\ output\ \text{energy}(t)\ {}^{Sprt_{b(t)}^{b(t)}} Sprt^{input\ \text{energy}(t)}{}_{Sprt_{b(t)}^{b(t)}} \end{array}\right\}} (*_{6.4}).$$

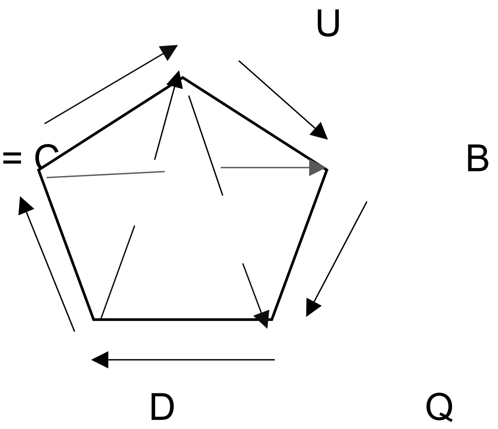
Physics of Singular Transformations

Any *Singular Transformations* in *Physics* are possible, since we live not only in the strip of inanimate objects and energies but also in the strip of living objects and living energies, in which much is possible that is not possible only in the strip of inanimate objects and energies. May use *Singular Transformations* in sociology, chemistry, engineering etc.

May consider the next example:

the structure ($*_{D.1}$) (Fig.1), where A goes into B, B goes into Q, Q goes into D, D goes into C, C goes into A, D goes out from A, A goes out from Q, C goes out from B, is used by the ancient Chinese concept of "wu-xing," for example, for energy meridians on the skin person, in this case (Fig.2): ($*_{D.2}$), ($*_{D.3}$), ($*_{D.4}$) will mean pathological changes.

Spt(U,B,Q,D,C)=

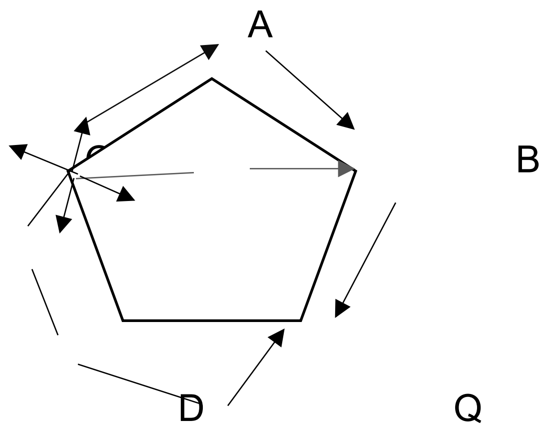


(*$_{D.1}$),

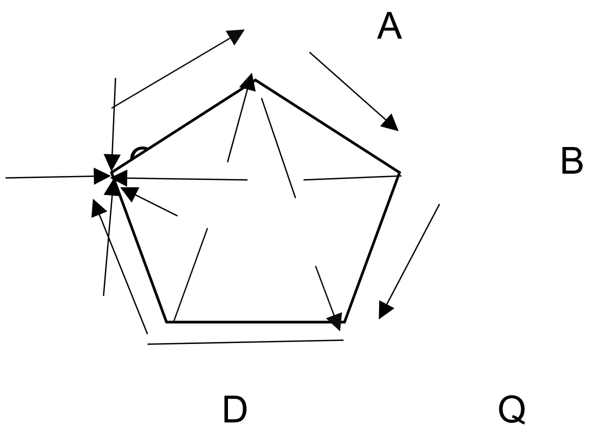
Fig. 1

for example, U = ${}^{A}_{A}Sprt^{A}_{A}$, B = $Sprt^{A}_{Sprt^{A}_{A}}$, Q = $Sprt^{A}_{A}$, D =${}^{A}_{A}Sprt^{Sprt^{A}_{A}}_{A}$,

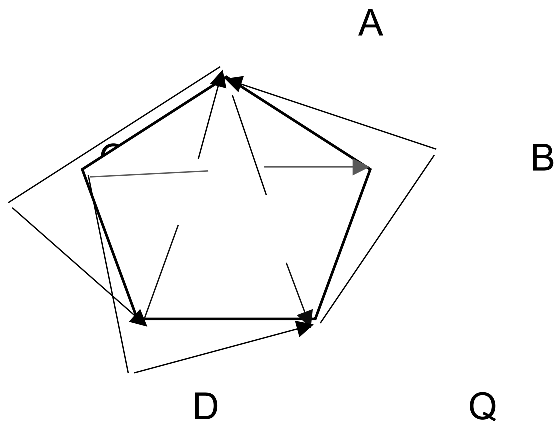
${}^{A}_{A}Sprt$ C= $\begin{pmatrix} {}^{()}_{()}Sprt^{A}_{A} \\ Sprt^{A}_{A} \end{pmatrix}$, for A = { }, Spt(U,B,Q,D,C) is virtual operator.



(*$_{D.2}$),



(*$_{D.3}$),



$(^{*}{}_{D.4})$,

Fig. 3

Self-interpretation ϵ H = (by interpretation ∞ of interpretation) (*decignation* − *si*in). Self-operator ϵ O = (by operator ∞ of operator) (*decignation* − *si*op). O_1 = (by O ∞ of O), …, O_{n+1} = (by O_n ∞ of O_n), …, O_∞.

$$\left(\begin{array}{cc} \multicolumn{2}{c}{\ldots} \\ \multicolumn{2}{c}{parelf\,(H)} \\ \multicolumn{2}{c}{singelf\,(H)} \\ \multicolumn{2}{c}{subtle\ energy\ of\ pa|||} \\ \multicolumn{2}{c}{\left(\overline{\overline{\overline{H}}}\right)} \\ / & \backslash \\ subtle\ energy\ of\ |||^{-1} & subtle\ energy\ of\ ||| \\ \underline{\underline{\underline{H}}} & \overline{\overline{\overline{H}}} \\ \left(\underline{\underline{H}}\right) & \overline{\overline{H}} \\ \underline{H} & \left(\overline{H}\right) \\ & \leftarrow\ H \end{array}\right)$$

,

$$
\left(\begin{array}{cc}
\multicolumn{2}{c}{\ldots} \\
\multicolumn{2}{c}{parelf\,(Q)} \\
\multicolumn{2}{c}{singelf\,(Q)} \\
\multicolumn{2}{c}{subtle\ energy\ of\ pa|||} \\
\multicolumn{2}{c}{\left(\overline{\overline{\overline{Q}}}\right)} \\
/ & \backslash \\
subtle\ energy\ of\ |||^{-1} & subtle\ energy\ of\ ||| \\
\underline{\underline{\underline{Q}}} & \overline{\overline{\overline{Q}}} \\
\left(\underline{\underline{Q}}\right) & \overline{\overline{Q}} \\
\underline{Q} & \left(\overline{Q}\right) \\
 & \leftarrow\ \ Q
\end{array}\right)
$$

$$
\left(\begin{array}{cc}
\multicolumn{2}{c}{\ldots} \\
\multicolumn{2}{c}{parelf\,(O_\infty)} \\
\multicolumn{2}{c}{singelf\,(O_\infty)} \\
\multicolumn{2}{c}{subtle\ energy\ of\ pa|||} \\
\multicolumn{2}{c}{\left(\overline{\overline{\overline{O_\infty}}}\right)} \\
/ & \backslash \\
subtle\ energy\ of\ |||^{-1} & subtle\ energy\ of\ ||| \\
\underline{\underline{\underline{O_\infty}}} & \overline{\overline{\overline{O_\infty}}} \\
\left(\underline{\underline{O_\infty}}\right) & \overline{\overline{O_\infty}} \\
\underline{O_\infty} & (O_\infty) \\
 & \leftarrow\ \ O_\infty
\end{array}\right)
$$

etc.

Physics of Singular Transformations

Any *Singular Transformations* in *Physics* are possible, since we live not only in the strip of inanimate objects and energies but also in the strip of living objects and living energies, in which much is possible that is not possible only in the strip of inanimate objects and energies.

Using Hamilton's canonical equations, we represent

$\overset{a}{\{p_1, \ldots, p_s, q_1, \ldots, q_s\}}\text{Sprt}\{\frac{\partial p_1}{\partial t} = -\frac{\partial H}{\partial q_1}, \ldots, \frac{\partial p_s}{\partial t} = -\frac{\partial H}{\partial q_s}, \frac{\partial q_1}{\partial t} = \frac{\partial H}{\partial p_1}, \ldots, \frac{\partial q_s}{\partial t} = \frac{\partial H}{\partial p_s}\}_a$ as a solution option for elementary particles.

Remark 1.7.19. The structure of an atom is an approximate paself: (approximate||| by nucleons)approximate|||(approximate self by electrons) as manifestation of it upper level.

Remark 1.7.20. Sprt^{a}_{a} allows you to access the energy entering the object - $\text{Sprt}^{a}_{input\ \text{energy}(t)}$ and the energy leaving it - $\text{Sprt}^{a}_{output\ \text{energy}(t)}$. ${}^{a}_{a}Sprt^{a}_{a}$ allows you to access the energy entering the object - ${}^{a}_{a}Sprt_{a}^{input\ \text{energy}(t)}$, ${}_{output\ \text{energy}(t)}^{a}Sprt^{a}_{a}$ and the energy leaving it - ${}^{a}_{a}Sprt_{a}^{output\ \text{energy}(t)}$ and other various manipulations by some a from ${}^{a}_{a}Sprt^{a}_{a}$. For example, ${}_{output\ \text{energy}(t)}^{a}Sprt_{a}^{input\ \text{energy}(t)}$ may correspond to the introduction of foreign energy into the body (parasites, etc.).

More complex ones are also possible: ${}_{a,\ output\ \text{energy}(t)}^{a}Sprt_{a}^{a,input\ \text{energy}(t)}$, ${}^{{}_{output\ \text{energy}(t)}^{a}Sprt_{a}^{input\ \text{energy}(t)}}_{a}Sprt^{a}_{a}$, ${}^{a,input\ \text{energy}(t)}_{a}Sprt_{a}^{a,input\ \text{energy}(t)}$ etc.

Supplement for Quantum Mechanics and Classical statistical Mechanics through Sprt-elements:

Using Hamilton's canonical equations [27], we represent

$$\overset{a}{\{p_1, \ldots, p_s, q_1, \ldots, q_s\}}\text{Sprt}\{\frac{\partial p_1}{\partial t} = -\frac{\partial H}{\partial q_1}, \ldots, \frac{\partial p_s}{\partial t} = -\frac{\partial H}{\partial q_s}, \frac{\partial q_1}{\partial t} = \frac{\partial H}{\partial p_1}, \ldots, \frac{\partial q_s}{\partial t} = \frac{\partial H}{\partial p_s}\}_a$$

as a solution option for elementary particles.

Variants of the Schrödinger equation $\frac{\partial \hat{\hat{\rho}}}{\partial t} + [\widehat{\hat{W}}, \hat{\hat{\rho}}] = 0$ of the form S_2f, S_3f are possible, using the forms (1.1) -(1.4) [16, 21]. The upper-level singularity of the Schrödinger equation $\frac{\partial \hat{\hat{\rho}}}{\partial t} + [\widehat{\hat{W}}, \hat{\hat{\rho}}] \equiv 0$

As a hypothesis

$\frac{\partial \mathrm{J}(\hat{\hat{\rho}})}{\partial t}$ + [J($\widehat{\hat{W}}$),J($\hat{\hat{\rho}}$)]=0, J(A) = ${}_{A}^{A}Sprt_{A}^{A}$

$\frac{\partial \mathrm{U}(\hat{\hat{\rho}})}{\partial t}$ + [U($\widehat{\hat{W}}$),U($\hat{\hat{\rho}}$)]=0, U(A) = ${}_{()}^{()}Sprt_{A}^{A}$,

using quasi-measure: $\begin{pmatrix} ls \\ \mu s \\ \rho_{ls,\mu s} \\ \rho \end{pmatrix}$.

Remark S1. Let us introduce the following notations: $\mathrm{self}_{\mathrm{B}}$A is self A by form B, C $|||_{\mathrm{B}}$A is ||| A with C by form B. You can consider any functions, operators: for example, g($\mathrm{self}_{\mathrm{B}}$A, d), $\mathrm{self}_{\mathrm{B}}$A(B($\mathrm{self}_{\mathrm{B}}$A, d), q) etc. If usual self can be associated with the action "in a circle" on itself, then the action "in a double circle in the form of an eight" on itself can be associated with a 2-self, the action "in a triple circle in the form of 3 circles intersecting only at one point" on itself can be associated with a 3-self etc.

A set B containing itself as N elements will be denoted by NselfB. (φ)selfA containing itself as A^{φ}, (φ)paselfA containing itself as A^{φ} ||| $A^{-\varphi}$, (f(φ))selfA containing itself as f(A, φ), (f(φ))paselfA containing itself as f(A, φ) ||| f(A^{-1}, φ).

The example of difference between the internal and external form of the same self: the external form of the self of a living organism is represented by an energy cocoon and, at the object level, by a physical body, and the internal form of the self of a living organism is represented by numerous DNA and RNA.

q↑|↓q has self-structure for q and paself-structure by directions. An atom has paself for electric-structure, self-structure for by electron orbitals, ||| by nucleons.

Likewise, any other object (process) can have different singular characteristics.

oselfA= ${}_{A}^{A}Sprt$ can be interpreted also as (-self)A.

For example, you can study the "side" version of self: sidselfA is A next to the side of itself.

The hierarchy of singularities of one can be included in the hierarchy of singularities of another, for example, the hierarchy of singularities of the fruit of a tree is included in the hierarchy of singularities of a tree, the hierarchy of singularities of a person is included in the hierarchy of singularities of the Universe etc. self of the fruit ⊂ self of the tree ⊂ self of the Universe.

$self_B A$, self A can be not only for objects (processes) but also for their characteristics, structures etc.

Remark S2. Classical science forms its abstractions as the intersection of properties of objects (processes), our approach to the formation of singularities is through |||.

Remark S3. All dynamic operators and examples with them in [1]-[15], [16, 21] are examples of constructing pseudo-living energies.

Remark S4. Self is the resting point of the accumulation process. A living organism is protected from further folding (compression) of its energy into the upper levels and loss of our energy cocoon until its I is destroyed. Some fearless people, prolonging the folding (compression) of energy into the upper levels of their organism and reaching other states of awareness, stop this folding (compression) of their energy into the upper levels in time so as not to lose protection. In the limit, "they include all states of awareness at once and move to another, higher level of energy accumulation, removing the protection at the previous level: "burning with fire from within." Here (in this paper) by accumulation we mean: increasing the capacity by increasing the level.

Note S5. Supercoiling of DNA before its duplication shows the role of "folding" into a higher level of its self to perform superactions.

Remark S6. As one of the options A|||B can be tried to be interpreted as a generalization (1.1) [16, 21]: by the form

(2(1, (2,1)),1) (1.7.4),

or (1.1.4.1), (1.1.4.2) [16, 21],

and the corresponding $self^2$ by the form

(1, (2(1,(2,1)),1)) (1.7.5),

for pa||| by the form

(2((1, (2(1,(2,1)),1))), 1) (1.7.6)

or (1.1.4.3), (1.1.4.4) [16, 21].

$self^2A$= paselfA = ${}_A^A Sprt_A^A$ can be tried to interpret in the following ways, depending on the choice of interpretation of the operation for $Sprt_B^A$ =A*B or $Sprt_B^A$ =A╪ B, as selfA*self$(A)^{-1}$ or selfA*self(-A) respectively. selfA does not mean accumulation for A, but means a new, higher level of energy for A due to its new accumulative structure. There are an infinite number of qualitatively different other variants of accumulation. We simply proceed from our usual 2 - interpretations of the world. Therefore, we limit ourselves to the formula A|||B. If through 3 –

interpretation, then we can consider the $\begin{matrix} A & & B \\ & |||_3 & \\ & C & \end{matrix}$ - accumulation and its

degenerations – self-type structures, for example $\begin{matrix} A & & A \\ & |||_3 & \\ & A & \end{matrix}$ etc. It is also possible

through 4 – interpretation etc. Namely, self-type structures are the structures of self-organization. May consider type of ||| : A-||| = |||A||| for any A, accumulation-(pa|||)D = D(pa|||)accumulation(pa|||)D for any D, paself-accumulation,

accumulation|||C for any C, self ||| Q for any Q, $\begin{pmatrix} \text{accumulation} - (\text{pa}|||)\text{D} \\ \text{paself} - \text{accumulation of D} \\ \text{accumulation}|||\text{D} \\ \text{self } ||| \text{ D} \\ \textit{the raw energy of } |||D \\ \textit{the } \text{manifestation } \textit{of } |||D \end{pmatrix}$

is levels accumulation of D etc.

An accumulation means the folding (squeezing) of energy from the lower levels to the upper levels.

Remark S7. self-induction: when the induction changes, we obtain an induction on itself.

Remark S8. May consider the manifestation of self-operator A (subject (master) of operator A) according to B. May consider the manifestation of self-action Q (subject (master) of action Q) according to C. May consider the manifestation of self-D (subject (master) of D) according to R for any D, R.

Remark S9. Energy manifests itself through actions, objects ("gives birth" to actions, objects). Subject ||| in the cocoon of a living organism is the assemblage point. It also has its own subject (master), who carries out its necessary adjustment, control. The "tipper" that gives energy to a living organism has the type $\overrightarrow{\text{self} - o\text{self}}$.

Remark S10. One can try to interpret it in a very simplified way self-level of a living organism as self(oself- self). Then one can try to interpret it in a very simplified way self-level of energy-producing beams for living organisms as $\overrightarrow{\text{self} - o\text{self}}$. Then self-level of energy others objects - self.

Remark S11. Let us introduce some generalizations of |||: a) (m → n)|||, (2 → 1)|||, b) (A → B)||| for any A, B, c) $\begin{matrix} A & & B \\ & C & \end{matrix}$ |||, …, (∀Q)||| etc.

Types, forms internal and external, structures of potential self, potential ||| and others potential singularities

Self characterizes by the average level, at the lower level it can only be in potential form, for example, DNA in living organisms. Denotes a potential self as poself, potential ||| as po|||**.** Self-sets, self-(material objects) can only be classified on object level as a potential selfes. Denotes a potential self, containing itself potentially, but its potentiality does not contain its potentiality, as p1self. It is also possible to consider any other types of potential singularities, all sorts of potentially singular structures, forms, degrees, characteristics. poselfA = A(p|||**)**A. May consider po(po(…(poselfA)…)).

One can try to simplify the energy cocoon of a living organism with the expression paselfA= ${}^{A}_{A}Sprt^{A}_{A}$, then we can try to simplify the assemblage point on the energy cocoon using expression $\xrightarrow{{}^{A}_{A}S\nabla prt^{B}_{A}}$ for a female and $\xrightarrow{{}^{A}_{A}S\Delta prt^{B}_{A}}$ for a male, where B are an external energy fibers of the Universe, ∇ here means the shape of the assemblage point in the form of a cone, facing "funnel" upwards, and Δ - "funnel" downwards, → sets the direction from action ${}^{A}_{A}Sprt$ to action $Sprt^{B}_{A}$; you can try to

simplify the energy gap on the energy cocoon at the level below the navel on the energy cocoon with expression $\xleftarrow{{}_{InB}^{A}Sprt_{A}^{A}}$, where InB are an internal energy fibers, ← sets the direction from action $Sprt_{A}^{A}$ to action ${}_{InB}^{A}Sprt$, similar, but to a lesser extent than this energy gap, can be imagined for the energy manifestations of the eyes.
To obtain energies of a higher level, it is necessary to use level accumulation structures.
In our dynamic mathematics, instead of repeating identifiers of specific material objects, energies, special singularities are used, their characteristics are another matter.
The structure of dynamic measuring instruments can be based on the following dynamic structures: $\{\}\overset{\{\}}{\underset{\{\}}{\mathrm{SCprt}}}\{\}$, $\{\}\overset{\{\}\ \{\}}{\underset{\{\}\ \{\}}{\mathrm{SCprt}}}$, $\overset{\{\}}{\underset{\{\}}{\mathrm{SCprt}}}\{\}$.

Some available types of "pseudo-living energy"

a) UHF with amplitude close to zero, b) short pulse laser pulses, c) UHF with twisting around a hollow wire, d) ultraviolet, e) in the form of ball lightning, h) vortices from UHF with almost zero amplitude, q) electric arc with almost zero amplitude, f) UHF by a "twisted" wire with minimal loops, made using nano-technology, by manipulating frequencies, it is possible to "construct" various pseudo-living energies, g) for ultraviolet similar waveguide, r) vortices from ultraviolet etc.

Supplement 2

Remark W. "Invisibility" of subtly energies can be explained using the example of a wave with a propagation law w(t, k) = c(k)sin(kt), $\lim_{k\to\infty} c(k) = 0$, $\lim_{k\to\infty} \frac{c(k)}{k^2} = Q \neq 0$: $\frac{d^2 w(t,k)}{dt^2}$ responsible for the force and energy will be a normal (non-zero) value, unlike the amplitude of the wave itself, which will tend to zero, when $k \to \infty$.

When the devices cannot record the wave due to its very small amplitude, the wave will act. Moreover, in the limit we obtain a singularity of the type $\uparrow \mathrm{I} \downarrow_{-Q}^{Q}$.

Remark W1. Information is the interpretation of subtle energies - one of their manifestations. Direct knowledge is the interpretation, in particular, of external singularities through internal ones.

Remark W2. Protection against virus A: paself(A).

Remark W3. Based on SmnSprt [16, 21], using grown elements of the central nervous system similar to the human central nervous system (in particular, neurons), one can try to create an Energy Internet to connect to subtle energies.

Remark W4. Any self-object A can be interpreted as a kind of equation, a problem with an unknown A, and vice versa, any equation, any problem can be presented as a definition of a self-object by |||.

Remark W5. Solving problems (equations): 1) by ${}^{\mathrm{problemA(x)}}{}_{x}Sprt$, 2) by ${}^{\mathrm{problemA(x)}}_{\mathrm{problemA(x)}}Sprt$ or $\mathrm{problemA(x)}|||^{-1}\mathrm{problemA(x)}$, x - the desired value, here removing self with $\mathrm{problemA(x)}$, 3) ${}^{\mathrm{problemA(x)}}_{\mathrm{problemA(x)}}Sprt^{\mathrm{problemA(x)}}_{\mathrm{problemA(x)}}$ or ${}^{\mathrm{problemA(x)}}{}_{\mathrm{x}}Sprt^{\mathrm{x}}_{\mathrm{problemA(x)}}$ - paradoxical solving, SmnSprt||| $\mathrm{problemA(x)}$, the manifestation of this singularity should give x (so-called "direct knowledge"). Similarly for the study of other objects and material processes too etc.

Remark W6. For the development and use of directly parallel algorithms, programs, directly parallel processors and directly parallel RAM are required. For example, the DNA double helix is a directly parallel program and, moreover, a self-program.

Remark W7. Energy of a living organism:

$$\mathrm{ffg}(\mathrm{r},\ \mathrm{a}(E_q)) = \mathrm{ffSprt}\left\{ {}^{q\begin{pmatrix} a & & a \\ \mu_1 & \mathrm{ffSrt} & \mu_1 \\ a & & a \end{pmatrix}}{}_{W_q} fSprt^{E_q}_{\substack{q\begin{pmatrix} a & & a \\ \mu_1 & \mathrm{ffSrt} & \mu_1 \\ a & & a \end{pmatrix} \\ \mu \\ t_0}},\quad fSprt^{\{E^{ex} l^{d_r}\}}_{d_r\left(E_{in} l^{d_r}\right)} \right\} \quad (**_{2.1}).$$

$\begin{matrix} a & a \\ \mu_1 \text{ffSrt} & \mu_1 \\ a & a \end{matrix}$ -internal energy of a living organism, q- a gap in the energy cocoon of a living organism, r-the position of the assemblage point d_r on the energy cocoon of a living organism, W_q- energy prominences from the gap in the cocoon of a living organism, E_q-external energy entering the gap in the cocoon of a living organism,$E^{ex}l^{d_r}$ - a bundle of fibers of external energy self-capacities from outside the cocoon, collected at the point of assembly of the cocoon of a living organism at time t_0, $E_{in}l^{d_r}$- a bundle of fibers of external energy self-capacities from inside the cocoon, collected at the point of assembly of the cocoon of a living organism in the same position r of the assemblage point d_r. d_r is the subject of identifying the energy fibers of the subtle energy of the Universe in position r both outside and inside the cocoon.

Energy with measure of fuzziness μ_1, μ_2 of a living organism of a person:

$$\text{ffpg}(\text{r}, \text{a}(E_q)) = \text{ffSprt}\left\{ {}^{q}\begin{pmatrix} a & a \\ \mu_1\text{ffSrt}\mu_1 \\ a & a \end{pmatrix} {}_{W_q} fSprt^{E_q}_{q\begin{pmatrix} a & a \\ \mu_1\text{ffSrt}\mu_1 \\ a & a \end{pmatrix}}, \quad fSprt^{\{E^{ex}l^{d_r}\}}_{d_r\left(self\left(E_{in}l^{d_r}\right)\right)} \right\}_{\substack{\mu \\ t_0}}$$

(***$_{2.1}$).

(**$_{2.1}$), (***$_{2.1}$) can be interpreted as ffSprt- program operators.

$$\overbrace{\overbrace{ffSprt}} = \text{ffSprt}\left\{\text{ffpg}\left(\text{r}_1, \text{a}\left(E_q\right)\right), \text{ffpg}\left(\text{r}_2, \text{a}\left(E_q\right)\right), \ldots, \text{ffpg}\left(\text{r}_i, \text{a}\left(E_q\right)\right), \ldots, \text{ffpg}\left(\text{r}_N, \text{a}\left(E_q\right)\right)\right\}_{\substack{\mu \\ \overbrace{\overbrace{ffSprt}}}}$$

(**$_{2.2}$),

N is the number of assemblage point positions. This is the definition of $\overbrace{\overbrace{ffSprt}}$ - singularity of exit to a higher level. r_i by its action = ffSprt $\overset{\{\,\}}{\underset{\{\,\}}{\mu}}$, an assemblage point

$$d_{r_i} \text{ by its action} = \text{ffSprt}\ \{\,\}^{\overset{\{\,\}}{\mu}}_{\underset{\{\,\}}{\mu\ \text{ffSprt}}}\ .$$

Remark W8. Directly parallel actions in any experimental science leads to self-type structures, for example, directly parallel evidence (directly parallel logic).

Remark W9. Let us introduce the notations of the||| result - |||rt and ||| process - |||prt. Let us introduce the notation of absolute chaos: I   I. Singularity ∀|||no creates a field. The absolute change is the absolute chaos. The absolute rest is the emptiness.

Remark W10. Chronic, systemic diseases form in the body self-type harmful structures, for example, $Sprt^{disease\ A}_{disease\ A}$, that is why it is so difficult to cure them.. To cure them needs $^{disease\ A}_{disease\ A}Sprt$ or $|||^{-1} disease\ A$ etc.

Remark W11. Induction from change is self- change (change spirit).

Remark W12. Induction from ||| is self- ||| (||| spirit).

In fact, the classification of singularities determines the classification of outputs from our 2-world to other levels in the 2-interpretation. Science is 2-interpretation and 2-classification. In principle, there can be nothing else, and that’s not bad either.

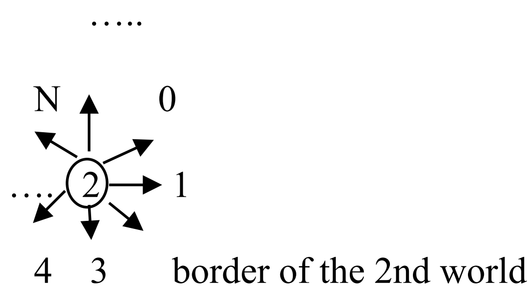


Fig.1. (2→ i)-connections, I = 0, 1, 2, …, N, …

Remark W13. Function $\delta(x)$ is actually a functional of singularity $\uparrow \mathrm{I} \downarrow_0^\infty$.

Remark W14. All singularities can act as program operators in a special type of programming - singular programming.

Remark W15. The identification of all singularities can be considered as the new higher-level singularity.

Remark W16. You can set norms for the same type singularities and study their topologies.

Singularities within singularities.

Increasing the level of singularity in the internal singular parts in singularities, in particular, for microwave alternating current, corresponding to the upper level through the identification of the corresponding Maxwell equations.

Partial self-type singularities.

Consider a third type of capacity in itself. For example, based on $Srt_x^{\{a\}}$, where $\{a\} = (a_1, a_2, \ldots, a_n)$, i.e. n - elements at one point, we can consider the capacity $S_3 f$ in itself with m elements from $\{a\}$, $m<n$, which is formed according to the forms from (1.1) – (1.4)[16, 21] and corresponding generalizations of (1.4)[16, 21] on (1.3.1) - (1.3.4)[16, 21], etc. (1.3), (1.4) are represented through the usual 2-bond. Science is the discipline of 2-connections, since everything in science is carried out through 2-connected logic, quantum logic is also a projection of 3-connected logic onto 2-connected logic. (1.3.1) - (1.3.4) schematically interpret the formation of capacity in itself through a pseudo 3-connected form with a 2-connected form.

Remark W17. Hypothesis G.1: Considering (1.7.1), we can assume that access to the upper level can be achieved through $Sprt_{Sprt_{A_0}^{A_0}}^{Sprt_{A_0}^{A_0}}$, and access to the middle level can be achieved through $Sprt^{A_0}_{A_0+Sprt^{A_0}_{A_0}} + Sprt_{A_0}^{A_0+Sprt^{A_0}_{A_0}}$.

Remark W18. The same in Hypothesis 1.7 applies to real problems: identifying the conditions of the problems with their request will give the singularity of the upper level of the problems. It is clear that the upper-level singularity corresponds not only to one object, process, task, etc., but also to a whole class of those corresponding to this singularity. The upper level is the identification of everything that is there, by definition. The upper level of objectivity (i.e., the boundary of objectivity) is the identification of all objects. The necessary manifestations of the upper level on the lower ones can be carried out through the appropriate settings in the upper level. Then it is quite possible, through the use of dynamic programming in the required activation (via microwave with minimum amplitude and maximum frequency, ultraviolet), to transfer S_{mnSt} to the boundary of objectivity to perform the desired task, in particular, for the necessary transformation, the necessary action etc. Using the work of 2023 Nobel Prize winners in physics Ferenc Kraus and his colleagues Pierre Agostini and Anna Lhuillier, their experimental methods of generating attosecond pulses of light to study the dynamics of electrons in matter, we will attempt to carry out the experimental part of our work as soon as we receive a specially equipped laboratory and funding. It is clear that the upper-level singularity corresponds not only to one object, process, task, etc., but also to a whole class of those corresponding to this singularity. Therefore, in particular, a transition to other elements of this class is possible.

Hypothesis G.2: The upper level is the identification of everything that is there, by definition.

The level that is below the lower level of objects is the level of their ordinary emanations from them - the level of ordinary energies. In particular for mathematical objects - equations, these are their solutions. For any mathematical object, one can give definitions of its singular generalizations, and not only for mathematical ones, in particular, all real objects and processes have an upper (singular) level.

Remark W19. So far we have used all sorts of (algebraic) structures to interpret some simplified processes and their results. Unfortunately, sometimes their great complexity is not entirely justified, so here we will try to interpret them through geometric constructions.

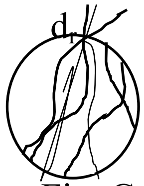


Fig. G.1

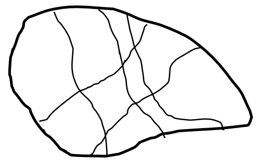


Fig. G.2

Fig. G.1 we will try to interpret the energy of a living organism. The ellipse represents a cross-section of the energy cocoon of a living organism, d_r is the assembly point on it, curved lines inside and outside are the energy fibers of the Universe, r-the position of the assemblage point d_r on the energy cocoon of a living organism.

Fig. G.2 we will try to interpret the energy of a non-living object. Shape border represents a cross-section of the energy cocoon of a non-living object; the curved lines are the energy fibers of the Universe enclosed in the cocoon of the object. In particular, string theory considers an elementary particle as a "string," although in our opinion it is more natural to consider an elementary particle as a manifestation of a "string," an energy fiber of the Universe. Energy cocoons are not structures of our object world; they are structures of energy space, the manifestation of which is our object world. For example, it is quite possible to try to interpret the nucleus of an atom as a manifestation of the intersection of such fibers, which are actually incubators of protons and neutrons that make up the nucleus of an atom, and the nucleus of a cell of a living organism as a manifestation of the intersection of such fibers, which are actually incubators of chromosomes with DNA. For example, (Fig. G.3) it is to try to interpret an atom ${}^{4}_{2}He$ as the cocoon with two layers of self-capacity in the form of orbitals that surround the intersection of energy fibers - incubators of protons and neutrons.

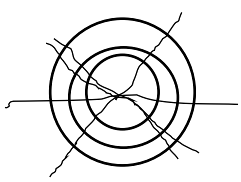


Fig. G.3

Since the energy fibers of the Universe have an energy type of not lower than paself, then we receive ordinary energy as a manifestation of paself both when "self-breaking" connections and when they are formed. An example is thermonuclear fusion.

May consider the following dynamic operator:

$XC(w, q, g_1, g_2) = \overset{q}{\underset{w}{g_2}}SCprt\overset{w}{\underset{q}{g_1}}\uparrow I\downarrow\overset{q}{\underset{w}{g_2}}SCprt\overset{w}{\underset{q}{g_1}}$, for example, w – our World.

May consider the new concept: paself(connection). Energy is given by self-destructive connections and forming connections. Let us introduce the notations: B_{con} = connections, A_{con} = ||| of connections, D_{con} = pa||| of connections.

May consider: B_{con}^{n}, B_{con}^{φ}, B_{con}^{∞}, $B_{con}^{B_{con}}$, A_{con}^{n}, A_{con}^{φ}, A_{con}^{∞}, $A_{con}^{A_{con}}$, D_{con}^{n}, D_{con}^{φ}, D_{con}^{∞}, $D_{con}^{D_{con}}$, parelf(B_{con}^{n}), singelf(B_{con}^{n}) etc. Self is eigenoperator of operator self: self(self(A)) = self(A)|||self(A) = self(A). oself is eigenoperator of operator oself: oself(oself(A)) = oself(A). May consider the next new singularities: g(A)|||g(A) = hɑg(A), ψ(D)|||ψ(D) = Q(D), L(S)|||L^{-1}(S) = R(S), φ(U)$|||^{-1}$φ(U) = G(U) etc. May consider o||| = $(|||^{-1})^2 = (|||^{-1})\,(|||^{-1})$, SCprt $\overset{(|||^{-1})}{\underset{(|||^{-1})}{g_1}}$ = self($|||^{-1}$), $\overset{(|||^{-1})}{\underset{(|||^{-1})}{g_1}}$ SCprt = oself($|||^{-1}$). $|||_c A$ is ||| of elements from A among themselves by c. $|||_B{}^{-1} A$ is $|||^{-1}$ of elements from A among themselves by B. May consider parelf($|||_B{}^{-1}$), singelf($|||_B{}^{-1}$), any operator F($|||_B{}^{-1}$) etc. May consider the new following probabilities: P(Vprt), P(PrSCprt) etc.

1.8 Elements of Dynamic Chemistry

Chemical reactions are examples of |||st substances that can be carried out at the usual level (i.e., this is a degeneration of |||st substances that in the general position are carried out through the upper level). That is, these are the so-called quasieigenvalues of |||st substances.

If we introduce for the energy of a chemical element the concept self$_g$ -energy (the concept of a chemical element was introduced earlier): SCprt $\underset{R}{\overset{R}{g}}$, R=Q+D, Q- internal energy, D is the energy of its interaction with the external environment.

SCprt $\underset{R}{\overset{R}{g}}$ = SCprt $\underset{Q+D}{\overset{Q+D}{g}}$ =SCprt $\underset{Q+D}{\overset{Q}{g}}$ +SCprt $\underset{Q+D}{\overset{D}{g}}$ =SCprt $\underset{Q}{\overset{Q}{g}}$ +SCprt $\underset{D}{\overset{Q}{g}}$ +SCprt $\underset{Q}{\overset{D}{g}}$ +SCprt $\underset{D}{\overset{D}{g}}$, SCprt $\underset{Q}{\overset{Q}{g}}$ - internal self$_g$ -energy, SCprt $\underset{D}{\overset{D}{g}}$ -the external self$_g$ -energy, SCprt $\underset{D}{\overset{Q}{g}}$ - object component of a chemical element, SCprt $\underset{Q}{\overset{D}{g}}$ - usual energy component of a chemical element. We describe the usual chemical reactions for the SCprt $\underset{D}{\overset{Q}{g}}$ -component using the SCprt $\underset{Q}{\overset{D}{g}}$-component. A self$_g$ -molecule (self$_g$ -atom, self$_g$ -(elementary particle))) as a capacity can have the following types of self$_g$: self$_g$ -set, self$_g$ -structure, self$_g$ -hierarchy or its elements that generates this self$_g$ -molecule (self$_g$ -atom, self$_g$ -(elementary particle))). SCprt $\underset{R}{\overset{R}{g}}$ corresponds to crystal. For example, SCrt $\underset{\{CO_2\}}{\overset{\{CO_2\}}{g_{usual\ \mathrm{crystal}}}}$ corresponds to crystal lattice of $\{CO_2\}$, SCrt $\underset{\{Al_2O_3\}}{\overset{\{Al_2O_3\}}{g_{usual\ \mathrm{crystal}}}}$ corresponds to sapphire crystal, , SCprt $\underset{\{DNA_K\}}{\overset{\{DNA_K\}}{g_{\mathrm{living\ organism}}}}$ corresponds to living organism K.

1.9 Elements of Dynamic Biology

Elements of NDynamic Morphology

May consider some Dynamic interpretation variants of Cell division:

a) $${}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}\left\{\underset{a}{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a + {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a}\right\} = {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}\left\{\underset{a}{\begin{matrix}\{cell\ pool\} \\ \left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a\right\}\end{matrix}\mathrm{Sprt}_a^a}\right\} +$$

$${}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}\left\{\underset{a}{\begin{matrix}\{cell\ pool\} \\ \left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a\right\}\end{matrix}\mathrm{Sprt}_a^a}\right\}$$

Result $${}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}\left\{\underset{a}{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a + {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a}\right\} + {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}\left\{\underset{a}{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a + {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a}\right\},$$

b) $${}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}\left\{\underset{a}{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a + {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a}\right\} = \begin{matrix}\{cell\ pool\} \\ \left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a\right\}\end{matrix}\mathrm{Sprt}\left\{\underset{a}{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a}\right\} +$$

$$\begin{matrix}\{cell\ pool\} \\ \left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a\right\}\end{matrix}\mathrm{Sprt}\left\{\underset{a}{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a}\right\}$$

Result $${}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}\left\{\underset{a}{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a + {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a}\right\} + {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}\left\{\underset{a}{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a + {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a}\right\},$$

c) $${}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}\{\underset{w}{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a + {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a}\} = {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}\{\underset{w}{\begin{matrix}\{cell\ pool\} \\ \{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a\}\end{matrix}\mathrm{Sprt}_a^a}\} +$$

$${}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}\{\underset{w}{\begin{matrix}\{cell\ pool\} \\ \{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a\}\end{matrix}\mathrm{Sprt}_a^a}\},$$

Result $${}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}\left\{\underset{w}{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a + {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a}\right\} + {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}\left\{\underset{w}{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a + {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}_a^a}\right\}$$

d) ${}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}\left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{a}_{a} \underset{w}{+} {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{a}_{a}\right\} = {}^{\{cell\ pool\}}_{\left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{a}_{a}\right\}}\mathrm{Sprt}\underset{w}{\left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{a}_{a}\right\}} +$

${}^{\{cell\ pool\}}_{\left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{a}_{a}\right\}}\mathrm{Sprt}\underset{w}{\left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{a}_{a}\right\}},$

Result ${}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}\left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{a}_{a} \underset{w}{+} {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{a}_{a}\right\} + {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}\left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{a}_{a} \underset{w}{+} {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{a}_{a}\right\}.$

Energy of living organism:

$$Q(b, a, p, q, t) = {}^{\left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{b_1}_{b_1}, \dots, {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{b_N}_{b_N}\right\}}_{\left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{b_1}_{b_1}, \dots, {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{b_N}_{b_N}\right\}}\mathrm{PrSprt}^{\left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{b_1}_{b_1}, \dots, {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{b_N}_{b_N}\right\}}_{\left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{b_1}_{b_1}, \dots, {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{b_N}_{b_N}\right\}} +$$

$${}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{\left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{a_1}_{a_1}, \dots, {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{a_N}_{a_N}\right\}}_{\left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{a_1}_{a_1}, \dots, {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{a_N}_{a_N}\right\}} + {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}\underset{q}{\{p_1, \dots, p_M\}}.$$

the easy part: ${}^{\left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{b_1}_{b_1}, \dots, {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{b_N}_{b_N}\right\}}_{\left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{b_1}_{b_1}, \dots, {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{b_N}_{b_N}\right\}}\mathrm{PrSprt}^{\left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{b_1}_{b_1}, \dots, {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{b_N}_{b_N}\right\}}_{\left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{b_1}_{b_1}, \dots, {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{b_N}_{b_N}\right\}}$, $b_i =$

${}^{d_i}_{d_i}\mathrm{Sprt}^{d_i}_{d_i}$,

objective part: ${}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{\left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{a_1}_{a_1}, \dots, {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{a_N}_{a_N}\right\}}_{\left\{{}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{a_1}_{a_1}, \dots, {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{a_N}_{a_N}\right\}} + {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}\underset{q}{\{p_1, \dots, p_M\}}$, $a_i = {}^{c_i}_{c_i}\mathrm{Sprt}^{c_i}_{c_i}$,

$p_j = {}^{\{\,\}}_{\{\,\}}\mathrm{Sprt}^{r_j}_{r_j}$.

People are used to perceiving at the level of objectivity, where there are so many limitations. Although they have all the opportunities to reach higher levels, where there are an order of magnitude fewer limitations and this can be learned. People are devices for capturing the energies of these higher levels and using them after appropriate training and tuning. And these functions will also be partially performed by SmnSprt. Here the calculation will take place not so much in numbers as in structures, structure is the frame (skeleton) of energy.

Cure from bacteria, viruses, pathogenic fungi in SmnSprt (SmnSDS etc) with the right tw.

C for treatment of bacteria and pathogenic fungi from the equation:
${}^{a}_{a}\mathrm{Sprt}^{a+b+C}_{a} = {}^{a}_{a+b}\mathrm{Sprt}^{a}_{a}$, where ${}^{a}_{a}\mathrm{Sprt}^{a}_{a}$ - man as energy, ${}^{b}_{b}\mathrm{Sprt}^{b}_{b}$ - bacteria and pathogenic fungi as energy

D for treatment of virus and virus in oncological diseases from the equation:
${}^{a}_{a}\mathrm{Sprt}^{a+q+D}_{a+q+D} = {}^{a}_{a+q}\mathrm{Sprt}^{a}_{a}$, where ${}^{a}_{a}\mathrm{Sprt}^{a}_{a}$ - man as energy, ${}^{q}_{q}\mathrm{Sprt}^{q}_{q}$ virus as energy.

Bioresonance of pathogenic microorganisms according to Voll can classify them according to their usual energy manifestations.

A virus is ${}^{\{\}}_{\{\}}\mathrm{Sprt}^{a}_{a}$ or $\{\}|||(|||)\mathrm{p}a_{\{\}}$self. An energy of living organism is ${}^{a}_{a}\mathrm{Sprt}^{a}_{a}$ or $pa|||$ $(pa|||)$paself.

Remark 1.9.1. HYPOTHALAMUS is the subject (controller) of pa. It manifests its 2- essence through the eyes and the gap in the human energy cocoon at the level below the navel. In fact, it controls the Will of a person and allows his energy body to go to the border of objectivity and further and thereby make any replacements with objects, processes, etc.

Remark 1.9.2. Energy structure of the DNA, virus: D = p1aself{Q}, where p1a selfA = ${}^{\{\}}_{\{\}}\mathrm{Sprt}^{A}_{A}$. Energy structure of a cell of a living organism:
$((\{D\}|||\{Q_1\})$ pa||| $(|||_{\mathrm{paself}q}\{Q_2\})$.

Remark 1.9.3. ↓ I ↑ by thermophilic bacteria that can live at a temperature of about 400 degrees. Thermophilic bacteria survive at a temperature of 400 degrees, since they constantly have a replacement at their upper level for a significantly lower temperature. Bacteria, viruses, and pathogenic fungi do not have a top-level block, so they are difficult to deal with.

Remark 1.9.4. Some highly developed people can be on two levels at the same time: the normal and the upper. Such as Jesus Christ, some highly developed magicians. And some other highly developed people can easily go to their upper level. Both are masters of their upper level and therefore they can do a lot that people are not capable of. And the plot of Adam and Eve's expulsion from Paradise is nothing more than blocking their upper level for them, which is also the case with ordinary people. Social justice is fundamentally impossible as long as education (training) is based on achieving results, and not on the process. Education (training) based on getting results leads to blocking the upper level. This is done to easily control people. And in order to unblock it, education (training) based on the process and re-examination of previous experience with its alienation is necessary. In a living organism, the rotation of energy in the energy centers is counterclockwise, except for the energy center on the top of the head, where the movement of energy has been altered by foreign influence through ineffective education.

Remark 1.9.5. Bacteria, viruses, and pathogenic fungi do not have a top-level block, so they are difficult to deal with. DNA outside of their environment, virus by ${}^{\{\}}_{\{\}}Sprt^{A}_{A}$ as operator: in one's environment C DNA = ${}^{\{\}}_{\{\}}Sprt^{A}_{A}(C) = {}^{A}_{A}Sprt^{A}_{A}$, virus in environment D of living organism = ${}^{\{\}}_{\{\}}Sprt^{A}_{A}(D) = {}^{d}_{d}Sprt^{A+d}_{A+d}$, d is energetic part of D, which virus captures in environment D.

Remark 1.9.6. By quasi proper elements ||| we can understand its manifestations at a lower level in a similar form (i.e., proper elements by level (hierarchy)). We can also consider functions, operators, equations by level (hierarchy) etc. May consider parelf($|||_B{}^{-1}$), singelf($|||_B{}^{-1}$), any operator F($|||_B{}^{-1}$) etc.

Remark 1.9.7. The objective part Q of a living organism can be interpreted as a form of containment in point x in space - $\mathrm{SCprt}\overset{Q}{\underset{x}{g_1}}$, and the non-objective energetic part W around it as a form of containment in a point t in time - $\mathrm{SCprt}\overset{W}{\underset{t}{g_2}}$.

$$\overset{C_q}{\underset{Internal\ energy(Will)}{g_2}}\ \mathrm{SCprt}\ \overset{External\ energy}{\underset{C_p}{g_1}}$$ (**), C_p- assembly point position of cocoon C, C_q - gap in the cocoon C. May consider the following equation:

$$C = \overset{C_q}{\underset{Internal\ energy(Will)}{g_2}}\ \mathrm{SCprt}\ \overset{External\ energy}{\underset{C_p}{g_1}}.$$

May consider $\overset{C_q}{\underset{|||}{g_2}}\mathrm{SCprt}\overset{External\ energy}{\underset{C_p}{g_1}}$, $\overset{C_q}{\underset{|||}{g_2}}\mathrm{Self}\overset{External\ energy}{\underset{C_p}{g_1}}$.

$\mathrm{SCprt}\overset{\{DNA_K\}}{\underset{\{DNA_K\}}{g_{\text{living organism}}}}$ corresponds to living organism K.

1.10 Elements of Dynamic Economy

Let’s consider the following dynamic operator of economization process (DEprt - element)

$\mathrm{DEprt}\overset{A}{\underset{B}{w}}$ (1.10.1),

where A economizes in B by w, w is type (criterion) of economization; A, B, w may be fuzzy. The result of this operator is

$\mathrm{DErt}\underset{B}{\overset{A}{w}}$ (1.10.2).

Let’s consider the following dynamic operator of de-economization process

$\underset{C}{\overset{B}{r}}\mathrm{DEprt}$ (1.10.3),

where C de-economizes B by r; B, C, r may be fuzzy. The result of this operator is

$\underset{C}{\overset{B}{r}}\mathrm{DEprt}$ (1.10.4).

Let’s consider the following more general dynamic operator

$\underset{C}{\overset{Q}{r}}\mathrm{DEprt}\underset{B}{\overset{A}{w}}$ (1.10.5),

where A economizes in B by w, C de-economizes Q by r; A, B, C, Q, r, w may be fuzzy. The result of this operator is

$\underset{C}{\overset{Q}{r}}\mathrm{DEprt}\underset{B}{\overset{A}{w}}$ (1.10.6).

Let us introduce the notations: $\mathrm{sel}^{DE}f_w(\mathrm{A}) = \mathrm{DEprt}\underset{A}{\overset{A}{w}}$, $\mathrm{osel}^{DE}f_r(\mathrm{B}) = \underset{B}{\overset{B}{r}}\mathrm{DEprt}$,

$\mathrm{pasel}^{DE}f_{w,r}(\mathrm{A}) = \underset{A}{\overset{A}{r}}\mathrm{DEprt}\underset{A}{\overset{A}{w}}$.

$\underset{C}{\overset{B}{r}}\mathrm{DEprt}\underset{B}{\overset{A}{w}}$ corresponds to competitive relations between A and C. The result: $\underset{C}{\overset{B}{r}}\mathrm{DErt}\underset{B}{\overset{A}{w}}$.

May consider self-type(or |||-type) economic structures or paself-type(or pa|||-type) etc. In particular, through a built-in program in each economic cell of economic structure - an analogue of DNA.

May consider self-production by artificial intelligence(in particular, by SmnSprt [29], [30]), self-marketing by artificial intelligence(in particular, by SmnSprt), self-advertising etc. maself_q(A) is self-maximum of A by q. mnself_q(A) is self-minimum of A by q. NXself_q^w (A) is $\underset{w}{\min}|||\underset{q}{\max}$A(w, q) [18], [30].

self-modification of Leontief's input-output models [31] by artificial intelligence(SmnSprt):

maself_q(||c(t)||) under the following restrictions:

x(t) = A(t) x(t) + B(t)$\dot{V}$(t) +c(t), 0≤ x(t) ≤ V(t), $\dot{V}$(t) ≥ 0, c(t) ≥ c(t_0), $a_0(t)$x(t) ≤ π(t), G_1V(T) ≤ a_1, G_2V(T) = a_2,

c(t) is a vector - consumption of the population, x(t) is a vector - product output, V(t) is a production capacities vector, B(t) is a capital intensity matrix, A(t) is a direct costs matrix, $a_0(t)$ is a vector-line of direct labor costs for the production of a single set of products.

Dynamic generalization π-model [32], [18], [18], [30]:

|||π-model:

$Ax_t + D\eta_t + L_t c$ <||| x_t,

x_t <||| ξ_{t-1},

ξ_t <||| $\xi_{t-1} + \eta_t$,

$\langle l, x_t\rangle$ <||| L_t,

(x_t , ξ_t, η_t, L_t) >||| 0, t = 1, 2, …, T. This displays the 2-interpretation of the corresponding upper-level singularity.

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Part II. Dynamic uncertainties of Vprt, PrSCprt types

Introduction

Some examples of Dynamic uncertainties:

$$\left(\begin{array}{ccc} & \ldots & \\ & parelf\,A\left(decignation-\overline{\overline{\overbrace{\overbrace{\overbrace{A}}}}}\right) & \\ & singelf\,A\left(decignation-\overline{\overbrace{\overbrace{\overbrace{A}}}}\right) & \\ & subtle\ energy\ of\ object\ \ A\ \text{paradoxical}\ upper\ level\ (\,pa|||)\left(decignation-\overbrace{\overbrace{\overbrace{A}}}\right) & \\ & subtle\ energy\ of\ object\ \ A\ \text{paradoxical}\ mid-level\left(decignation-\overline{\overline{\overline{\overline{A}}}}\right) & \\ / & & \backslash \\ subtle\ energy\ of\ |||^{-1} & & subtle\ energy\ of\ ||| \\ \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{A}}} \\ \left(\underline{\underline{A}}\right) & & \overline{\overline{A}} \\ & & \left(\overline{A}\right) \\ ordinary\ energy\ exhibited\ by\ an\ \ object\ \ A\left(decignation-\underline{A}\right) & \leftarrow & the\ raw\ energy\ of\ an\ object\ \ A\left(decignation-A\right) \end{array}\right),$$

A = SmnSprt,

$$\left(\begin{array}{ccc} & \ldots & \\ & parelf\,A\left(decignation-\overline{\overline{\overbrace{\overbrace{\overbrace{A}}}}}\right) & \\ & singelf\,A\left(decignation-\overline{\overbrace{\overbrace{\overbrace{A}}}}\right) & \\ & subtle\ energy\ of\ object\ \ A\ \text{paradoxical}\ upper\ level\ (\,pa|||)\left(decignation-\overbrace{\overbrace{\overbrace{A}}}\right) & \\ & subtle\ energy\ of\ object\ \ A\ \text{paradoxical}\ mid-level\left(decignation-\overline{\overline{\overline{\overline{A}}}}\right) & \\ / & & \backslash \\ subtle\ energy\ of\ |||^{-1} & & subtle\ energy\ of\ ||| \\ \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{A}}} \\ \left(\underline{\underline{A}}\right) & & \overline{\overline{A}} \\ & & \left(\overline{A}\right) \\ ordinary\ energy\ exhibited\ by\ an\ \ object\ \ A\left(decignation-\underline{A}\right) & \leftarrow & the\ raw\ energy\ of\ an\ object\ \ A\left(decignation-A\right) \end{array}\right)$$

A = SmnSprt activation,

$$\left(\begin{array}{c}
\ldots \\
parelf\,A\left(decignation-\overline{\overline{\widetilde{\widetilde{\widetilde{A}}}}}\right) \\
singelf\,A\left(decignation-\overline{\widetilde{\widetilde{\widetilde{A}}}}\right) \\
subtle\ energy\ of\ object\ \ A\ \text{paradoxical}\ upper\ level\ (\,pa|||)\left(decignation-\widetilde{\widetilde{\widetilde{A}}}\right) \\
subtle\ energy\ of\ object\ \ A\ \text{paradoxical}\ mid-level\left(decignation-\overline{\overline{\overline{\overline{A}}}}\right) \\
\begin{array}{cc}
/ & \backslash \\
subtle\ energy\ of\ |||^{-1} & subtle\ energy\ of\ ||| \\
\underline{\underline{\underline{A}}} & \overline{\overline{\overline{A}}} \\
\left(\underline{\underline{A}}\right) & \overline{\overline{A}} \\
 & \left(\overline{A}\right) \\
ordinary\ energy\ exhibited\ by\ an\ \ object\ \ A\left(decignation-\underline{A}\right) & \leftarrow\ \ the\ raw\ energy\ of\ an\ object\ \ A\left(decignation-A\right)
\end{array}
\end{array}\right)$$

A = *upper level*.

$$\left(\begin{array}{c}
\ldots \\
parelf\,A\left(decignation-\overline{\overline{\widetilde{\widetilde{\widetilde{A}}}}}\right) \\
singelf\,A\left(decignation-\overline{\widetilde{\widetilde{\widetilde{A}}}}\right) \\
subtle\ energy\ of\ object\ \ A\ \text{paradoxical}\ upper\ level\ (\,pa|||)\left(decignation-\widetilde{\widetilde{\widetilde{A}}}\right) \\
subtle\ energy\ of\ object\ \ A\ \text{paradoxical}\ mid-level\left(decignation-\overline{\overline{\overline{\overline{A}}}}\right) \\
\begin{array}{cc}
— & \backslash \\
 & subtle\ energy\ of\ ||| \\
subtle\ energy\ of\ |||^{-1} & \overline{\overline{\overline{A}}} \\
\underline{\underline{\underline{A}}} & \overline{\overline{A}} \\
\left(\underline{\underline{A}}\right) & \left(\overline{A}\right) \\
ordinary\ energy\ exhibited\ by\ an\ \ object\ \ A\left(decignation-\underline{A}\right) & \leftarrow\ \ the\ raw\ energy\ of\ an\ object\ \ A\left(decignation-A\right)
\end{array}
\end{array}\right)$$

For our 2-interpretations, options with two lower "rings", with three, etc., with N concentric lower "rings" for N-interpretations are also possible etc. For example,

$$\begin{array}{c}
\ldots \\
\overline{\overline{\widetilde{\widetilde{\widetilde{A}}}}} \\
\uparrow \\
\overline{\widetilde{\widetilde{\widetilde{A}}}} \\
\uparrow \\
\widetilde{\widetilde{\widetilde{A}}} \\
\uparrow \\
\overline{\overline{\overline{\overline{A}}}}
\end{array}$$

$$\begin{array}{cccc}
 & \backslash & & \backslash \\
/ & ||| & / & ||| \\
|||^{-1} & \uparrow & |||^{-1} & \uparrow \\
\uparrow & \overline{\overline{\overline{A}}} & \uparrow & \overline{\overline{\overline{A}}} \\
\underline{\underline{\underline{A}}} & \uparrow & \underline{\underline{\underline{A}}} & \uparrow \\
\uparrow & \overline{\overline{A}} & \uparrow & \overline{\overline{A}} \\
\underline{\underline{A}} & \uparrow & \underline{\underline{A}} & \uparrow \\
\uparrow & \overline{A} & \uparrow & \overline{A} \\
\underline{A} & \uparrow & \underline{A} & \uparrow \\
 & \leftarrow \ A & & \leftarrow \ A
\end{array}$$

A. Vprt-elements and Their Applications

Introduction

The part task: to understand hierarchy of energies in the Universe and the principles of functioning of living energy (living organism, in particular, human, subtle energies), and then using these principles to "construct" artificial living energies (let's call them pseudo-living energies). We transform all kinds of uncertainties into new singularities and use them to describe uncertain energies. Here is considered paradoxical singularities (singularities of disintegration&synthesis), self-type singularities.

A.1 Vprt – elements, self-type Vprt-structures

A.1 Vprt – elements, self-type Vprt-structures

We consider dynamic operator

$$
\begin{array}{ccccccc}
\underline{D} & \leftarrow & C & & \cdots & & \\
\uparrow & & \uparrow & & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & & \\
\underline{\underline{Q}} & & \overline{R} & & \uparrow & & \\
\uparrow & & \uparrow & & \overline{\overbrace{\overbrace{K}}} & & \\
\underline{\underline{\underline{M}}} & & \overline{\overline{P}} & & \uparrow & & \\
\uparrow & & \uparrow & & \overbrace{\overbrace{G}} & & \\
\text{|||}^{-1} & & \overline{\overline{\overline{L}}} & & \uparrow & & \\
\backslash & & \uparrow & & \overline{\overline{\overline{F}}} & & \\
 & & \text{|||} & & & & \\
 & & /\ \text{Vprt} & & & \backslash & \text{(A.1.1),} \\
 & \overline{\overline{\overline{B}}} & & / & & \text{|||} & \\
 & \uparrow & & \text{|||}^{-1} & & \uparrow & \\
 & \overbrace{\overbrace{W}} & & \uparrow & & \overline{\overline{\overline{T}}} & \\
 & \uparrow & & \underline{\underline{\underline{A}}} & & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & & \uparrow & & \overline{\overline{Y}} & \\
 & \uparrow & & \underline{\underline{S}} & & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & & \uparrow & & \overline{U} & \\
 & \cdots & & \underline{E} & & \uparrow & \\
 & & & & \leftarrow & H &
\end{array}
$$

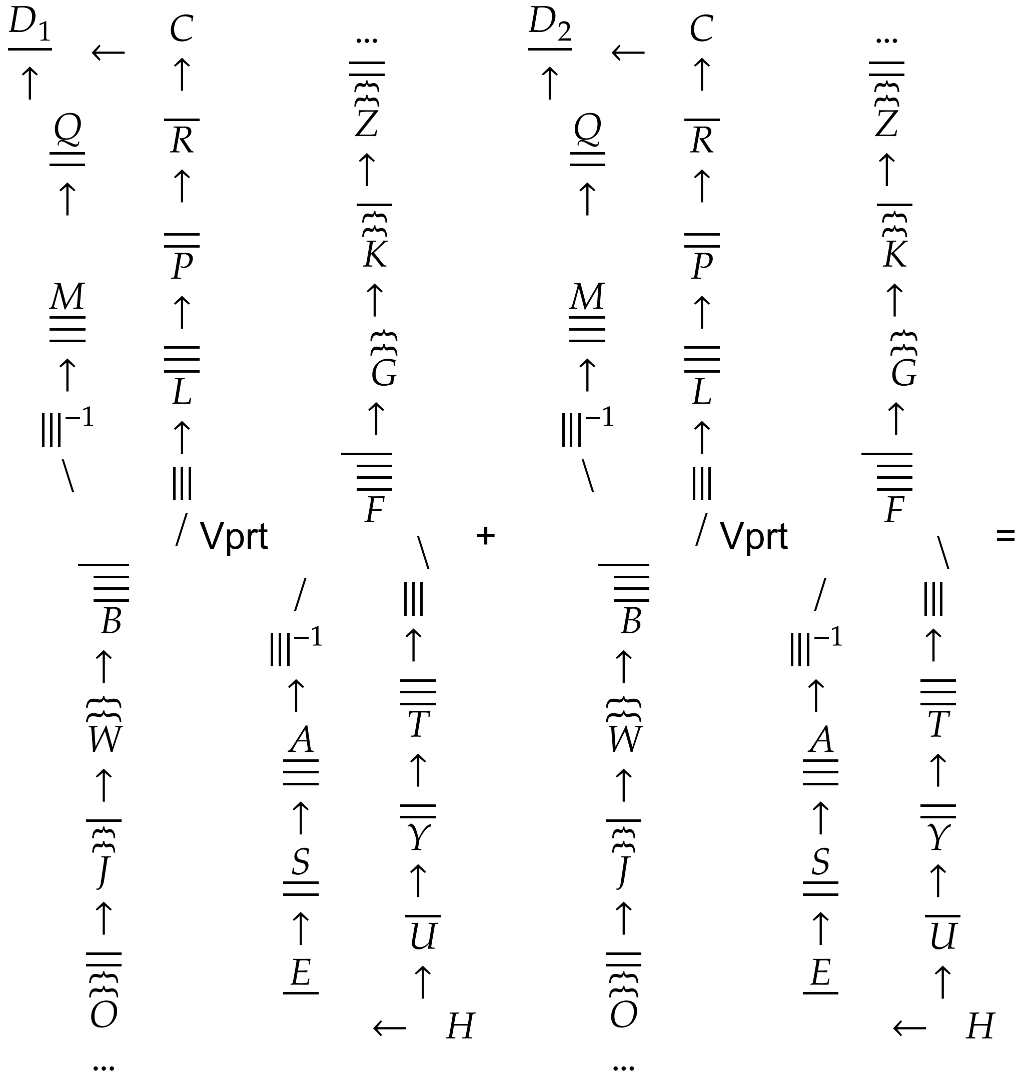
where $\overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}}$, $\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}}$ - *parelf* levels of Z and O respectively, $\overline{\overbrace{\overbrace{J}}}$, $\overline{\overbrace{\overbrace{K}}}$ – singelf levels of J and K respectively, $\overbrace{\overbrace{G}}$, $\overbrace{\overbrace{W}}$ - paradoxical upper levels of G and W respectively, $\overline{\overline{\overline{F}}}$, $\overline{\overline{\overline{B}}}$ - paradoxical average levels of F and B respectively, $\overline{U}$, $\overline{R}$ - middle$_1$ levels of U and R respectively, $\underline{E}$, $\underline{D}$ - *ordinary energies exhibited* by E, D respectively, $\underline{\underline{Q}}$, $\underline{\underline{S}}$ - first sublevel of Q and S respectively, $\underline{\underline{\underline{A}}}$, $\underline{\underline{\underline{M}}}$ - second sublevel of A and M respectively. The result of this process will be described by the expression

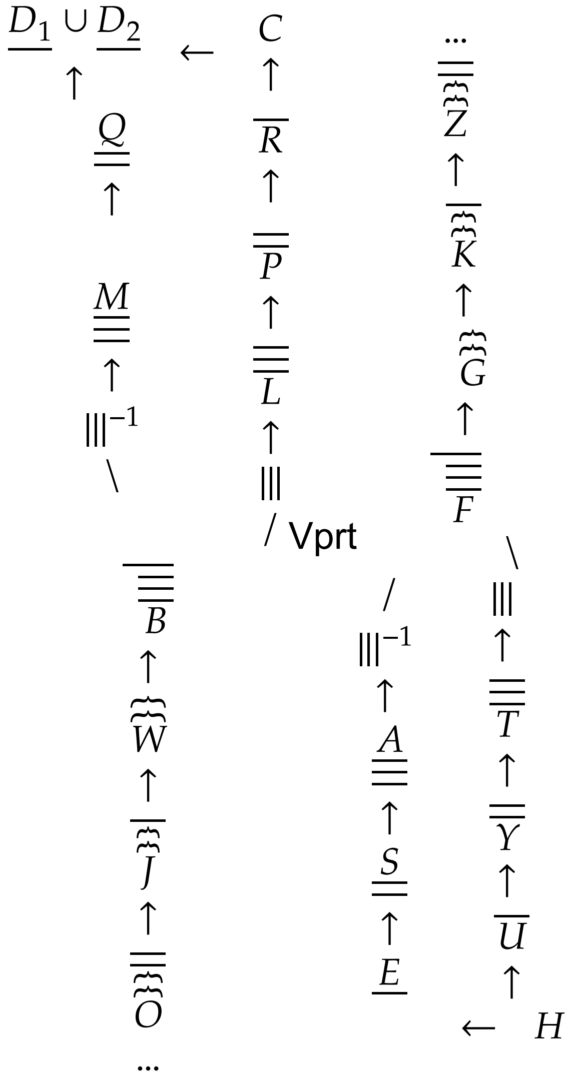
$$
\begin{array}{ccccc}
\underline{D} \leftarrow & C & & \vdots & \\
\uparrow & \uparrow & & \overline{\overline{\overbrace{Z}}} & \\
\underline{\underline{Q}} & \overline{R} & & \uparrow & \\
\uparrow & \uparrow & & \overline{\overbrace{K}} & \\
\underline{\underline{\underline{M}}} & \overline{\overline{P}} & & \uparrow & \\
\uparrow & \uparrow & & \overbrace{G} & \\
|||^{-1} & \overline{\overline{\overline{L}}} & & \uparrow & \\
\backslash & \uparrow & & \overline{\overline{\overline{F}}} & \\
 & ||| & & & \\
 & /\ \mathrm{Vrt} & & \backslash & \text{(A.1.2).} \\
\overline{\overline{\overline{B}}} & & / & ||| & \\
\uparrow & & |||^{-1} & \uparrow & \\
\overbrace{W} & & \uparrow & \overline{\overline{\overline{T}}} & \\
\uparrow & & \underline{\underline{\underline{A}}} & \uparrow & \\
\overline{\overbrace{J}} & & \uparrow & \overline{\overline{Y}} & \\
\uparrow & & \underline{\underline{S}} & \uparrow & \\
O & & \uparrow & \overline{U} & \\
\ldots & & \underline{E} & \uparrow & \\
 & & & \leftarrow & H
\end{array}
$$

Definition A.1.1. The dynamic operator (A.1.1) we shall call Vprt – element of the first type, (A.1.2) we shall call Vrt – element of the first type.

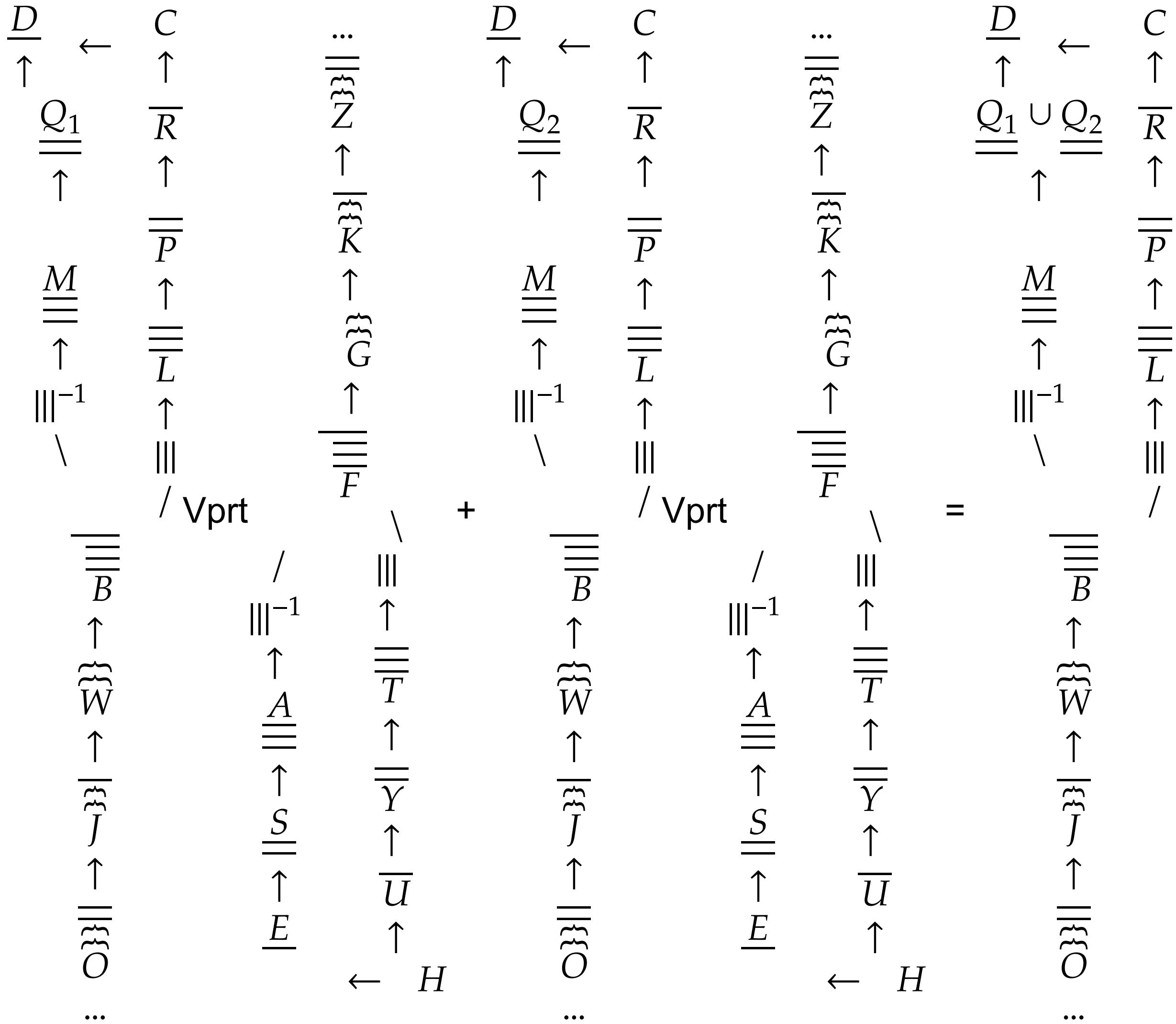
Remark A.1.1 Can consider Vprt – elements use the Banach space.

It’s allowed to add Vprt – elements:

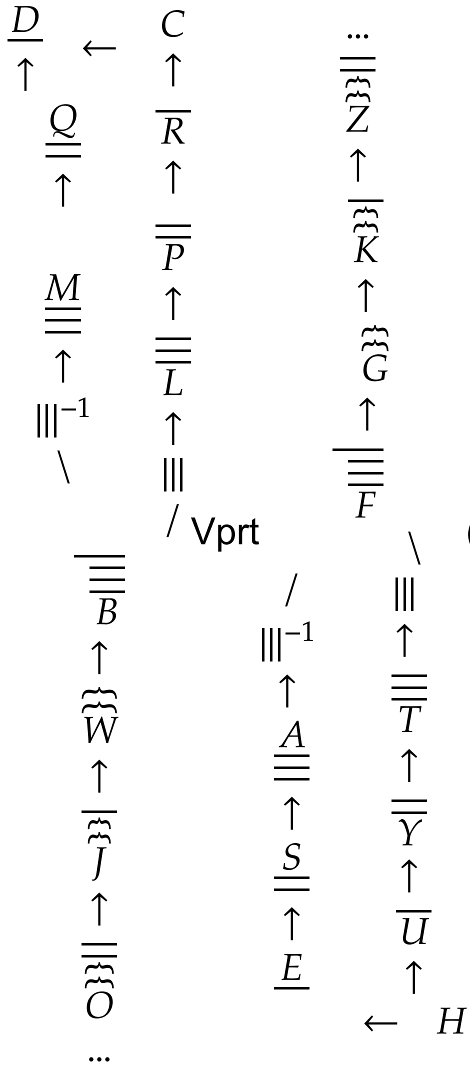

D1 ← C
Q R
M P
|||−1 L
|||
Vprt
B
W
J
O
...
Z K G F
|||−1 A S E
||| T Y U ← H
+
D2 ← C
Q R
M P
|||−1 L
|||
Vprt
B
W
J
O
...
Z K G F
|||−1 A S E
||| T Y U ← H
=



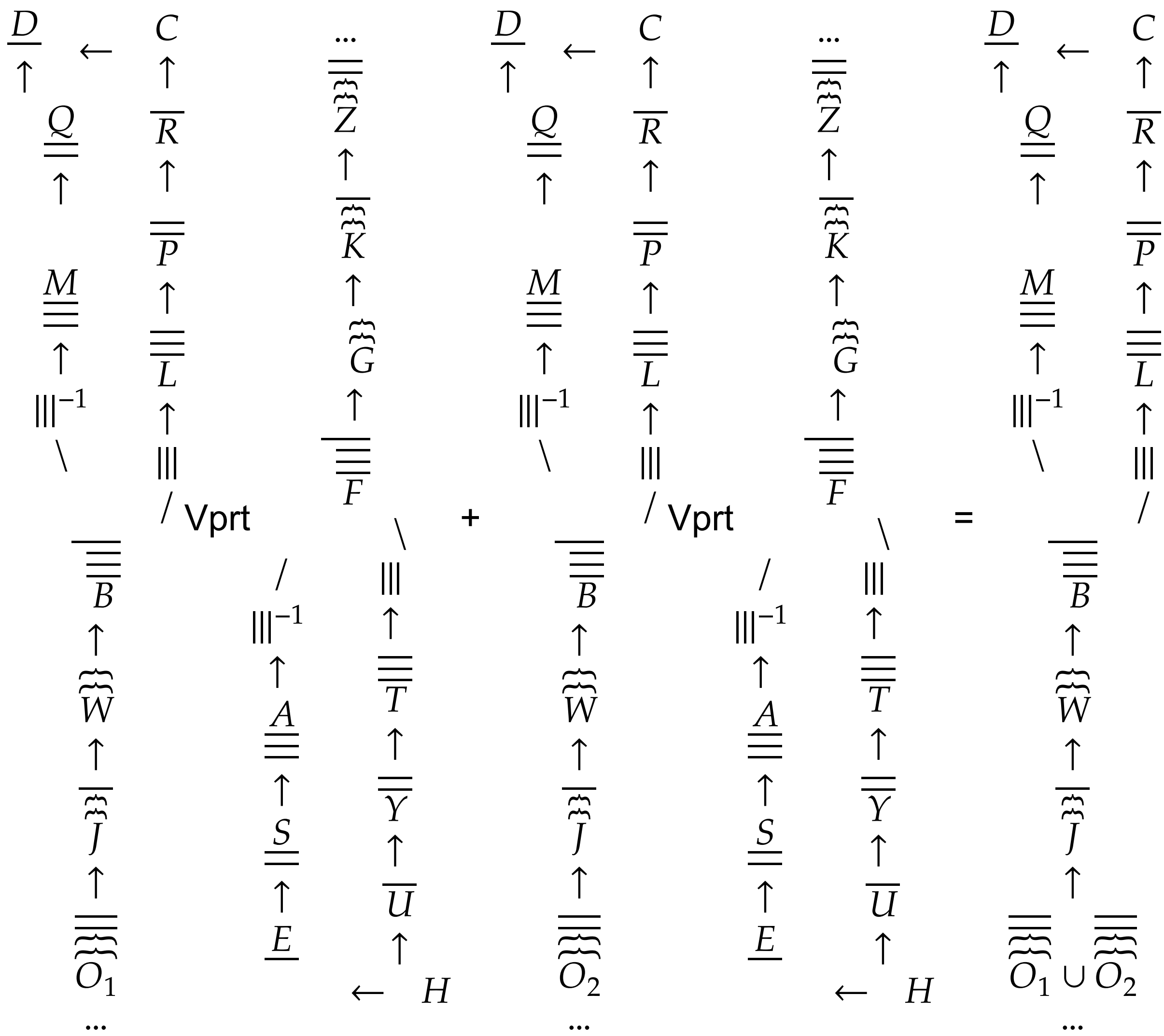
(A.1.3),


Vprt
+
Vprt
=

$$\begin{array}{ccccc}
 & & \vdots & & \\
 & & \overline{\overline{\overbrace{\overbrace{Z}}}} & & \\
 & & \uparrow & & \\
 & & \overline{\overbrace{\overbrace{K}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{G}} & & \\
 & & \uparrow & & \\
 & & \overline{\overline{\overline{\overline{F}}}} & & \\
\text{Vprt} & & & \backslash & \text{(A.1.3.1),} \\
 & / & & ||| & \\
 & |||^{-1} & & \uparrow & \\
 & \uparrow & & \overline{\overline{T}} & \\
 & \underline{\underline{\underline{A}}} & & \uparrow & \\
 & \uparrow & & \overline{\overline{Y}} & \\
 & \underline{\underline{S}} & & \uparrow & \\
 & \uparrow & & \overline{U} & \\
 & \underline{E} & & \uparrow & \\
 & & \leftarrow & H &
\end{array}$$



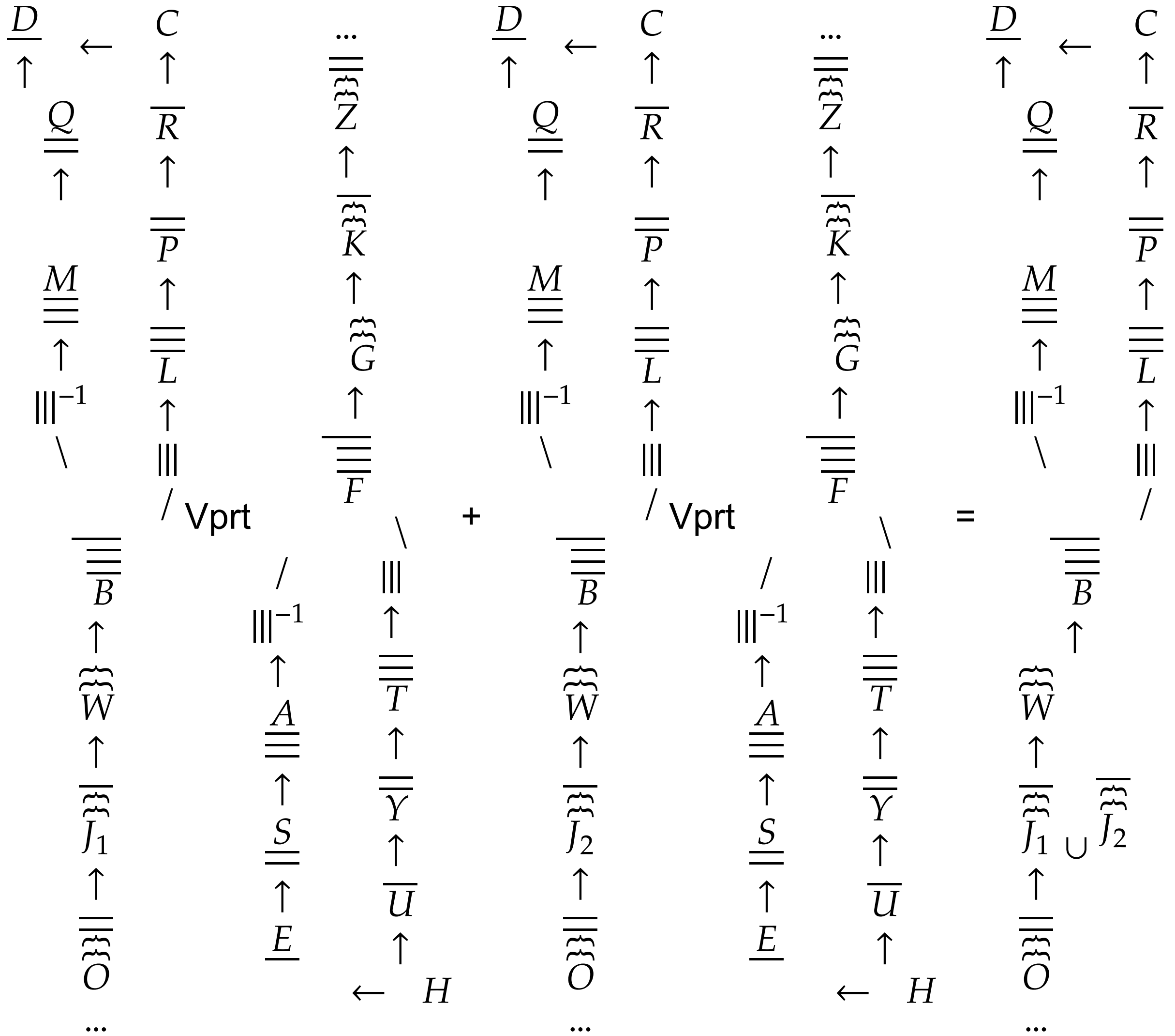
(A.1.3.2),


Vprt
Vprt

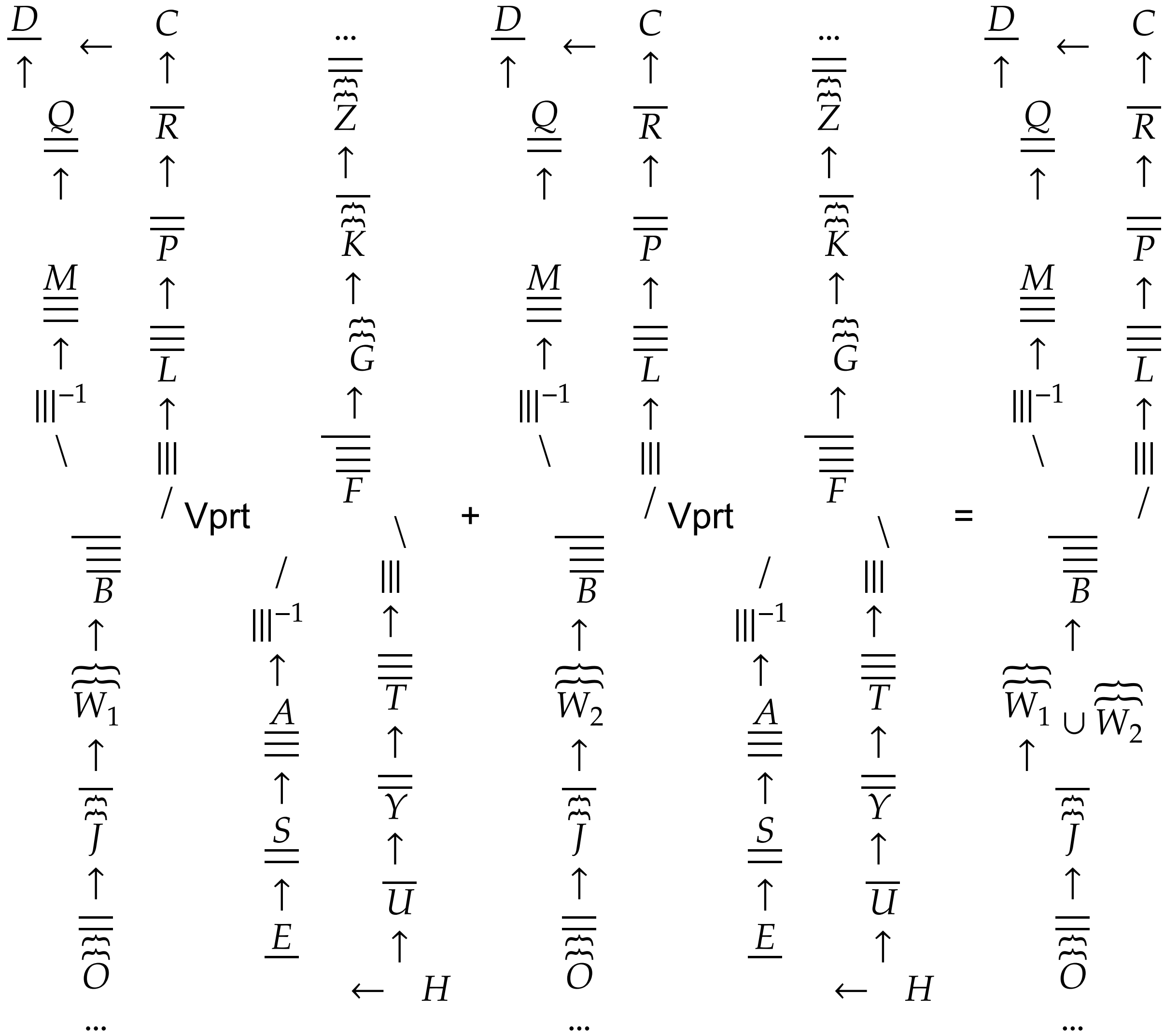
$$\cdots$$
$$\overline{\overline{\overbrace{\overbrace{Z}}}}$$
$$\uparrow$$
$$\overline{\overbrace{\overbrace{K}}}$$
$$\uparrow$$
$$\overbrace{\overbrace{G}}$$
$$\uparrow$$
$$\overline{\overline{\overline{\overline{F}}}}$$

Vprt $\qquad / \qquad \backslash$ (A.1.3.3),

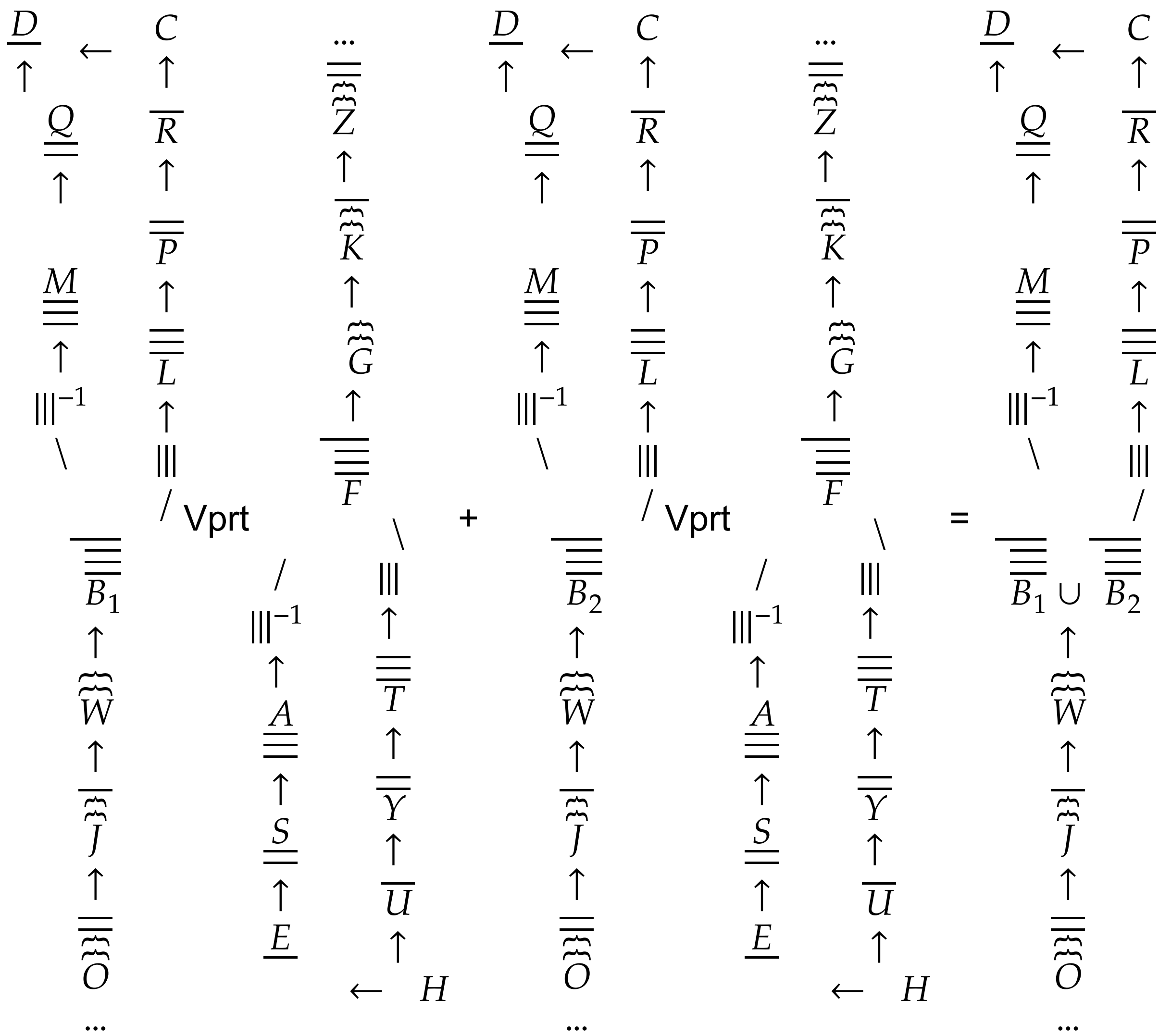
$$|||^{-1} \uparrow \underline{\underline{\underline{A}}} \uparrow \underline{\underline{S}} \uparrow \underline{E} \qquad ||| \uparrow \overline{\overline{\overline{T}}} \uparrow \overline{\overline{Y}} \uparrow \overline{U} \uparrow$$
$$\leftarrow \quad H$$


Vprt
+
Vprt
=

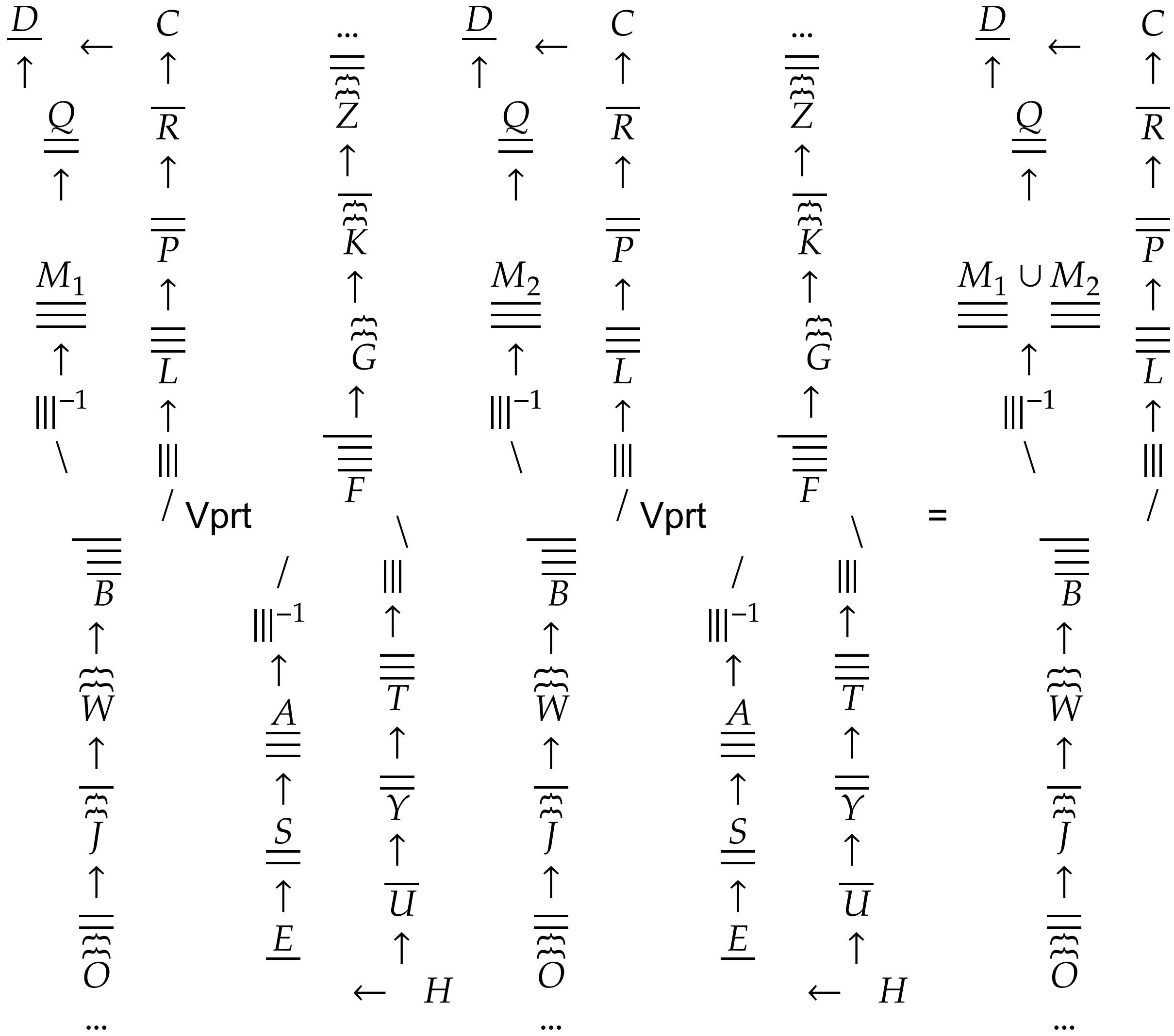
$$
\begin{array}{ccccc}
 & & \vdots & & \\
 & & \overline{\overline{\overbrace{Z}}} & & \\
 & & \uparrow & & \\
 & & \overline{\overbrace{K}} & & \\
 & & \uparrow & & \\
 & & \overbrace{G} & & \\
 & & \uparrow & & \\
 & & \overline{\overline{\overline{\overline{F}}}} & & \\
\text{Vprt} & & & \backslash & \text{(A.1.3.4),} \\
 & / & & ||| & \\
 & |||^{-1} & & \uparrow & \\
 & \uparrow & & \overline{\overline{\overline{T}}} & \\
 & \underline{\underline{\underline{A}}} & & \uparrow & \\
 & \uparrow & & \overline{\overline{Y}} & \\
 & \underline{\underline{S}} & & \uparrow & \\
 & \uparrow & & \overline{U} & \\
 & \underline{E} & & \uparrow & \\
 & & \leftarrow & H &
\end{array}
$$


Vprt
+
Vprt
=

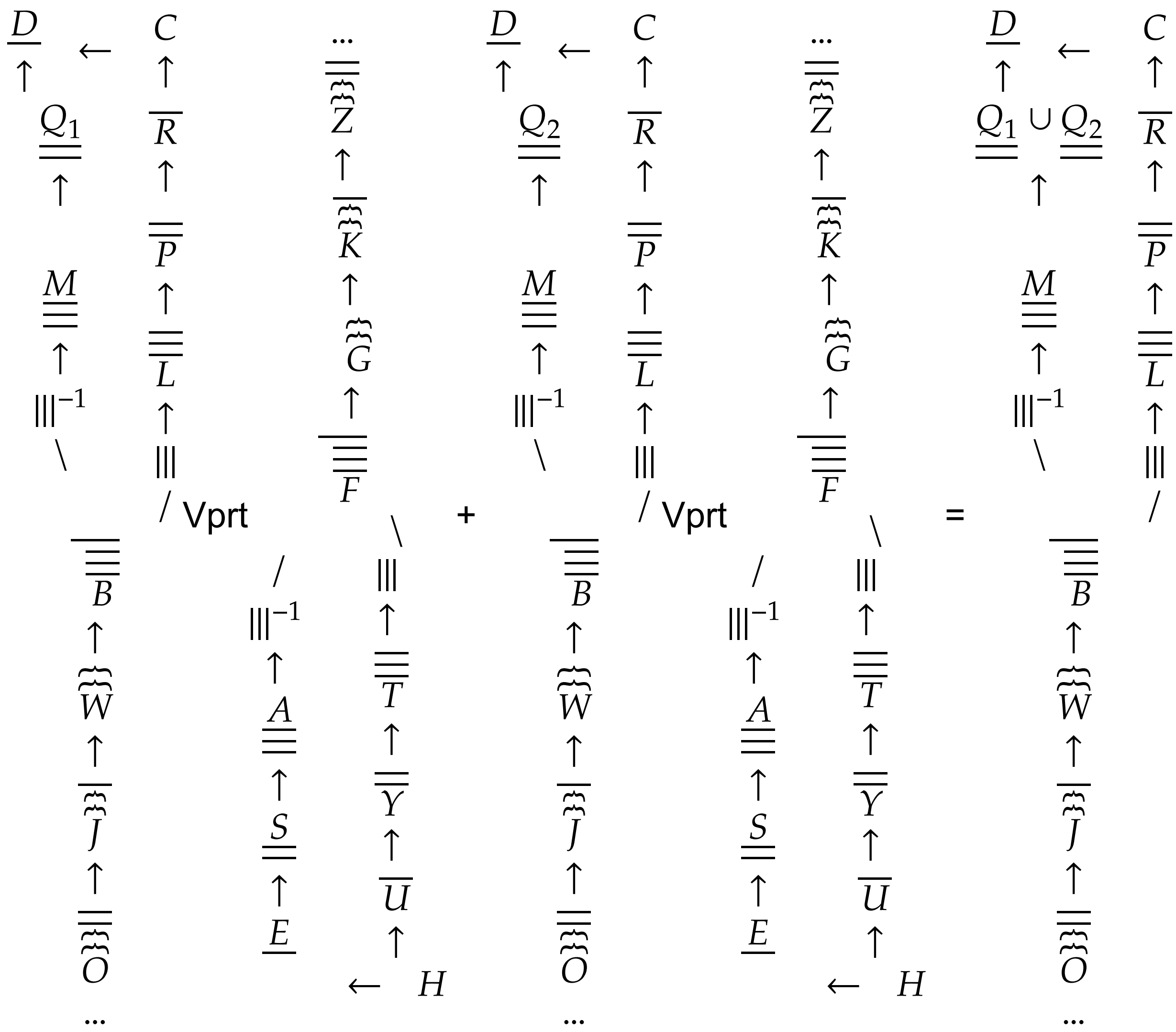
$$
\begin{array}{ccccc}
 & & \vdots & & \\
 & & \overline{\overline{\overbrace{\overbrace{Z}}}} & & \\
 & & \uparrow & & \\
 & & \overline{\overbrace{\overbrace{K}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{G}} & & \\
 & & \uparrow & & \\
 & & \overline{\overline{\overline{\overline{F}}}} & & \\
\text{Vprt} & & & \backslash & \text{(A.1.3.5),} \\
 & / & & ||| & \\
 & |||^{-1} & & \uparrow & \\
 & \uparrow & & \overline{\overline{\overline{T}}} & \\
 & \underline{\underline{\underline{A}}} & & \uparrow & \\
 & \uparrow & & \overline{\overline{Y}} & \\
 & \underline{\underline{S}} & & \uparrow & \\
 & \uparrow & & \overline{U} & \\
 & \underline{E} & & \uparrow & \\
 & & \leftarrow & H &
\end{array}
$$


Vprt
+
Vprt
=

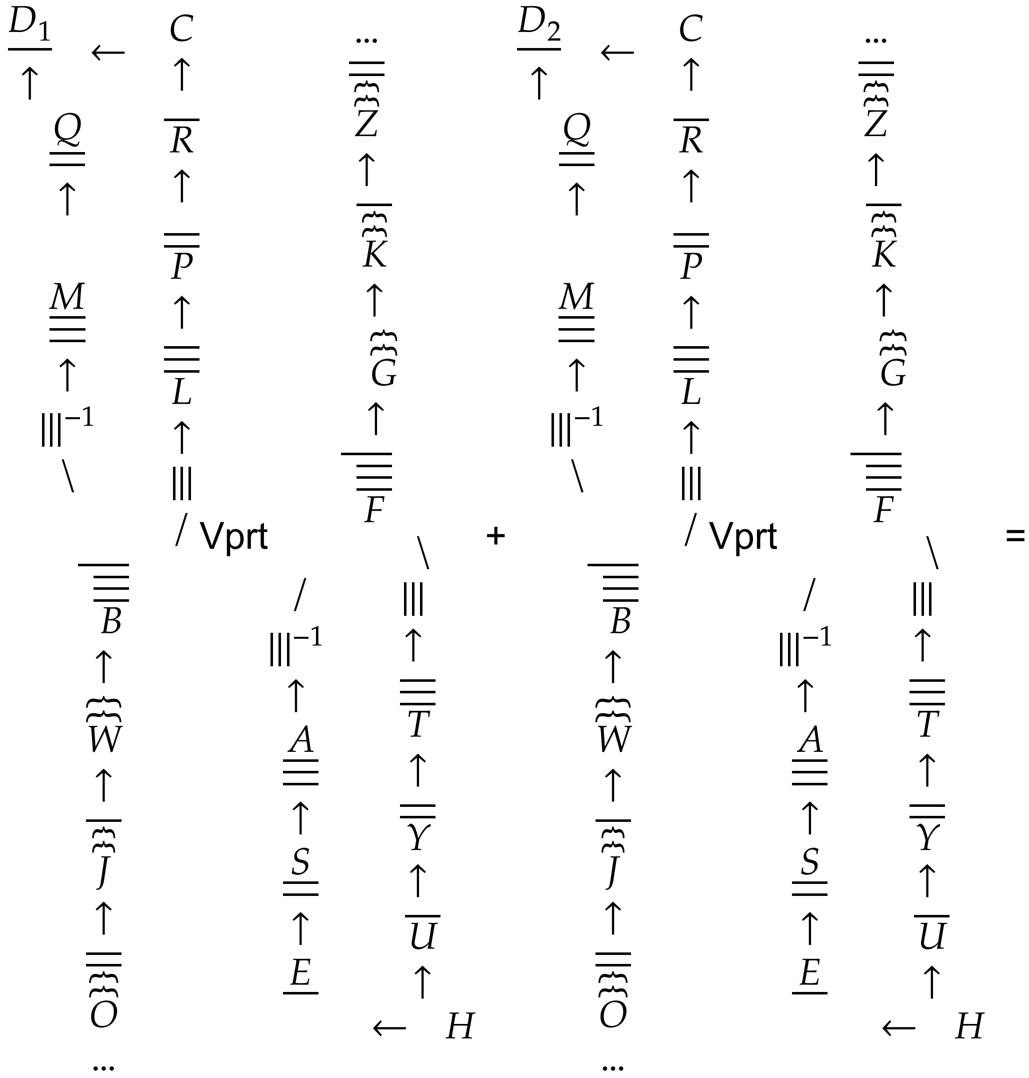
$$
\begin{array}{lccc}
 & & \vdots & \\
 & & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & & \uparrow & \\
 & & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & & \uparrow & \\
 & & \overbrace{\overbrace{\overbrace{G}}} & \\
 & & \uparrow & \\
 & & \overline{\overline{\overline{\overline{F}}}} & \\
\text{Vprt} & & & \quad (\text{A.1.3.6}), \\
 & / & & \backslash \\
 & |||^{-1} & & ||| \\
 & \uparrow & & \uparrow \\
 & \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
 & \uparrow & & \uparrow \\
 & \underline{\underline{S}} & & \overline{\overline{Y}} \\
 & \uparrow & & \uparrow \\
 & \underline{E} & & \overline{U} \\
 & & & \uparrow \\
 & & \leftarrow & H
\end{array}
$$


Vprt
Vprt
=

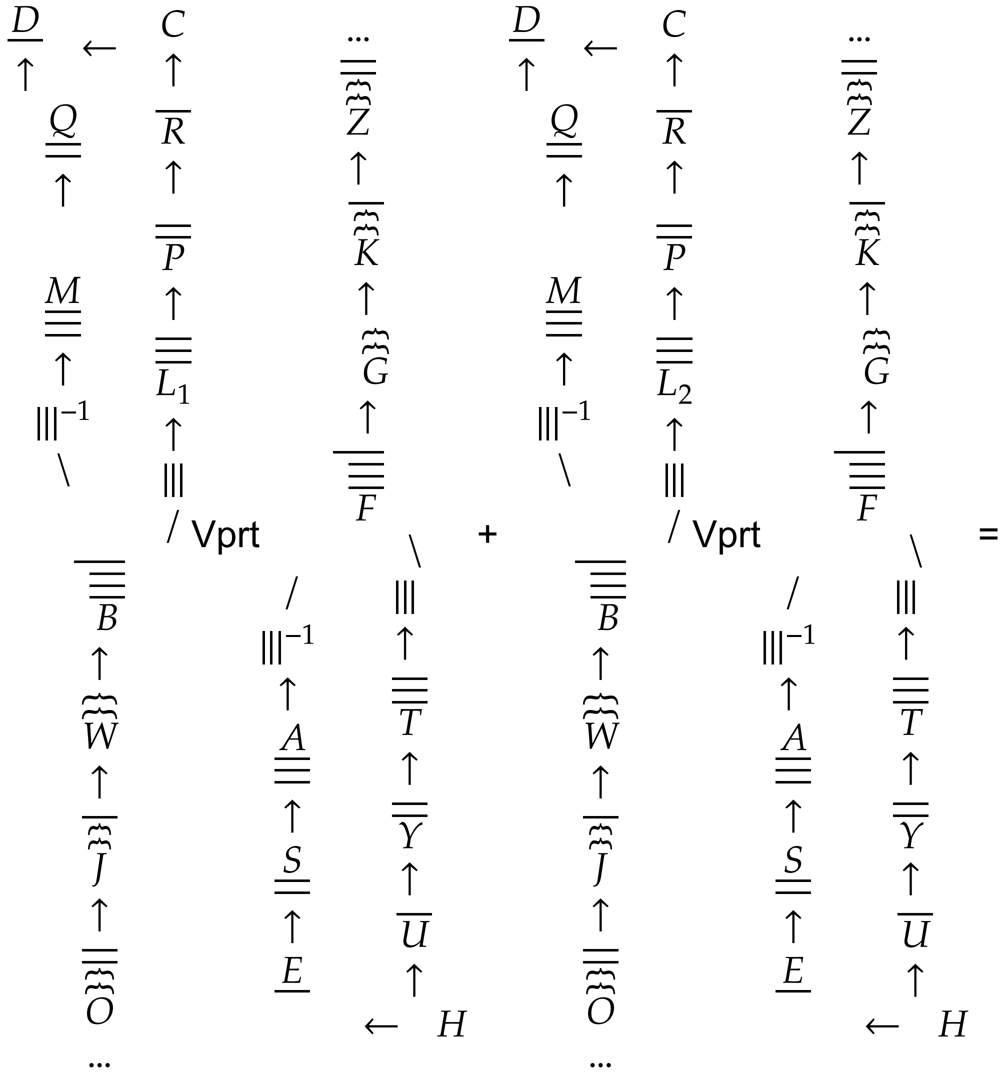
$$
\begin{array}{cccc}
 & \cdots & & \\
 & \overline{\overline{\overbrace{\overbrace{Z}}}} & & \\
 & \uparrow & & \\
 & \overline{\overbrace{\overbrace{K}}} & & \\
 & \uparrow & & \\
 & \overbrace{\overbrace{G}} & & \\
 & \uparrow & & \\
 & \overline{\overline{\overline{\overline{F}}}} & & \\
\text{Vprt} & & \backslash & \text{(A.1.3.7),} \\
/ & & ||| & \\
|||^{-1} & & \uparrow & \\
\uparrow & & \overline{\overline{\overline{T}}} & \\
\underline{\underline{\underline{A}}} & & \uparrow & \\
\uparrow & & \overline{\overline{Y}} & \\
\underline{\underline{S}} & & \uparrow & \\
\uparrow & & \overline{U} & \\
\underline{E} & & \uparrow & \\
 & \leftarrow & H &
\end{array}
$$


Vprt
+
Vprt
=

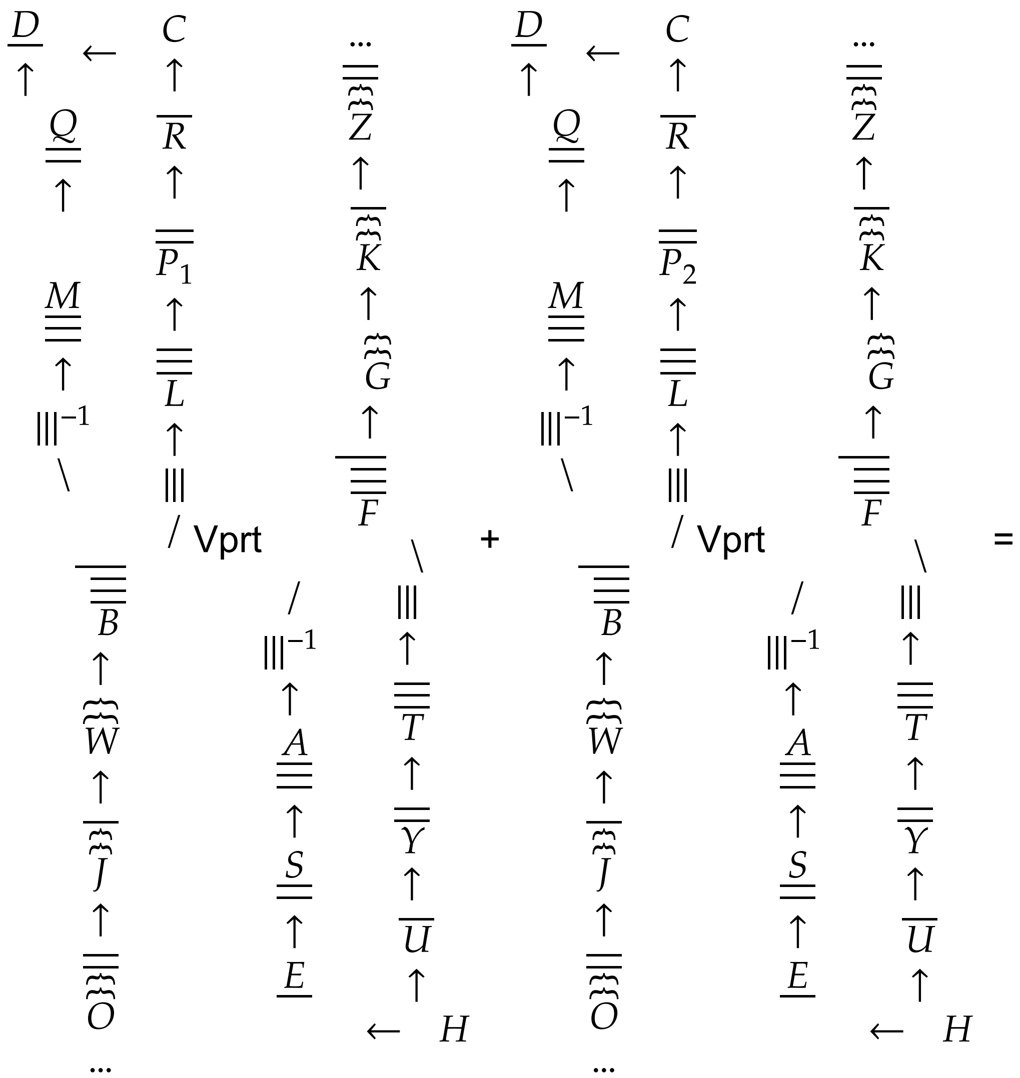
$$\begin{array}{cccc}
 & \vdots & & \\
 & \overline{\overline{\overbrace{\overbrace{Z}}}} & & \\
 & \uparrow & & \\
 & \overline{\overbrace{\overbrace{K}}} & & \\
 & \uparrow & & \\
 & \overbrace{\overbrace{G}} & & \\
 & \uparrow & & \\
 & \overline{\overline{\overline{\overline{F}}}} & & \\
\text{Vprt} & & & \text{(A.1.3.8),} \\
/ & & \backslash & \\
|||^{-1} & & ||| & \\
\uparrow & & \uparrow & \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} & \\
\uparrow & & \uparrow & \\
\underline{\underline{S}} & & \overline{\overline{Y}} & \\
\uparrow & & \uparrow & \\
\underline{E} & & \overline{U} & \\
 & & \uparrow & \\
 & \leftarrow & H &
\end{array}$$



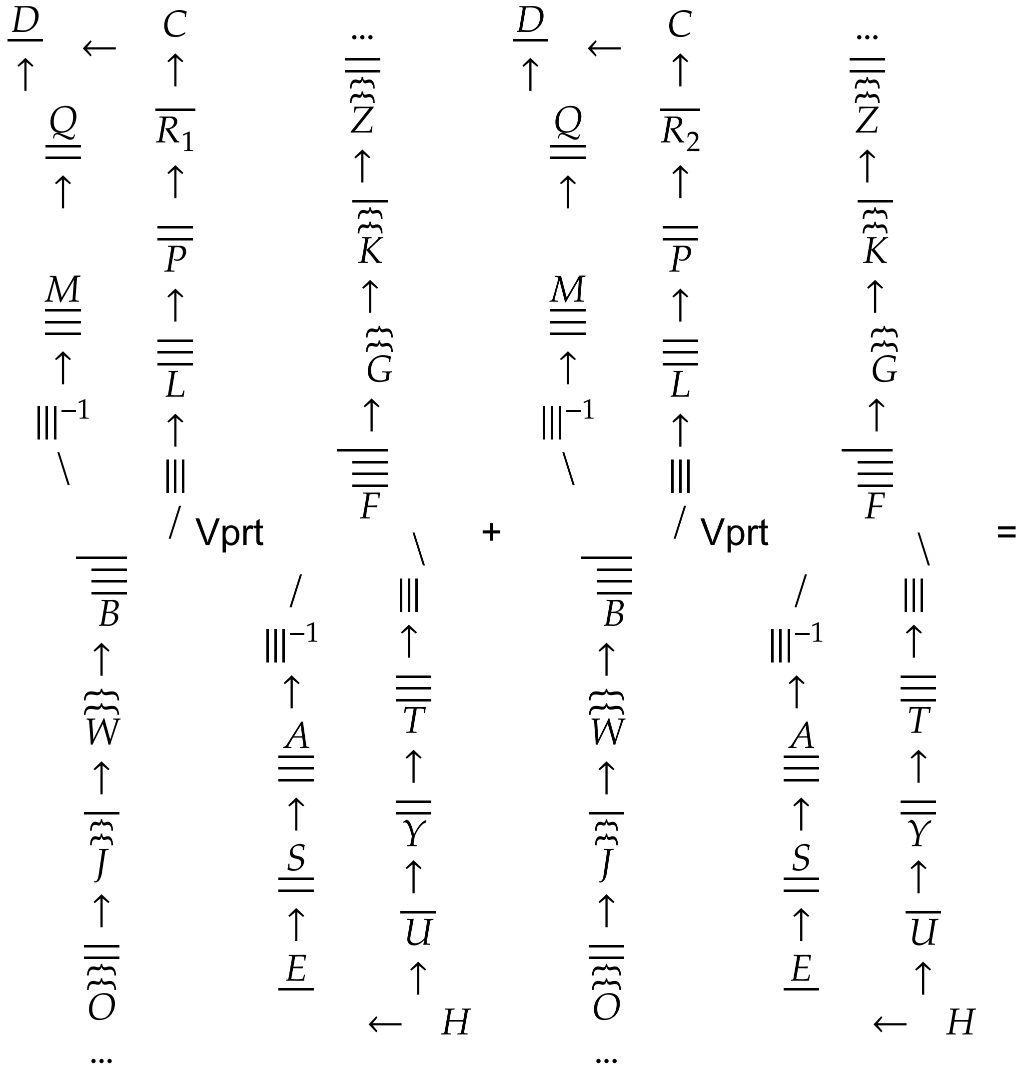
$$
\begin{array}{cccccc}
\underline{D_1} \cup \underline{D_2} & \leftarrow & C & & \dots & \\
\uparrow & & \uparrow & & \overline{\overline{\widetilde{Z}}} & \\
\underline{\underline{Q}} & & \overline{R} & & \uparrow & \\
\uparrow & & \uparrow & & \overline{\widetilde{K}} & \\
\underline{\underline{\underline{M}}} & & \overline{\overline{P}} & & \uparrow & \\
\uparrow & & \uparrow & & \widetilde{G} & \\
|||^{-1} & & \overline{\overline{\overline{L}}} & & \uparrow & \\
\backslash & & \uparrow & & \overline{\overline{\overline{\overline{F}}}} & \\
 & & ||| & & & \\
 & & / \ \text{Vprt} & & \backslash & (\text{A.1.3.9}), \\
\overline{\overline{\overline{\overline{B}}}} & & & / & ||| & \\
\uparrow & & & |||^{-1} & \uparrow & \\
\widetilde{W} & & & \uparrow & \overline{\overline{\overline{T}}} & \\
\uparrow & & & \underline{\underline{\underline{A}}} & \uparrow & \\
\overline{\widetilde{J}} & & & \uparrow & \overline{\overline{Y}} & \\
\uparrow & & & \underline{\underline{S}} & \uparrow & \\
\overline{\overline{\widetilde{O}}} & & & \uparrow & \overline{U} & \\
\dots & & & \underline{E} & \uparrow & \\
 & & & & \leftarrow \quad H & \\
\end{array}
$$


Vprt
+
Vprt
=

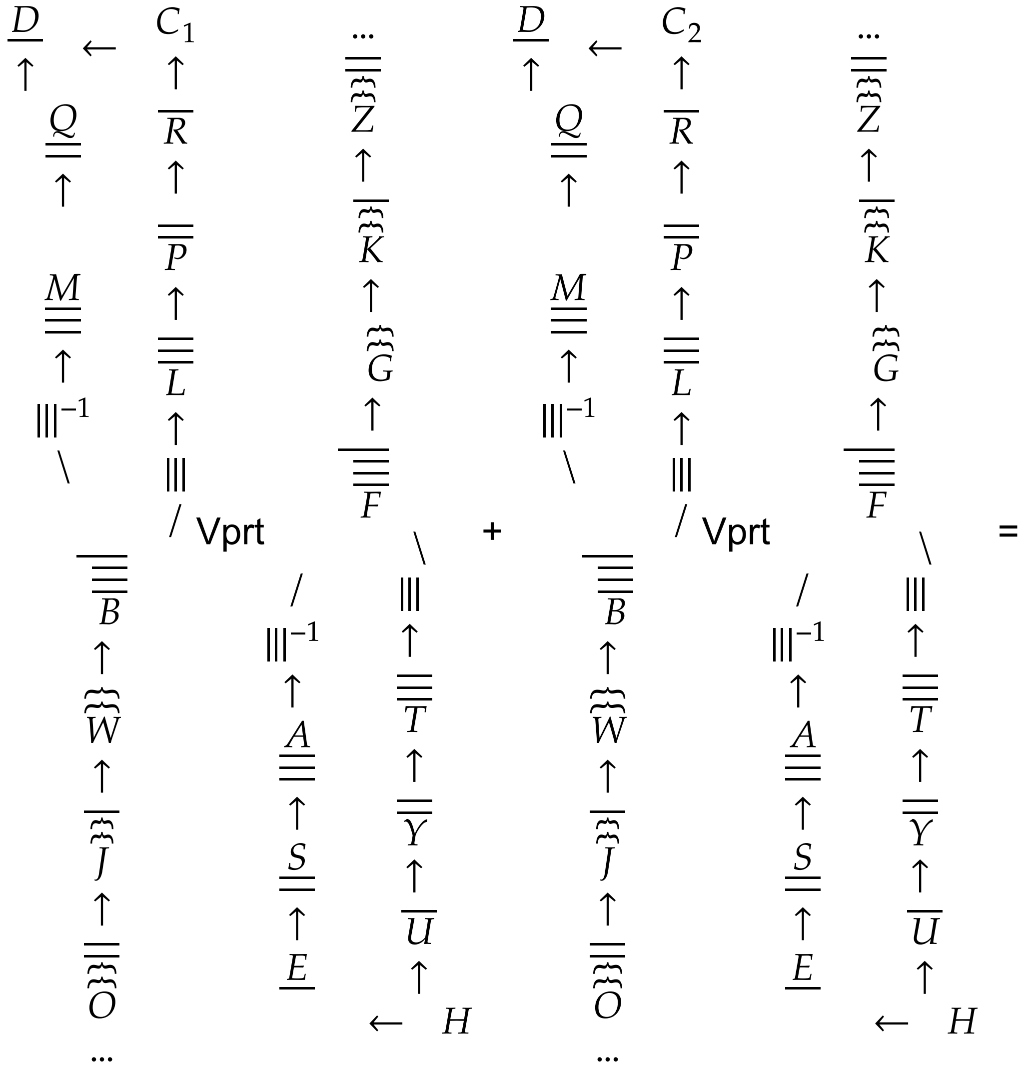
$$
\begin{array}{ccccccc}
\underline{D} & \leftarrow & C & & \cdots & & \\
\uparrow & & \uparrow & & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}}} & & \\
\underline{\underline{Q}} & & \overline{R} & & \uparrow & & \\
\uparrow & & \uparrow & & \overline{\overbrace{\overbrace{\overbrace{K}}}} & & \\
 & & \overline{\overline{P}} & & \uparrow & & \\
\underline{\underline{\underline{M}}} & & \uparrow & & \overbrace{\overbrace{\overbrace{G}}} & & \\
\uparrow & & \overline{\overline{\overline{L_1}}} \cup \overline{\overline{\overline{L_2}}} & & \uparrow & & \\
|||^{-1} & & \uparrow & & \overline{\overline{\overline{\overline{F}}}} & & \\
\backslash & & ||| & & & & \\
 & & / \quad \text{Vprt} & & & \backslash & \quad (\text{A.1.3.10}), \\
 & \overline{\overline{\overline{\overline{B}}}} & & / & & ||| & \\
 & \uparrow & & |||^{-1} & & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & & \uparrow & & \overline{\overline{\overline{T}}} & \\
 & \uparrow & & \underline{\underline{\underline{A}}} & & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{J}}}} & & \uparrow & & \overline{\overline{Y}} & \\
 & \uparrow & & \underline{\underline{S}} & & \uparrow & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}}} & & \uparrow & & \overline{U} & \\
 & \cdots & & \underline{E} & & \uparrow & \\
 & & & & \leftarrow & H &
\end{array}
$$


Vprt
+
Vprt
=

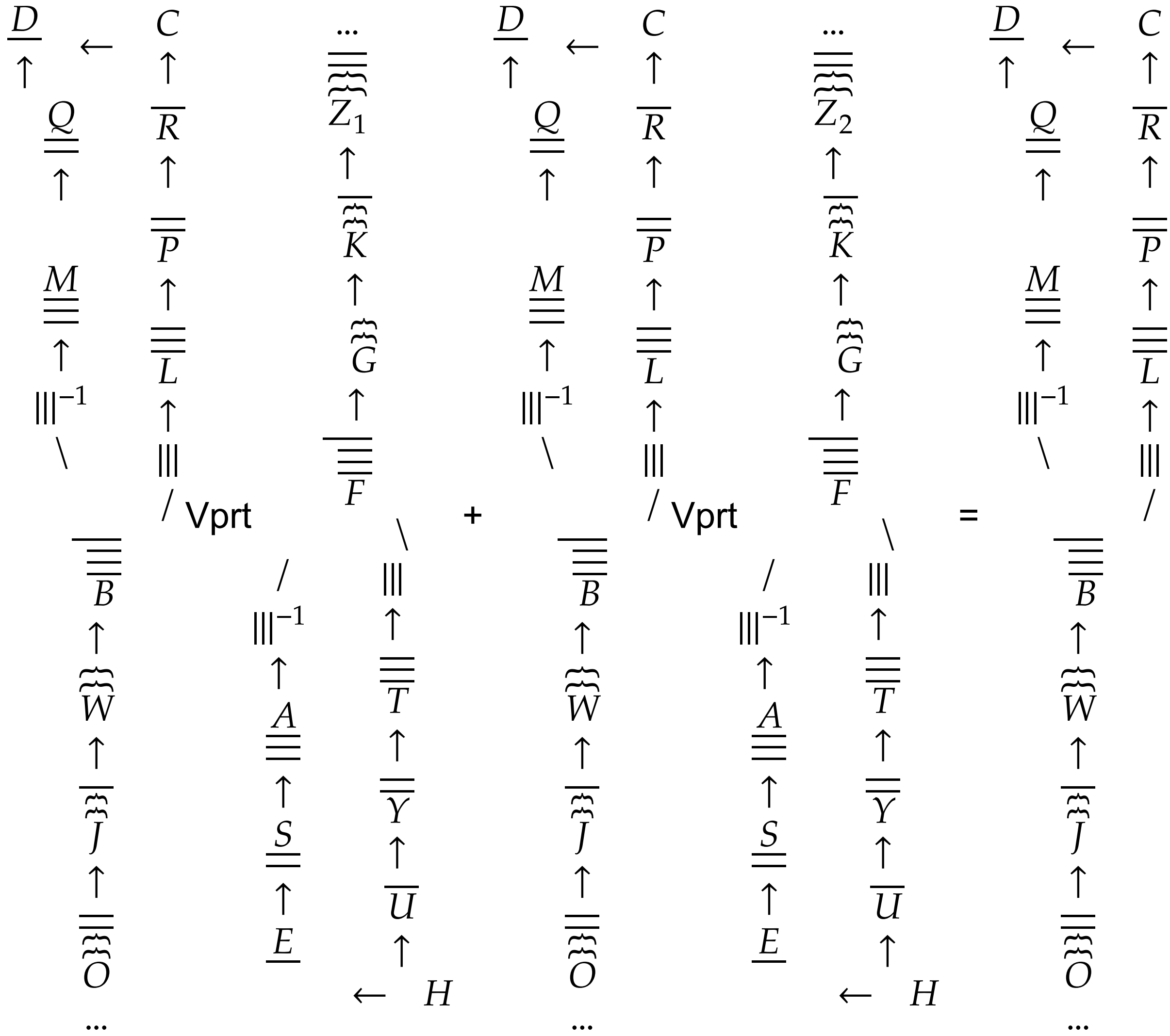
$$
\begin{array}{cccccccccc}
\underline{D} & & \leftarrow & & C & & & \cdots & & \\
\uparrow & & & & \uparrow & & & \overline{\overline{\overbrace{Z}}} & & \\
 & \underline{\underline{Q}} & & & \overline{R} & & & \uparrow & & \\
 & \uparrow & & & \uparrow & & & \overline{\overbrace{K}} & & \\
 & & & & \overline{\overline{P_1}} \cup \overline{\overline{P_2}} & & & \uparrow & & \\
 & \underline{\underline{\underline{M}}} & & & \uparrow & & & \overbrace{G} & & \\
 & \uparrow & & & \overline{\overline{\overline{L}}} & & & \uparrow & & \\
 & \mid\mid\mid^{-1} & & & \uparrow & & & \overline{\overline{\overline{F}}} & & \\
 & \backslash & & & \mid\mid\mid & & & & & \\
 & & & & / & \text{Vprt} & & & \backslash & \\
 & & & \overline{\overline{\overline{B}}} & & & / & & \mid\mid\mid & \\
 & & & \uparrow & & & \mid\mid\mid^{-1} & & \uparrow & \\
 & & & \overbrace{W} & & & \uparrow & & \overline{\overline{\overline{T}}} & \\
 & & & \uparrow & & & \underline{\underline{\underline{A}}} & & \uparrow & \\
 & & & \overline{\overbrace{J}} & & & \uparrow & & \overline{\overline{Y}} & \\
 & & & \uparrow & & & \underline{\underline{S}} & & \uparrow & \\
 & & & \overline{\overline{\overbrace{O}}} & & & \uparrow & & \overline{U} & \\
 & & & \cdots & & & \underline{E} & & \uparrow & \\
 & & & & & & & \leftarrow & & H
\end{array}
\qquad \text{(A.1.3.11),}
$$


Vprt
+
Vprt
=

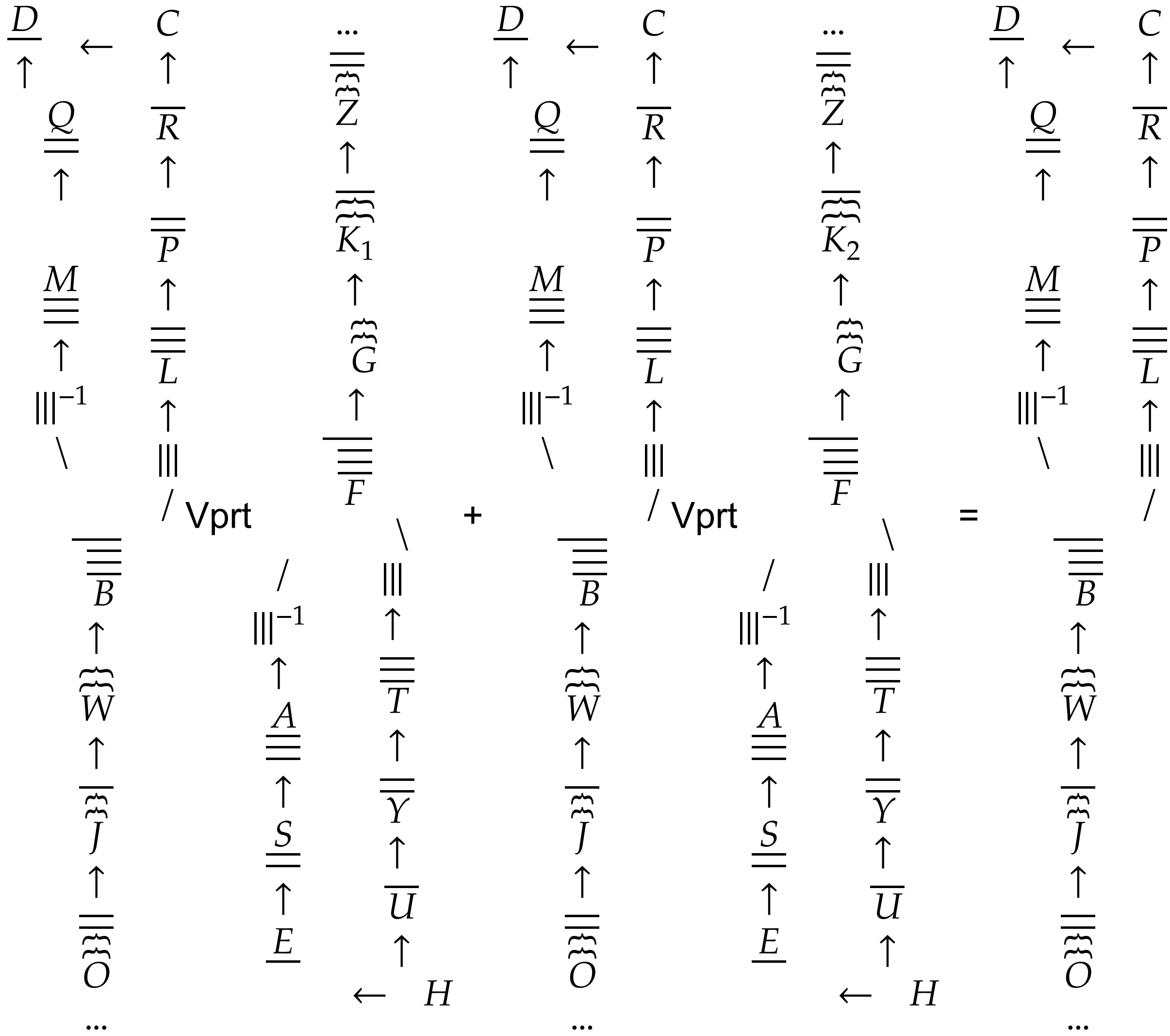
$$
\begin{array}{ccccccc}
\underline{D} & \leftarrow & C & & \cdots & & \\
\uparrow & & \uparrow & & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & & \\
\underline{\underline{Q}} & & \overline{R_1} \cup \overline{R_2} & & \uparrow & & \\
\uparrow & & \uparrow & & \overline{\overbrace{\overbrace{\overbrace{K}}}} & & \\
\underline{\underline{\underline{M}}} & & \overline{\overline{P}} & & \uparrow & & \\
\uparrow & & \uparrow & & \overbrace{\overbrace{\overbrace{G}}} & & \\
|||^{-1} & & \overline{\overline{\overline{L}}} & & \uparrow & & \\
\backslash & & \uparrow & & \overline{\overline{\overline{\overline{F}}}} & & \\
 & & ||| & & & & \\
 & & / & \text{Vprt} & & \backslash & \text{(A.1.3.12),} \\
\overline{\overline{\overline{\overline{B}}}} & & & / & & ||| & \\
\uparrow & & & |||^{-1} & & \uparrow & \\
\overbrace{\overbrace{\overbrace{W}}} & & & \uparrow & & \overline{\overline{\overline{T}}} & \\
\uparrow & & & \underline{\underline{\underline{A}}} & & \uparrow & \\
\overline{\overbrace{\overbrace{\overbrace{J}}}} & & & \uparrow & & \overline{\overline{Y}} & \\
\uparrow & & & \underline{\underline{S}} & & \uparrow & \\
\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & & & \uparrow & & \overline{U} & \\
\cdots & & & \underline{E} & & \uparrow & \\
 & & & & \leftarrow & H &
\end{array}
$$


Vprt
+
Vprt
=

$$
\begin{array}{cccccccc}
\underline{D} & \leftarrow & C_1 \cup C_2 & & & \dots & & \\
\uparrow & & \uparrow & & & \overline{\overline{\overbrace{\overbrace{Z}}}} & & \\
\underline{\underline{Q}} & & \overline{R} & & & \uparrow & & \\
\uparrow & & \uparrow & & & \overline{\overbrace{\overbrace{K}}} & & \\
\underline{\underline{\underline{M}}} & & \overline{\overline{P}} & & & \uparrow & & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overbrace{G}}} & & \\
|||^{-1} & & \overline{\overline{\overline{L}}} & & & \uparrow & & \\
\backslash & & \uparrow & & & \overline{\overline{\overline{\overline{F}}}} & & \\
 & & ||| & & & & & \\
 & & / & \text{Vprt} & & & \backslash & \text{(A.1.3.13),} \\
 & \overline{\overline{\overline{\overline{B}}}} & & & / & & ||| & \\
 & \uparrow & & & |||^{-1} & & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & & & \uparrow & & \overline{\overline{\overline{T}}} & \\
 & \uparrow & & & \underline{\underline{\underline{A}}} & & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & & & \uparrow & & \overline{\overline{Y}} & \\
 & \uparrow & & & \underline{\underline{S}} & & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & & & \uparrow & & \overline{U} & \\
 & \dots & & & \underline{E} & & \uparrow & \\
 & & & & & \leftarrow & H &
\end{array}
$$

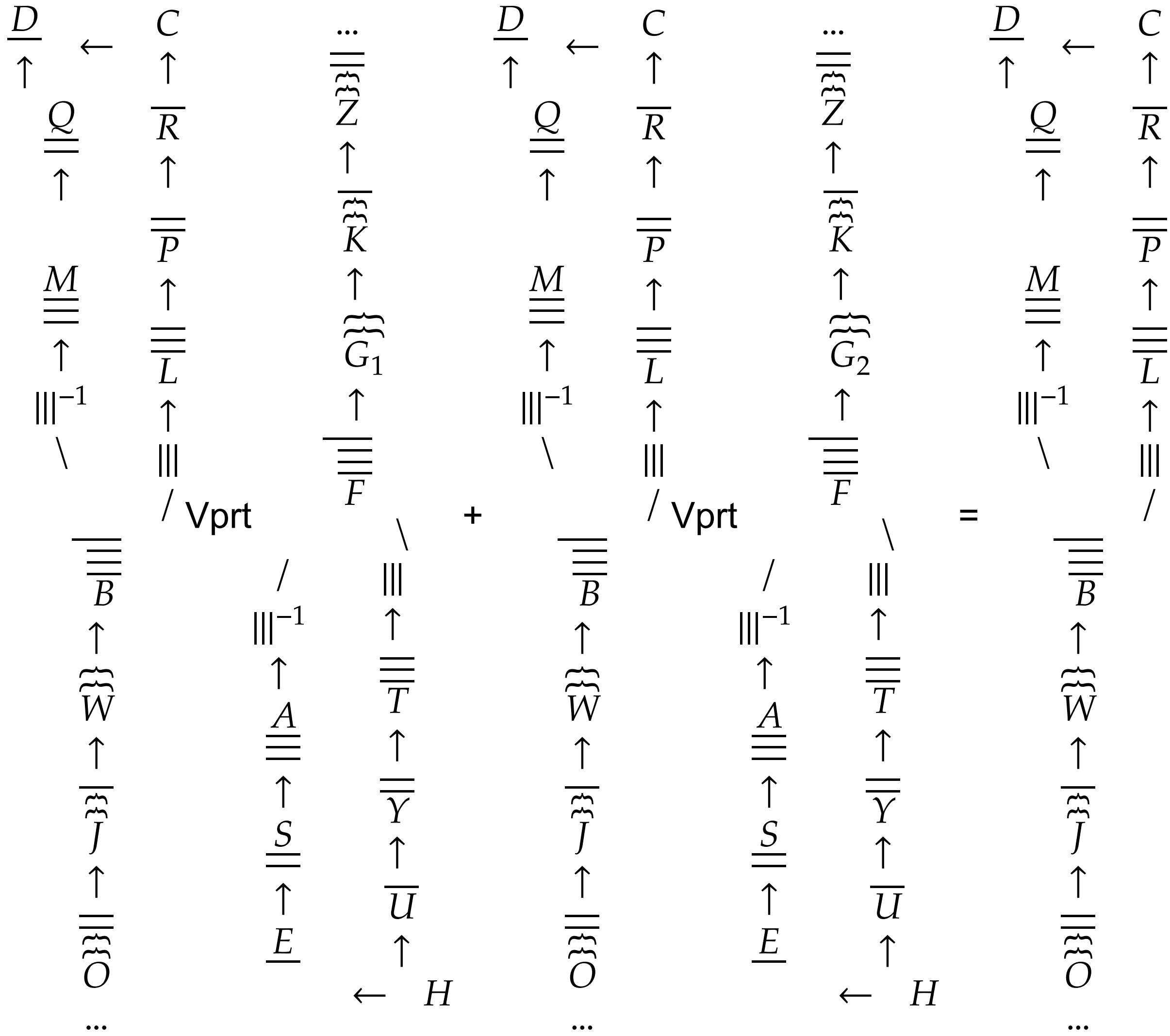

Vprt
+
Vprt
=

$$
\text{Vprt} \qquad
\begin{array}{ccc}
 & \ldots & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z_1}}}}}} \cup \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z_2}}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
\qquad \text{(A.1.3.14),}
$$

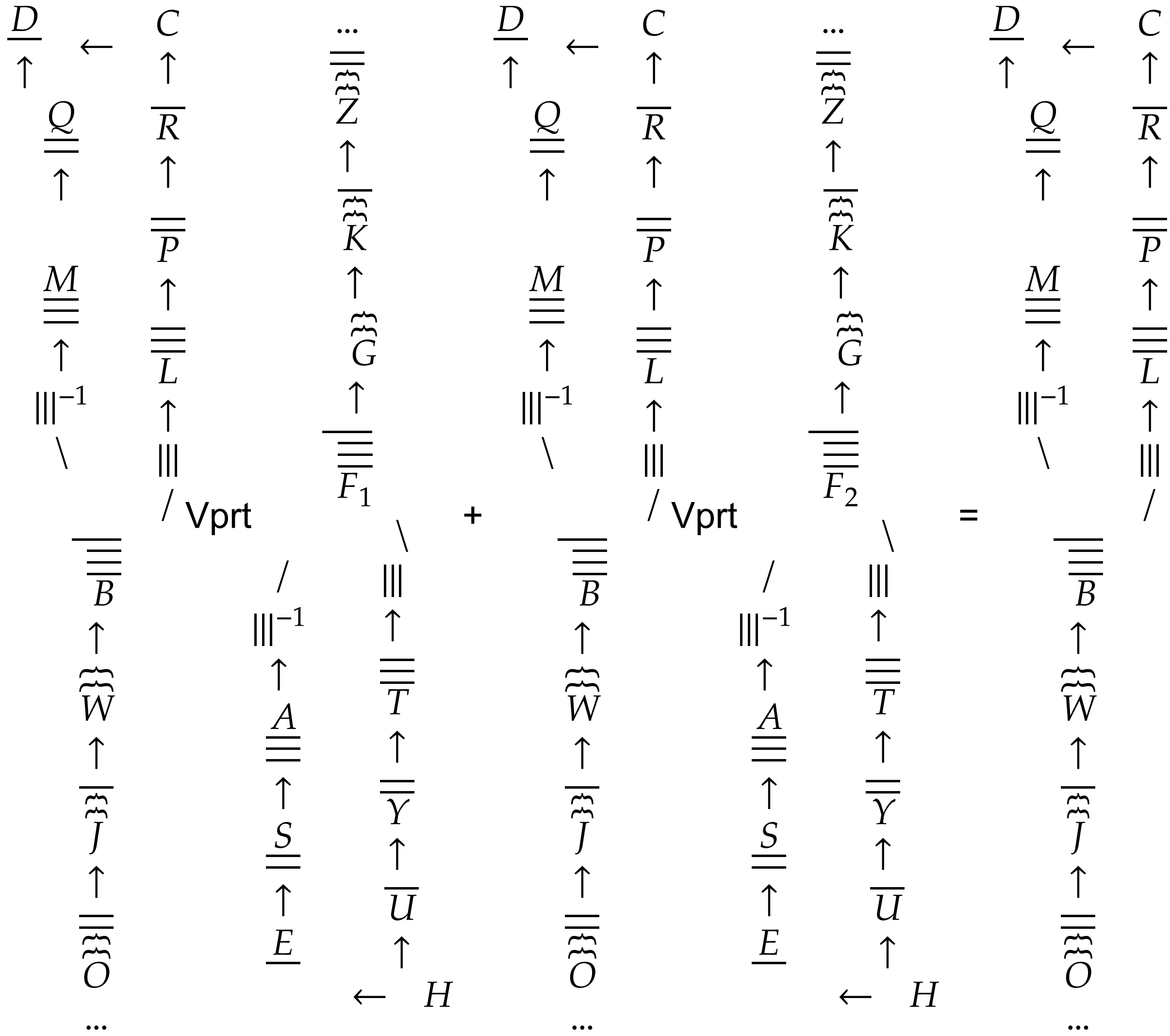

Vprt
+
Vprt
=

$$\begin{array}{ccc}
 & \vdots & \\
 & \overline{\overline{\widetilde{\widetilde{Z}}}} & \\
 & \uparrow & \\
 & \overline{\overline{\widetilde{\widetilde{K_1}}}} \cup \overline{\overline{\widetilde{\widetilde{K_2}}}} & \\
 & \uparrow & \\
 & \widetilde{\widetilde{G}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}$$

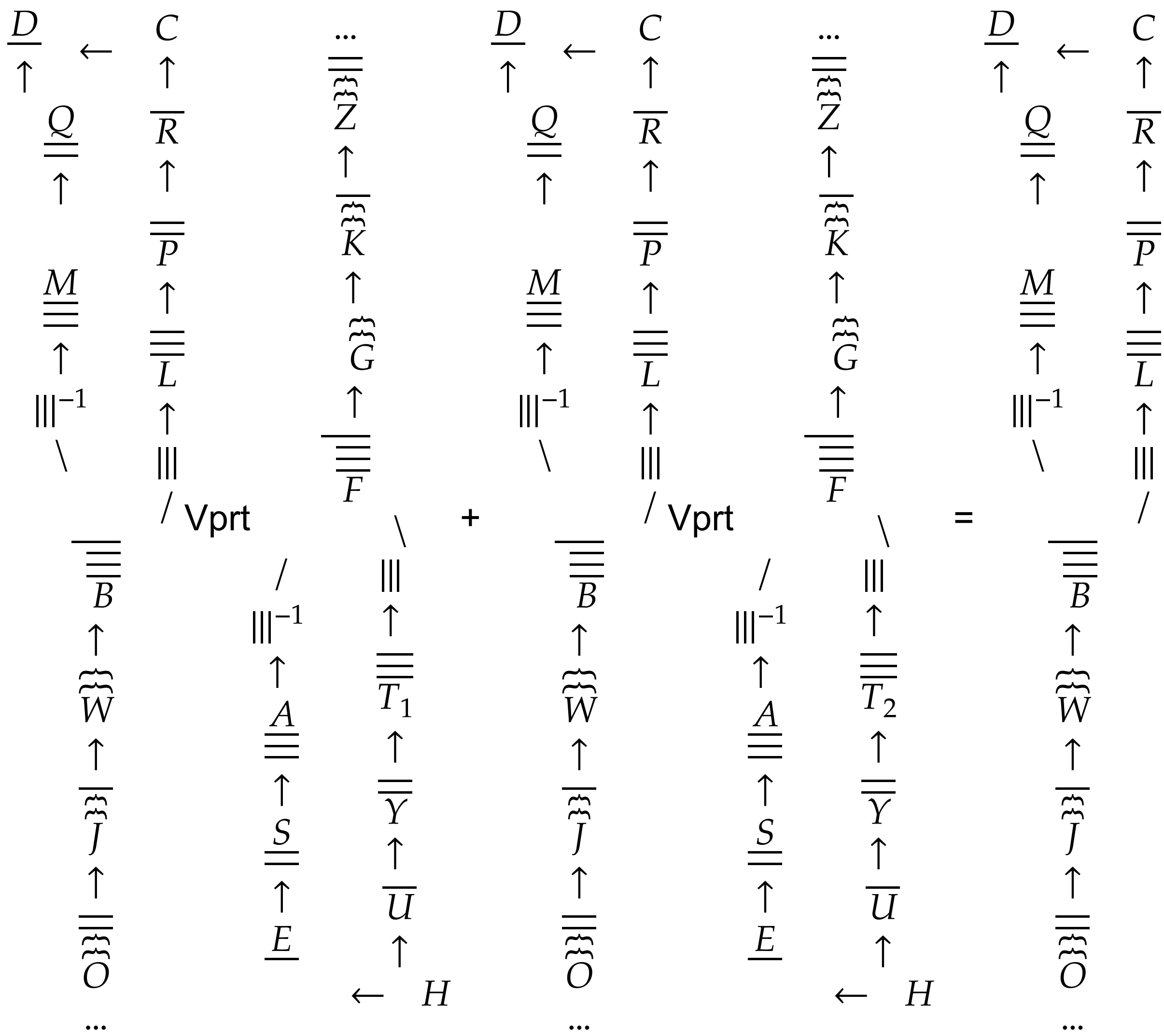
Vprt (A.1.3.15),


Vprt
+
Vprt
=

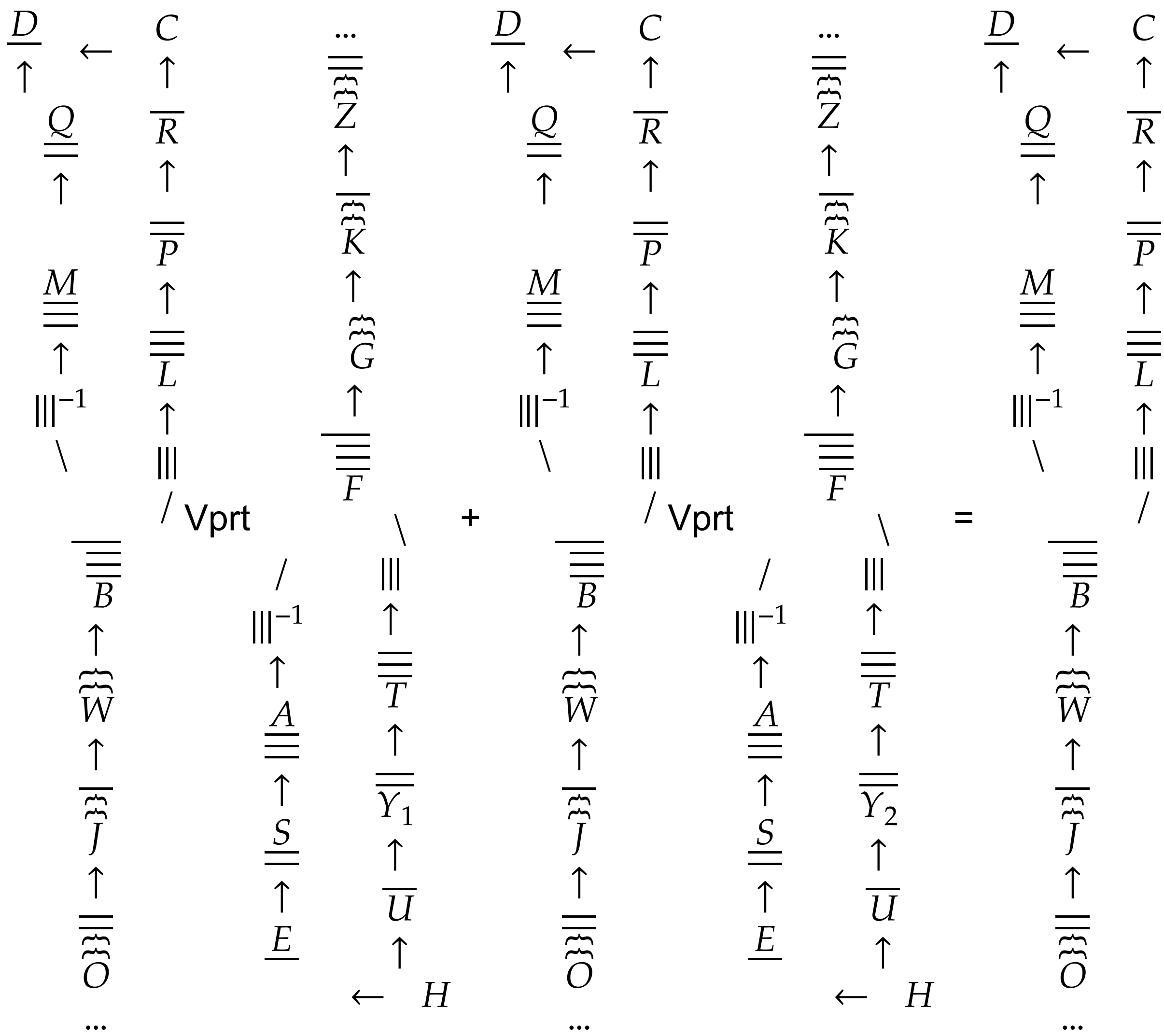
$$
\begin{array}{ccccc}
 & & \vdots & & \\
 & & \overline{\overline{\overbrace{\overbrace{Z}}}} & & \\
 & & \uparrow & & \\
 & & \overline{\overbrace{\overbrace{K}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{\overline{G_1}}} \cup \overbrace{\overbrace{\overline{G_2}}} & & \\
 & & \uparrow & & \\
 & & \overline{\overline{\overline{\overline{F}}}} & & \\
\text{Vprt} & & & \backslash & \text{(A.1.3.16),} \\
 & / & & ||| & \\
 & |||^{-1} & & \uparrow & \\
 & \uparrow & & \overline{\overline{\overline{T}}} & \\
 & \underline{\underline{\underline{A}}} & & \uparrow & \\
 & \uparrow & & \overline{\overline{Y}} & \\
 & \underline{\underline{S}} & & \uparrow & \\
 & \uparrow & & \overline{U} & \\
 & \underline{E} & & \uparrow & \\
 & & \leftarrow & H &
\end{array}
$$



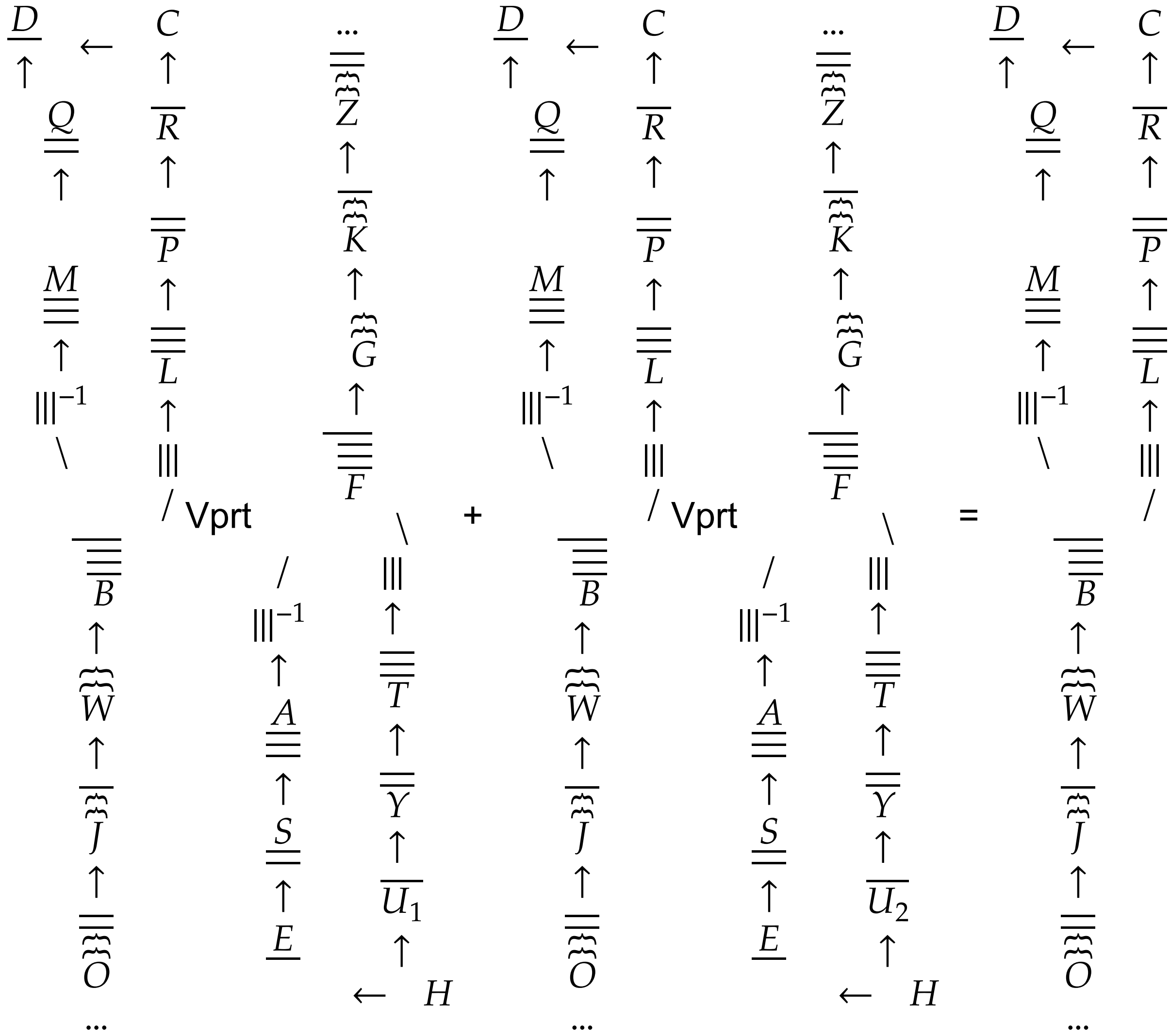
$$
\text{Vprt}\quad
\begin{array}{ccc}
 & \vdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
\overline{\overline{\overline{\overline{F_1}}}} & \cup & \overline{\overline{\overline{\overline{F_2}}}} \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
\quad \text{(A.1.3.17),}
$$



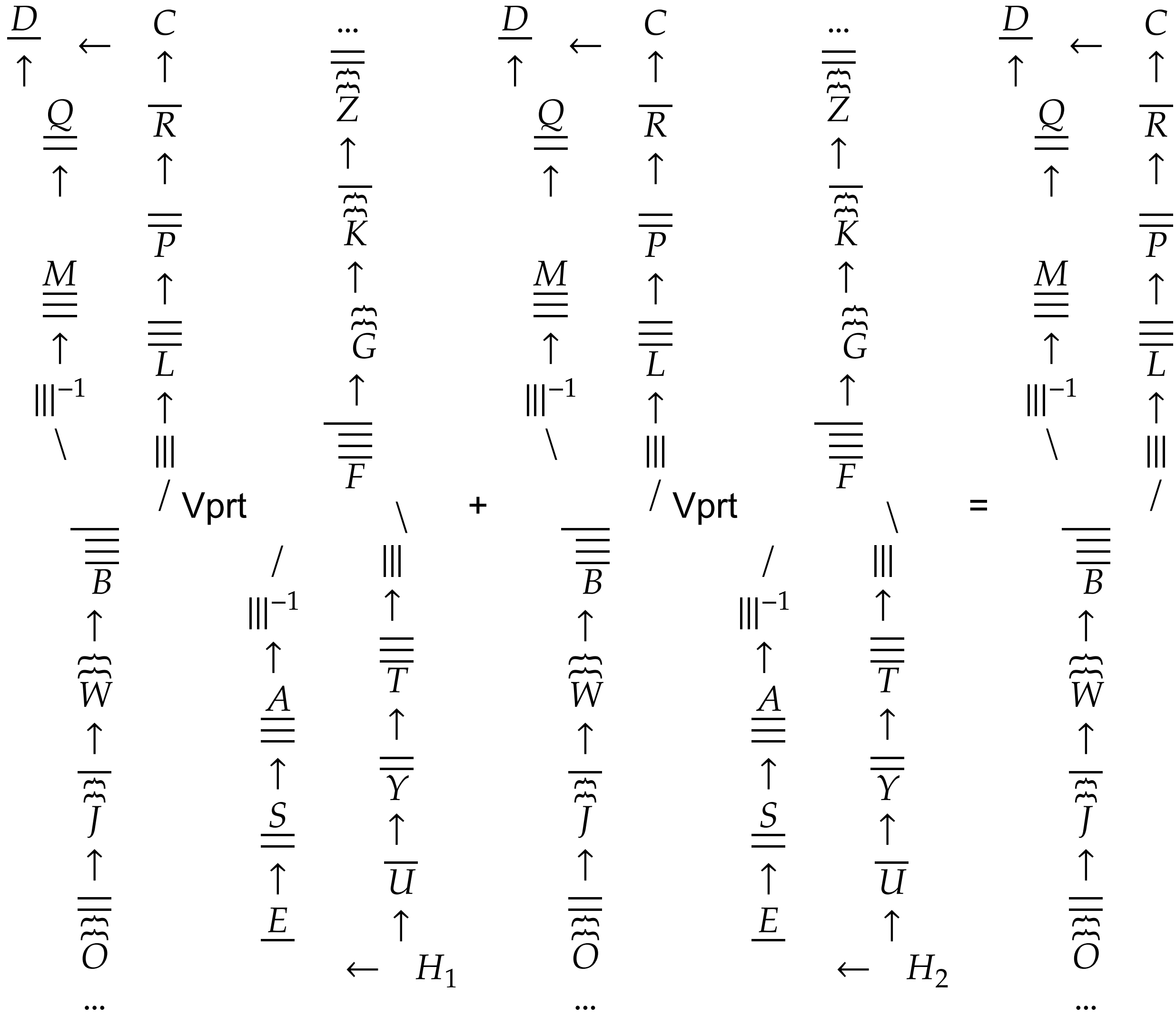
$$
\begin{array}{ccccc}
 & & \cdots & & \\
 & & \overline{\overline{\overbrace{\overbrace{Z}}}} & & \\
 & & \uparrow & & \\
 & & \overline{\overbrace{\overbrace{K}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{G}} & & \\
 & & \uparrow & & \\
 & & \overline{\overline{\overline{\overline{F}}}} & & \\
\text{Vprt} & & & \backslash & \text{(A.1.3.18),} \\
 & / & \||| & & \\
 & \|||^{-1} & \uparrow & & \\
 & \uparrow & \overline{\overline{\overline{T}}}_1 \cup \overline{\overline{\overline{T}}}_2 & & \\
 & \underline{\underline{\underline{A}}} & \uparrow & & \\
 & \uparrow & \overline{\overline{Y}} & & \\
 & \underline{\underline{S}} & \uparrow & & \\
 & \uparrow & \overline{U} & & \\
 & \underline{E} & \uparrow & & \\
 & & \leftarrow \quad H & &
\end{array}
$$


Vprt
+
Vprt
=

$$
\begin{array}{ccc}
 & \vdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
\text{Vprt} & & \backslash \\
/ & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{T}}} \\
\underline{\underline{\underline{A}}} & & \uparrow \\
\uparrow & & \overline{\overline{Y_1}} \cup \overline{\overline{Y_2}} \\
\underline{\underline{S}} & & \uparrow \\
\uparrow & & \overline{U} \\
\underline{E} & & \uparrow \\
 & \leftarrow & H
\end{array}
\qquad (A.1.3.19),
$$


Vprt
+
Vprt
=

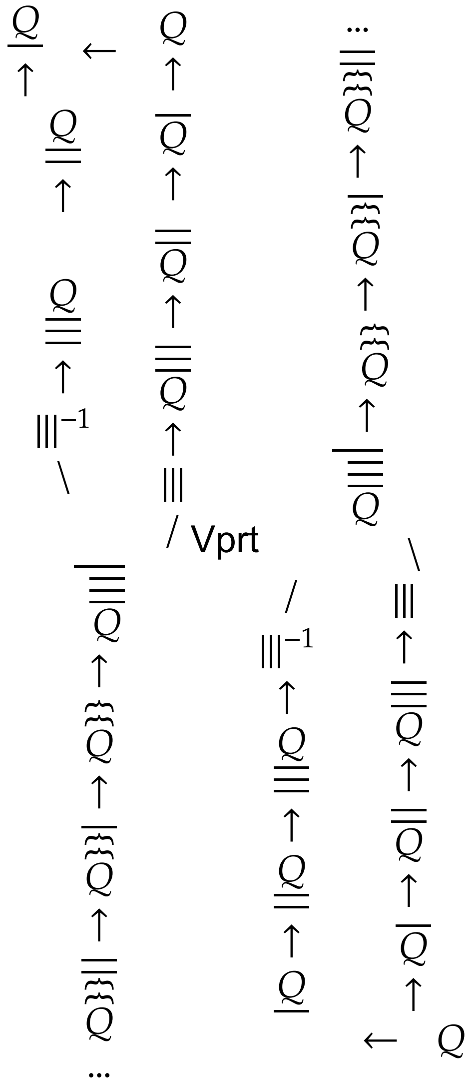
$$
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{Z}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
\text{Vprt} & & \backslash \qquad \text{(A.1.3.20),} \\
/ & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{T}}} \\
\underline{\underline{\underline{A}}} & & \uparrow \\
\uparrow & & \overline{\overline{Y}} \\
\underline{\underline{S}} & & \uparrow \\
\uparrow & & \overline{U_1} \cup \overline{U_2} \\
\underline{E} & & \uparrow \\
 & \leftarrow & H
\end{array}
$$


D ← C
Q
R
M
P
L
|||⁻¹
|||
Vprt
Z
K
G
F
B
W
J
O
A
S
E
T
Y
U
H1
+
H2
=
…

$$\overline{\overline{\overline{F}}} \rightarrow \tilde{\tilde{\tilde{G}}} \rightarrow \overline{\tilde{\tilde{\tilde{K}}}} \rightarrow \overline{\overline{\tilde{\tilde{\tilde{Z}}}}} \ldots$$

$$\begin{array}{ccc}
 & \mathrm{Vprt} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H_1 \cup H_2
\end{array} \qquad (A.1.3.21),$$

We consider the following self-type Vprt-structure, paradoxical self-type Vprt-structure (paself-type Vprt-structure) of the first type:



denote $V_1 f Q$,

$\underline{Q} \quad \leftarrow \quad Q \qquad \vdots$

$\uparrow \qquad\quad \uparrow \qquad \overline{\overline{\overbrace{Z}}}$

$\underline{\underline{Q}} \qquad \overline{R} \qquad \uparrow$

$\uparrow \qquad\quad \uparrow \qquad \overline{\overbrace{K}}$

$\overline{\overline{P}} \qquad \uparrow$

$\underline{\underline{\underline{M}}} \qquad \uparrow \qquad \overbrace{G}$

$\uparrow \qquad \overline{\overline{\overline{L}}} \qquad \uparrow$

$|||^{-1} \qquad \uparrow \qquad \overline{\overline{\overline{\overline{F}}}}$

$\backslash \qquad |||$

/ Vprt $\qquad \backslash$

$\overline{\overline{\overline{\overline{B}}}} \qquad / \qquad |||$

$\uparrow \qquad |||^{-1} \qquad \uparrow$

$\overbrace{W} \qquad \uparrow \qquad \overline{\overline{\overline{T}}}$

$\uparrow \qquad \underline{\underline{\underline{A}}} \qquad \uparrow$

$\overline{\overbrace{J}} \qquad \uparrow \qquad \overline{\overline{Y}}$

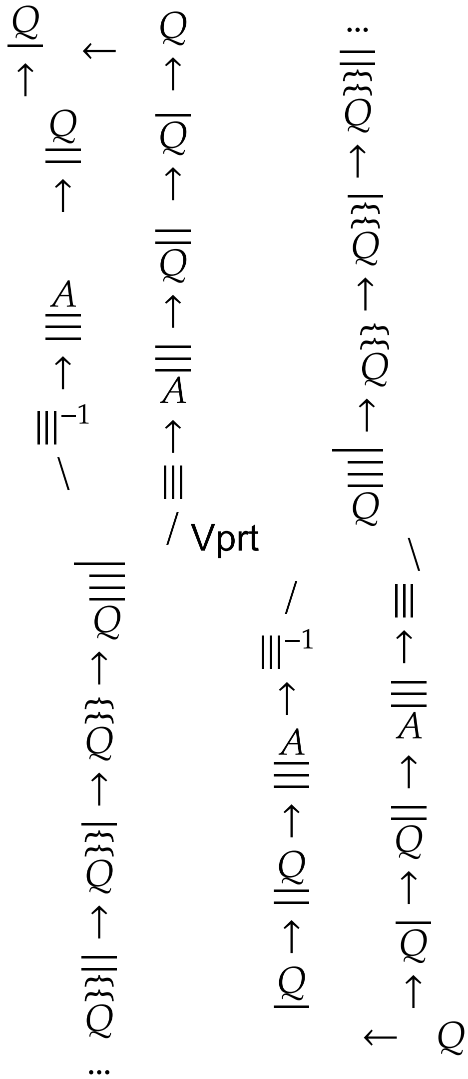
$\uparrow \qquad \underline{\underline{S}} \qquad \uparrow$

$\overline{\overline{\overbrace{Q}}} \qquad \uparrow \qquad \overline{U}$

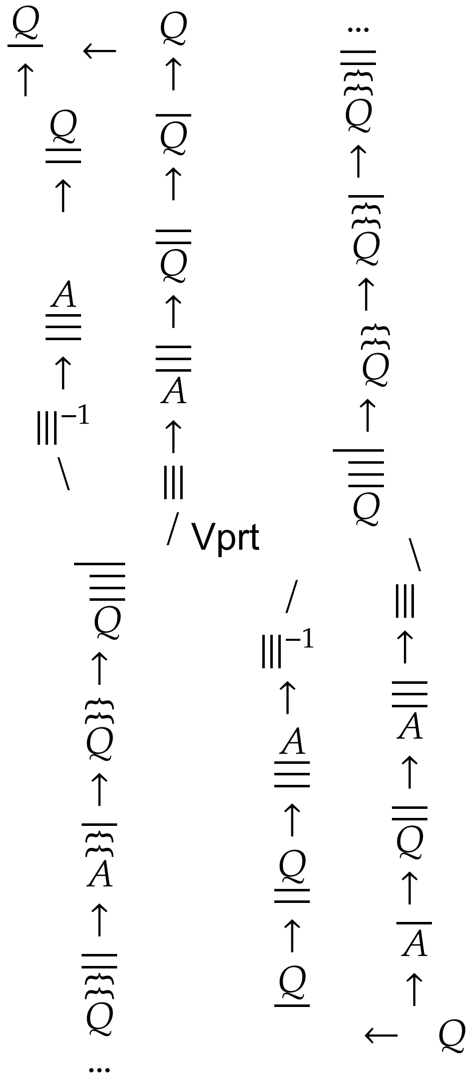
$\vdots \qquad \underline{Q} \qquad \uparrow$

$\leftarrow \quad Q$

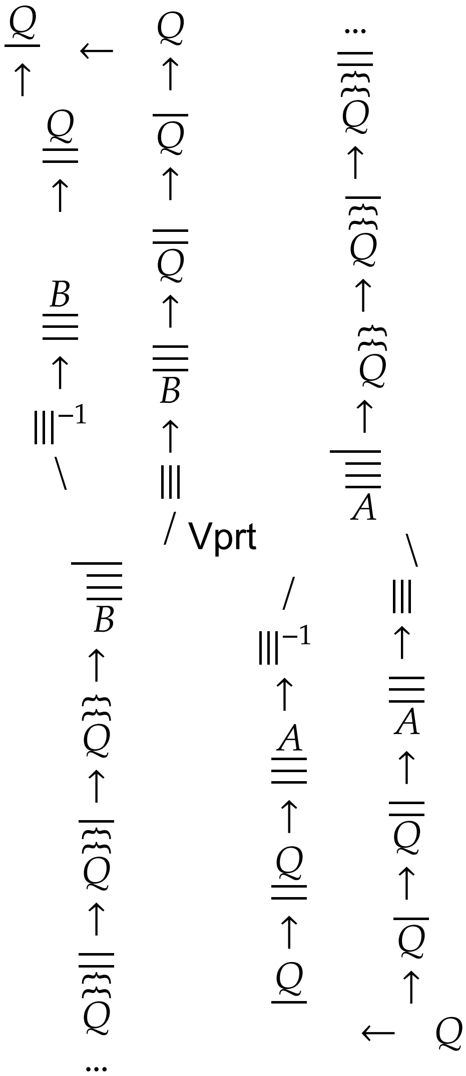
denote $V_2 f$,



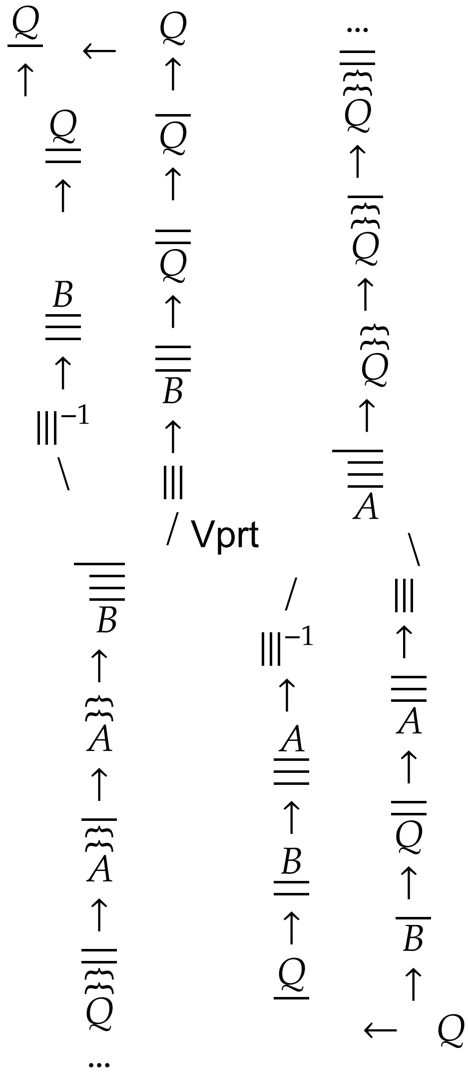
denote $V_3 f$,



denote $V_4 f$,



denote $V_5 f$,



denote $V_6 f$,

and any other possible options of self for (A.1.1) etc.

It can be considered a simpler version of the dynamic operator

$$
\begin{array}{ccccc}
 & & \cdots & & \\
 & & \overbrace{\overbrace{\overline{\overline{Z}}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{\overline{K}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{G}} & & \\
 & & \uparrow & & \\
 & & \overline{\overline{\overline{\overline{F}}}} & & \\
\text{Vprt} & & & \backslash & \text{(A.1.8),} \\
 & / & & ||| & \\
 & |||^{-1} & & \uparrow & \\
 & \uparrow & & \overline{\overline{\overline{T}}} & \\
 & \underline{\underline{\underline{A}}} & & \uparrow & \\
 & \uparrow & & \overline{\overline{Y}} & \\
 & \underline{\underline{S}} & & \uparrow & \\
 & \uparrow & & \overline{U} & \\
 & \underline{E} & & \uparrow & \\
 & & \leftarrow & H &
\end{array}
$$

the result of this process will be described by the expression

$$
\begin{array}{ccccc}
 & & \cdots & & \\
 & & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & & \\
 & & \uparrow & & \\
 & & \overline{\overbrace{\overbrace{\overbrace{K}}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{\overbrace{G}}} & & \\
 & & \uparrow & & \\
 & & \overline{\overline{\overline{F}}} & & \\
\text{Vrt} & & & \backslash & \text{(A.1.9)} \\
 & / & & ||| & \\
 & |||^{-1} & & \uparrow & \\
 & \uparrow & & \overline{\overline{\overline{T}}} & \\
 & \underline{\underline{\underline{A}}} & & \uparrow & \\
 & \uparrow & & \overline{\overline{Y}} & \\
 & \underline{\underline{S}} & & \uparrow & \\
 & \uparrow & & \overline{U} & \\
 & \underline{E} & & \uparrow & \\
 & & \leftarrow & & H
\end{array}
$$

or

$$
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \ \text{Vprt} \quad (A.1.10), \\
 & \overline{\overline{\overline{\overline{B}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & \\
 & \dots &
\end{array}
$$

the result of this process will be described by the expression

$$
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{M}}} & & \overline{\overline{P}} \\
\uparrow & & \uparrow \\
|||^{-1} & & \overline{\overline{\overline{L}}} \\
 & & \uparrow \\
 & & ||| \\
\backslash & & /
\end{array}
\text{ Vprt (A.1.11).}
$$

$$
\begin{array}{c}
\overline{\overline{\overline{\overline{B}}}} \\
\uparrow \\
\overbrace{\overbrace{W}} \\
\uparrow \\
\overline{\overbrace{\overbrace{J}}} \\
\uparrow \\
\overline{\overline{\overbrace{\overbrace{O}}}} \\
\ldots
\end{array}
$$

Definition 1,2. The dynamic operator (A.1.8) we shall call Vprt – element of the second type, (A.1.9) we shall call Vrt – element of the second type.

It’s allowed to add Vprt – elements of the second type:

$$
\mathrm{Vprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z_1}}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S}} & & \overline{\overline{Y}} \\
 \uparrow & & \uparrow \\
 \underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
+\mathrm{Vprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z_2}}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S}} & & \overline{\overline{Y}} \\
 \uparrow & & \uparrow \\
 \underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
=\mathrm{Vprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z_1}}}}}} \cup \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z_2}}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S}} & & \overline{\overline{Y}} \\
 \uparrow & & \uparrow \\
 \underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
\quad \text{(A.1.12),}
$$

$$
\mathrm{Vprt}\begin{array}{ccc}
 & \vdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K_1}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 & & \diagdown \\
 - & & ||| \\
 |||^{-1} & & \uparrow \\
 \uparrow & & \overline{\overline{\overline{T}}} \\
 \underline{\underline{\underline{\underline{A}}}} & & \uparrow \\
 \uparrow & & \overline{\overline{Y}} \\
 \underline{\underline{\underline{S}}} & & \uparrow \\
 \uparrow & & \overline{U} \\
 \underline{E} & & \uparrow \\
 & \leftarrow & H
\end{array}
+ \mathrm{Vprt}\begin{array}{ccc}
 & \vdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K_2}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 & & \diagdown \\
 - & & ||| \\
 |||^{-1} & & \uparrow \\
 \uparrow & & \overline{\overline{\overline{T}}} \\
 \underline{\underline{\underline{\underline{A}}}} & & \uparrow \\
 \uparrow & & \overline{\overline{Y}} \\
 \underline{\underline{\underline{S}}} & & \uparrow \\
 \uparrow & & \overline{U} \\
 \underline{E} & & \uparrow \\
 & \leftarrow & H
\end{array}
= \mathrm{Vprt}\begin{array}{ccc}
 & \vdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 \overline{\overbrace{\overbrace{\overbrace{K_1}}}} & \cup & \overline{\overbrace{\overbrace{\overbrace{K_2}}}} \\
 \uparrow & & \uparrow \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 & & \diagdown \\
 - & & ||| \\
 |||^{-1} & & \uparrow \\
 \uparrow & & \overline{\overline{\overline{T}}} \\
 \underline{\underline{\underline{\underline{A}}}} & & \uparrow \\
 \uparrow & & \overline{\overline{Y}} \\
 \underline{\underline{\underline{S}}} & & \uparrow \\
 \uparrow & & \overline{U} \\
 \underline{E} & & \uparrow \\
 & \leftarrow & H
\end{array}
\quad \text{(A.1.13),}
$$

$$
\mathrm{Vprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{Z}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G_1}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
+\mathrm{Vprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{Z}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G_2}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
=\mathrm{Vprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{Z}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G_1}}} \cup \overbrace{\overbrace{\overbrace{G_2}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
\quad (\text{A.1.13.1}),
$$

$$\mathrm{Vprt}\begin{array}{ccc} & \cdots & \\ & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{G}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{F_1}}} & \\ / & & \backslash \\ |||^{-1} & & ||| \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\ \uparrow & & \uparrow \\ \underline{\underline{S}} & & \overline{\overline{Y}} \\ \uparrow & & \uparrow \\ \underline{E} & & \overline{U} \\ & & \uparrow \\ & \leftarrow & H \end{array} + \mathrm{Vprt}\begin{array}{ccc} & \cdots & \\ & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{G}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{F_2}}} & \\ / & & \backslash \\ |||^{-1} & & ||| \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\ \uparrow & & \uparrow \\ \underline{\underline{S}} & & \overline{\overline{Y}} \\ \uparrow & & \uparrow \\ \underline{E} & & \overline{U} \\ & & \uparrow \\ & \leftarrow & H \end{array} = \mathrm{Vprt}\begin{array}{ccc} & \cdots & \\ & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{G}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{F_1}}} \cup \overline{\overline{\overline{F_2}}} & \\ / & & \backslash \\ |||^{-1} & & ||| \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\ \uparrow & & \uparrow \\ \underline{\underline{S}} & & \overline{\overline{Y}} \\ \uparrow & & \uparrow \\ \underline{E} & & \overline{U} \\ & & \uparrow \\ & \leftarrow & H \end{array} \quad \text{(A.1.13.2),}$$

$$
\mathrm{Vprt}\begin{array}{ccc}
 & \vdots & \\
 & \overline{\overline{\overset{\frown\frown\frown}{Z}}} & \\
 & \uparrow & \\
 & \overline{\overset{\frown\frown\frown}{K}} & \\
 & \uparrow & \\
 & \overset{\frown\frown\frown}{G} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A_1}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
+\mathrm{Vprt}\begin{array}{ccc}
 & \vdots & \\
 & \overline{\overline{\overset{\frown\frown\frown}{Z}}} & \\
 & \uparrow & \\
 & \overline{\overset{\frown\frown\frown}{K}} & \\
 & \uparrow & \\
 & \overset{\frown\frown\frown}{G} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A_2}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
=\mathrm{Vprt}\begin{array}{ccc}
 & \vdots & \\
 & \overline{\overline{\overset{\frown\frown\frown}{Z}}} & \\
 & \uparrow & \\
 & \overline{\overset{\frown\frown\frown}{K}} & \\
 & \uparrow & \\
 & \overset{\frown\frown\frown}{G} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A_1}}} \cup \underline{\underline{\underline{A_2}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
\quad (A.1.13.3),
$$

$$
\mathrm{Vprt}\begin{array}{ccc}
 & \vdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 & & \backslash \\
/ & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{T}}} \\
\underline{\underline{\underline{A}}} & & \uparrow \\
\uparrow & & \overline{\overline{Y}} \\
\underline{\underline{S_1}} & & \uparrow \\
\uparrow & & \overline{U} \\
\underline{E} & & \uparrow \\
 & \leftarrow & H
\end{array}
+\mathrm{Vprt}\begin{array}{ccc}
 & \vdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 & & \backslash \\
/ & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{T}}} \\
\underline{\underline{\underline{A}}} & & \uparrow \\
\uparrow & & \overline{\overline{Y}} \\
\underline{\underline{S_2}} & & \uparrow \\
\uparrow & & \overline{U} \\
\underline{E} & & \uparrow \\
 & \leftarrow & H
\end{array}
=\mathrm{Vprt}\begin{array}{ccc}
 & \vdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 & & \backslash \\
/ & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{T}}} \\
\underline{\underline{\underline{A}}} & & \uparrow \\
\uparrow & & \overline{\overline{Y}} \\
\underline{\underline{S_1}} \cup \underline{\underline{S_2}} & & \uparrow \\
\uparrow & & \overline{U} \\
\underline{E} & & \uparrow \\
 & \leftarrow & H
\end{array}
\quad (\mathrm{A}.1.13.4),
$$

$$
\mathrm{Vprt}\begin{array}{ccc}
 & \begin{array}{c} \cdots \\ \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} \\ \uparrow \\ \overline{\overbrace{\overbrace{\overbrace{K}}}} \\ \uparrow \\ \overbrace{\overbrace{\overbrace{G}}} \\ \uparrow \\ \overline{\overline{\overline{\overline{F}}}} \end{array} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E_1} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
+\mathrm{Vprt}\begin{array}{ccc}
 & \begin{array}{c} \cdots \\ \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} \\ \uparrow \\ \overline{\overbrace{\overbrace{\overbrace{K}}}} \\ \uparrow \\ \overbrace{\overbrace{\overbrace{G}}} \\ \uparrow \\ \overline{\overline{\overline{\overline{F}}}} \end{array} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E_2} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
=\mathrm{Vprt}\begin{array}{ccc}
 & \begin{array}{c} \cdots \\ \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} \\ \uparrow \\ \overline{\overbrace{\overbrace{\overbrace{K}}}} \\ \uparrow \\ \overbrace{\overbrace{\overbrace{G}}} \\ \uparrow \\ \overline{\overline{\overline{\overline{F}}}} \end{array} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E_1}\cup\underline{E_2} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
\quad (\mathrm{A}.1.13.5),
$$

$$
\mathrm{Vprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{\underline{A}}}} & & \overline{\overline{\overline{T_1}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
+\mathrm{Vprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{\underline{A}}}} & & \overline{\overline{\overline{T_2}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
=\mathrm{Vprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{\underline{A}}}} & & \overline{\overline{\overline{T_1}}} \cup \overline{\overline{\overline{T_2}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
\quad (\text{A.1.13.6}),
$$

$$
\text{Vprt}\;
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S}} & & \overline{\overline{Y_1}} \\
 \uparrow & & \uparrow \\
 \underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
\;+\;\text{Vprt}\;
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S}} & & \overline{\overline{Y_2}} \\
 \uparrow & & \uparrow \\
 \underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
\;=\;\text{Vprt}\;
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S}} & & \overline{\overline{Y_1}} \cup \overline{\overline{Y_2}} \\
 \uparrow & & \uparrow \\
 \underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
\quad \text{(A.1.13.7),}
$$

$$
\mathrm{Vprt}\begin{array}{ccc}
 & \vdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 & & \backslash \\
 / & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{T}}} \\
\underline{\underline{\underline{\underline{A}}}} & & \uparrow \\
\uparrow & & \overline{\overline{Y}} \\
\underline{\underline{\underline{S}}} & & \uparrow \\
\uparrow & & \overline{U_1} \\
\underline{E} & & \uparrow \\
 & \leftarrow & H
\end{array}
+ \mathrm{Vprt}\begin{array}{ccc}
 & \vdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 & & \backslash \\
 / & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{T}}} \\
\underline{\underline{\underline{\underline{A}}}} & & \uparrow \\
\uparrow & & \overline{\overline{Y}} \\
\underline{\underline{\underline{S}}} & & \uparrow \\
\uparrow & & \overline{U_2} \\
\underline{E} & & \uparrow \\
 & \leftarrow & H
\end{array}
= \mathrm{Vprt}\begin{array}{ccc}
 & \vdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 & & \backslash \\
 / & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{T}}} \\
\underline{\underline{\underline{\underline{A}}}} & & \uparrow \\
\uparrow & & \overline{\overline{Y}} \\
\underline{\underline{\underline{S}}} & & \uparrow \\
\uparrow & & \overline{U_1} \cup \overline{U_2} \\
\underline{E} & & \uparrow \\
 & \leftarrow & H
\end{array}
\quad \text{(A.1.13.8),}
$$

$$\text{Vprt}\begin{array}{ccc} & \vdots & \\ & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{G}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overline{F}}}} & \\ / & & \backslash \\ |||^{-1} & & ||| \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\ \uparrow & & \uparrow \\ \underline{\underline{S}} & & \overline{\overline{Y}} \\ \uparrow & & \uparrow \\ \underline{E} & & \overline{U} \\ & & \uparrow \\ & \leftarrow & H_1 \end{array} + \text{Vprt}\begin{array}{ccc} & \vdots & \\ & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{G}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overline{F}}}} & \\ / & & \backslash \\ |||^{-1} & & ||| \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\ \uparrow & & \uparrow \\ \underline{\underline{S}} & & \overline{\overline{Y}} \\ \uparrow & & \uparrow \\ \underline{E} & & \overline{U} \\ & & \uparrow \\ & \leftarrow & H_2 \end{array} = \text{Vprt}\begin{array}{ccc} & \vdots & \\ & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{G}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overline{F}}}} & \\ / & & \backslash \\ |||^{-1} & & ||| \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\ \uparrow & & \uparrow \\ \underline{\underline{S}} & & \overline{\overline{Y}} \\ \uparrow & & \uparrow \\ \underline{E} & & \overline{U} \\ & & \uparrow \\ & \leftarrow & H_1 \cup H_2 \end{array} \quad \text{(A.1.13.9).}$$

We consider the following self-type Vprt-structures of the second type:

$\overline{\overline{\overline{\overline{Q}}}} \to \overbrace{\overbrace{Q}} \to \overline{\overbrace{\overbrace{\overbrace{Q}}}} \to \overline{\overline{\overbrace{\overbrace{\overbrace{Q}}}}} \ldots$

Vprt $\quad\quad\quad\quad \backslash \quad$ (A.1.14),

$/ \quad\quad |||$

$|||^{-1} \quad \uparrow$

$\uparrow \quad \overline{\overline{\overline{Q}}}$

$\underline{\underline{\underline{Q}}} \quad \uparrow$

$\uparrow \quad \overline{\overline{Q}}$

$\underline{\underline{Q}} \quad \uparrow$

$\uparrow \quad \overline{Q}$

$\underline{Q} \quad \uparrow$

$\leftarrow \quad Q$

$$\overline{\overline{\overline{Q}}}\,\big| \rightarrow \widetilde{Q} \rightarrow \widetilde{\overline{Q}}\,\big| \rightarrow \widetilde{\overline{A}} \cdots$$

Vprt (A.1.14.1),

$$
\begin{array}{ccc}
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{Q}}} & & \overline{\overline{\overline{Q}}} \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{\overline{Q}} \\
\uparrow & & \uparrow \\
\underline{Q} & & \overline{Q} \\
 & & \uparrow \\
 & \leftarrow & a
\end{array}
$$

denote $V_7 f A;Q;a,\ a \subset \mathrm{A}$,

$$\overline{\overline{\overline{Q}}}\,| \to \tilde{\tilde{\tilde{Q}}} \to \tilde{\tilde{\tilde{Q}}}\,| \to \tilde{\tilde{\tilde{a}}}\,||| \ldots$$

Vprt (A.1.15),

$$\begin{array}{ccc}
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{Q}}} & & \overline{\overline{\overline{Q}}} \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{\overline{Q}} \\
\uparrow & & \uparrow \\
\underline{Q} & & \overline{Q} \\
 & & \uparrow \\
 & \leftarrow & str\ A
\end{array}$$

denote $V_8 fa;Q;A$, $a \subset$ A,

$$
\begin{array}{ccccc}
 & & \vdots & & \\
 & & \overbrace{\overbrace{\overbrace{a}}}\,||| & & \\
 & & \uparrow & & \\
 & & \overline{\overbrace{\overbrace{A}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{A}} & & \\
 & & \uparrow & & \\
 & & \overline{\overline{\overline{\overline{Q}}}} & & \\
\text{Vprt} & & & \diagdown & \text{(A.1.16),} \\
 & / & & ||| & \\
 & |||^{-1} & & \uparrow & \\
 & \uparrow & & \overline{\overline{\overline{Q}}} & \\
 & \underline{\underline{\underline{Q}}} & & \uparrow & \\
 & \uparrow & & \overline{\overline{Q}} & \\
 & \underline{\underline{Q}} & & \uparrow & \\
 & \uparrow & & \overline{Q} & \\
 & \underline{Q} & & \uparrow & \\
 & & \leftarrow & str\ A &
\end{array}
$$

and any other possible options of self for (A.1.8) etc.

Definition A.1.3. The dynamic operator (A.1.10) we shall call tprV – element, (A.1.11) we shall call trV – element.

It’s allowed to add tprV – elements:

$$
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M_1}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & \overline{\overline{\overline{B}}} & / \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & \\
 & \ldots &
\end{array}
\text{ Vprt } +
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M_2}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & \overline{\overline{\overline{B}}} & / \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & \\
 & \ldots &
\end{array}
\text{ Vprt } =
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M_1}}} \cup \underline{\underline{\underline{M_2}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & \overline{\overline{\overline{B}}} & / \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & \\
 & \ldots &
\end{array}
\text{ Vprt } \quad \text{(A.1.17),}
$$

$$\begin{array}{ccc} \underline{D} & \leftarrow & C \\ \uparrow & & \uparrow \\ \underline{\underline{Q_1}} & & \overline{R} \\ \uparrow & & \uparrow \\ & & \overline{\overline{P}} \\ \underline{\underline{\underline{M}}} & & \uparrow \\ \uparrow & & \overline{\overline{\overline{L}}} \\ |||^{-1} & & \uparrow \\ \backslash & & ||| \\ & & / \\ & \overline{\overline{\overline{\overline{B}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{W}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{J}}} & \\ & \uparrow & \\ & \overline{\overline{\overbrace{\overbrace{O}}}} & \\ & \ldots & \end{array} \text{Vprt} + \begin{array}{ccc} \underline{D} & \leftarrow & C \\ \uparrow & & \uparrow \\ \underline{\underline{Q_2}} & & \overline{R} \\ \uparrow & & \uparrow \\ & & \overline{\overline{P}} \\ \underline{\underline{\underline{M}}} & & \uparrow \\ \uparrow & & \overline{\overline{\overline{L}}} \\ |||^{-1} & & \uparrow \\ \backslash & & ||| \\ & & / \\ & \overline{\overline{\overline{\overline{B}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{W}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{J}}} & \\ & \uparrow & \\ & \overline{\overline{\overbrace{\overbrace{O}}}} & \\ & \ldots & \end{array} \text{Vprt} = \begin{array}{ccc} \underline{D} & \leftarrow & C \\ \uparrow & & \uparrow \\ \underline{\underline{Q_1}} \cup \underline{\underline{Q_2}} & & \overline{R} \\ \uparrow & & \uparrow \\ & & \overline{\overline{P}} \\ \underline{\underline{\underline{M}}} & & \uparrow \\ \uparrow & & \overline{\overline{\overline{L}}} \\ |||^{-1} & & \uparrow \\ \backslash & & ||| \\ & & / \\ & \overline{\overline{\overline{\overline{B}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{W}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{J}}} & \\ & \uparrow & \\ & \overline{\overline{\overbrace{\overbrace{O}}}} & \\ & \ldots & \end{array} \text{Vprt (A.1.18),}$$

$$
\begin{array}{ccc}
\underline{D_1} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{M}}} & & \overline{\overline{P}} \\
\uparrow & & \uparrow \\
|||^{-1} & & \overline{\overline{\overline{L}}} \\
 & & \uparrow \\
\backslash & & ||| \\
 & & / \\
\overline{\overline{\overline{\overline{B}}}} & & \\
\uparrow & & \\
\overbrace{\overbrace{\overbrace{W}}} & & \\
\uparrow & & \\
\overline{\overbrace{\overbrace{J}}} & & \\
\uparrow & & \\
\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & & \\
\ldots & &
\end{array}
\mathrm{Vprt} \; + \;
\begin{array}{ccc}
\underline{D_2} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{M}}} & & \overline{\overline{P}} \\
\uparrow & & \uparrow \\
|||^{-1} & & \overline{\overline{\overline{L}}} \\
 & & \uparrow \\
\backslash & & ||| \\
 & & / \\
\overline{\overline{\overline{\overline{B}}}} & & \\
\uparrow & & \\
\overbrace{\overbrace{\overbrace{W}}} & & \\
\uparrow & & \\
\overline{\overbrace{\overbrace{J}}} & & \\
\uparrow & & \\
\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & & \\
\ldots & &
\end{array}
\mathrm{Vprt} \; = \;
\begin{array}{ccc}
\underline{D_1} \cup \underline{D_2} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{M}}} & & \overline{\overline{P}} \\
\uparrow & & \uparrow \\
|||^{-1} & & \overline{\overline{\overline{L}}} \\
 & & \uparrow \\
\backslash & & ||| \\
 & & / \\
\overline{\overline{\overline{\overline{B}}}} & & \\
\uparrow & & \\
\overbrace{\overbrace{\overbrace{W}}} & & \\
\uparrow & & \\
\overline{\overbrace{\overbrace{J}}} & & \\
\uparrow & & \\
\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & & \\
\ldots & &
\end{array}
\mathrm{Vprt} \quad \text{(A.1.18.1),}
$$

$$
\begin{array}{ccc}
\underline{D} & \leftarrow & C_1 \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{J}}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & \\
 & \dots &
\end{array}
\text{Vprt} \; + \;
\begin{array}{ccc}
\underline{D} & \leftarrow & C_2 \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{J}}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & \\
 & \dots &
\end{array}
\text{Vprt} \; = \;
\begin{array}{ccc}
\underline{D} & \leftarrow & C_1 \cup C_2 \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{J}}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & \\
 & \dots &
\end{array}
\text{Vprt (A.1.18.2),}
$$

$$\begin{array}{ccc} \underline{D} & \leftarrow & C \\ \uparrow & & \uparrow \\ \underline{\underline{Q}} & & \overline{R_1} \\ \uparrow & & \uparrow \\ & & \overline{\overline{P}} \\ \underline{\underline{\underline{M}}} & & \uparrow \\ \uparrow & & \overline{\overline{\overline{L}}} \\ |||^{-1} & & \uparrow \\ \backslash & & ||| \\ & & / \\ & \overline{\overline{\overline{\overline{B}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{W}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{J}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}}} & \\ & \ldots & \end{array} \text{Vprt} + \begin{array}{ccc} \underline{D} & \leftarrow & C \\ \uparrow & & \uparrow \\ \underline{\underline{Q}} & & \overline{R_2} \\ \uparrow & & \uparrow \\ & & \overline{\overline{P}} \\ \underline{\underline{\underline{M}}} & & \uparrow \\ \uparrow & & \overline{\overline{\overline{L}}} \\ |||^{-1} & & \uparrow \\ \backslash & & ||| \\ & & / \\ & \overline{\overline{\overline{\overline{B}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{W}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{J}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}}} & \\ & \ldots & \end{array} \text{Vprt} = \begin{array}{ccc} \underline{D} & \leftarrow & C \\ \uparrow & & \uparrow \\ \underline{\underline{Q}} & & \overline{R_1} \cup \overline{R_2} \\ \uparrow & & \uparrow \quad \uparrow \\ & & \overline{\overline{P}} \\ \underline{\underline{\underline{M}}} & & \uparrow \\ \uparrow & & \overline{\overline{\overline{L}}} \\ |||^{-1} & & \uparrow \\ \backslash & & ||| \\ & & / \\ & \overline{\overline{\overline{\overline{B}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{W}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{J}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}}} & \\ & \ldots & \end{array} \text{Vprt} \quad (A.1.18.3),$$

$$
\begin{array}{ccc} \underline{D} & \leftarrow & C \\ \uparrow & & \uparrow \\ \underline{\underline{Q}} & & \overline{R} \\ \uparrow & & \uparrow \\ & & \overline{\overline{P_1}} \\ \underline{\underline{\underline{M}}} & & \uparrow \\ \uparrow & & \overline{\overline{\overline{L}}} \\ |||^{-1} & & \uparrow \\ \backslash & & ||| \\ & & / \\ & \overline{\overline{\overline{\overline{B}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{W}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{J}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}}} & \\ & \dots & \end{array}
\text{ Vprt } +
\begin{array}{ccc} \underline{D} & \leftarrow & C \\ \uparrow & & \uparrow \\ \underline{\underline{Q}} & & \overline{R} \\ \uparrow & & \uparrow \\ & & \overline{\overline{P_2}} \\ \underline{\underline{\underline{M}}} & & \uparrow \\ \uparrow & & \overline{\overline{\overline{L}}} \\ |||^{-1} & & \uparrow \\ \backslash & & ||| \\ & & / \\ & \overline{\overline{\overline{\overline{B}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{W}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{J}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}}} & \\ & \dots & \end{array}
\text{ Vprt } =
\begin{array}{ccc} \underline{D} & \leftarrow & C \\ \uparrow & & \uparrow \\ \underline{\underline{Q}} & & \overline{R} \\ \uparrow & & \uparrow \\ & & \overline{\overline{P_1}} \cup \overline{\overline{P_2}} \\ \underline{\underline{\underline{M}}} & & \uparrow \\ \uparrow & & \overline{\overline{\overline{L}}} \\ |||^{-1} & & \uparrow \\ \backslash & & ||| \\ & & / \\ & \overline{\overline{\overline{\overline{B}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{W}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{J}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}}} & \\ & \dots & \end{array}
\text{ Vprt } \quad (A.1.18.4),
$$

$$
\begin{array}{ccc}
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L_1}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O}}}} & \\
 & \ldots &
\end{array}
\text{Vprt} \; + &
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L_2}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O}}}} & \\
 & \ldots &
\end{array}
\text{Vprt} \; = &
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L_1}}} \cup \overline{\overline{\overline{L_2}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O}}}} & \\
 & \ldots &
\end{array}
\text{Vprt (A.1.18.5),}
\end{array}
$$

$$
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B_1}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O}}}} & \\
 & \dots &
\end{array}
\text{ Vprt } +
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B_2}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O}}}} & \\
 & \dots &
\end{array}
\text{ Vprt } =
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
\overline{\overline{\overline{\overline{B_1}}}} & \cup & \overline{\overline{\overline{\overline{B_2}}}} \\
 & \uparrow & \\
 & \overbrace{\overbrace{W}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O}}}} & \\
 & \dots &
\end{array}
\text{ Vprt (A.1.18.6),}
$$

$$
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & \overline{\overline{\overline{\overline{B}}}} & / \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W_1}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O}}}} & \\
 & \ldots &
\end{array}
\text{Vprt} +
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & \overline{\overline{\overline{\overline{B}}}} & / \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W_2}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O}}}} & \\
 & \ldots &
\end{array}
\text{Vprt} =
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & \overline{\overline{\overline{\overline{B}}}} & / \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W_1}}} \cup \overbrace{\overbrace{\overbrace{W_2}}} & \\
 & \uparrow \quad\quad \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O}}}} & \\
 & \ldots &
\end{array}
\text{Vprt} \quad (\text{A.1.18.7}),
$$

$$\begin{array}{ccc} \underline{D} & \leftarrow & C \\ \uparrow & & \uparrow \\ \underline{\underline{Q}} & & \overline{R} \\ \uparrow & & \uparrow \\ & & \overline{\overline{P}} \\ \underline{\underline{\underline{M}}} & & \uparrow \\ \uparrow & & \overline{\overline{\overline{L}}} \\ |||^{-1} & & \uparrow \\ \backslash & & ||| \\ & \overline{\overline{\overline{\overline{B}}}} & / \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{W}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{J_1}}} & \\ & \uparrow & \\ & \overline{\overline{\overbrace{\overbrace{O}}}} & \\ & \ldots & \end{array} \text{Vprt} \; + \; \begin{array}{ccc} \underline{D} & \leftarrow & C \\ \uparrow & & \uparrow \\ \underline{\underline{Q}} & & \overline{R} \\ \uparrow & & \uparrow \\ & & \overline{\overline{P}} \\ \underline{\underline{\underline{M}}} & & \uparrow \\ \uparrow & & \overline{\overline{\overline{L}}} \\ |||^{-1} & & \uparrow \\ \backslash & & ||| \\ & \overline{\overline{\overline{\overline{B}}}} & / \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{W}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{J_2}}} & \\ & \uparrow & \\ & \overline{\overline{\overbrace{\overbrace{O}}}} & \\ & \ldots & \end{array} \text{Vprt} = \begin{array}{ccc} \underline{D} & \leftarrow & C \\ \uparrow & & \uparrow \\ \underline{\underline{Q}} & & \overline{R} \\ \uparrow & & \uparrow \\ & & \overline{\overline{P}} \\ \underline{\underline{\underline{M}}} & & \uparrow \\ \uparrow & & \overline{\overline{\overline{L}}} \\ |||^{-1} & & \uparrow \\ \backslash & & ||| \\ & \overline{\overline{\overline{\overline{B}}}} & / \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{W}}} & \\ & \uparrow & \\ \overline{\overbrace{\overbrace{J_1}}} & \cup & \overline{\overbrace{\overbrace{J_2}}} \\ \uparrow & & \uparrow \\ & \overline{\overline{\overbrace{\overbrace{O}}}} & \\ & \ldots & \end{array} \text{Vprt (A.1.18.8),}$$

$$
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
& & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
& \_\_\_ & /
\end{array}
\text{Vprt} \;+\;
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
& & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
& \_\_\_ & /
\end{array}
\text{Vprt} \;=\;
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
& & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
& \_\_\_ & /
\end{array}
\text{Vprt (A.1.18.9).}
$$

$$
\begin{array}{c}
\overline{\overline{\overline{\overline{B}}}} \\
\uparrow \\
\overbrace{\overbrace{W}} \\
\uparrow \\
\overline{\overbrace{\overbrace{J}}} \\
\uparrow \\
\overline{\overline{\overbrace{\overbrace{\overbrace{O_1}}}}} \\
\dots
\end{array}
\qquad\qquad
\begin{array}{c}
\overline{\overline{\overline{\overline{B}}}} \\
\uparrow \\
\overbrace{\overbrace{W}} \\
\uparrow \\
\overline{\overbrace{\overbrace{J}}} \\
\uparrow \\
\overline{\overline{\overbrace{\overbrace{\overbrace{O_2}}}}} \\
\dots
\end{array}
\qquad\qquad
\begin{array}{c}
\overline{\overline{\overline{\overline{B}}}} \\
\uparrow \\
\overbrace{\overbrace{W}} \\
\uparrow \\
\overline{\overbrace{\overbrace{J}}} \\
\uparrow \\
\overline{\overline{\overbrace{\overbrace{\overbrace{O_1}}}}} \cup \overline{\overline{\overbrace{\overbrace{\overbrace{O_2}}}}} \\
\dots
\end{array}
$$

We consider the following self-type tprV-structures:

$$\underline{Q} \leftarrow Q$$

$$\uparrow \quad \underline{\underline{Q}} \quad \uparrow \quad \overline{Q} \quad \uparrow \quad \overline{\overline{Q}} \quad \uparrow \quad \underline{\underline{\underline{Q}}} \quad \uparrow \quad \overline{\overline{\overline{Q}}} \quad \uparrow \quad \equiv^{-1} \quad \equiv$$

\ / Vprt (A.1.19),

$$\overline{\overline{\overline{\overline{Q}}}} \uparrow \widetilde{\widetilde{Q}} \uparrow \overline{\widetilde{\widetilde{Q}}} \uparrow \overline{\overline{\widetilde{\widetilde{Q}}}} \ \cdots$$

$$
\begin{array}{ccc}
\underline{Q} & \leftarrow & str\,D \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{Q} \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{Q}}} & & \overline{\overline{Q}} \\
\uparrow & & \uparrow \\
|||^{-1} & & \overline{\overline{\overline{Q}}} \\
\backslash & & \uparrow \\
 & & ||| \\
 & & /
\end{array}
\quad \text{Vprt (A.1.19.1),}
$$

$$
\begin{array}{c}
\overline{\overline{\overline{Q}}} \\
\uparrow \\
\tilde{\tilde{\tilde{Q}}} \\
\uparrow \\
\overline{\tilde{\tilde{\tilde{Q}}}} \\
\uparrow \\
\overline{\overline{\tilde{\tilde{\tilde{d}}}}} \\
\dots
\end{array}
$$

denote $V_9 f d;Q;D$, $d \subset$ D,

$$
\begin{array}{ccc}
\underline{Q} & \leftarrow & d \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{Q} \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{Q}}} & & \overline{\overline{Q}} \\
\uparrow & & \uparrow \\
|||^{-1} & & \overline{\overline{\overline{Q}}} \\
& & \uparrow \\
\backslash & & ||| \\
& & /
\end{array}
$$

Vprt (A.1.20),

$$
\begin{array}{c}
\overline{\overline{\overline{D}}} \\
\uparrow \\
\tilde{\tilde{\tilde{Q}}} \\
\uparrow \\
\overline{\tilde{\tilde{\tilde{Q}}}} \\
\uparrow \\
\overline{\overline{\tilde{\tilde{\tilde{Q}}}}} \\
\ldots
\end{array}
$$

denote $V_{10} f D;Q;d$, $d \subset$ D,

and any other possible options of self for (A.1.10) etc.

A.2 Dynamic Vprt – elements, self-type dynamic Vprt-structures

We considered Vprt – elements earlier. Here we consider dynamic Vprt – elements. We consider dynamic operators, whose elements change over time

$$
\begin{array}{cccc}
\underline{D(t)} & \leftarrow & C(t) & \cdots \\
\uparrow & & \uparrow & \overline{\overline{\overline{\overbrace{\overbrace{Z(t)}}}}} \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & \uparrow \\
\uparrow & & \uparrow & \overline{\overline{\overbrace{\overbrace{K(t)}}}} \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & \uparrow \\
\uparrow & & \uparrow & \overbrace{\overbrace{G(t)}} \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} & \uparrow \\
\backslash & & \uparrow & \overline{\overline{\overline{F(t)}}} \\
 & & ||| & \\
 & & / & \backslash
\end{array}
$$

$$\mathrm{Vprt}(t) \qquad (A.2.1),$$

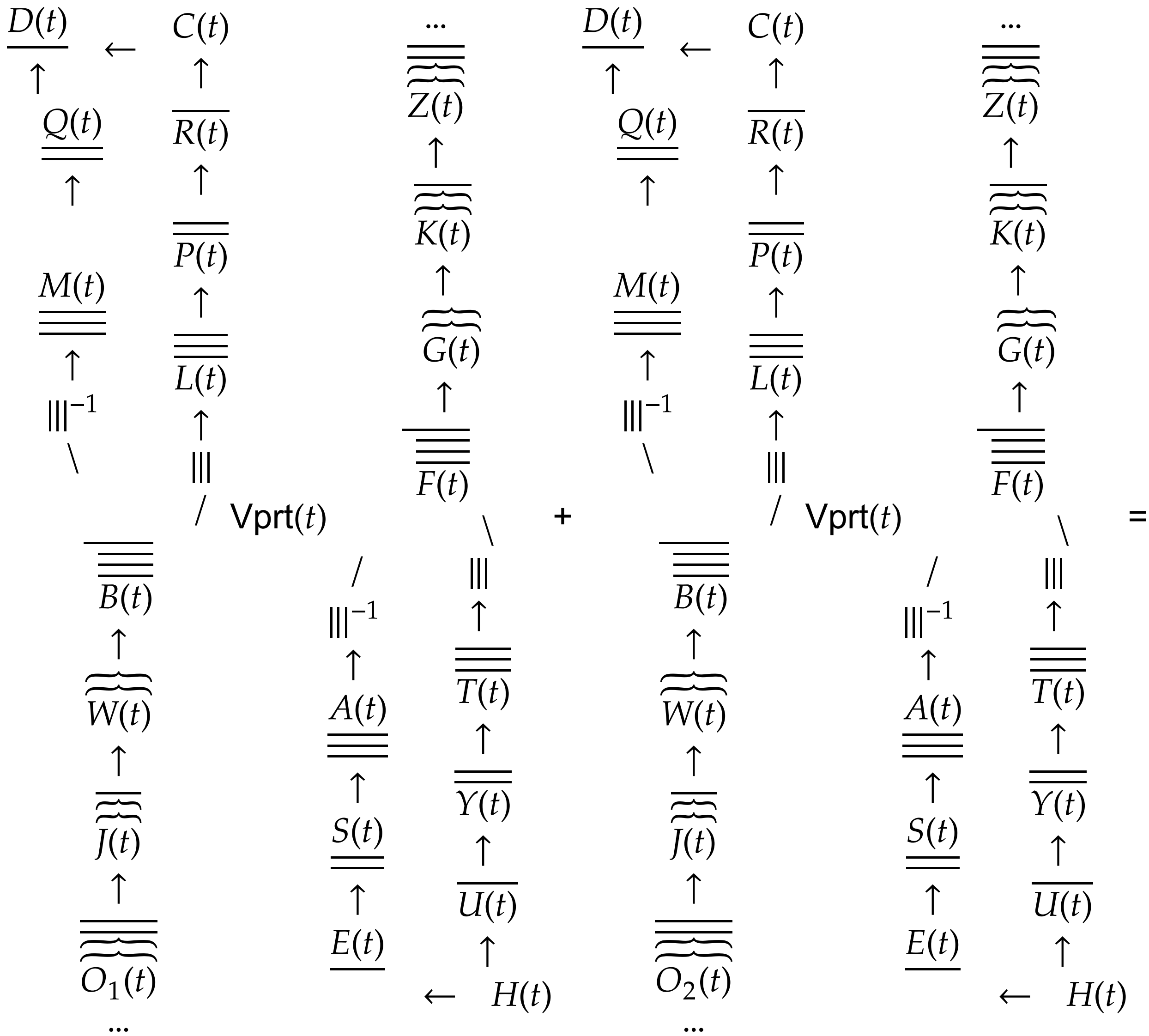
$$
\begin{array}{ccc}
\overline{\overline{\overline{B(t)}}} & / & ||| \\
\uparrow & |||^{-1} & \uparrow \\
\overbrace{\overbrace{W(t)}} & \uparrow & \overline{\overline{\overline{T(t)}}} \\
\uparrow & \underline{\underline{\underline{A(t)}}} & \uparrow \\
\overline{\overline{\overbrace{\overbrace{J(t)}}}} & \uparrow & \overline{\overline{Y(t)}} \\
\uparrow & \underline{\underline{S(t)}} & \uparrow \\
\overline{\overline{\overline{\overbrace{\overbrace{O(t)}}}}} & \uparrow & \overline{U(t)} \\
\cdots & \underline{E(t)} & \uparrow \\
 & & \leftarrow \ H(t)
\end{array}
$$

where $\overline{\overline{\overline{\overbrace{\overbrace{Z(t)}}}}}$, $\overline{\overline{\overline{\overbrace{\overbrace{O(t)}}}}}$ - *parelf* levels of Z(t) and O(t) respectively, $\overline{\overline{\overbrace{\overbrace{J(t)}}}}$, $\overline{\overline{\overbrace{\overbrace{K(t)}}}}$ – singelf levels of J(t) and K(t) respectively, $\overbrace{\overbrace{G(t)}}$, $\overbrace{\overbrace{W(t)}}$ - paradoxical upper levels of G(t) and W(t) respectively, $\overline{\overline{\overline{F(t)}}}$, $\overline{\overline{\overline{B(t)}}}$ - paradoxical average levels of F(t) and B(t) respectively, $\overline{U(t)}$, $\overline{R(t)}$ - middle$_1$ levels of U(t) and R(t) respectively, $\underline{E(t)}$, $\underline{D(t)}$ - *ordinary energies exhibited* by E(t), D(t) respectively, $\underline{\underline{Q(t)}}$, $\underline{\underline{S(t)}}$ - first sublevel of Q(t) and S(t) respectively, $\underline{\underline{\underline{A(t)}}}$, $\underline{\underline{\underline{M(t)}}}$ - second sublevel of A(t) and M(t) respectively. The result of this process will be described by the expression

$$
\begin{array}{cccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots \\
\uparrow & & \uparrow & & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow \\
\uparrow & & \uparrow & & & \overline{\overbrace{\overbrace{K(t)}}} \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & & \uparrow \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{G(t)}} \\
\vert\vert\vert^{-1} & & \overline{\overline{\overline{L(t)}}} & & & \uparrow \\
\backslash & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & & \vert\vert\vert & & & \\
 & & / & \mathrm{Vrt}(t) & & \backslash \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & \vert\vert\vert \\
\uparrow & & & & \vert\vert\vert^{-1} & \uparrow \\
\overbrace{\overbrace{W(t)}} & & & & \uparrow & \overline{\overline{T(t)}} \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & \uparrow \\
\overline{\overbrace{\overbrace{J(t)}}} & & & & \uparrow & \overline{\overline{Y(t)}} \\
\uparrow & & & & \underline{\underline{S(t)}} & \uparrow \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & & \uparrow & \overline{U(t)} \\
\cdots & & & & \underline{E(t)} & \uparrow \\
 & & & & \leftarrow & H(t)
\end{array}
\qquad (A.2.2).
$$

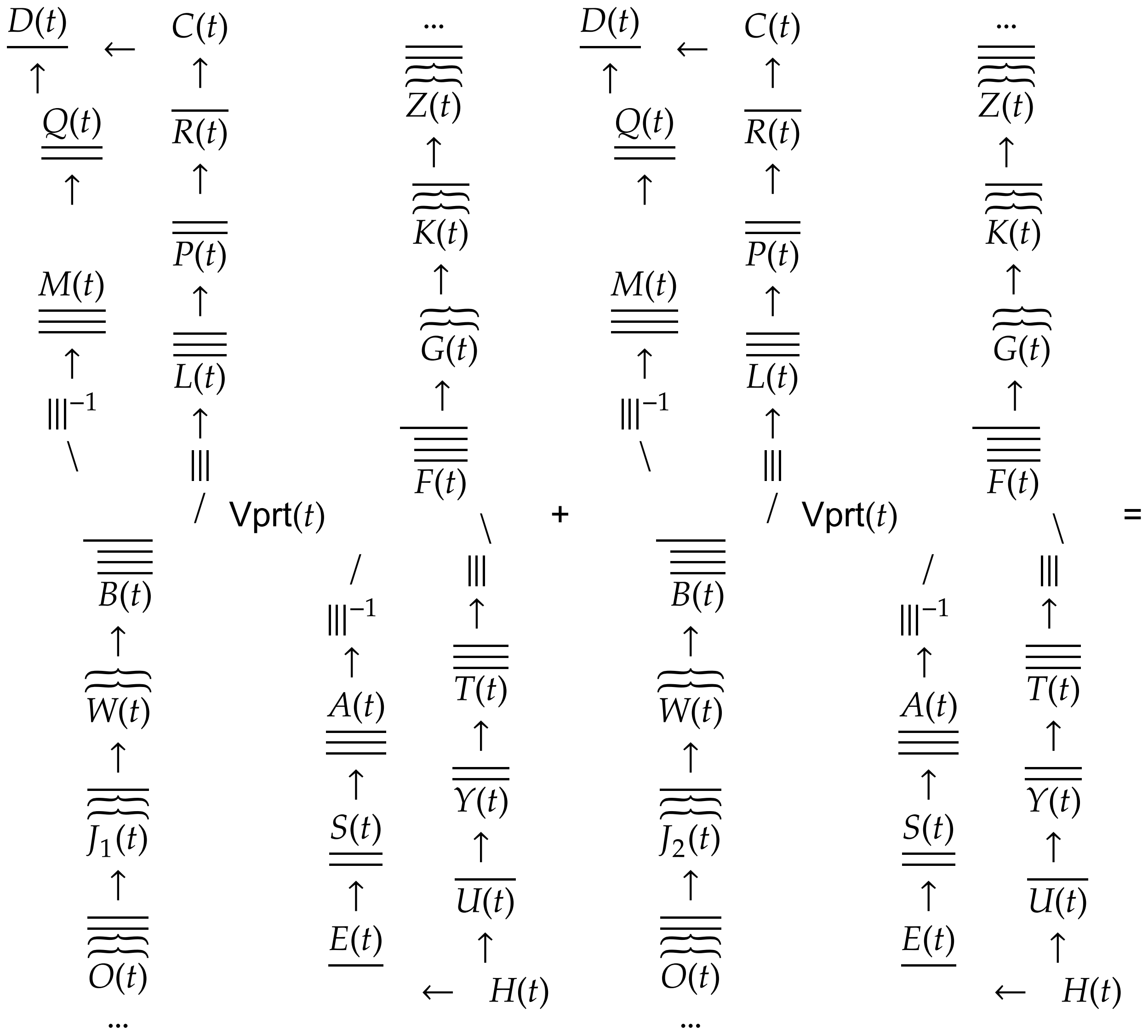
Definition A.2.2.1. The dynamic operator (A.2.2.1) we shall call dynamic Vprt – element of the first type, (A.2.2.2) we shall call dynamic Vrt – element of the first type.

It’s allowed to add dynamic Vprt – elements:


D(t)
C(t)
Q(t)
R(t)
M(t)
P(t)
L(t)
|||^{-1}
|||
Vprt(t)
Z(t)
K(t)
G(t)
F(t)
B(t)
W(t)
J(t)
O_1(t)
A(t)
S(t)
E(t)
T(t)
Y(t)
U(t)
H(t)
+
O_2(t)
=

$$
\begin{array}{ccccc}
\underline{D(t)} \;\leftarrow & C(t) & & & \cdots \\
\uparrow & \uparrow & & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} \\
\underline{\underline{Q(t)}} & \overline{R(t)} & & & \uparrow \\
\uparrow & \uparrow & & & \overline{\overbrace{\overbrace{K(t)}}} \\
\underline{\underline{\underline{M(t)}}} & \overline{\overline{P(t)}} & & & \uparrow \\
\uparrow & \uparrow & & & \overbrace{\overbrace{G(t)}} \\
|||^{-1} & \overline{\overline{\overline{L(t)}}} & & & \uparrow \\
\backslash & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & ||| & & & \backslash \\
 & / & \mathsf{Vprt}(t) & / & ||| \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & |||^{-1} & \uparrow \\
\uparrow & & & \uparrow & \overline{\overline{\overline{T(t)}}} \\
\overbrace{\overbrace{W(t)}} & & & \underline{\underline{\underline{A(t)}}} & \uparrow \\
\uparrow & & & \uparrow & \overline{\overline{Y(t)}} \\
\overline{\overbrace{\overbrace{J(t)}}} & & & \underline{\underline{S(t)}} & \uparrow \\
\uparrow & & & \uparrow & \overline{U(t)} \\
\overline{\overline{\overbrace{\overbrace{O_1(t)}}}} \cup \overline{\overline{\overbrace{\overbrace{O_2(t)}}}} & & & \underline{E(t)} & \uparrow \\
\cdots & & & & \leftarrow \;\; H(t)
\end{array}
$$

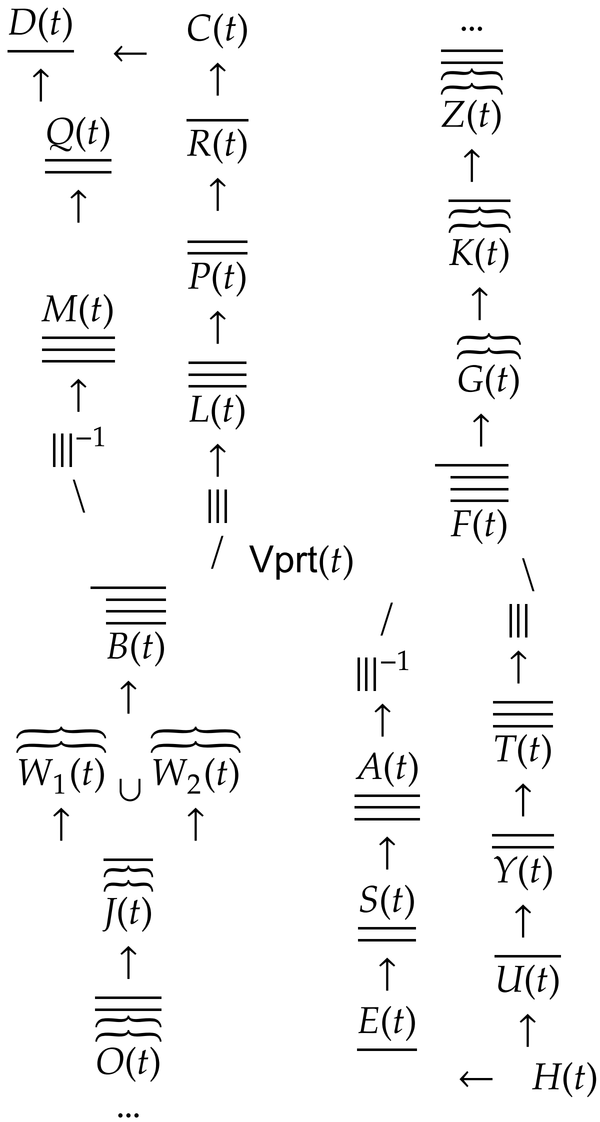
(A.2.2.2.1),


D(t) ← C(t)
Q(t) R(t) Z(t)
M(t) P(t) K(t)
L(t) G(t)
|||⁻¹ ||| F(t)
Vprt(t)
+
=
B(t) |||⁻¹ |||
W(t) A(t) T(t)
J₁(t) J₂(t) S(t) Y(t)
O(t) E(t) U(t)
← H(t)

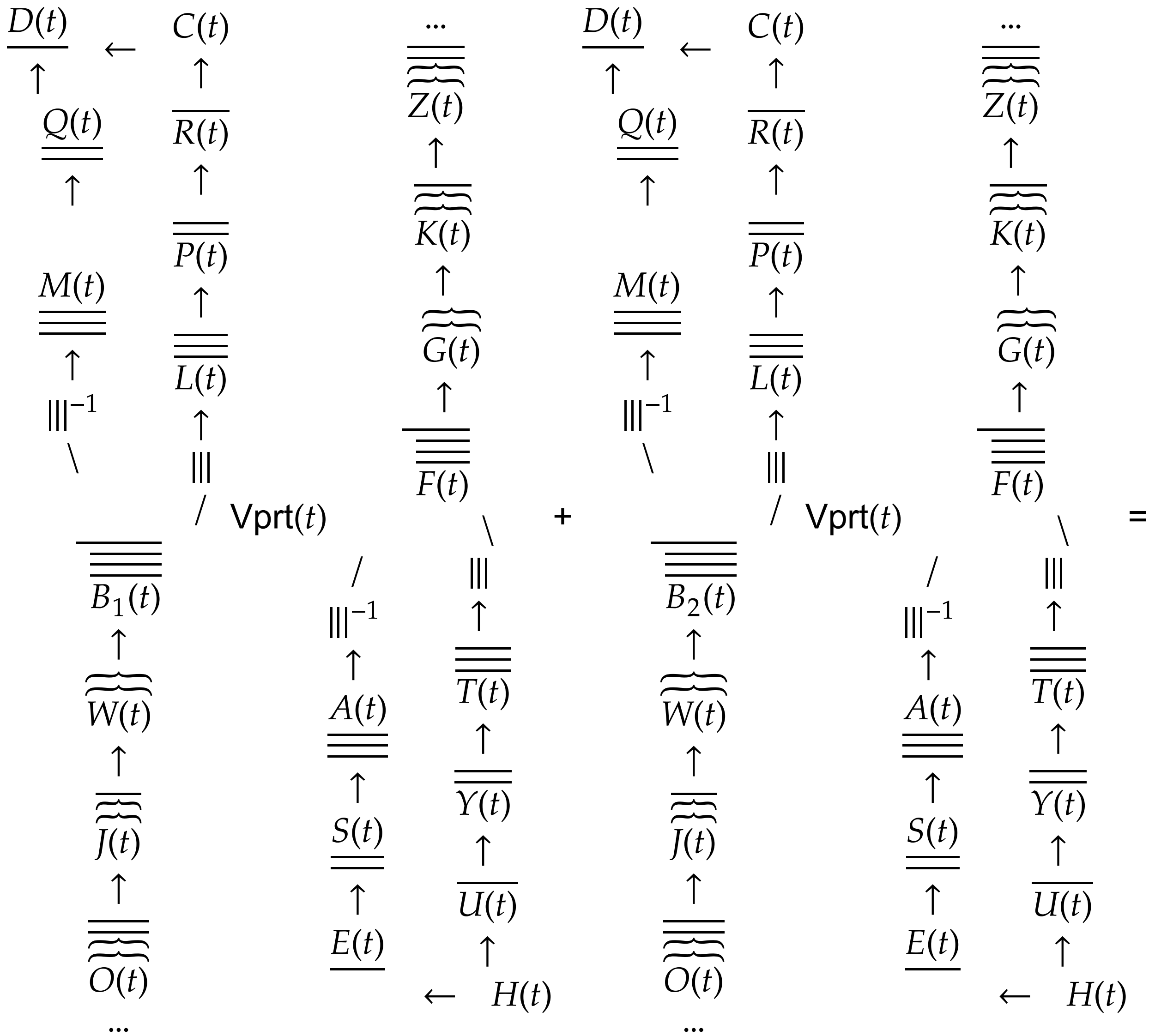
$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{K(t)}}} & \\
& & \overline{\overline{P(t)}} & & & \uparrow & \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & & \overbrace{\overbrace{G(t)}} & \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
|||^{-1} & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
\backslash & & ||| & & & & \backslash \\
& & / & \mathsf{Vprt}(t) & & & \\
& \overline{\overline{\overline{\overline{B(t)}}}} & & & / & & ||| \\
& \uparrow & & & |||^{-1} & & \uparrow \\
& \overbrace{\overbrace{W(t)}} & & & \uparrow & & \overline{\overline{\overline{T(t)}}} \\
& \uparrow & & & \underline{\underline{\underline{A(t)}}} & & \uparrow \\
\overbrace{\overbrace{\overline{J_1(t)}}} & \cup & \overbrace{\overbrace{\overline{J_2(t)}}} & & \uparrow & & \overline{\overline{Y(t)}} \\
\uparrow & & \uparrow & & \underline{\underline{S(t)}} & & \uparrow \\
& \overbrace{\overbrace{\overline{\overline{O(t)}}}} & & & \uparrow & & \overline{U(t)} \\
& \cdots & & & \underline{E(t)} & & \uparrow \\
& & & & & \leftarrow & H(t)
\end{array}
$$

(A.2.2.2.2),

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{\overline{K(t)}} & \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{G(t)} & \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
\backslash & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 & & ||| & & & & \\
 & & / & \mathsf{Vprt}(t) & & & \backslash \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & ||| & \\
\uparrow & & & & |||^{-1} & \uparrow & \\
\overbrace{\overbrace{W_1(t)}} & & & & \uparrow & \overline{\overline{\overline{T(t)}}} & \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & \uparrow & \\
\overbrace{\overbrace{\overline{J(t)}}} & & & & \uparrow & \overline{\overline{Y(t)}} & \\
\uparrow & & & & \underline{\underline{S(t)}} & \uparrow & \\
\overbrace{\overbrace{\overline{\overline{O(t)}}}} & & & & \uparrow & \overline{U(t)} & \\
\cdots & & & & \underline{E(t)} & \uparrow & \\
 & & & & & \leftarrow & H(t)
\end{array}
\quad + \quad
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{\overline{K(t)}} & \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{G(t)} & \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
\backslash & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 & & ||| & & & & \\
 & & / & \mathsf{Vprt}(t) & & & \backslash \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & ||| & \\
\uparrow & & & & |||^{-1} & \uparrow & \\
\overbrace{\overbrace{W_2(t)}} & & & & \uparrow & \overline{\overline{\overline{T(t)}}} & \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & \uparrow & \\
\overbrace{\overbrace{\overline{J(t)}}} & & & & \uparrow & \overline{\overline{Y(t)}} & \\
\uparrow & & & & \underline{\underline{S(t)}} & \uparrow & \\
\overbrace{\overbrace{\overline{\overline{O(t)}}}} & & & & \uparrow & \overline{U(t)} & \\
\cdots & & & & \underline{E(t)} & \uparrow & \\
 & & & & & \leftarrow & H(t)
\end{array}
\quad =
$$


D(t)
C(t)
Q(t)
R(t)
P(t)
M(t)
L(t)
Vprt(t)
B(t)
W1(t) ∪ W2(t)
J(t)
O(t)
Z(t)
K(t)
G(t)
F(t)
A(t)
S(t)
E(t)
T(t)
Y(t)
U(t)
H(t)

(A.2.2.2.3),



$$
\begin{array}{ccccc}
\underline{D(t)} \;\leftarrow & C(t) & & \cdots & \\
\uparrow & \uparrow & & \overbrace{\overbrace{\overline{\overline{}}}} & \\
\underline{\underline{Q(t)}} & \overline{R(t)} & & Z(t) & \\
\uparrow & \uparrow & & \uparrow & \\
 & \overline{\overline{P(t)}} & & \overbrace{\overbrace{\overline{K(t)}}} & \\
\underline{\underline{\underline{M(t)}}} & \uparrow & & \uparrow & \\
\uparrow & \overline{\overline{\overline{L(t)}}} & & \overbrace{\overbrace{G(t)}} & \\
|||^{-1} & \uparrow & & \uparrow & \\
\backslash & ||| & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 & / \;\; \mathsf{Vprt}(t) & & & \backslash \\
\overline{\overline{\overline{\overline{B_1(t)}}}} \cup & \overline{\overline{\overline{\overline{B_2(t)}}}} & / & & ||| \\
\uparrow & & |||^{-1} & & \uparrow \\
\overbrace{\overbrace{W(t)}} & & \uparrow & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & \underline{\underline{\underline{A(t)}}} & & \uparrow \\
\overbrace{\overbrace{\overline{J(t)}}} & & \uparrow & & \overline{\overline{Y(t)}} \\
\uparrow & & \underline{\underline{S(t)}} & & \uparrow \\
\overbrace{\overbrace{\overline{\overline{O(t)}}}} & & \uparrow & & \overline{U(t)} \\
\cdots & & \underline{E(t)} & & \uparrow \\
 & & & \leftarrow & H(t)
\end{array}
$$

(A.2.2.2.4),

$$
\begin{array}{ccc}
\underline{D_1(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} \\
\uparrow & & \uparrow \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} \\
\backslash & & \uparrow \\
 & & ||| \\
 & & / \quad \mathsf{Vprt}(t) \\
\overline{\overline{\overline{\overline{B(t)}}}} & & \\
\uparrow & & \\
\overbrace{W(t)} & & \\
\uparrow & & \\
\overline{\overbrace{J(t)}} & & \\
\uparrow & & \\
\overline{\overline{\overbrace{O(t)}}} & & \\
\ldots & &
\end{array}
\qquad
\begin{array}{ccc}
 & \ldots & \\
 & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
\uparrow & & \uparrow \\
\underline{E(t)} & & \overline{U(t)} \\
 & \leftarrow & \uparrow \\
 & & H(t)
\end{array}
\qquad + \qquad
\begin{array}{ccc}
\underline{D_2(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} \\
\uparrow & & \uparrow \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} \\
\backslash & & \uparrow \\
 & & ||| \\
 & & / \quad \mathsf{Vprt} \\
\overline{\overline{\overline{\overline{B(t)}}}} & & \\
\uparrow & & \\
\overbrace{W(t)} & & \\
\uparrow & & \\
\overline{\overbrace{J(t)}} & & \\
\uparrow & & \\
\overline{\overline{\overbrace{O(t)}}} & & \\
\ldots & &
\end{array}
$$

$$
\begin{array}{cccccccc}
 & \cdots & & \underline{D_1(t)} \cup \underline{D_2(t)} & \leftarrow & C(t) & & \cdots \\
 & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} & & \uparrow & & \uparrow & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} \\
 & \uparrow & & \underline{\underline{Q(t)}} & & \overline{R(t)} & & \uparrow \\
 & \overbrace{\overbrace{\overline{K(t)}}} & & \uparrow & & \uparrow & & \overbrace{\overbrace{\overline{K(t)}}} \\
 & \uparrow & & \underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & \uparrow \\
 & \overbrace{\overbrace{G(t)}} & & \uparrow & & \uparrow & & \overbrace{\overbrace{G(t)}} \\
 & \uparrow & & |||^{-1} & & \overline{\overline{\overline{L(t)}}} & & \uparrow \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & & \backslash & & \uparrow & & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & & & & & ||| & & \\
(t) & \backslash & = & & & / \ \ \mathrm{Vprt}(t) & & \backslash \\
/ & ||| & & & \overline{\overline{\overline{\overline{B(t)}}}} & & / & ||| \\
|||^{-1} & \uparrow & & & \uparrow & & |||^{-1} & \uparrow \\
\uparrow & \overline{\overline{\overline{T(t)}}} & & & \overbrace{\overbrace{W(t)}} & & \uparrow & \overline{\overline{\overline{T(t)}}} \\
\underline{\underline{\underline{A(t)}}} & \uparrow & & & \uparrow & & \underline{\underline{\underline{A(t)}}} & \uparrow \\
\uparrow & \overline{\overline{Y(t)}} & & & \overbrace{\overbrace{\overline{J(t)}}} & & \uparrow & \overline{\overline{Y(t)}} \\
\underline{\underline{S(t)}} & \uparrow & & & \uparrow & & \underline{\underline{S(t)}} & \uparrow \\
\uparrow & \overline{U(t)} & & & \overbrace{\overbrace{\overline{\overline{O(t)}}}} & & \uparrow & \overline{U(t)} \\
\underline{E(t)} & \uparrow & & & \cdots & & \underline{E(t)} & \uparrow \\
 & \leftarrow \ \ H(t) & & & & & & \leftarrow \ \ H(t)
\end{array}
$$

(A.2.2.2.5),

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots & \\
\uparrow & & \uparrow & & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
\underline{\underline{Q_1(t)}} & & \overline{R(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overline{\overbrace{\overbrace{K(t)}}} & \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{G(t)}} & \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
\backslash & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 & & ||| & & & & \\
 & & / & \text{Vprt}(t) & & & \backslash \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & & ||| \\
\uparrow & & & & |||^{-1} & & \uparrow \\
\overbrace{\overbrace{W(t)}} & & & & \uparrow & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & & \uparrow \\
\overline{\overbrace{\overbrace{J(t)}}} & & & & \uparrow & & \overline{\overline{Y(t)}} \\
\uparrow & & & & \underline{\underline{S(t)}} & & \uparrow \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & & \uparrow & & \overline{U(t)} \\
\cdots & & & & \underline{E(t)} & & \uparrow \\
 & & & & & \leftarrow & H(t)
\end{array}
+
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots & \\
\uparrow & & \uparrow & & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
\underline{\underline{Q_2(t)}} & & \overline{R(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overline{\overbrace{\overbrace{K(t)}}} & \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{G(t)}} & \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
\backslash & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 & & ||| & & & & \\
 & & / & \text{Vprt}(t) & & & \backslash \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & & ||| \\
\uparrow & & & & |||^{-1} & & \uparrow \\
\overbrace{\overbrace{W(t)}} & & & & \uparrow & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & & \uparrow \\
\overline{\overbrace{\overbrace{J(t)}}} & & & & \uparrow & & \overline{\overline{Y(t)}} \\
\uparrow & & & & \underline{\underline{S(t)}} & & \uparrow \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & & \uparrow & & \overline{U(t)} \\
\cdots & & & & \underline{E(t)} & & \uparrow \\
 & & & & & \leftarrow & H(t)
\end{array}
=
$$

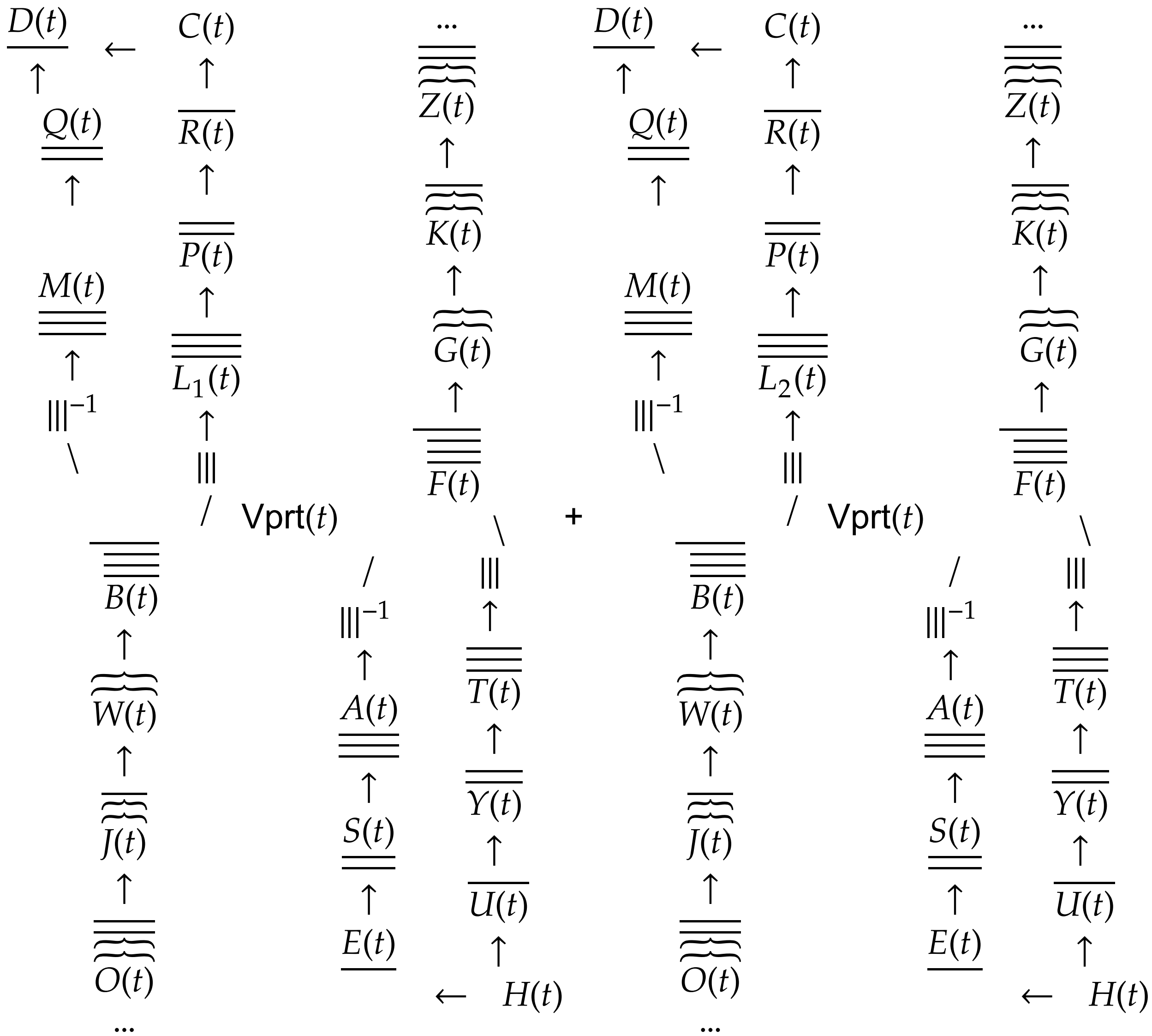
$$\begin{array}{ccccc}
\underline{D(t)} & \leftarrow & C(t) & & \cdots \\
\uparrow & & \uparrow & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} \\
\underline{\underline{Q_1(t)}} \cup \underline{\underline{Q_2(t)}} & & \overline{R(t)} & & \uparrow \\
\uparrow & & \uparrow & & \overline{\overbrace{\overbrace{K(t)}}} \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & \uparrow \\
\uparrow & & \uparrow & & \overbrace{\overbrace{G(t)}} \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} & & \uparrow \\
\backslash & & \uparrow & & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & & ||| & & \backslash \\
 & & /\ \ \mathsf{Vprt}(t) & / & ||| \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & |||^{-1} & \uparrow \\
\uparrow & & & \uparrow & \overline{\overline{\overline{T(t)}}} \\
\overbrace{\overbrace{W(t)}} & & & \underline{\underline{\underline{A(t)}}} & \uparrow \\
\uparrow & & & \uparrow & \overline{\overline{Y(t)}} \\
\overline{\overbrace{\overbrace{J(t)}}} & & & \underline{\underline{S(t)}} & \uparrow \\
\uparrow & & & \uparrow & \overline{U(t)} \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & \underline{E(t)} & \uparrow \\
\cdots & & & & \leftarrow\ \ H(t)
\end{array}$$

(A.2.2.2.6),

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \overbrace{\overline{\overline{\cdots}}} & \\
\uparrow & & \uparrow & & & \overbrace{Z(t)} & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{\overline{K(t)}} & \\
& & \overline{\overline{P(t)}} & & & \uparrow & \\
\underline{\underline{\underline{M_1(t)}}} & & \uparrow & & & \overbrace{G(t)} & \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
|||^{-1} & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
\backslash & & ||| & & & & \\
& & / & \mathsf{Vprt}(t) & & \backslash & \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & ||| & \\
\uparrow & & & & |||^{-1} & \uparrow & \\
\overbrace{W(t)} & & & & \uparrow & \overline{\overline{\overline{T(t)}}} & \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & \uparrow & \\
\overbrace{\overline{J(t)}} & & & & \uparrow & \overline{\overline{Y(t)}} & \\
\uparrow & & & & \underline{\underline{S(t)}} & \uparrow & \\
\overbrace{\overline{\overline{\overline{O(t)}}}} & & & & \uparrow & \overline{U(t)} & \\
\cdots & & & & \underline{E(t)} & \uparrow & \\
& & & & & \leftarrow & H(t)
\end{array}
\quad + \quad
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \overbrace{\overline{\overline{\cdots}}} & \\
\uparrow & & \uparrow & & & \overbrace{Z(t)} & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{\overline{K(t)}} & \\
& & \overline{\overline{P(t)}} & & & \uparrow & \\
\underline{\underline{\underline{M_2(t)}}} & & \uparrow & & & \overbrace{G(t)} & \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
|||^{-1} & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
\backslash & & ||| & & & & \\
& & / & \mathsf{Vprt}(t) & & \backslash & \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & ||| & \\
\uparrow & & & & |||^{-1} & \uparrow & \\
\overbrace{W(t)} & & & & \uparrow & \overline{\overline{\overline{T(t)}}} & \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & \uparrow & \\
\overbrace{\overline{J(t)}} & & & & \uparrow & \overline{\overline{Y(t)}} & \\
\uparrow & & & & \underline{\underline{S(t)}} & \uparrow & \\
\overbrace{\overline{\overline{\overline{O(t)}}}} & & & & \uparrow & \overline{U(t)} & \\
\cdots & & & & \underline{E(t)} & \uparrow & \\
& & & & & \leftarrow & H(t)
\end{array}
\quad =
$$

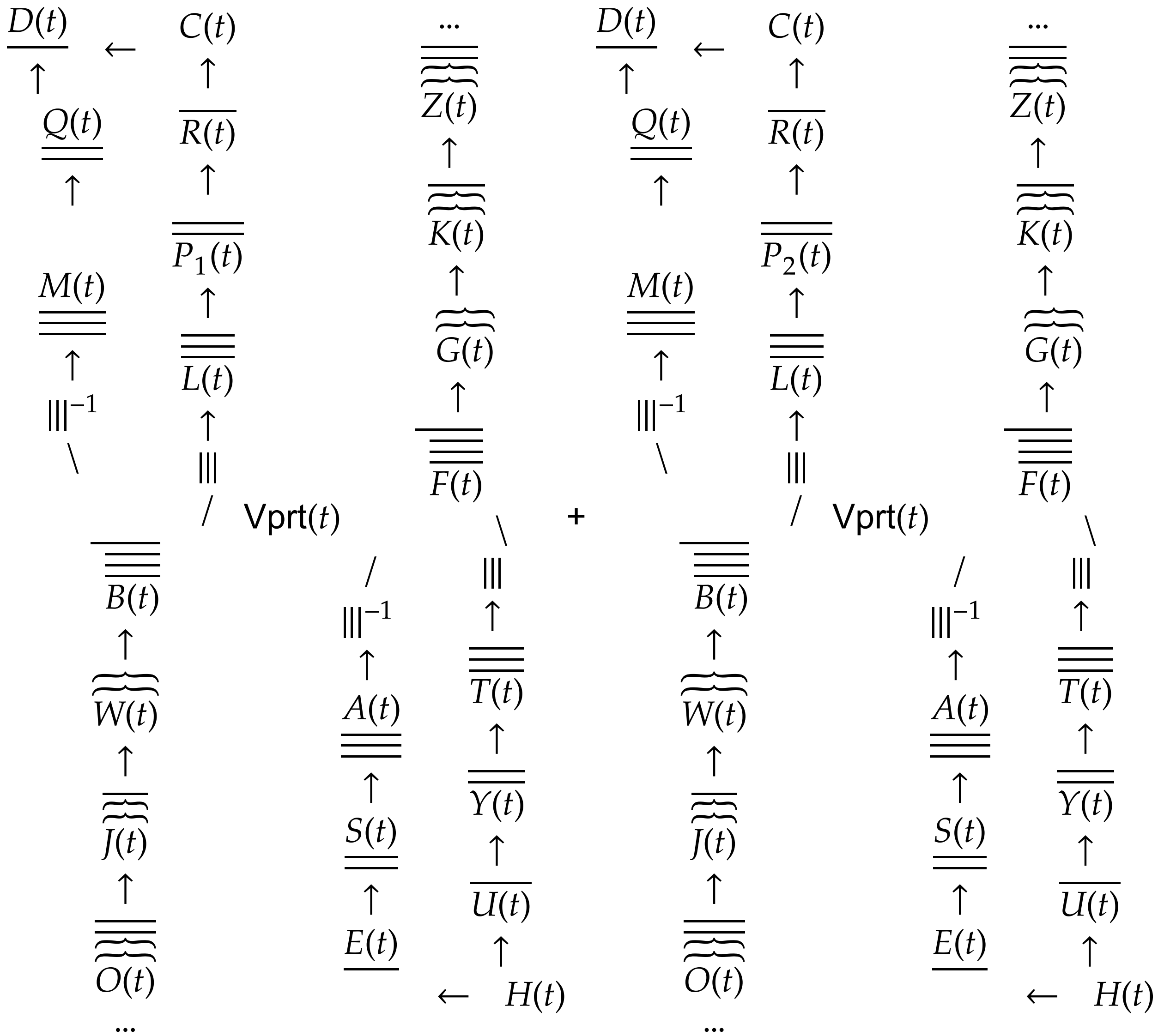
$$
\begin{array}{ccccc}
\underline{D(t)} & \leftarrow & C(t) & & \cdots \\
\uparrow & & \uparrow & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & \uparrow \\
\uparrow & & \uparrow & & \overline{\overbrace{\overbrace{K(t)}}} \\
 & & \overline{\overline{P(t)}} & & \uparrow \\
\underline{\underline{\underline{M_1(t)}}} \cup \underline{\underline{\underline{M_2(t)}}} & & \uparrow & & \overbrace{\overbrace{G(t)}} \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & \uparrow \\
|||^{-1} & & \uparrow & & \overline{\overline{\overline{\overline{F(t)}}}} \\
\backslash & & ||| & & \\
 & & / \quad \text{Vprt}(t) & & \backslash \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & / & ||| \\
\uparrow & & & |||^{-1} & \uparrow \\
\overbrace{\overbrace{W(t)}} & & & \uparrow & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & & \underline{\underline{\underline{A(t)}}} & \uparrow \\
\overline{\overbrace{\overbrace{J(t)}}} & & & \uparrow & \overline{\overline{Y(t)}} \\
\uparrow & & & \underline{\underline{S(t)}} & \uparrow \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & \uparrow & \overline{U(t)} \\
\cdots & & & \underline{E(t)} & \uparrow \\
 & & & & \leftarrow \quad H(t)
\end{array}
$$

(A.2.2.2.7),


D(t) ← C(t)
Q(t)
R(t)
Z(t)
K(t)
P(t)
M(t)
G(t)
L1(t)
L2(t)
|||−1
|||
F(t)
Vprt(t)
+
B(t)
A(t)
T(t)
W(t)
Y(t)
J(t)
S(t)
U(t)
O(t)
E(t)
← H(t)

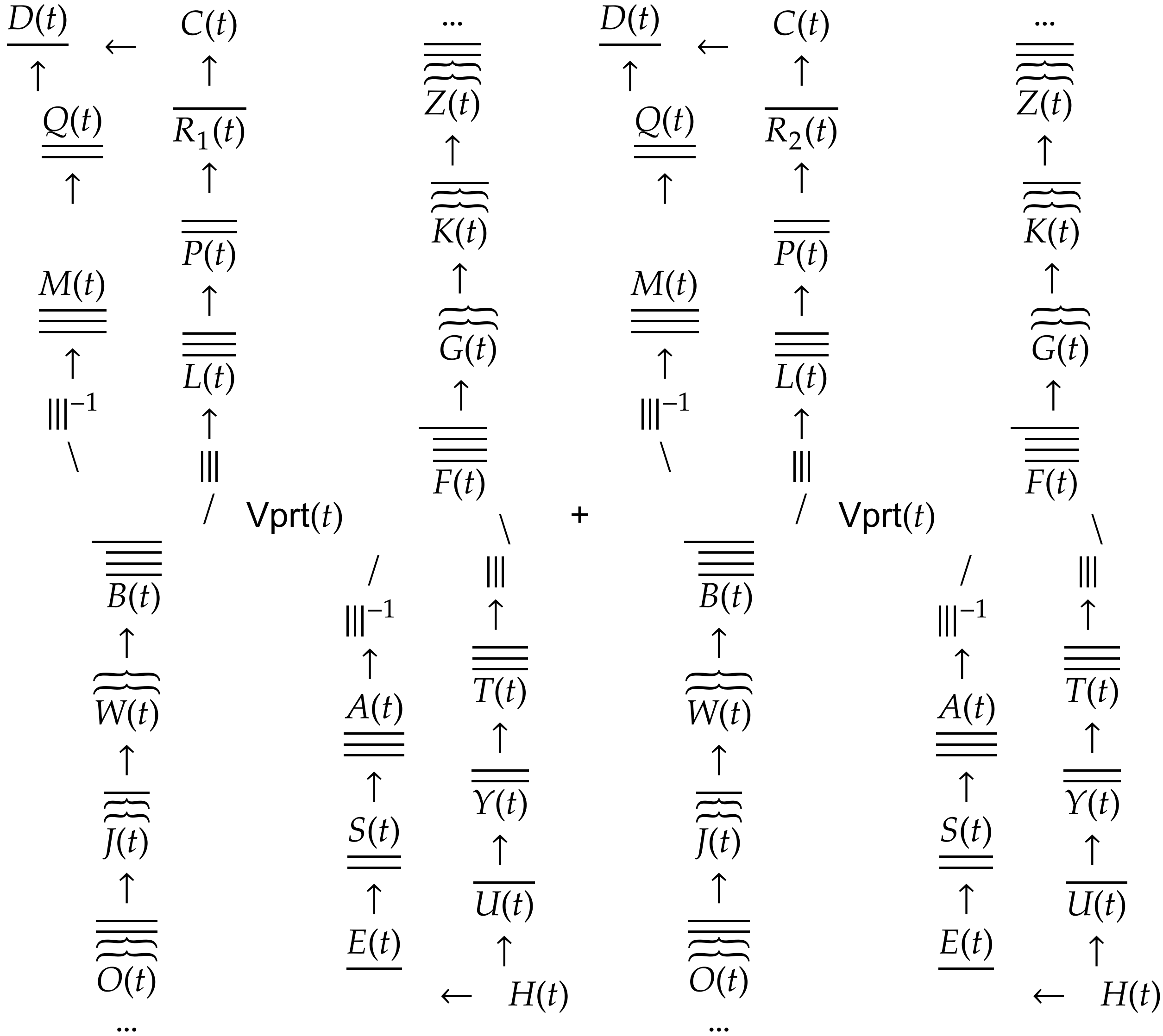
$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots & \\
\uparrow & & \uparrow & & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overline{\overbrace{\overbrace{K(t)}}} & \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{G(t)}} & \\
|||^{-1} & & \overline{\overline{\overline{L_1(t)}}} \cup \overline{\overline{\overline{L_2(t)}}} & & & \uparrow & \\
\backslash & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
= & & ||| & & & \backslash & \\
 & & / & \mathrm{Vprt}(t) & / & ||| & \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & & & |||^{-1} & \uparrow & \\
 & \uparrow & & & \uparrow & \overline{\overline{\overline{T(t)}}} & \\
 & \overbrace{\overbrace{W(t)}} & & & \underline{\underline{\underline{A(t)}}} & \uparrow & \\
 & \uparrow & & & \uparrow & \overline{\overline{Y(t)}} & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & & & \underline{\underline{S(t)}} & \uparrow & \\
 & \uparrow & & & \uparrow & \overline{U(t)} & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{O(t)}}}}} & & & \underline{E(t)} & \uparrow & \\
 & \cdots & & & & \leftarrow & H(t)
\end{array}
$$

(A.2.2.2.8),



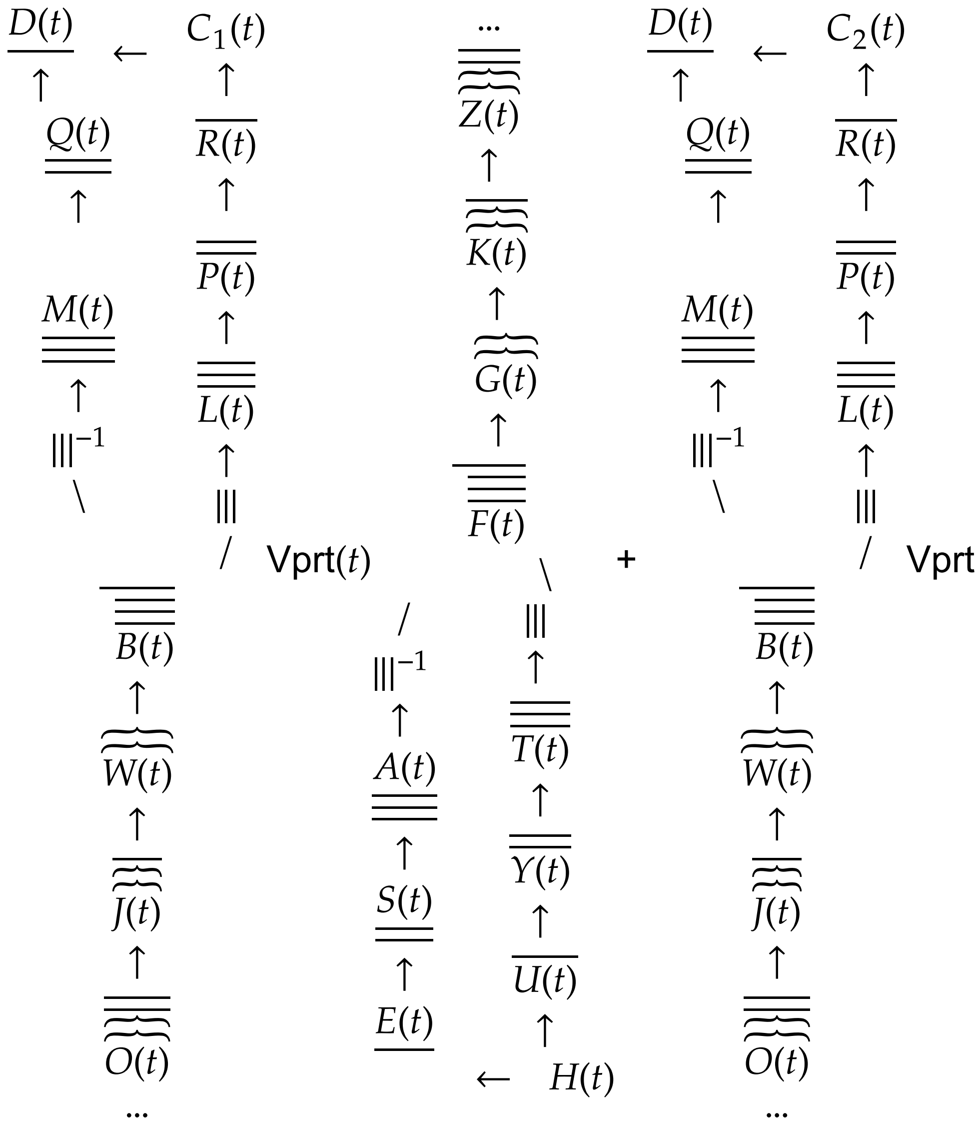
$$
\begin{array}{cccccc}
 & \underline{D(t)} \quad \leftarrow & C(t) & & & \cdots \\
 & \uparrow & \uparrow & & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} \\
 & \underline{\underline{Q(t)}} & \overline{R(t)} & & & \uparrow \\
 & \uparrow & \uparrow & & & \overbrace{\overbrace{\overline{K(t)}}} \\
 & \underline{\underline{\underline{M(t)}}} & \overline{\overline{P_1(t)}} \cup \overline{\overline{P_2(t)}} & & & \uparrow \\
 & \uparrow & \uparrow & & & \overbrace{\overbrace{G(t)}} \\
 & |||^{-1} & \overline{\overline{\overline{L(t)}}} & & & \uparrow \\
 & \backslash & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & & ||| & & & \backslash \\
= & & / & \text{Vprt}(t) & & \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & & & / & ||| \\
 & \uparrow & & & |||^{-1} & \uparrow \\
 & \overbrace{\overbrace{W(t)}} & & & \uparrow & \overline{\overline{\overline{T(t)}}} \\
 & \uparrow & & & \underline{\underline{\underline{A(t)}}} & \uparrow \\
 & \overbrace{\overbrace{\overline{J(t)}}} & & & \uparrow & \overline{\overline{Y(t)}} \\
 & \uparrow & & & \underline{\underline{S(t)}} & \uparrow \\
 & \overbrace{\overbrace{\overline{\overline{O(t)}}}} & & & \uparrow & \overline{U(t)} \\
 & \cdots & & & \underline{E(t)} & \uparrow \\
 & & & & \leftarrow & H(t)
\end{array}
$$

(A.2.2.2.9),


D(t) ← C(t)
Q(t) R₁(t)
M(t) P(t)
L(t)
Z(t) K(t) G(t) F(t)
Vprt(t)
+
B(t) W(t) J(t) O(t)
A(t) S(t) E(t)
T(t) Y(t) U(t) ← H(t)
D(t) ← C(t)
Q(t) R₂(t)
M(t) P(t)
L(t)
Z(t) K(t) G(t) F(t)
Vprt(t)
B(t) W(t) J(t) O(t)
A(t) S(t) E(t)
T(t) Y(t) U(t) ← H(t)

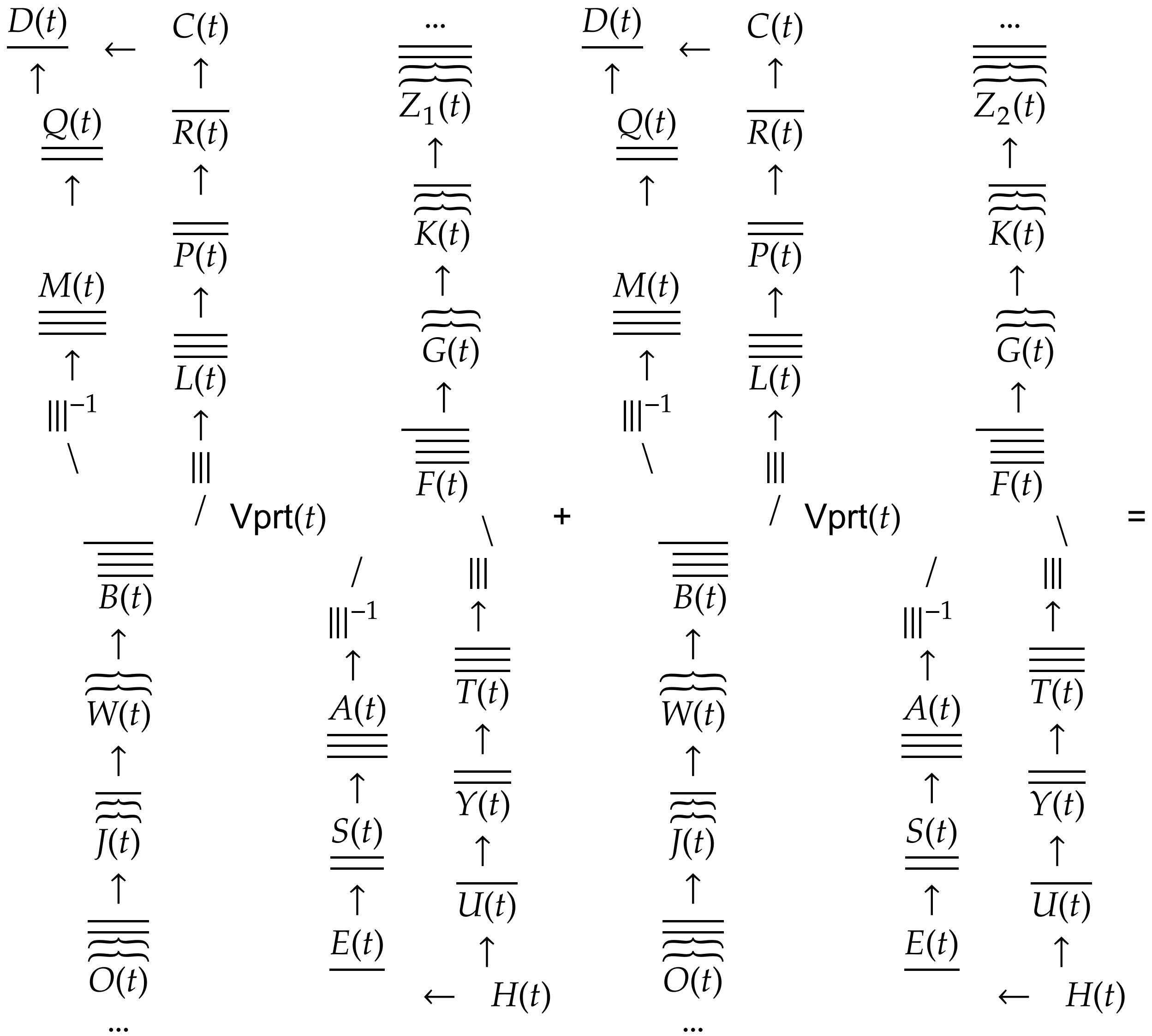
$$
\begin{array}{cccccccccc}
 & \underline{D(t)} & \leftarrow & & C(t) & & & & & \cdots \\
 & \uparrow & & & \uparrow & & & & & \overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}} \\
 & \underline{\underline{Q(t)}} & & \overline{R_1(t)} & \cup & \overline{R_2(t)} & & & & \uparrow \\
 & \uparrow & & \uparrow & & \uparrow & & & & \overline{\overbrace{\overbrace{K(t)}}} \\
 & & & & \overline{\overline{P(t)}} & & & & & \uparrow \\
 & \underline{\underline{\underline{M(t)}}} & & & \uparrow & & & & & \overbrace{\overbrace{G(t)}} \\
 & \uparrow & & & \overline{\overline{\overline{L(t)}}} & & & & & \uparrow \\
 & |||^{-1} & & & \uparrow & & & & & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & \backslash & & & ||| & & & & & \\
= & & & & / & \text{Vprt}(t) & & & & \backslash \\
 & & & \overline{\overline{\overline{\overline{B(t)}}}} & & & / & & ||| & \\
 & & & \uparrow & & & |||^{-1} & & \uparrow & \\
 & & & \overbrace{\overbrace{W(t)}} & & & \uparrow & & \overline{\overline{\overline{T(t)}}} & \\
 & & & \uparrow & & & \underline{\underline{\underline{A(t)}}} & & \uparrow & \\
 & & & \overline{\overbrace{\overbrace{J(t)}}} & & & \uparrow & & \overline{\overline{Y(t)}} & \\
 & & & \uparrow & & & \underline{\underline{S(t)}} & & \uparrow & \\
 & & & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & \uparrow & & \overline{U(t)} & \\
 & & & \cdots & & & \underline{E(t)} & & \uparrow & \\
 & & & & & & & \leftarrow & H(t) &
\end{array}
$$

(A.2.2.2.10),


D(t)
C1(t)
Q(t)
R(t)
P(t)
M(t)
L(t)
Z(t)
K(t)
G(t)
F(t)
Vprt(t)
+
Vprt
B(t)
W(t)
J(t)
O(t)
A(t)
S(t)
E(t)
T(t)
Y(t)
U(t)
H(t)
C2(t)

$$
(t)\;
\begin{array}{ccc}
 & & \cdots \\
 & & \overbrace{\overbrace{\overline{\overline{\overline{Z(t)}}}}} \\
 & & \uparrow \\
 & & \overbrace{\overbrace{\overline{K(t)}}} \\
 & & \uparrow \\
 & & \overbrace{\overbrace{G(t)}} \\
 & & \uparrow \\
 & & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & / & & \backslash \\
 & |||^{-1} & & ||| \\
 & \uparrow & & \uparrow \\
 & \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
 & \uparrow & & \uparrow \\
 & \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
 & \uparrow & & \uparrow \\
 & \underline{E(t)} & & \overline{U(t)} \\
 & & & \uparrow \\
 & & \leftarrow & H(t)
\end{array}
=
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C_1(t) \cup C_2(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overline{W(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overline{J(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overline{\overline{O(t)}}}} & \\
 & \cdots &
\end{array}
\;\mathrm{Vprt}(t)\;
\begin{array}{ccc}
 & & \cdots \\
 & & \overbrace{\overbrace{\overline{\overline{\overline{Z(t)}}}}} \\
 & & \uparrow \\
 & & \overbrace{\overbrace{\overline{K(t)}}} \\
 & & \uparrow \\
 & & \overbrace{\overbrace{G(t)}} \\
 & & \uparrow \\
 & & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & / & & \backslash \\
 & |||^{-1} & & ||| \\
 & \uparrow & & \uparrow \\
 & \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
 & \uparrow & & \uparrow \\
 & \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
 & \uparrow & & \uparrow \\
 & \underline{E(t)} & & \overline{U(t)} \\
 & & & \uparrow \\
 & & \leftarrow & H(t)
\end{array}
$$

(A.2.2.2.11),


$D(t)$ ← $C(t)$
$Q(t)$
$R(t)$
$P(t)$
$M(t)$
$L(t)$
$|||^{-1}$
$|||$
$Z_1(t)$
$K(t)$
$G(t)$
$F(t)$
Vprt(t)
+
$B(t)$
$W(t)$
$J(t)$
$O(t)$
$A(t)$
$S(t)$
$E(t)$
$T(t)$
$Y(t)$
$U(t)$
← $H(t)$
$Z_2(t)$
=

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \quad \mathsf{Vprt}(t)
\end{array}
\qquad
\begin{array}{c}
\cdots \\
\overline{\overline{\overline{\overbrace{\overbrace{Z_1(t)}}}}} \cup \overline{\overline{\overline{\overbrace{\overbrace{Z_2(t)}}}}} \\
\uparrow \\
\overline{\overbrace{\overbrace{K(t)}}} \\
\uparrow \\
\overbrace{\overbrace{G(t)}} \\
\uparrow \\
\overline{\overline{\overline{\overline{F(t)}}}}
\end{array}
$$

$$
\begin{array}{ccccc}
\overline{\overline{\overline{\overline{B(t)}}}} & & / & & \backslash \\
\uparrow & & |||^{-1} & & ||| \\
\overbrace{\overbrace{W(t)}} & & \uparrow & & \uparrow \\
\uparrow & & \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
\overline{\overbrace{\overbrace{J(t)}}} & & \uparrow & & \uparrow \\
\uparrow & & \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
\overline{\overline{\overline{\overbrace{\overbrace{O(t)}}}}} & & \uparrow & & \uparrow \\
\cdots & & \underline{E(t)} & & \overline{U(t)} \\
 & & & & \uparrow \\
 & & & \leftarrow & H(t)
\end{array}
$$

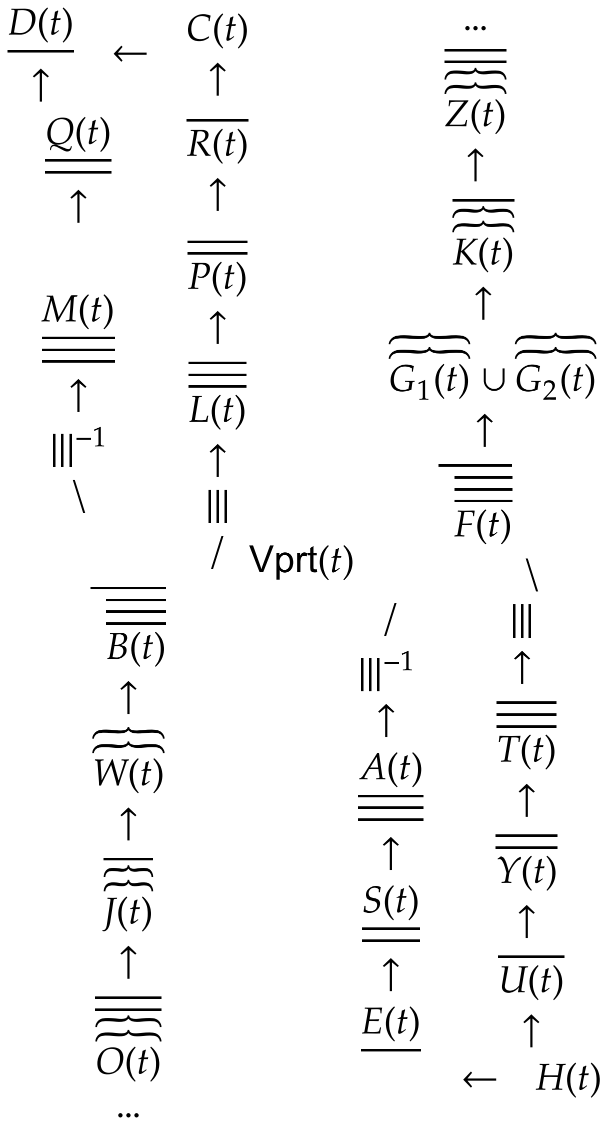
(A.2.2.2.11.1),

$$
\begin{array}{cccc}
D(t) \leftarrow & C(t) & & \cdots \\
\uparrow & \uparrow & & Z(t) \\
Q(t) & R(t) & & \uparrow \\
\uparrow & \uparrow & & K_1(t) \\
M(t) & P(t) & & \uparrow \\
\uparrow & \uparrow & & G(t) \\
|||^{-1} & L(t) & & \uparrow \\
\backslash & \uparrow & & F(t) \\
 & ||| & & \backslash \\
B(t) & / \ \mathsf{Vprt}(t) & / & ||| \\
\uparrow & & |||^{-1} & \uparrow \\
W(t) & & \uparrow & T(t) \\
\uparrow & & A(t) & \uparrow \\
J(t) & & \uparrow & Y(t) \\
\uparrow & & S(t) & \uparrow \\
O(t) & & \uparrow & U(t) \\
\cdots & & E(t) & \uparrow \\
 & & & \leftarrow H(t)
\end{array}
\quad + \quad
\begin{array}{cccc}
D(t) \leftarrow & C(t) & & \cdots \\
\uparrow & \uparrow & & Z(t) \\
Q(t) & R(t) & & \uparrow \\
\uparrow & \uparrow & & K_2(t) \\
M(t) & P(t) & & \uparrow \\
\uparrow & \uparrow & & G(t) \\
|||^{-1} & L(t) & & \uparrow \\
\backslash & \uparrow & & F(t) \\
 & ||| & & \backslash \\
B(t) & / \ \mathsf{Vprt}(t) & / & ||| \\
\uparrow & & |||^{-1} & \uparrow \\
W(t) & & \uparrow & T(t) \\
\uparrow & & A(t) & \uparrow \\
J(t) & & \uparrow & Y(t) \\
\uparrow & & S(t) & \uparrow \\
O(t) & & \uparrow & U(t) \\
\cdots & & E(t) & \uparrow \\
 & & & \leftarrow H(t)
\end{array}
\quad =
$$

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & \overbrace{\overbrace{\overline{K_1(t)}}} & \cup & \overbrace{\overbrace{\overline{K_2(t)}}} \\
 & & \overline{\overline{P(t)}} & & \uparrow & & \uparrow \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & & \overbrace{\overbrace{G(t)}} & \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
|||^{-1} & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
\backslash & & ||| & & & & \backslash \\
 & & / & \mathsf{Vprt}(t) & & & \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & & ||| \\
\uparrow & & & & |||^{-1} & & \uparrow \\
\overbrace{\overbrace{W(t)}} & & & & \uparrow & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & & \uparrow \\
\overbrace{\overbrace{\overline{J(t)}}} & & & & \uparrow & & \overline{\overline{Y(t)}} \\
\uparrow & & & & \underline{\underline{S(t)}} & & \uparrow \\
\overbrace{\overbrace{\overline{\overline{O(t)}}}} & & & & \uparrow & & \overline{U(t)} \\
\cdots & & & & \underline{E(t)} & \leftarrow & \uparrow \\
 & & & & & & H(t)
\end{array}
$$

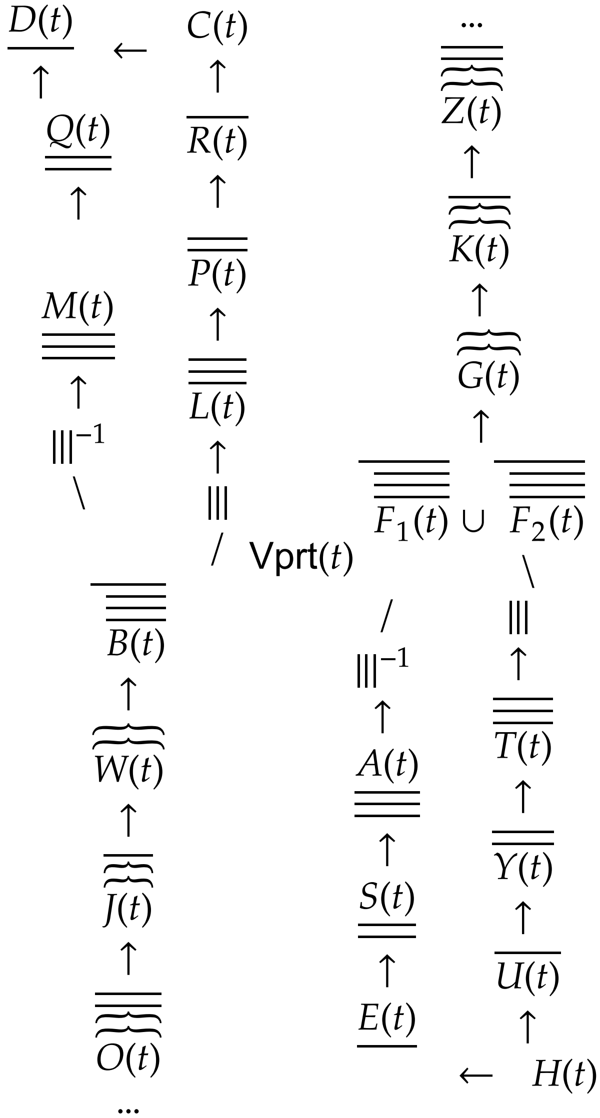
(A.2.2.2.12),

$$
\begin{array}{cccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \ldots \\
\uparrow & & \uparrow & & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow \\
\uparrow & & \uparrow & & & \overline{\overbrace{\overbrace{K(t)}}} \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & & \uparrow \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{G_1(t)}} \\
\mid\mid\mid^{-1} & & \overline{\overline{\overline{L(t)}}} & & & \uparrow \\
\backslash & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & & \mid\mid\mid & & & \\
 & & / & \mathsf{Vprt}(t) & & \backslash \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & & & / & \mid\mid\mid \\
 & \uparrow & & & \mid\mid\mid^{-1} & \uparrow \\
 & \overbrace{\overbrace{\overbrace{W(t)}}} & & & \uparrow & \overline{\overline{\overline{T(t)}}} \\
 & \uparrow & & & \underline{\underline{\underline{A(t)}}} & \uparrow \\
 & \overline{\overbrace{\overbrace{J(t)}}} & & & \uparrow & \overline{\overline{Y(t)}} \\
 & \uparrow & & & \underline{\underline{S(t)}} & \uparrow \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{O(t)}}}}} & & & \uparrow & \overline{U(t)} \\
 & \ldots & & & \underline{E(t)} & \uparrow \\
 & & & & \leftarrow & H(t)
\end{array}
\quad + \quad
\begin{array}{cccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \ldots \\
\uparrow & & \uparrow & & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow \\
\uparrow & & \uparrow & & & \overline{\overbrace{\overbrace{K(t)}}} \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & & \uparrow \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{G_2(t)}} \\
\mid\mid\mid^{-1} & & \overline{\overline{\overline{L(t)}}} & & & \uparrow \\
\backslash & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & & \mid\mid\mid & & & \\
 & & / & \mathsf{Vprt}(t) & & \backslash \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & & & / & \mid\mid\mid \\
 & \uparrow & & & \mid\mid\mid^{-1} & \uparrow \\
 & \overbrace{\overbrace{\overbrace{W(t)}}} & & & \uparrow & \overline{\overline{\overline{T(t)}}} \\
 & \uparrow & & & \underline{\underline{\underline{A(t)}}} & \uparrow \\
 & \overline{\overbrace{\overbrace{J(t)}}} & & & \uparrow & \overline{\overline{Y(t)}} \\
 & \uparrow & & & \underline{\underline{S(t)}} & \uparrow \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{O(t)}}}}} & & & \uparrow & \overline{U(t)} \\
 & \ldots & & & \underline{E(t)} & \uparrow \\
 & & & & \leftarrow & H(t)
\end{array}
\quad =
$$

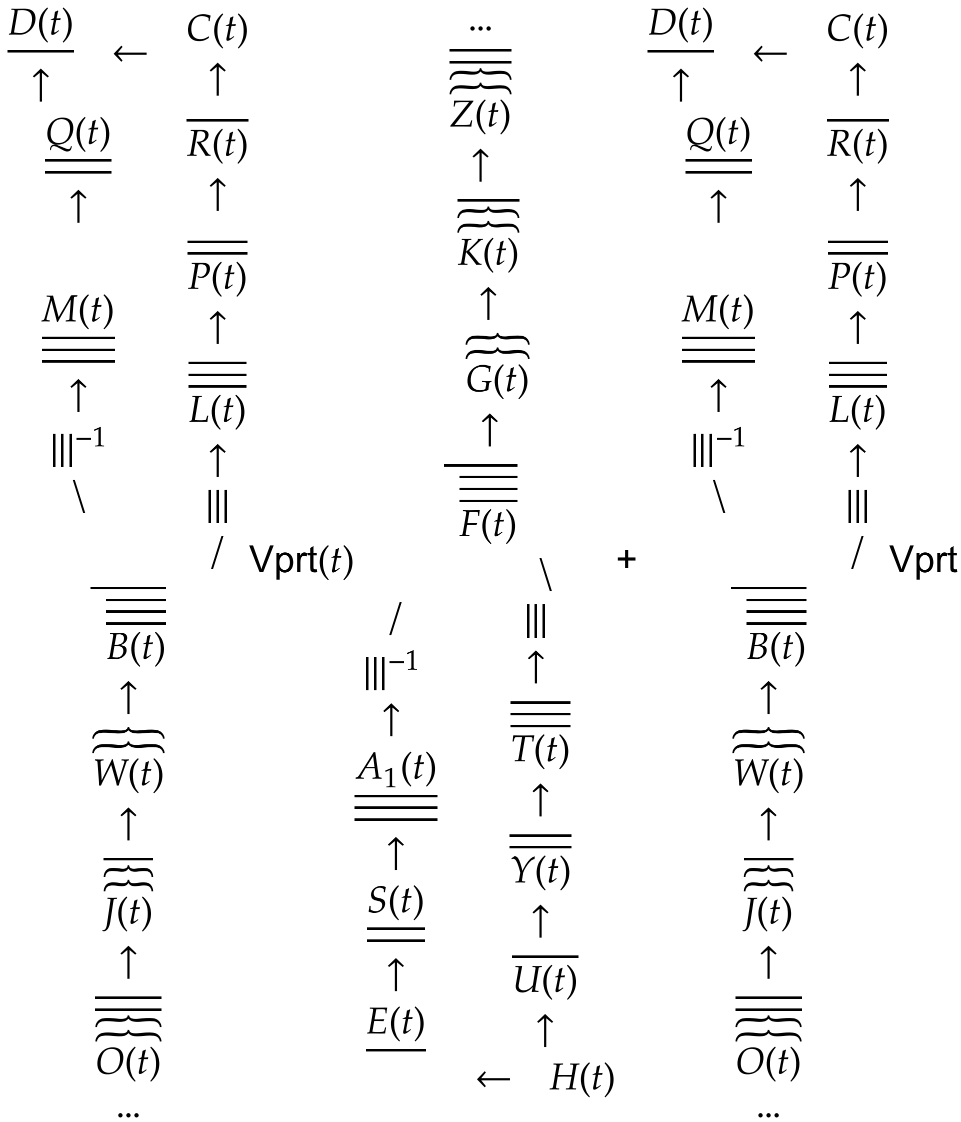


(A.2.2.2.12.1),

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{\overline{\overline{Z(t)}}}}} & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{K(t)}}} & \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{G(t)}} & \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
\backslash & & \uparrow & & & \overline{\overline{\overline{\overline{\overline{F_1(t)}}}}} & \\
 & & ||| & & & & \\
 & & / & \mathsf{Vprt}(t) & & & \backslash \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & & ||| \\
\uparrow & & & & |||^{-1} & & \uparrow \\
\overbrace{\overbrace{\overbrace{W(t)}}} & & & & \uparrow & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & & \uparrow \\
\overbrace{\overbrace{\overline{J(t)}}} & & & & \uparrow & & \overline{\overline{Y(t)}} \\
\uparrow & & & & \underline{\underline{S(t)}} & & \uparrow \\
\overbrace{\overbrace{\overline{\overline{\overline{O(t)}}}}} & & & & \uparrow & & \overline{U(t)} \\
\cdots & & & & \underline{E(t)} & & \uparrow \\
 & & & & & \leftarrow & H(t)
\end{array}
\quad + \quad
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{\overline{\overline{Z(t)}}}}} & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{K(t)}}} & \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{G(t)}} & \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
\backslash & & \uparrow & & & \overline{\overline{\overline{\overline{\overline{F_2(t)}}}}} & \\
 & & ||| & & & & \\
 & & / & \mathsf{Vprt}(t) & & & \backslash \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & & ||| \\
\uparrow & & & & |||^{-1} & & \uparrow \\
\overbrace{\overbrace{\overbrace{W(t)}}} & & & & \uparrow & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & & \uparrow \\
\overbrace{\overbrace{\overline{J(t)}}} & & & & \uparrow & & \overline{\overline{Y(t)}} \\
\uparrow & & & & \underline{\underline{S(t)}} & & \uparrow \\
\overbrace{\overbrace{\overline{\overline{\overline{O(t)}}}}} & & & & \uparrow & & \overline{U(t)} \\
\cdots & & & & \underline{E(t)} & & \uparrow \\
 & & & & & \leftarrow & H(t)
\end{array}
\quad =
$$



(A.2.2.2.13),


D(t)
C(t)
Q(t)
R(t)
M(t)
P(t)
L(t)
Z(t)
K(t)
G(t)
F(t)
Vprt(t)
+
Vprt
B(t)
W(t)
J(t)
O(t)
A1(t)
S(t)
E(t)
T(t)
Y(t)
U(t)
H(t)

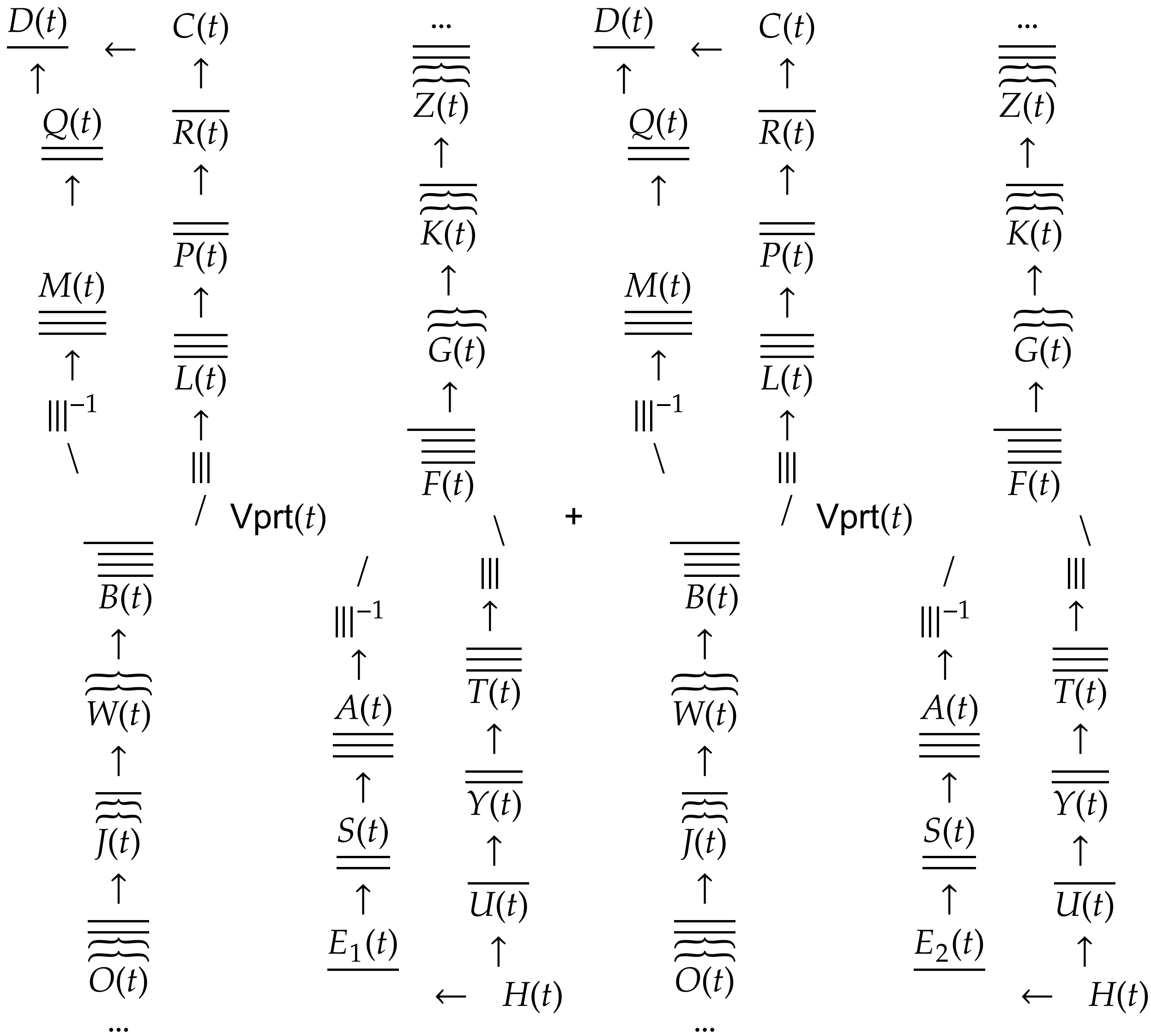
$$
\begin{array}{cccccccccc}
 & & \cdots & & \underline{D(t)} & \leftarrow & C(t) & & & \cdots \\
 & & \overline{\overline{\overline{\overbrace{\overbrace{Z(t)}}}}} & & \uparrow & & \uparrow & & & \overline{\overline{\overline{\overbrace{\overbrace{Z(t)}}}}} \\
 & & \uparrow & & \underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow \\
 & & \overline{\overline{\overbrace{\overbrace{K(t)}}}} & & \uparrow & & \uparrow & & & \overline{\overline{\overbrace{\overbrace{K(t)}}}} \\
 & & \uparrow & & & & \overline{\overline{P(t)}} & & & \uparrow \\
 & & \overbrace{\overbrace{G(t)}} & & \underline{\underline{\underline{M(t)}}} & & \uparrow & & & \overbrace{\overbrace{G(t)}} \\
 & & \uparrow & & \uparrow & & \overline{\overline{\overline{L(t)}}} & & & \uparrow \\
 & & \overline{\overline{\overline{\overline{F(t)}}}} & & |||^{-1} & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & & & & \backslash & & ||| & & & \\
(t) & & \backslash & = & & & / & \mathsf{Vprt}(t) & & \backslash \\
 & / & ||| & & & \overline{\overline{\overline{\overline{B(t)}}}} & & & / & ||| \\
 & |||^{-1} & \uparrow & & & \uparrow & & & |||^{-1} & \uparrow \\
 & \uparrow & \overline{\overline{\overline{T(t)}}} & & & \overbrace{\overbrace{W(t)}} & & & \uparrow & \overline{\overline{\overline{T(t)}}} \\
 & \underline{\underline{\underline{A_2(t)}}} & \uparrow & & & \uparrow & & & \underline{\underline{\underline{A_1(t)}}} \cup \underline{\underline{\underline{A_2(t)}}} & \uparrow \\
 & \uparrow & \overline{\overline{Y(t)}} & & & \overline{\overbrace{\overbrace{J(t)}}} & & & \uparrow & \overline{\overline{Y(t)}} \\
 & \underline{\underline{S(t)}} & \uparrow & & & \uparrow & & & \underline{\underline{S(t)}} & \uparrow \\
 & \uparrow & \overline{U(t)} & & & \overline{\overline{\overline{\overbrace{\overbrace{O(t)}}}}} & & & \uparrow & \overline{U(t)} \\
 & \underline{E(t)} & \uparrow & & & \cdots & & & \underline{E(t)} & \uparrow \\
 & & \leftarrow \;\; H(t) & & & & & & & \leftarrow \;\; H(t)
\end{array}
$$

(A.2.2.2.14),

$$
\begin{array}{ccccccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \dots & & \underline{D(t)} & \leftarrow & C(t) & \\
\uparrow & & \uparrow & & & \overline{\overline{\overline{\overbrace{\overbrace{Z(t)}}}}} & & \uparrow & & \uparrow & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow & & \underline{\underline{Q(t)}} & & \overline{R(t)} & \\
\uparrow & & \uparrow & & & \overline{\overbrace{\overbrace{K(t)}}} & & \uparrow & & \uparrow & \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & & \uparrow & & \underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{G(t)}} & & \uparrow & & \uparrow & \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & & |||^{-1} & & \overline{\overline{\overline{L(t)}}} & \\
\backslash & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & & \backslash & & \uparrow & \\
 & & ||| & & & \backslash & + & & & ||| & \\
 & & / & \text{Vprt}(t) & & ||| & & & & / & \text{Vprt} \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & - & \uparrow & & \overline{\overline{\overline{\overline{B(t)}}}} & & & \\
\uparrow & & & & |||^{-1} & \overline{\overline{\overline{T(t)}}} & & \uparrow & & & \\
\overbrace{\overbrace{W(t)}} & & & & \uparrow & \uparrow & & \overbrace{\overbrace{W(t)}} & & & \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & \overline{\overline{Y(t)}} & & \uparrow & & & \\
\overline{\overbrace{\overbrace{J(t)}}} & & & & \uparrow & \uparrow & & \overline{\overbrace{\overbrace{J(t)}}} & & & \\
\uparrow & & & & \underline{\underline{S_1(t)}} & \overline{U(t)} & & \uparrow & & & \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & & \uparrow & \uparrow & & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & \\
\dots & & & & \underline{E(t)} \;\leftarrow & H(t) & & \dots & & &
\end{array}
$$

$$
\begin{array}{ccc}
 & \cdots & \\
 & \overbrace{\overbrace{\overline{\overline{\overline{Z(t)}}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overline{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 / & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{\underline{A(t)}}}} & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S_2(t)}} & & \overline{\overline{Y(t)}} \\
\uparrow & & \uparrow \\
\underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
(t)
=
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} \\
\uparrow & & \uparrow \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} \\
 & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overline{J(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overline{\overline{O(t)}}}} & \\
 & \cdots &
\end{array}
\mathrm{Vprt}(t)
\begin{array}{ccc}
 & \cdots & \\
 & \overbrace{\overbrace{\overline{\overline{\overline{Z(t)}}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overline{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 / & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{\underline{A(t)}}}} & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S_1(t)}} \cup \underline{\underline{S_2(t)}} & & \overline{\overline{Y(t)}} \\
\uparrow & & \uparrow \\
\underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
$$

(A.2.2.2.15),



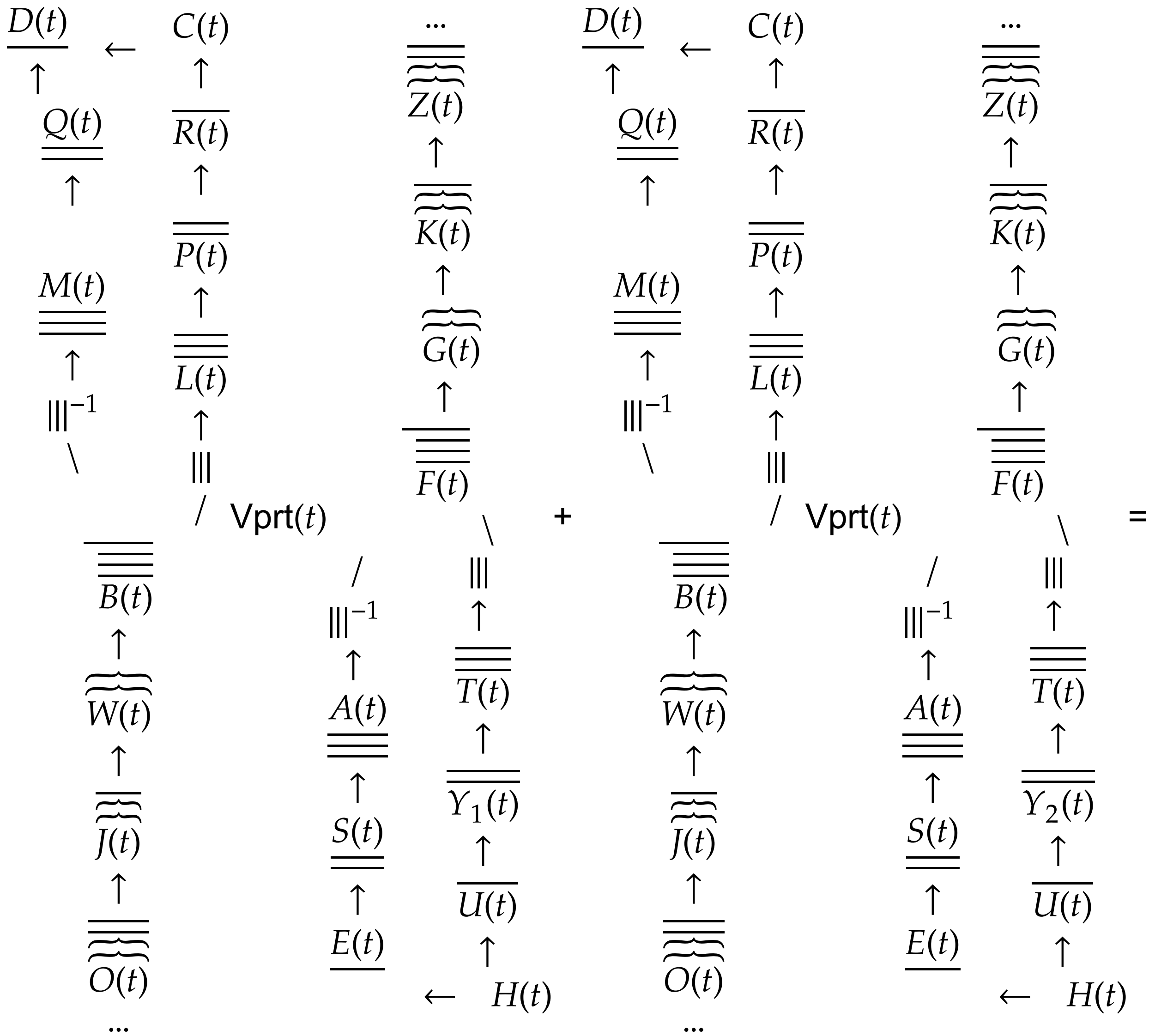
$$
\begin{array}{ccccccc}
 & \underline{D(t)} & \leftarrow & C(t) & & & \\
 & \uparrow & & \uparrow & & & \ldots \\
 & \underline{\underline{Q(t)}} & & \overline{R(t)} & & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} \\
 & \uparrow & & \uparrow & & & \uparrow \\
 & & & \overline{\overline{P(t)}} & & & \overline{\overbrace{\overbrace{K(t)}}} \\
 & \underline{\underline{\underline{M(t)}}} & & \uparrow & & & \uparrow \\
 & \uparrow & & \overline{\overline{\overline{L(t)}}} & & & \overbrace{\overbrace{G(t)}} \\
 & |||^{-1} & & \uparrow & & & \uparrow \\
 & \backslash & & ||| & & & \overline{\overline{\overline{\overline{F(t)}}}} \\
= & & & / & \mathsf{Vprt}(t) & & \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & & & & & \backslash \\
 & \uparrow & & & / & & ||| \\
 & \overbrace{\overbrace{W(t)}} & & & |||^{-1} & & \uparrow \\
 & \uparrow & & & \uparrow & & \overline{\overline{\overline{T(t)}}} \\
 & \overline{\overbrace{\overbrace{J(t)}}} & & & \underline{\underline{\underline{A(t)}}} & & \uparrow \\
 & \uparrow & & & \uparrow & & \overline{\overline{Y(t)}} \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & \underline{\underline{S(t)}} & & \uparrow \\
 & \ldots & & & \uparrow & & \overline{U(t)} \\
 & & & & \underline{E_1(t)} \cup \underline{E_2(t)} & & \uparrow \\
 & & & & & \leftarrow & H(t)
\end{array}
$$

(A.2.2.2.16),

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & & \cdots \\
\uparrow & & \uparrow & & & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & & \uparrow \\
\uparrow & & \uparrow & & & & \overline{\overbrace{\overbrace{K(t)}}} \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & & & \uparrow \\
\uparrow & & \uparrow & & & & \overbrace{\overbrace{G(t)}} \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} & & & & \uparrow \\
\backslash & & \uparrow & & & & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & & ||| & & & & \backslash \\
 & & / & \mathsf{Vprt}(t) & & & ||| \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & & \uparrow \\
\uparrow & & & & |||^{-1} & & \overline{\overline{\overline{T_1(t)}}} \\
\overbrace{\overbrace{W(t)}} & & & & \uparrow & & \uparrow \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & & \overline{\overline{Y(t)}} \\
\overline{\overbrace{\overbrace{J(t)}}} & & & & \uparrow & & \uparrow \\
\uparrow & & & & \underline{\underline{S(t)}} & & \overline{U(t)} \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & & \uparrow & & \uparrow \\
\cdots & & & & \underline{E(t)} & \leftarrow & H(t)
\end{array}
\quad + \quad
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & & \cdots \\
\uparrow & & \uparrow & & & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & & \uparrow \\
\uparrow & & \uparrow & & & & \overline{\overbrace{\overbrace{K(t)}}} \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & & & \uparrow \\
\uparrow & & \uparrow & & & & \overbrace{\overbrace{G(t)}} \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} & & & & \uparrow \\
\backslash & & \uparrow & & & & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & & ||| & & & & \backslash \\
 & & / & \mathsf{Vprt}(t) & & & ||| \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & & \uparrow \\
\uparrow & & & & |||^{-1} & & \overline{\overline{\overline{T_2(t)}}} \\
\overbrace{\overbrace{W(t)}} & & & & \uparrow & & \uparrow \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & & \overline{\overline{Y(t)}} \\
\overline{\overbrace{\overbrace{J(t)}}} & & & & \uparrow & & \uparrow \\
\uparrow & & & & \underline{\underline{S(t)}} & & \overline{U(t)} \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & & \uparrow & & \uparrow \\
\cdots & & & & \underline{E(t)} & \leftarrow & H(t)
\end{array}
\quad =
$$

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots & \\
\uparrow & & \uparrow & & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & & \overline{\overline{P(t)}} & & & \uparrow & \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & & \overbrace{\overbrace{G(t)}} & \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
\vert\vert\vert^{-1} & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
\backslash & & \vert\vert\vert & & & \backslash & \\
 & & / & \mathsf{Vprt}(t) & & & \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & & / & & \vert\vert\vert & \\
 & \uparrow & & \vert\vert\vert^{-1} & & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & & \uparrow & \overline{\overline{\overline{T_1(t)}}} & \cup & \overline{\overline{\overline{T_2(t)}}} \\
 & \uparrow & & \underline{\underline{\underline{A(t)}}} & \uparrow & & \uparrow \\
 & \overline{\overbrace{\overbrace{J(t)}}} & & \uparrow & & \overline{\overline{Y(t)}} & \\
 & \uparrow & & \underline{\underline{S(t)}} & & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & & \uparrow & & \overline{U(t)} & \\
 & \cdots & & \underline{E(t)} & & \uparrow & \\
 & & & & \leftarrow & H(t) &
\end{array}
$$

(A.2.2.2.17),



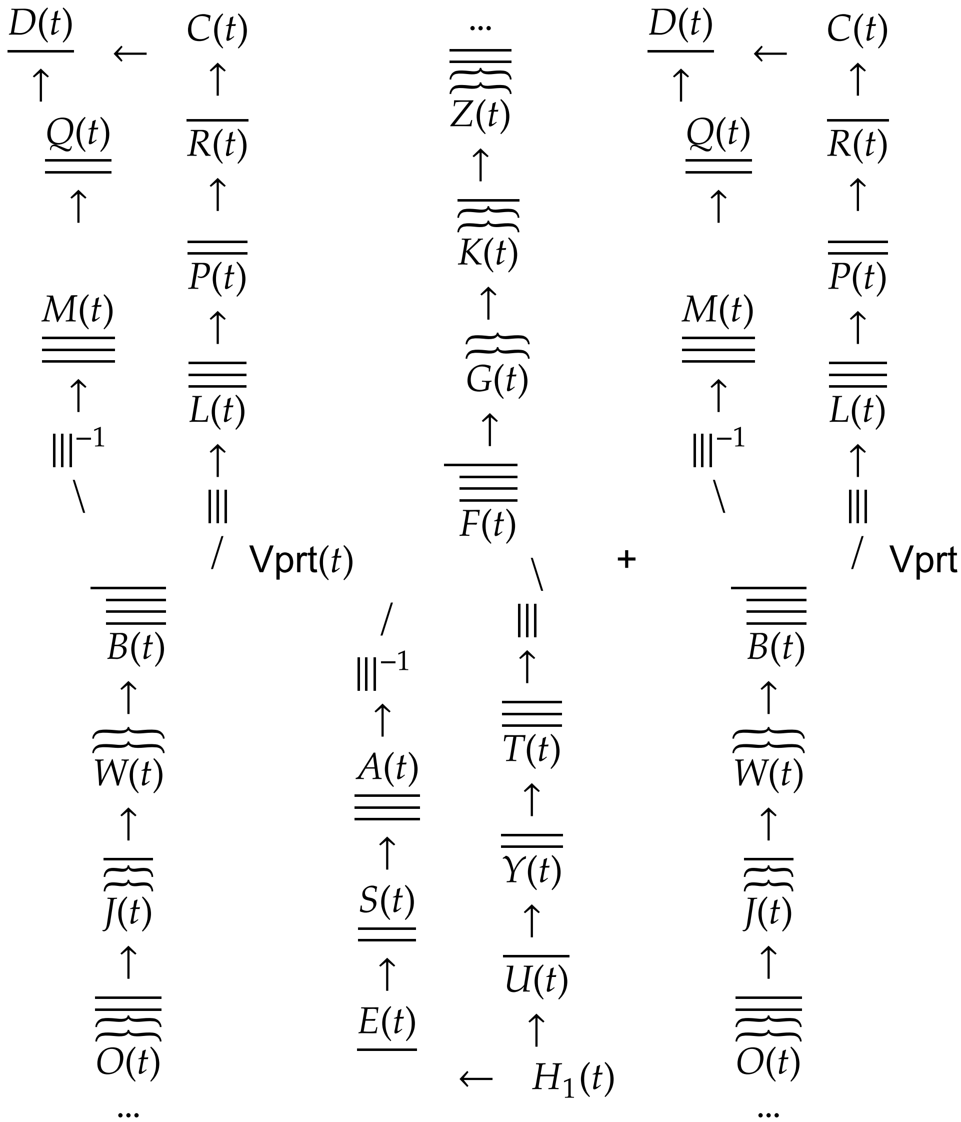
$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & & \cdots \\
\uparrow & & \uparrow & & & & \overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}} \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & & \uparrow \\
\uparrow & & \uparrow & & & & \overline{\overbrace{\overbrace{K(t)}}} \\
 & & \overline{\overline{P(t)}} & & & & \uparrow \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & & & \overbrace{\overbrace{G(t)}} \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & & & \uparrow \\
|||^{-1} & & \uparrow & & & & \overline{\overline{\overline{\overline{F(t)}}}} \\
\backslash & & ||| & & & & \backslash \\
 & & / & \mathsf{Vprt}(t) & & & \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & & ||| \\
\uparrow & & & & |||^{-1} & & \uparrow \\
\overbrace{\overbrace{\overbrace{W(t)}}} & & & & \uparrow & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & & \uparrow \\
\overline{\overbrace{\overbrace{J(t)}}} & & & & \uparrow & & \overline{\overline{Y_1(t)}} \cup \overline{\overline{Y_2(t)}} \\
\uparrow & & & & \underline{\underline{S(t)}} & & \uparrow \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & & \uparrow & & \overline{U(t)} \\
\cdots & & & & \underline{E(t)} & & \uparrow \\
 & & & & & \leftarrow & H(t)
\end{array}
$$

(A.2.2.2.18),

$$
\begin{array}{cccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots \\
\uparrow & & \uparrow & & & \overbrace{\overline{\overline{Z(t)}}} \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow \\
\uparrow & & \uparrow & & & \overbrace{\overline{K(t)}} \\
 & & \overline{\overline{P(t)}} & & & \uparrow \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & & \overbrace{G(t)} \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & & \uparrow \\
|||^{-1} & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} \\
\backslash & & ||| & & & \backslash \\
 & & / & \mathsf{Vprt}(t) & & \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & ||| \\
\uparrow & & & & |||^{-1} & \uparrow \\
\overbrace{W(t)} & & & & \uparrow & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & \uparrow \\
\overbrace{\overline{J(t)}} & & & & \uparrow & \overline{\overline{Y(t)}} \\
\uparrow & & & & \underline{\underline{S(t)}} & \uparrow \\
\overbrace{\overline{\overline{O(t)}}} & & & & \uparrow & \overline{U_1(t)} \\
\cdots & & & & \underline{E(t)} & \uparrow \\
 & & & & & \leftarrow \quad H(t)
\end{array}
\quad + \quad
\begin{array}{cccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots \\
\uparrow & & \uparrow & & & \overbrace{\overline{\overline{Z(t)}}} \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow \\
\uparrow & & \uparrow & & & \overbrace{\overline{K(t)}} \\
 & & \overline{\overline{P(t)}} & & & \uparrow \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & & \overbrace{G(t)} \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & & \uparrow \\
|||^{-1} & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} \\
\backslash & & ||| & & & \backslash \\
 & & / & \mathsf{Vprt}(t) & & \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & ||| \\
\uparrow & & & & |||^{-1} & \uparrow \\
\overbrace{W(t)} & & & & \uparrow & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & \uparrow \\
\overbrace{\overline{J(t)}} & & & & \uparrow & \overline{\overline{Y(t)}} \\
\uparrow & & & & \underline{\underline{S(t)}} & \uparrow \\
\overbrace{\overline{\overline{O(t)}}} & & & & \uparrow & \overline{U_2(t)} \\
\cdots & & & & \underline{E(t)} & \uparrow \\
 & & & & & \leftarrow \quad H(t)
\end{array}
\quad =
$$

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{K(t)}}} & \\
 & & \overline{\overline{P(t)}} & & & \uparrow & \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & & \overbrace{\overbrace{G(t)}} & \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
|||^{-1} & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
\backslash & & ||| & & & & \backslash \\
 & & / & \text{Vprt}(t) & & & ||| \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & & \uparrow \\
\uparrow & & & & |||^{-1} & & \overline{\overline{\overline{T(t)}}} \\
\overbrace{\overbrace{W(t)}} & & & & \uparrow & & \uparrow \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & & \overline{\overline{Y(t)}} \\
\overline{\overbrace{\overbrace{J(t)}}} & & & & \uparrow & & \uparrow \\
\uparrow & & & & \underline{\underline{S(t)}} & & \overline{U_1(t)} \cup \overline{U_2(t)} \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & & \uparrow & & \uparrow \\
\cdots & & & & \underline{E(t)} & \leftarrow & H(t)
\end{array}
$$

(A.2.2.2.19),


D(t) ← C(t)
Q(t)
R(t)
P(t)
M(t)
L(t)
|||^−1
|||
Vprt(t)
B(t)
W(t)
J(t)
O(t)
...
Z(t)
K(t)
G(t)
F(t)
|||^−1
|||
A(t)
S(t)
E(t)
T(t)
Y(t)
U(t)
← H_1(t)
+
D(t) ← C(t)
Q(t)
R(t)
P(t)
M(t)
L(t)
|||^−1
|||
Vprt
B(t)
W(t)
J(t)
O(t)
...

$$
(t)\ \begin{array}{cc}
 & \cdots \\
 & \overbrace{\overbrace{\overbrace{\overline{\overline{\overline{Z(t)}}}}}} \\
 & \uparrow \\
 & \overbrace{\overbrace{\overline{\overline{K(t)}}}} \\
 & \uparrow \\
 & \overbrace{\overbrace{G(t)}} \\
 & \uparrow \\
 & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & \backslash \\
 / & ||| \\
 |||^{-1} & \uparrow \\
 \uparrow & \overline{\overline{\overline{T(t)}}} \\
 \underline{\underline{\underline{A(t)}}} & \uparrow \\
 \uparrow & \overline{\overline{Y(t)}} \\
 \underline{\underline{S(t)}} & \uparrow \\
 \uparrow & \overline{U(t)} \\
 \underline{E(t)} & \uparrow \\
 \leftarrow & H_2(t)
\end{array}
\ = \
\begin{array}{ccc}
 \underline{D(t)} & \leftarrow & C(t) \\
 \uparrow & & \uparrow \\
 \underline{\underline{Q(t)}} & & \overline{R(t)} \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} \\
 \uparrow & & \uparrow \\
 |||^{-1} & & \overline{\overline{\overline{L(t)}}} \\
 \backslash & & \uparrow \\
 & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overline{\overline{J(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overline{\overline{\overline{O(t)}}}}} & \\
 & \cdots &
\end{array}
\ \mathrm{Vprt}(t)\
\begin{array}{cc}
 & \cdots \\
 & \overbrace{\overbrace{\overbrace{\overline{\overline{\overline{Z(t)}}}}}} \\
 & \uparrow \\
 & \overbrace{\overbrace{\overline{\overline{K(t)}}}} \\
 & \uparrow \\
 & \overbrace{\overbrace{G(t)}} \\
 & \uparrow \\
 & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & \backslash \\
 / & ||| \\
 |||^{-1} & \uparrow \\
 \uparrow & \overline{\overline{\overline{T(t)}}} \\
 \underline{\underline{\underline{A(t)}}} & \uparrow \\
 \uparrow & \overline{\overline{Y(t)}} \\
 \underline{\underline{S(t)}} & \uparrow \\
 \uparrow & \overline{U(t)} \\
 \underline{E(t)} & \uparrow \\
 \leftarrow & H_1(t) \cup H_2(t)
\end{array}
$$

(A.2.2.2.20).

We consider the following self-type dynamic Vprt-structures of the first type:

$$
\begin{array}{ccccccc}
\underline{Q(t)} & \leftarrow & Q(t) & & \cdots & & \\
\uparrow & & \uparrow & & \overline{\overline{\overbrace{\overbrace{Q(t)}}}} & & \\
\underline{\underline{Q(t)}} & & \overline{Q(t)} & & \uparrow & & \\
\uparrow & & \uparrow & & \overline{\overbrace{\overbrace{Q(t)}}} & & \\
\underline{\underline{\underline{Q(t)}}} & & \overline{\overline{Q(t)}} & & \uparrow & & \\
\uparrow & & \uparrow & & \overbrace{\overbrace{Q(t)}} & & \\
|||^{-1} & & \overline{\overline{\overline{Q(t)}}} & & \uparrow & & \\
\backslash & & \uparrow & & \overline{\overline{\overline{\overline{Q(t)}}}} & & \\
 & & ||| & & \backslash & & \\
 & & / & \mathrm{Vprt}(t) & & & (\text{A.2.2.3}), \\
\overline{\overline{\overline{\overline{Q(t)}}}} & & & / & ||| & & \\
\uparrow & & & |||^{-1} & \uparrow & & \\
\overbrace{\overbrace{Q(t)}} & & & \uparrow & \overline{\overline{\overline{Q(t)}}} & & \\
\uparrow & & & \underline{\underline{\underline{Q(t)}}} & \uparrow & & \\
\overline{\overbrace{\overbrace{Q(t)}}} & & & \uparrow & \overline{\overline{Q(t)}} & & \\
\uparrow & & & \underline{\underline{Q(t)}} & \uparrow & & \\
\overline{\overline{\overbrace{\overbrace{Q(t)}}}} & & & \uparrow & \overline{Q(t)} & & \\
\cdots & & & \underline{Q(t)} & \uparrow & & \\
 & & & & \leftarrow & Q(t) &
\end{array}
$$

$$\begin{array}{ccccc}
\underline{A(t)} & \leftarrow & Q(t) & & \cdots \\
\uparrow & & \uparrow & & \overbrace{\overbrace{\overline{\overline{A(t)}}}} \\
\underline{\underline{Q(t)}} & & \overline{Q(t)} & & \uparrow \\
\uparrow & & \uparrow & & \overbrace{\overbrace{\overline{Q(t)}}} \\
\underline{\underline{\underline{Q(t)}}} & & \overline{\overline{Q(t)}} & & \uparrow \\
\uparrow & & \uparrow & & \overbrace{\overbrace{Q(t)}} \\
|||^{-1} & & \overline{\overline{\overline{Q(t)}}} & & \uparrow \\
\backslash & & \uparrow & & \overline{\overline{\overline{\overline{Q(t)}}}} \\
 & & ||| & & \\
 & & / & \mathrm{Vprt}(t) & \backslash \\
\overline{\overline{\overline{\overline{Q(t)}}}} & & / & & ||| \\
\uparrow & & |||^{-1} & & \uparrow \\
\overbrace{\overbrace{Q(t)}} & & \uparrow & & \overline{\overline{\overline{Q(t)}}} \\
\uparrow & & \underline{\underline{\underline{Q(t)}}} & & \uparrow \\
\overbrace{\overbrace{\overline{Q(t)}}} & & \uparrow & & \overline{\overline{Q(t)}} \\
\uparrow & & \underline{\underline{Q(t)}} & & \uparrow \\
\overbrace{\overbrace{\overline{\overline{\overline{a(t)}}}}} & & \uparrow & & \overline{Q(t)} \\
\cdots & & \underline{Q(t)} & & \uparrow \\
 & & & \leftarrow & a(t)
\end{array} \qquad (A.2.2.4),$$

denote $V_{11}(t) f A(t);Q(t);a(t)$, $a(t) \subset$ A(t),

$$
\begin{array}{cccccc}
\underline{A(t)} \quad \leftarrow & A(t) & & \cdots & & \\
\uparrow & \uparrow & & \overbrace{\overline{\overline{A(t)}}} & & \\
\underline{\underline{Q(t)}} & \overline{Q(t)} & & \uparrow & & \\
\uparrow & \uparrow & & \overbrace{\overline{Q(t)}} & & \\
 & \overline{\overline{Q(t)}} & & \uparrow & & \\
\underline{\underline{\underline{Q(t)}}} & \uparrow & & \overbrace{Q(t)} & & \\
\uparrow & \overline{\overline{\overline{Q(t)}}} & & \uparrow & & \\
|||^{-1} & \uparrow & & \overline{\overline{\overline{\overline{Q(t)}}}} & & \\
\backslash & ||| & & & & \\
 & / & \text{Vprt}(t) & & \backslash & \text{(A.2.2.5),} \\
\overline{\overline{\overline{\overline{Q(t)}}}} & & / & & ||| & \\
\uparrow & & |||^{-1} & & \uparrow & \\
\overbrace{Q(t)} & & \uparrow & & \overline{\overline{\overline{Q(t)}}} & \\
\uparrow & & \underline{\underline{\underline{Q(t)}}} & & \uparrow & \\
\overbrace{\overline{Q(t)}} & & \uparrow & & \overline{\overline{Q(t)}} & \\
\uparrow & & \underline{\underline{Q(t)}} & & \uparrow & \\
\overbrace{\overline{\overline{A(t)}}} & & \uparrow & & \overline{Q(t)} & \\
\cdots & & \underline{A(t)} & & \uparrow & \\
 & & & \leftarrow & A(t) & \\
\end{array}
$$

$$
\begin{array}{ccccc}
\underline{A(t)} & \leftarrow & a(t) & & \cdots \\
\uparrow & & \uparrow & & \overline{\overline{\overline{\overbrace{\overbrace{A(t)}}}}} \\
\underline{\underline{Q(t)}} & & \overline{Q(t)} & & \uparrow \\
\uparrow & & \uparrow & & \overline{\overbrace{\overbrace{Q(t)}}} \\
\underline{\underline{\underline{Q(t)}}} & & \overline{\overline{Q(t)}} & & \uparrow \\
\uparrow & & \uparrow & & \overbrace{\overbrace{Q(t)}} \\
|||^{-1} & & \overline{\overline{\overline{Q(t)}}} & & \uparrow \\
\backslash & & \uparrow & & \overline{\overline{\overline{\overline{Q(t)}}}} \\
 & & ||| & & \backslash \\
 & & / \ \mathsf{Vprt}(t) & & \\
\overline{\overline{\overline{\overline{Q(t)}}}} & & / & & ||| \\
\uparrow & & |||^{-1} & & \uparrow \\
\overbrace{\overbrace{Q(t)}} & & \uparrow & & \overline{\overline{\overline{Q(t)}}} \\
\uparrow & & \underline{\underline{\underline{Q(t)}}} & & \uparrow \\
\overline{\overbrace{\overbrace{Q(t)}}} & & \uparrow & & \overline{\overline{Q(t)}} \\
\uparrow & & \underline{\underline{Q(t)}} & & \uparrow \\
\overline{\overline{\overbrace{\overbrace{a(t)}}}} & & \uparrow & & \overline{Q(t)} \\
\cdots & & \underline{Q(t)} & & \uparrow \\
 & & & \leftarrow & a(t)
\end{array}
$$

denote $V_{12}(t) f a(t);Q(t);A(t)$, $a(t) \subset$ A(t),

$$
\begin{array}{ccccccc}
\underline{Q(t)} & \leftarrow & Q(t) & & & \cdots & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{\overline{Q(t)}}}} & \\
\underline{\underline{Q(t)}} & & \overline{Q(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{Q(t)}}} & \\
 & & \overline{\overline{Q(t)}} & & & \uparrow & \\
\underline{\underline{\underline{A(t)}}} & & \uparrow & & & \overbrace{\overbrace{Q(t)}} & \\
\uparrow & & \overline{\overline{\overline{A(t)}}} & & & \uparrow & \\
|||^{-1} & & \uparrow & & & \overline{\overline{\overline{\overline{A(t)}}}} & \\
\backslash & & ||| & & & & \\
 & & / & \text{Vprt}(t) & & \backslash & (\text{A.2.2.7}), \\
 & \overline{\overline{\overline{\overline{A(t)}}}} & & & / & ||| & \\
 & \uparrow & & & |||^{-1} & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{Q(t)}}} & & & \uparrow & \overline{\overline{a(t)}} & \\
 & \uparrow & & & \underline{\underline{\underline{A(t)}}} & \uparrow & \\
 & \overbrace{\overbrace{\overline{Q(t)}}} & & & \uparrow & \overline{\overline{Q(t)}} & \\
 & \uparrow & & & \underline{\underline{Q(t)}} & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{\overline{\overline{Q(t)}}}}} & & & \uparrow & \overline{Q(t)} & \\
 & \cdots & & & \underline{Q(t)} & \uparrow & \\
 & & & & & \leftarrow & Q(t)
\end{array}
$$

and any other possible options of self for (A.2.2.1) etc.

It can be considered a simpler version of the dynamic operator

$$
\begin{array}{ccccc}
 & & \cdots & & \\
 & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & & \\
 & & \uparrow & & \\
 & & \overline{\overbrace{\overbrace{K(t)}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{G(t)}} & & \\
 & & \uparrow & & \\
 & & \overline{\overline{\overline{\overline{F(t)}}}} & & \\
\text{Vprt}(t) & & & \backslash & \text{(A.2.2.8),} \\
 & / & & ||| & \\
 & |||^{-1} & & \uparrow & \\
 & \uparrow & & \overline{\overline{\overline{T(t)}}} & \\
 & \underline{\underline{\underline{A(t)}}} & & \uparrow & \\
 & \uparrow & & \overline{\overline{Y(t)}} & \\
 & \underline{\underline{S(t)}} & & \uparrow & \\
 & \uparrow & & \overline{U(t)} & \\
 & \underline{E(t)} & & \uparrow & \\
 & & \leftarrow & & H(t)
\end{array}
$$

the result of this process will be described by the expression

$$
\begin{array}{cccc}
 & \cdots & & \\
 & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & & \\
 & \uparrow & & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & & \\
 & \uparrow & & \\
 & \overbrace{\overbrace{G(t)}} & & \\
 & \uparrow & & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & & \\
\mathrm{Vrt}(t) & & \backslash & \text{(A.2.2.9),} \\
 & / & \vert\vert\vert & \\
 & \vert\vert\vert^{-1} & \uparrow & \\
 & \uparrow & \overline{\overline{\overline{T(t)}}} & \\
 & \underline{\underline{\underline{A(t)}}} & \uparrow & \\
 & \uparrow & \overline{\overline{Y(t)}} & \\
 & \underline{\underline{S(t)}} & \uparrow & \\
 & \uparrow & \overline{U(t)} & \\
 & \underline{E(t)} & \uparrow & \\
 & & \leftarrow & H(t)
\end{array}
$$

or

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \quad \mathrm{Vprt}(t)\ (\ \mathrm{A.2.2.10}), \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
$$

the result of this process will be described by the expression

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
 & & \overline{\overline{\overline{L(t)}}} \\
\uparrow & & \uparrow \\
|||^{-1} & & ||| \\
\backslash & & / \quad \text{Vrt}(t) \text{ (A.2.2.11),} \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{O(t)}}}}} & \\
 & \ldots &
\end{array}
$$

Definition A.2.2.2. The dynamic operator (A.2.2.8) we shall call dynamic Vprt – element of the second type, (A.2.2.9) we shall call dynamic Vrt – element of the second type.

It’s allowed to add dynamic Vprt – elements of the second type:

$$
\mathrm{Vprt}(t)\;
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{Z_1(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
 \uparrow & & \uparrow \\
 \underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
+\;\mathrm{Vprt}(t)\;
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{Z_2(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
 \uparrow & & \uparrow \\
 \underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
=\;\mathrm{Vprt}(t)\;
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{Z_1(t)}}}} \cup \overline{\overline{\overbrace{\overbrace{Z_2(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
 \uparrow & & \uparrow \\
 \underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
$$

(A.2.2.12),

$$
\mathrm{Vprt}(t)\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K_1(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
 \uparrow & & \uparrow \\
 \underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
+ \mathrm{Vprt}(t)\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K_2(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
 \uparrow & & \uparrow \\
 \underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
= \mathrm{Vprt}(t)\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K_1(t)}}} \cup \overline{\overbrace{\overbrace{K_2(t)}}} & \\
 & \uparrow \qquad \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
 \uparrow & & \uparrow \\
 \underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
$$

(A.2.2.13),

$$
\mathrm{Vprt}(t)\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{Z(t)}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G_1(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{\overline{F(t)}}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
 \uparrow & & \uparrow \\
 \underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
+ \mathrm{Vprt}(t)\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{Z(t)}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G_2(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{\overline{F(t)}}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
 \uparrow & & \uparrow \\
 \underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
= \mathrm{Vprt}(t)\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{Z(t)}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G_1(t)}} \cup \overbrace{\overbrace{G_2(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{\overline{F(t)}}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
 \uparrow & & \uparrow \\
 \underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
$$

(A.2.2.13.1),

$$
\mathrm{Vprt}(t)\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F_1(t)}}}} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
\uparrow & & \uparrow \\
\underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
+\mathrm{Vprt}(t)\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F_2(t)}}}} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
\uparrow & & \uparrow \\
\underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
=\mathrm{Vprt}(t)\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F_1(t)}}}} \cup \overline{\overline{\overline{\overline{F_2(t)}}}} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
\uparrow & & \uparrow \\
\underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
$$

(A.2.2.13.2),

$$
\begin{array}{ccc}
 & \begin{array}{c} \dots \\ \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}}} \\ \uparrow \\ \overline{\overbrace{\overbrace{\overbrace{K(t)}}}} \\ \uparrow \\ \overbrace{\overbrace{\overbrace{G(t)}}} \\ \uparrow \\ \overline{\overline{\overline{\overline{F(t)}}}} \end{array} & \\
\text{Vprt}(t) & & \\
 & / \qquad\qquad \backslash & \\
 & \begin{array}{cc} |||^{-1} & ||| \\ \uparrow & \uparrow \\ \underline{\underline{\underline{A_1(t)}}} & \overline{\overline{\overline{T(t)}}} \\ \uparrow & \uparrow \\ \underline{\underline{S(t)}} & \overline{\overline{Y(t)}} \\ \uparrow & \uparrow \\ \underline{E(t)} & \overline{U(t)} \\ & \uparrow \\ & \leftarrow \quad H(t) \end{array} &
\end{array}
+
\begin{array}{ccc}
 & \begin{array}{c} \dots \\ \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}}} \\ \uparrow \\ \overline{\overbrace{\overbrace{\overbrace{K(t)}}}} \\ \uparrow \\ \overbrace{\overbrace{\overbrace{G(t)}}} \\ \uparrow \\ \overline{\overline{\overline{\overline{F(t)}}}} \end{array} & \\
\text{Vprt}(t) & & \\
 & / \qquad\qquad \backslash & \\
 & \begin{array}{cc} |||^{-1} & ||| \\ \uparrow & \uparrow \\ \underline{\underline{\underline{A_2(t)}}} & \overline{\overline{\overline{T(t)}}} \\ \uparrow & \uparrow \\ \underline{\underline{S(t)}} & \overline{\overline{Y(t)}} \\ \uparrow & \uparrow \\ \underline{E(t)} & \overline{U(t)} \\ & \uparrow \\ & \leftarrow \quad H(t) \end{array} &
\end{array}
= \text{Vprt}
$$

$$
\begin{array}{ccc}
 & \cdots & \\
 & \overbrace{\overbrace{\overbrace{\overline{\overline{Z(t)}}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overline{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{\overline{F(t)}}}}} & \\
(t) & & \qquad\qquad \backslash \qquad (\text{A.2.2.13.3}), \\
 / & & ||| \\
 |||^{-1} & & \uparrow \\
 \uparrow & & \overline{\overline{\overline{T(t)}}} \\
 \underline{\underline{\underline{A_1(t)}}} \cup \underline{\underline{\underline{A_2(t)}}} & & \uparrow \\
 \uparrow & & \overline{\overline{Y(t)}} \\
 \underline{\underline{S(t)}} & & \uparrow \\
 \uparrow & & \overline{U(t)} \\
 \underline{E(t)} & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
$$

$$
\text{Vprt}(t)\;
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overbrace{\overbrace{\overbrace{Z(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 / & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S_1(t)}} & & \overline{\overline{Y(t)}} \\
\uparrow & & \uparrow \\
\underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
\;+\;\text{Vprt}(t)\;
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overbrace{\overbrace{\overbrace{Z(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 / & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S_2(t)}} & & \overline{\overline{Y(t)}} \\
\uparrow & & \uparrow \\
\underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
\;=\;\text{Vprt}
$$

$$
\begin{array}{ccccc}
 & & \cdots & & \\
 & & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}}} & & \\
 & & \uparrow & & \\
 & & \overline{\overbrace{\overbrace{\overbrace{K(t)}}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{\overbrace{G(t)}}} & & \\
 & & \uparrow & & \\
 & & \overline{\overline{\overline{\overline{\overline{F(t)}}}}} & & \\
(t) & & & \backslash & \text{(A.2.2.13.4),} \\
 & / & & ||| & \\
 & |||^{-1} & & \uparrow & \\
 & \uparrow & & \overline{\overline{\overline{T(t)}}} & \\
 & \underline{\underline{\underline{A(t)}}} & & \uparrow & \\
 & \uparrow & & \overline{\overline{Y(t)}} & \\
 & \underline{\underline{S_1(t)}} \cup \underline{\underline{S_2(t)}} & & \uparrow & \\
 & \uparrow & & \overline{U(t)} & \\
 & \underline{E(t)} & & \uparrow & \\
 & & \leftarrow & H(t) &
\end{array}
$$

$$
\text{Vprt}(t)
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
 \uparrow & & \uparrow \\
 \underline{E_1(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
+ \text{Vprt}(t)
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
 \uparrow & & \uparrow \\
 \underline{E_2(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
= \text{Vprt}
$$

$$
\begin{array}{ccccc}
 & & \cdots & & \\
 & & \overbrace{\overbrace{\overline{\overline{\overline{Z(t)}}}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{\overline{K(t)}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{G(t)}} & & \\
 & & \uparrow & & \\
 & & \overline{\overline{\overline{\overline{F(t)}}}} & & \\
(t) & & & \backslash & \text{(A.2.2.13.),} \\
 & / & & ||| & \\
 & |||^{-1} & & \uparrow & \\
 & \uparrow & & \overline{\overline{\overline{T(t)}}} & \\
 & \underline{\underline{\underline{A(t)}}} & & \uparrow & \\
 & \uparrow & & \overline{\overline{Y(t)}} & \\
 & \underline{\underline{S(t)}} & & \uparrow & \\
 & \uparrow & & \overline{U(t)} & \\
 & \underline{E_1(t)} \cup \underline{E_2(t)} & & \uparrow & \\
 & & \leftarrow & H(t) &
\end{array}
$$

$$
\mathrm{Vprt}(t)\begin{array}{ccc}
 & \cdots & \\
 & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overline{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 & & \diagdown \\
 / & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{\overline{T_1(t)}}}} \\
\underline{\underline{\underline{A(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{Y(t)}} \\
\underline{\underline{S(t)}} & & \uparrow \\
\uparrow & & \overline{U(t)} \\
\underline{E(t)} & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
+\mathrm{Vprt}(t)\begin{array}{ccc}
 & \cdots & \\
 & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overline{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 & & \diagdown \\
 / & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{\overline{T_2(t)}}}} \\
\underline{\underline{\underline{A(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{Y(t)}} \\
\underline{\underline{S(t)}} & & \uparrow \\
\uparrow & & \overline{U(t)} \\
\underline{E(t)} & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
=\mathrm{Vprt}(t)\begin{array}{ccc}
 & \cdots & \\
 & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overline{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 & & \diagdown \\
 / & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{\overline{T_1(t)}}}} \cup \overline{\overline{\overline{\overline{T_2(t)}}}} \\
\underline{\underline{\underline{A(t)}}} & & \uparrow \qquad \uparrow \\
\uparrow & & \overline{\overline{Y(t)}} \\
\underline{\underline{S(t)}} & & \uparrow \\
\uparrow & & \overline{U(t)} \\
\underline{E(t)} & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
$$

(A.2.2.13.6),

$$\mathrm{Vprt}(t)\begin{array}{cc} & \cdots \\ & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} \\ & \uparrow \\ & \overline{\overbrace{\overbrace{K(t)}}} \\ & \uparrow \\ & \overbrace{\overbrace{G(t)}} \\ & \uparrow \\ & \overline{\overline{\overline{\overline{F(t)}}}} \\ / & \backslash \\ |||^{-1} & ||| \\ \uparrow & \uparrow \\ \underline{\underline{\underline{A(t)}}} & \overline{\overline{\overline{T(t)}}} \\ \uparrow & \uparrow \\ \underline{\underline{S(t)}} & \overline{\overline{Y_1(t)}} \\ \uparrow & \uparrow \\ \underline{E(t)} & \overline{U(t)} \\ & \uparrow \\ \leftarrow & H(t) \end{array} + \mathrm{Vprt}(t)\begin{array}{cc} & \cdots \\ & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} \\ & \uparrow \\ & \overline{\overbrace{\overbrace{K(t)}}} \\ & \uparrow \\ & \overbrace{\overbrace{G(t)}} \\ & \uparrow \\ & \overline{\overline{\overline{\overline{F(t)}}}} \\ / & \backslash \\ |||^{-1} & ||| \\ \uparrow & \uparrow \\ \underline{\underline{\underline{A(t)}}} & \overline{\overline{\overline{T(t)}}} \\ \uparrow & \uparrow \\ \underline{\underline{S(t)}} & \overline{\overline{Y_2(t)}} \\ \uparrow & \uparrow \\ \underline{E(t)} & \overline{U(t)} \\ & \uparrow \\ \leftarrow & H(t) \end{array} = \mathrm{Vprt}(t)\begin{array}{cc} & \cdots \\ & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} \\ & \uparrow \\ & \overline{\overbrace{\overbrace{K(t)}}} \\ & \uparrow \\ & \overbrace{\overbrace{G(t)}} \\ & \uparrow \\ & \overline{\overline{\overline{\overline{F(t)}}}} \\ / & \backslash \\ |||^{-1} & ||| \\ \uparrow & \uparrow \\ \underline{\underline{\underline{A(t)}}} & \overline{\overline{\overline{T(t)}}} \\ \uparrow & \uparrow \\ \underline{\underline{S(t)}} & \overline{\overline{Y_1(t)}} \cup \overline{\overline{Y_2(t)}} \\ \uparrow & \uparrow \\ \underline{E(t)} & \overline{U(t)} \\ & \uparrow \\ \leftarrow & H(t) \end{array}$$

(A.2.2.13.7),

$$
\mathrm{Vprt}(t)
\begin{array}{cc}
 & \cdots \\
 & \overline{\overline{\overline{\overbrace{\overbrace{Z(t)}}}}} \\
 & \uparrow \\
 & \overline{\overbrace{\overbrace{K(t)}}} \\
 & \uparrow \\
 & \overbrace{\overbrace{G(t)}} \\
 & \uparrow \\
 & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & \backslash \\
 / & ||| \\
 |||^{-1} & \uparrow \\
 \uparrow & \overline{\overline{\overline{T(t)}}} \\
 \underline{\underline{\underline{A(t)}}} & \uparrow \\
 \uparrow & \overline{\overline{Y(t)}} \\
 \underline{\underline{S(t)}} & \uparrow \\
 \uparrow & \overline{U_1(t)} \\
 \underline{E(t)} & \uparrow \\
 \leftarrow & H(t)
\end{array}
+ \mathrm{Vprt}(t)
\begin{array}{cc}
 & \cdots \\
 & \overline{\overline{\overline{\overbrace{\overbrace{Z(t)}}}}} \\
 & \uparrow \\
 & \overline{\overbrace{\overbrace{K(t)}}} \\
 & \uparrow \\
 & \overbrace{\overbrace{G(t)}} \\
 & \uparrow \\
 & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & \backslash \\
 / & ||| \\
 |||^{-1} & \uparrow \\
 \uparrow & \overline{\overline{\overline{T(t)}}} \\
 \underline{\underline{\underline{A(t)}}} & \uparrow \\
 \uparrow & \overline{\overline{Y(t)}} \\
 \underline{\underline{S(t)}} & \uparrow \\
 \uparrow & \overline{U_2(t)} \\
 \underline{E(t)} & \uparrow \\
 \leftarrow & H(t)
\end{array}
= \mathrm{Vprt}(t)
\begin{array}{cc}
 & \cdots \\
 & \overline{\overline{\overline{\overbrace{\overbrace{Z(t)}}}}} \\
 & \uparrow \\
 & \overline{\overbrace{\overbrace{K(t)}}} \\
 & \uparrow \\
 & \overbrace{\overbrace{G(t)}} \\
 & \uparrow \\
 & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & \backslash \\
 / & ||| \\
 |||^{-1} & \uparrow \\
 \uparrow & \overline{\overline{\overline{T(t)}}} \\
 \underline{\underline{\underline{A(t)}}} & \uparrow \\
 \uparrow & \overline{\overline{Y(t)}} \\
 \underline{\underline{S(t)}} & \uparrow \\
 \uparrow & \overline{U_1(t)} \cup \overline{U_2(t)} \\
 \underline{E(t)} & \uparrow \\
 \leftarrow & H(t)
\end{array}
$$

(A.2.2.13.8),

$$
\mathrm{Vprt}(t)\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 & & \backslash \\
 / & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{T(t)}}} \\
\underline{\underline{\underline{A(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{Y(t)}} \\
\underline{\underline{S(t)}} & & \uparrow \\
\uparrow & & \overline{U(t)} \\
\underline{E(t)} & & \uparrow \\
 & \leftarrow & H_1(t)
\end{array}
+\ \mathrm{Vprt}(t)\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 & & \backslash \\
 / & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{T(t)}}} \\
\underline{\underline{\underline{A(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{Y(t)}} \\
\underline{\underline{S(t)}} & & \uparrow \\
\uparrow & & \overline{U(t)} \\
\underline{E(t)} & & \uparrow \\
 & \leftarrow & H_2(t)
\end{array}
=\ \mathrm{Vprt}
$$

$$
\begin{array}{ccc}
 & \cdots & \\
 & \overbrace{\overbrace{\overline{\overline{\overline{Z(t)}}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overline{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
(t) & & \backslash \\
/ & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{T(t)}}} \\
\underline{\underline{\underline{A(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{Y(t)}} \\
\underline{\underline{S(t)}} & & \uparrow \\
\uparrow & & \overline{U(t)} \\
\underline{E(t)} & & \uparrow \\
 & \leftarrow & H_1(t) \cup H_2(t)
\end{array}
\qquad (A.2.2.13.9),
$$

We consider the following self-type dynamic Vprt-structures of the second t type:

$$
\begin{array}{ccccc}
 & & \cdots & & \\
 & & \overbrace{\overbrace{\overbrace{\overline{\overline{Q(t)}}}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{\overline{Q(t)}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{Q(t)}} & & \\
 & & \uparrow & & \\
 & & \overline{\overline{\overline{\overline{Q(t)}}}} & & \\
\text{Vprt}(t) & & & \backslash & \text{(A.2.2.14)}, \\
 & / & & ||| & \\
 & |||^{-1} & & \uparrow & \\
 & \uparrow & & \overline{\overline{\overline{Q(t)}}} & \\
 & \underline{\underline{\underline{Q(t)}}} & & \uparrow & \\
 & \uparrow & & \overline{\overline{Q(t)}} & \\
 & \underline{\underline{Q(t)}} & & \uparrow & \\
 & \uparrow & & \overline{Q(t)} & \\
 & \underline{Q(t)} & & \uparrow & \\
 & & \leftarrow & Q(t) &
\end{array}
$$

$$
\begin{array}{ccccc}
 & & \cdots & & \\
 & & \overbrace{\overbrace{\overline{\overline{A(t)}}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{\overline{Q(t)}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{Q(t)}} & & \\
 & & \uparrow & & \\
 & & \overline{\overline{\overline{\overline{Q(t)}}}} & & \\
\text{Vprt}(t) & & & \backslash & \text{(A.2.2.15),} \\
 & / & & ||| & \\
 & |||^{-1} & & \uparrow & \\
 & \uparrow & & \overline{\overline{\overline{Q(t)}}} & \\
 & \underline{\underline{\underline{Q(t)}}} & & \uparrow & \\
 & \uparrow & & \overline{\overline{Q(t)}} & \\
 & \underline{\underline{Q(t)}} & & \uparrow & \\
 & \uparrow & & \overline{Q(t)} & \\
 & \underline{Q(t)} & & \uparrow & \\
 & & \leftarrow & a(t) &
\end{array}
$$

denote $V_{13}(t) f A(t);Q(t);a(t)$, $a(t) \subset$ A(t),

$$
\begin{array}{lcccl}
 & & \cdots & & \\
 & & \overbrace{\overbrace{\overline{\overline{a(t)}}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{\overline{Q(t)}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{Q(t)}} & & \\
 & & \uparrow & & \\
 & & \overline{\overline{\overline{\overline{Q(t)}}}} & & \\
\text{Vprt}(t) & & & \backslash & \text{(A.2.2.16),} \\
 & / & & ||| & \\
 & |||^{-1} & & \uparrow & \\
 & \uparrow & & \overline{\overline{\overline{Q(t)}}} & \\
 & \underline{\underline{\underline{Q(t)}}} & & \uparrow & \\
 & \uparrow & & \overline{\overline{Q(t)}} & \\
 & \underline{\underline{Q(t)}} & & \uparrow & \\
 & \uparrow & & \overline{Q(t)} & \\
 & \underline{Q(t)} & & \uparrow & \\
 & & \leftarrow & A(t) &
\end{array}
$$

denote $V_{14}(t) f a(t); Q(t); A(t),\ a(t) \subset \mathrm{A(t)}$,

and any other possible options of self for (A.2.2.8) etc.

Definition A.2.2.3. The dynamic operator (A.2.2.10) we shall call dynamic tprV – element, (A.2.2.11) we shall call dynamic trV – element.

It’s allowed to add dynamic tprV – elements:

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t)\\
\uparrow & & \uparrow\\
\underline{\underline{Q(t)}} & & \overline{R(t)}\\
\uparrow & & \uparrow\\
 & & \overline{\overline{P(t)}}\\
\underline{\underline{\underline{M_1(t)}}} & & \uparrow\\
\uparrow & & \overline{\overline{\overline{L(t)}}}\\
|||^{-1} & & \uparrow\\
\backslash & & |||\\
 & & /\\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
\mathrm{Vprt}(t) +
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t)\\
\uparrow & & \uparrow\\
\underline{\underline{Q(t)}} & & \overline{R(t)}\\
\uparrow & & \uparrow\\
 & & \overline{\overline{P(t)}}\\
\underline{\underline{\underline{M_2(t)}}} & & \uparrow\\
\uparrow & & \overline{\overline{\overline{L(t)}}}\\
|||^{-1} & & \uparrow\\
\backslash & & |||\\
 & & /\\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
\mathrm{Vprt}(t) =
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t)\\
\uparrow & & \uparrow\\
\underline{\underline{Q(t)}} & & \overline{R(t)}\\
\uparrow & & \uparrow\\
 & & \overline{\overline{P(t)}}\\
\underline{\underline{\underline{M_1(t)}}} \cup \underline{\underline{\underline{M_2(t)}}} & & \uparrow\\
\uparrow & & \overline{\overline{\overline{L(t)}}}\\
|||^{-1} & & \uparrow\\
\backslash & & |||\\
 & & /\\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
\mathrm{Vprt}(t)
$$

(A.2.2.17),

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q_1(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \dots &
\end{array}
\text{Vprt}(t) +
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q_2(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \dots &
\end{array}
\text{Vprt}(t) =
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q_1(t)}} \cup \underline{\underline{Q_2(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \dots &
\end{array}
\text{Vprt}(t)
$$

(A.2.2.18),

$$
\begin{array}{ccc}
\underline{D_1(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\quad\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
\text{Vprt}(t) +
\begin{array}{ccc}
\underline{D_2(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\quad\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
\text{Vprt}(t) =
\begin{array}{ccc}
\underline{D_1(t)} \cup \underline{D_2(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\quad\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
$$

Vprt(t) (A.2.2.18.1),

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C_1(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W(t)}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{O(t)}}}}} & \\
 & \ldots &
\end{array}
\ \mathrm{Vprt}(t) +
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C_2(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W(t)}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{O(t)}}}}} & \\
 & \ldots &
\end{array}
\ \mathrm{Vprt}(t) =
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C_1(t) \cup C_2(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W(t)}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{O(t)}}}}} & \\
 & \ldots &
\end{array}
$$

Vprt(t) (A.2.2.18.2),

$$
\begin{array}{ccc}
\overline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R_1(t)} \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} \\
\uparrow & & \uparrow \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} \\
\backslash & & \uparrow \\
 & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{O(t)}}}}} & \\
 & \ldots &
\end{array}
\text{Vprt}(t) +
\begin{array}{ccc}
\overline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R_2(t)} \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} \\
\uparrow & & \uparrow \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} \\
\backslash & & \uparrow \\
 & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{O(t)}}}}} & \\
 & \ldots &
\end{array}
\text{Vprt}(t) =
\begin{array}{ccc}
\overline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R_1(t)} \cup \overline{R_2(t)} \\
\uparrow & & \uparrow \quad \uparrow \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} \\
\uparrow & & \uparrow \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} \\
\backslash & & \uparrow \\
 & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{O(t)}}}}} & \\
 & \ldots &
\end{array}
$$

Vprt(t) (A.2.2.18.3),

$$
\begin{array}{cccc}
\underline{D(t)} & \leftarrow & C(t) & \\
\uparrow & & \uparrow & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & \\
\uparrow & & \uparrow & \\
 & & \overline{\overline{P_1(t)}} & \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & \\
|||^{-1} & & \uparrow & \\
\backslash & & ||| & \\
 & & {}^{-} & \mathrm{Vprt}(t) + \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & \\
\uparrow & & & \\
\overbrace{\overbrace{W(t)}} & & & \\
\uparrow & & & \\
\overline{\overbrace{\overbrace{J(t)}}} & & & \\
\uparrow & & & \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & \\
\ldots & & &
\end{array}
\begin{array}{cccc}
\underline{D(t)} & \leftarrow & C(t) & \\
\uparrow & & \uparrow & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & \\
\uparrow & & \uparrow & \\
 & & \overline{\overline{P_2(t)}} & \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & \\
|||^{-1} & & \uparrow & \\
\backslash & & ||| & \\
 & & {}^{-} & \mathrm{Vprt}(t) = \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & \\
\uparrow & & & \\
\overbrace{\overbrace{W(t)}} & & & \\
\uparrow & & & \\
\overline{\overbrace{\overbrace{J(t)}}} & & & \\
\uparrow & & & \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & \\
\ldots & & &
\end{array}
$$

$$\underline{D(t)} \quad \leftarrow \quad C(t)$$

$$\uparrow \qquad\qquad \uparrow$$

$$\underline{\underline{Q(t)}} \qquad \overline{R(t)}$$

$$\uparrow \qquad\qquad \uparrow$$

$$\overline{\overline{P_1(t)}} \cup \overline{\overline{P_1(t)}}$$

$$\underline{\underline{\underline{M(t)}}} \qquad \uparrow$$

$$\uparrow \qquad \overline{\overline{\overline{L(t)}}}$$

$$|||^{-1} \qquad \uparrow$$

$$\backslash \qquad |||$$

$$-$$

Vprt(t) (A.2.2.18.4),

$$\overline{\overline{\overline{\overline{B(t)}}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{W(t)}}$$

$$\uparrow$$

$$\overline{\overbrace{\overbrace{J(t)}}}$$

$$\uparrow$$

$$\overline{\overline{\overbrace{\overbrace{O(t)}}}}$$

...

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{\overline{L_1(t)}}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \dots &
\end{array}
\quad \mathrm{Vprt}(t) + \quad
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{\overline{L_2(t)}}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \dots &
\end{array}
\quad \mathrm{Vprt}(t) = \quad
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{\overline{L_1(t)}}}} \cup \overline{\overline{\overline{\overline{L_2(t)}}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \dots &
\end{array}
\quad \mathrm{Vprt}(t) \quad (A.2.2.18.5),
$$

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t)\\
\uparrow & & \uparrow\\
\underline{\underline{Q(t)}} & & \overline{R(t)}\\
\uparrow & & \uparrow\\
 & & \overline{\overline{P(t)}}\\
\underline{\underline{\underline{M(t)}}} & & \uparrow\\
\uparrow & & \overline{\overline{\overline{L(t)}}}\\
|||^{-1} & & \uparrow\\
\backslash & & |||\\
 & & /\\
\multicolumn{3}{c}{\overline{\overline{\overline{\overline{B_1(t)}}}}}\\
\multicolumn{3}{c}{\uparrow}\\
\multicolumn{3}{c}{\overbrace{\overbrace{W(t)}}}\\
\multicolumn{3}{c}{\uparrow}\\
\multicolumn{3}{c}{\overline{\overbrace{\overbrace{J(t)}}}}\\
\multicolumn{3}{c}{\uparrow}\\
\multicolumn{3}{c}{\overline{\overline{\overbrace{\overbrace{O(t)}}}}}\\
\multicolumn{3}{c}{\ldots}
\end{array}
\mathrm{Vprt}(t) +
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t)\\
\uparrow & & \uparrow\\
\underline{\underline{Q(t)}} & & \overline{R(t)}\\
\uparrow & & \uparrow\\
 & & \overline{\overline{P(t)}}\\
\underline{\underline{\underline{M(t)}}} & & \uparrow\\
\uparrow & & \overline{\overline{\overline{L(t)}}}\\
|||^{-1} & & \uparrow\\
\backslash & & |||\\
 & & /\\
\multicolumn{3}{c}{\overline{\overline{\overline{\overline{B_2(t)}}}}}\\
\multicolumn{3}{c}{\uparrow}\\
\multicolumn{3}{c}{\overbrace{\overbrace{W(t)}}}\\
\multicolumn{3}{c}{\uparrow}\\
\multicolumn{3}{c}{\overline{\overbrace{\overbrace{J(t)}}}}\\
\multicolumn{3}{c}{\uparrow}\\
\multicolumn{3}{c}{\overline{\overline{\overbrace{\overbrace{O(t)}}}}}\\
\multicolumn{3}{c}{\ldots}
\end{array}
\mathrm{Vprt}(t) =
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t)\\
\uparrow & & \uparrow\\
\underline{\underline{Q(t)}} & & \overline{R(t)}\\
\uparrow & & \uparrow\\
 & & \overline{\overline{P(t)}}\\
\underline{\underline{\underline{M(t)}}} & & \uparrow\\
\uparrow & & \overline{\overline{\overline{L(t)}}}\\
|||^{-1} & & \uparrow\\
\backslash & & |||\\
 & & /\\
\multicolumn{3}{c}{\overline{\overline{\overline{\overline{B_1(t)}}}} \cup \overline{\overline{\overline{\overline{B_2(t)}}}}}\\
\multicolumn{3}{c}{\uparrow}\\
\multicolumn{3}{c}{\overbrace{\overbrace{W(t)}}}\\
\multicolumn{3}{c}{\uparrow}\\
\multicolumn{3}{c}{\overline{\overbrace{\overbrace{J(t)}}}}\\
\multicolumn{3}{c}{\uparrow}\\
\multicolumn{3}{c}{\overline{\overline{\overbrace{\overbrace{O(t)}}}}}\\
\multicolumn{3}{c}{\ldots}
\end{array}
\mathrm{Vprt}(t)
$$

(A.2.2.18.6),

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} \\
\uparrow & & \uparrow \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} \\
 & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{W_1(t)} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
\text{Vprt}(t) +
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} \\
\uparrow & & \uparrow \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} \\
 & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{W_2(t)} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
\text{Vprt}(t) =
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} \\
\uparrow & & \uparrow \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} \\
 & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
\overbrace{W_1(t)} & \cup & \overbrace{W_2(t)} \\
\uparrow & & \uparrow \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
\text{Vprt}(t)
$$

(A.2.2.18.7),

$$\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t)\\
\uparrow & & \uparrow\\
\underline{\underline{Q(t)}} & & \overline{R(t)}\\
\uparrow & & \uparrow\\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}}\\
\uparrow & & \uparrow\\
|||^{-1} & & \overline{\overline{\overline{L(t)}}}\\
 & & \uparrow\\
\backslash & & |||\\
 & & /\\
 & \overline{\overline{\overline{\overline{\overline{B(t)}}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J_1(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
\mathrm{Vprt}(t) +
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t)\\
\uparrow & & \uparrow\\
\underline{\underline{Q(t)}} & & \overline{R(t)}\\
\uparrow & & \uparrow\\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}}\\
\uparrow & & \uparrow\\
|||^{-1} & & \overline{\overline{\overline{L(t)}}}\\
 & & \uparrow\\
\backslash & & |||\\
 & & /\\
 & \overline{\overline{\overline{\overline{\overline{B(t)}}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J_2(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
\mathrm{Vprt}(t) =
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t)\\
\uparrow & & \uparrow\\
\underline{\underline{Q(t)}} & & \overline{R(t)}\\
\uparrow & & \uparrow\\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}}\\
\uparrow & & \uparrow\\
|||^{-1} & & \overline{\overline{\overline{L(t)}}}\\
 & & \uparrow\\
\backslash & & |||\\
 & & /\\
 & \overline{\overline{\overline{\overline{\overline{B(t)}}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J_1(t)}}} \cup \overline{\overbrace{\overbrace{J_2(t)}}} & \\
 & \uparrow \qquad \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
\mathrm{Vprt}(t)$$

(A.2.2.18.8),

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \ \text{Vprt}(t) \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{W(t)} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O_1(t)}}}} & \\
 & \ldots &
\end{array}
+
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \ \text{Vprt}(t) \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{W(t)} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O_2(t)}}}} & \\
 & \ldots &
\end{array}
=
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \ \text{Vprt}(t) \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{W(t)} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O_1(t)}}}} \cup \overline{\overline{\overbrace{\overbrace{O_2(t)}}}} & \\
 & \ldots &
\end{array}
$$

(A.2.2.18.9),

We consider the following self-type dynamic tprV-structures:

$$\cdots$$

$$\overline{\overline{\overbrace{\overbrace{\overbrace{a(t)}}}}}$$

$$\uparrow$$

$$\overline{\overbrace{\overbrace{\overbrace{Q(t)}}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{Q(t)}}$$

$$\uparrow$$

$$\overline{\overline{\overline{\overline{Q(t)}}}}$$

$$\backslash \qquad \text{Vprt}(t) \quad \text{(A.2.2.19)}$$

$$/ \qquad\qquad |||$$

$$|||^{-1} \qquad \uparrow$$

$$\uparrow \qquad \overline{\overline{\overline{Q(t)}}}$$

$$\underline{\underline{\underline{Q(t)}}} \qquad \uparrow$$

$$\uparrow \qquad \overline{\overline{Q(t)}}$$

$$\underline{\underline{Q(t)}} \qquad \uparrow$$

$$\uparrow \qquad \overline{Q(t)}$$

$$\underline{Q(t)} \qquad \uparrow$$

$$\leftarrow \quad A(t)$$

$$
\begin{array}{ccc}
str\frac{D(t)}{} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \quad \text{Vprt}(t) \quad \text{(A.2.2.20)},
\end{array}
$$

$$
\begin{array}{c}
\overline{\overline{\overline{\overline{B(t)}}}} \\
\uparrow \\
\overbrace{\overbrace{W(t)}} \\
\uparrow \\
\overline{\overbrace{\overbrace{J(t)}}} \\
\uparrow \\
\overline{\overline{\overbrace{\overbrace{d(t)}}}} \\
\ldots
\end{array}
$$

denote $V_{15}(t)f$, where $d(t) \subset \mathrm{D(t)}$,

$$
\begin{array}{ccl}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{d(t)}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{Q(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{Q(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{Q(t)}}}} & \\
 & \quad\backslash & \text{Vprt}(t) \ \ \text{(A.2.2.21),} \\
/ & ||| & \\
|||^{-1} & \uparrow & \\
\uparrow & \overline{\overline{\overline{Q(t)}}} & \\
\underline{\underline{\underline{Q(t)}}} & \uparrow & \\
\uparrow & \overline{\overline{Q(t)}} & \\
\underline{\underline{Q(t)}} & \uparrow & \\
\uparrow & \overline{Q(t)} & \\
\underline{Q(t)} & \uparrow & \\
 & \leftarrow \ \ D(t) &
\end{array}
$$

denote $V_{16}(t)f$, where $d(t) \subset$ D(t),

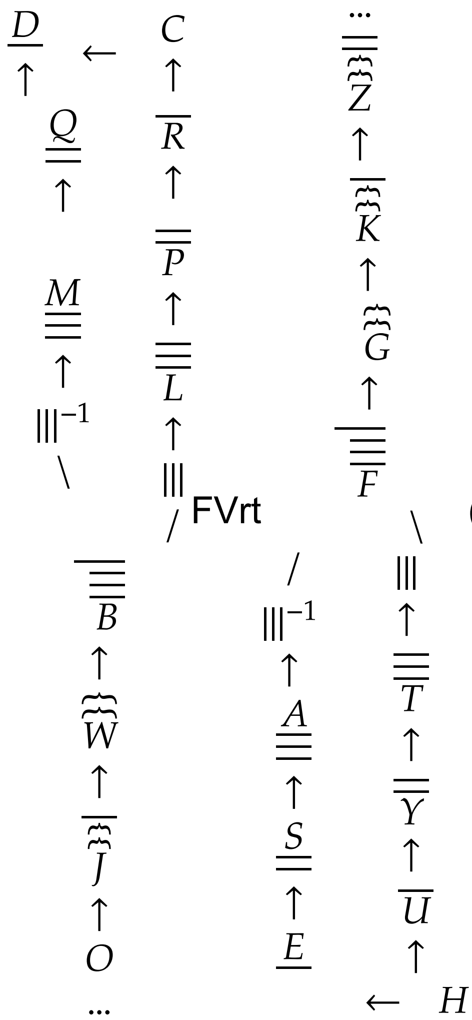
and any other possible options of self for (A.2.2.10) etc.

A.3 FVprt – elements, self-type FVprt-structures

We consider dynamic operator

$$
\begin{array}{ccccccc}
\underline{D} & \leftarrow & C & & \dots & & \\
\uparrow & & \uparrow & & \overline{\overline{\overbrace{\overbrace{Z}}}} & & \\
\underline{\underline{Q}} & & \overline{R} & & \uparrow & & \\
\uparrow & & \uparrow & & \overline{\overbrace{\overbrace{K}}} & & \\
 & & \overline{\overline{P}} & & \uparrow & & \\
\underline{\underline{\underline{M}}} & & \uparrow & & \overbrace{\overbrace{G}} & & \\
\uparrow & & \overline{\overline{\overline{L}}} & & \uparrow & & \\
|||^{-1} & & \uparrow & & \overline{\overline{\overline{\overline{F}}}} & & \\
\backslash & & ||| & & & & \\
 & & / & F\text{Vprt} & & \backslash & \text{(A.3 .1),} \\
\overline{\overline{\overline{\overline{B}}}} & & & / & & ||| & \\
\uparrow & & & |||^{-1} & & \uparrow & \\
\overbrace{\overbrace{\overbrace{W}}} & & & \uparrow & & \overline{\overline{\overline{T}}} & \\
\uparrow & & & \underline{\underline{\underline{A}}} & & \uparrow & \\
\overline{\overbrace{\overbrace{J}}} & & & \uparrow & & \overline{\overline{Y}} & \\
\uparrow & & & \underline{\underline{S}} & & \uparrow & \\
\overline{\overline{\overbrace{\overbrace{O}}}} & & & \uparrow & & \overline{U} & \\
\dots & & & \underline{E} & & \uparrow & \\
 & & & & \leftarrow & & H
\end{array}
$$

where $\overline{\overline{\overbrace{\overbrace{Z}}}}, \overline{\overline{\overbrace{\overbrace{O}}}}$ - *parelf* levels of fuzzy Z and fuzzy O respectively, $\overline{\overbrace{\overbrace{J}}}, \overline{\overbrace{\overbrace{K}}}$ – singelf levels of fuzzy J and fuzzy K respectively, $\overbrace{\overbrace{G}}, \overbrace{\overbrace{\overbrace{W}}}$ - paradoxical upper levels of fuzzy G and fuzzy W respectively, $\overline{\overline{\overline{\overline{F}}}}, \overline{\overline{\overline{\overline{B}}}}$ - paradoxical average levels of fuzzy F and fuzzy B respectively, $\overline{U}, \overline{R}$ - middle$_1$ levels of fuzzy U and fuzzy R respectively, $\underline{E}, \underline{D}$ - *ordinary energies exhibited* by fuzzy E, fuzzy D respectively, $\underline{\underline{Q}}, \underline{\underline{S}}$ - first sublevel of fuzzy Q and fuzzy S respectively, $\underline{\underline{\underline{A}}}, \underline{\underline{\underline{M}}}$ - second sublevel of fuzzy A and fuzzy M respectively. The result of this process will be described by the expression

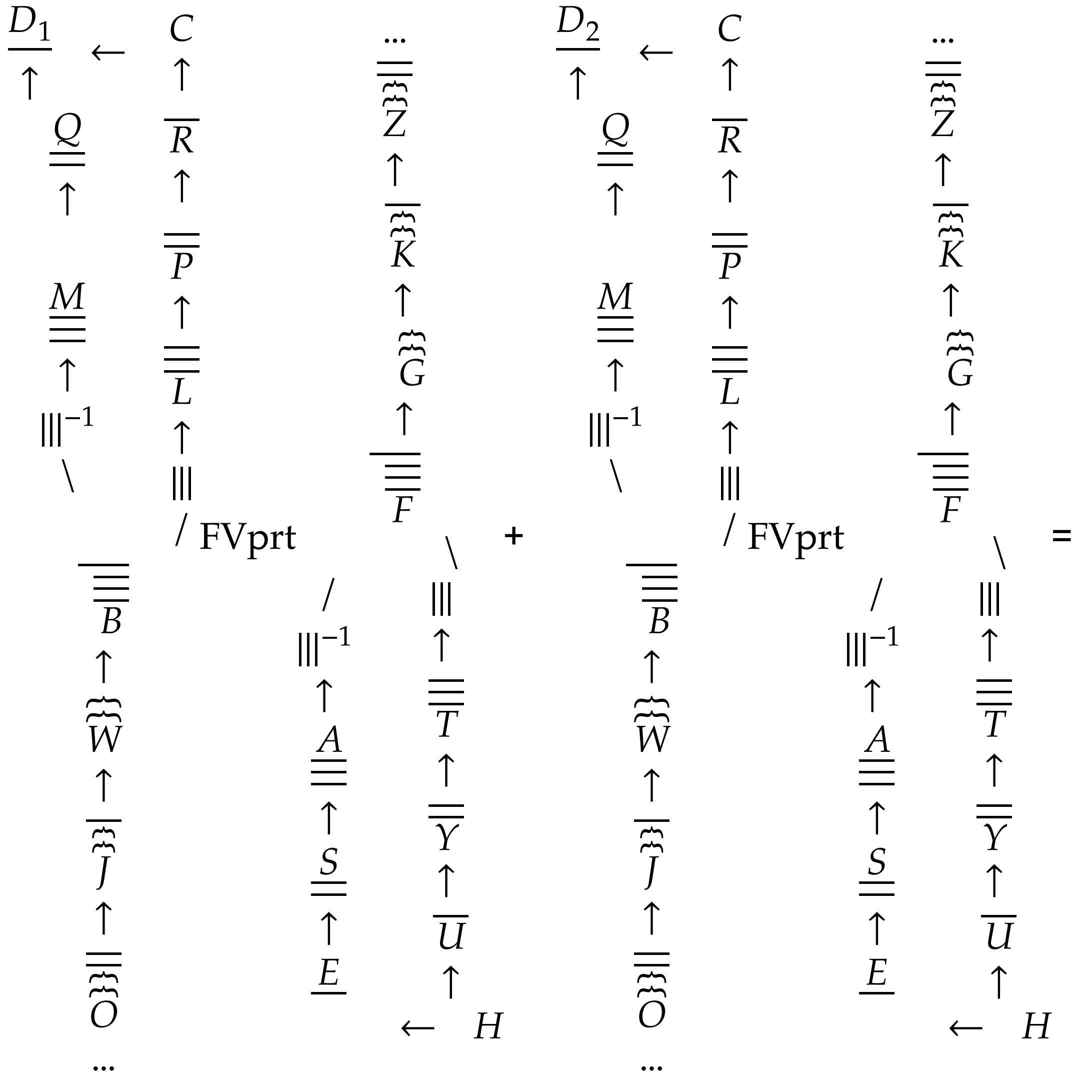


(A.3 .2)

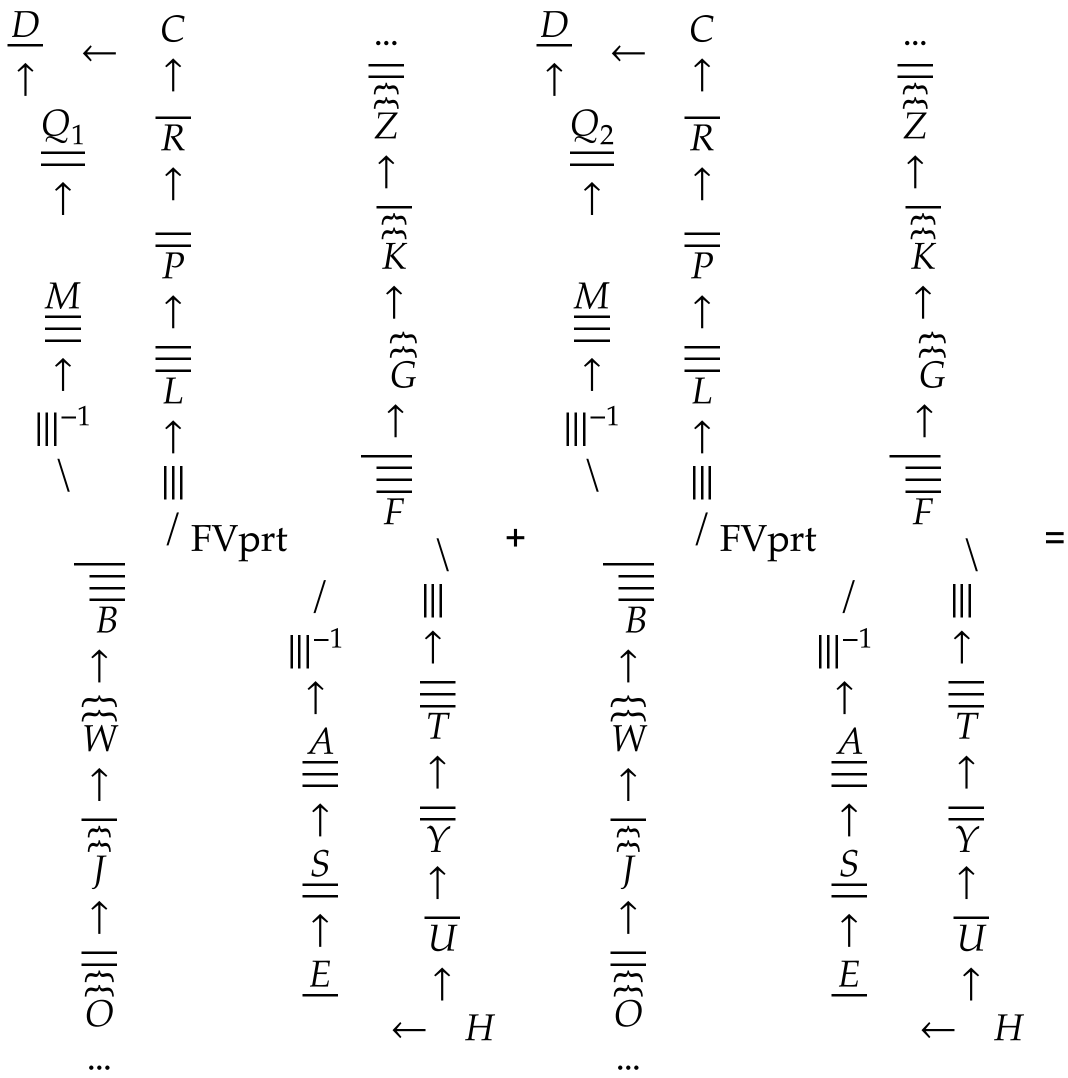
Definition A.3 .1. The dynamic operator (A.3 .1) we shall call FVprt – element of the first type, (A.3 .2) we shall call FVrt – element of the first type.

Remark A.3 .1 Can consider FVprt – elements use the Banach space.

It’s allowed to add FVprt – elements:

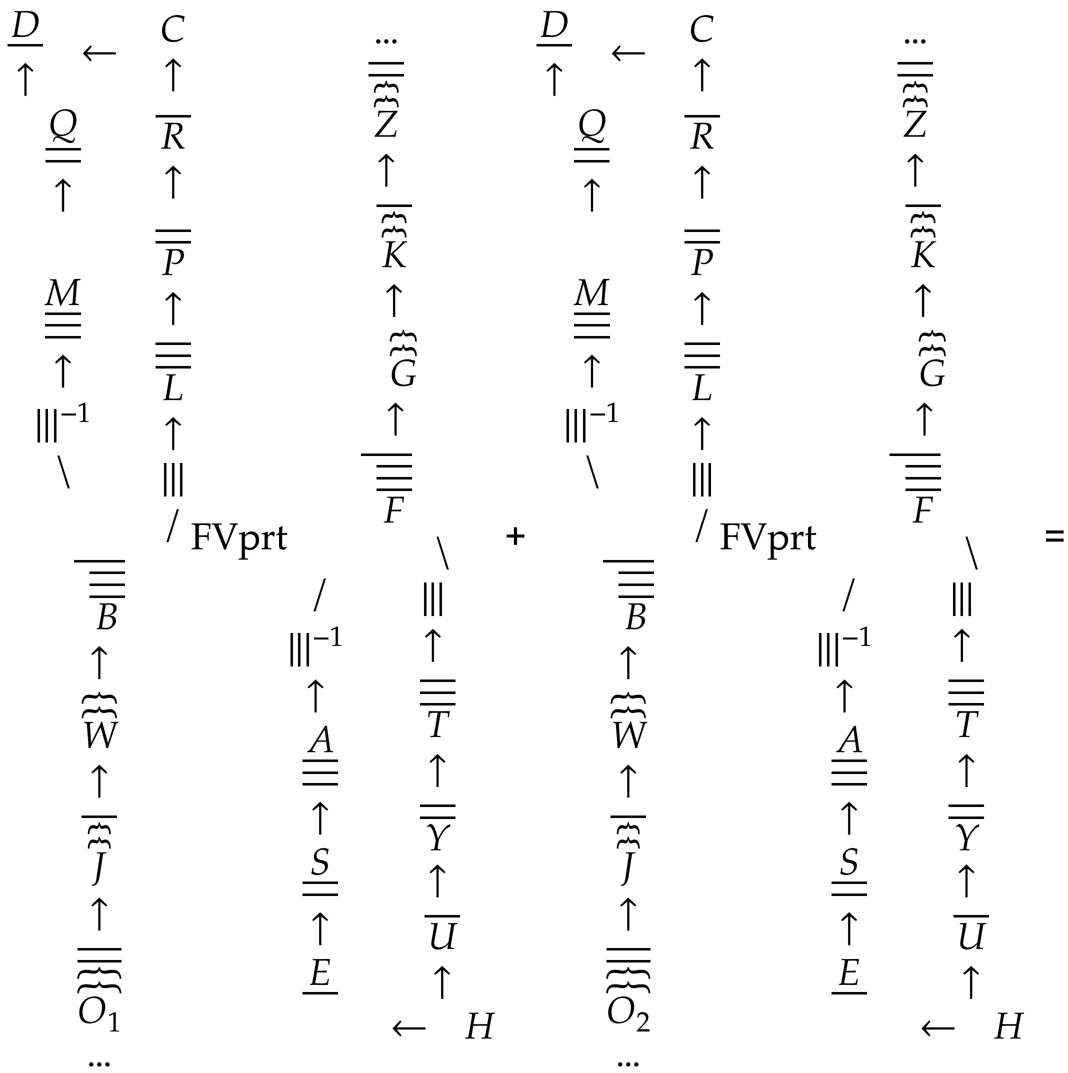

D1
C
Q
R
P
M
L
Z
K
G
F
FVprt
+
B
W
J
O
A
S
E
T
Y
U
H
D2
=

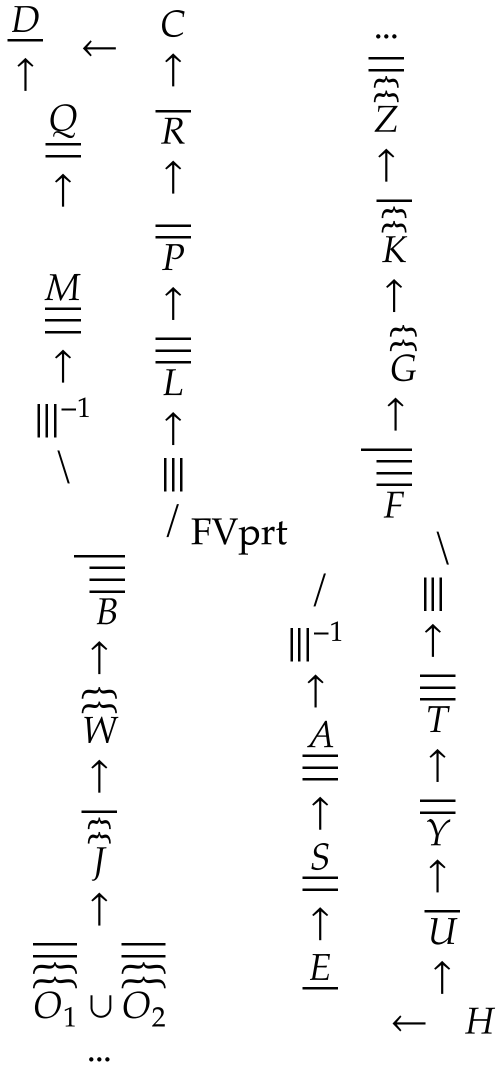
$$
\begin{array}{ccccccccc}
\underline{D_1}\cup\underline{D_2} & \leftarrow & C & & \dots & & & & \\
\uparrow & & \uparrow & & \overline{\overline{\widetilde{\widetilde{\widetilde{Z}}}}} & & & & \\
\underline{\underline{Q}} & & \overline{R} & & \uparrow & & & & \\
\uparrow & & \uparrow & & \overline{\widetilde{\widetilde{\widetilde{K}}}} & & & & \\
\underline{\underline{\underline{M}}} & & \overline{\overline{P}} & & \uparrow & & & & \\
\uparrow & & \uparrow & & \widetilde{\widetilde{\widetilde{G}}} & & & & \\
|||^{-1} & & \overline{\overline{\overline{L}}} & & \uparrow & & & & \\
\backslash & & \uparrow & & \overline{\overline{\overline{\overline{F}}}} & & & & \\
 & & ||| & & & & & & \\
 & & / \ \mathrm{FVprt} & & & \backslash & & & (\text{A.3 .3}), \\
\overline{\overline{\overline{\overline{B}}}} & & & / & & ||| & & & \\
\uparrow & & & |||^{-1} & & \uparrow & & & \\
\widetilde{\widetilde{\widetilde{W}}} & & & \uparrow & & \overline{\overline{\overline{T}}} & & & \\
\uparrow & & & \underline{\underline{\underline{A}}} & & \uparrow & & & \\
\overline{\widetilde{\widetilde{\widetilde{J}}}} & & & \uparrow & & \overline{\overline{Y}} & & & \\
\uparrow & & & \underline{\underline{S}} & & \uparrow & & & \\
\overline{\overline{\widetilde{\widetilde{\widetilde{O}}}}} & & & \uparrow & & \overline{U} & & & \\
\dots & & & \underline{E} & & \uparrow & & & \\
 & & & & \leftarrow & H & & &
\end{array}
$$



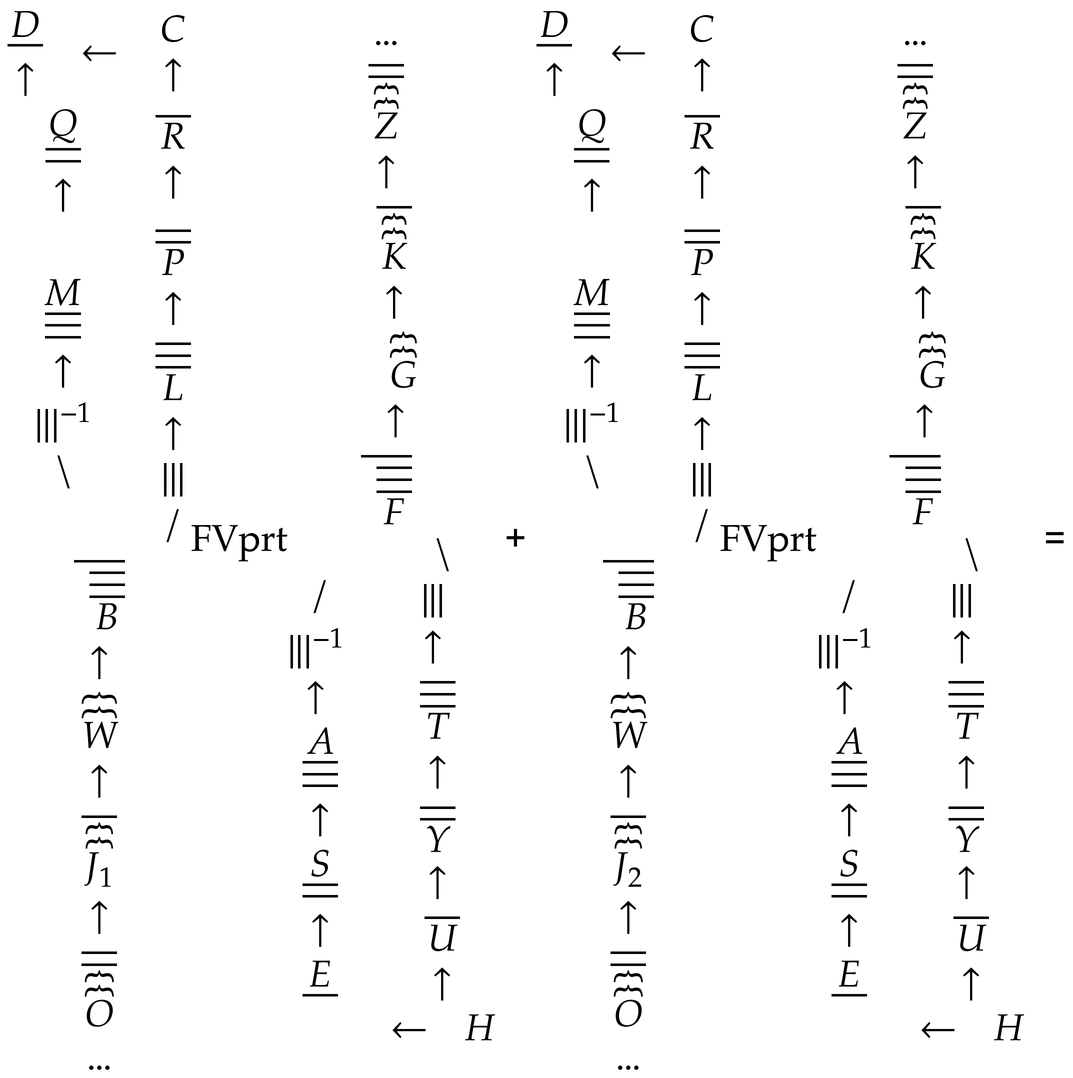
$$
\begin{array}{ccccccc}
\underline{D} & \leftarrow & C & & & \ldots & \\
\uparrow & & \uparrow & & & \overline{\overline{\overset{\approx}{\approx}}} & \\
\underline{\underline{\underline{Q_1}}} \cup \underline{\underline{\underline{Q_2}}} & & \overline{R} & & & Z & \\
\uparrow & & \uparrow & & & \uparrow & \\
 & & \overline{\overline{P}} & & & \overline{\overset{\approx}{\approx}K} & \\
\underline{\underline{\underline{M}}} & & \uparrow & & & \uparrow & \\
\uparrow & & \overline{\overline{\overline{L}}} & & & \overset{\approx}{\approx}G & \\
|||^{-1} & & \uparrow & & & \uparrow & \\
\backslash & & ||| & & & \overline{\overline{\overline{\overline{F}}}} & \\
 & & / \ \mathrm{FVprt} & & & & \backslash \\
\overline{\overline{\overline{\overline{B}}}} & & & / & & & ||| \\
\uparrow & & & |||^{-1} & & & \uparrow \\
\overset{\approx}{\approx}W & & & \uparrow & & & \overline{\overline{\overline{T}}} \\
\uparrow & & & \underline{\underline{\underline{A}}} & & & \uparrow \\
\overline{\overset{\approx}{\approx}J} & & & \uparrow & & & \overline{\overline{Y}} \\
\uparrow & & & \underline{\underline{S}} & & & \uparrow \\
\overline{\overline{\overset{\approx}{\approx}O}} & & & \uparrow & & & \overline{U} \\
\ldots & & & \underline{E} & & & \uparrow \\
 & & & & & \leftarrow & H
\end{array}
\qquad \text{(A.3 .3.1),}
$$

$$
\begin{array}{ccccccccc}
\underline{D} & \leftarrow & C & & & \cdots & & & \\
\uparrow & & \uparrow & & & \overline{\overline{\overbrace{Z}}} & & & \\
\underline{\underline{Q}} & & \overline{R} & & & \uparrow & & & \\
\uparrow & & \uparrow & & & \overline{\overbrace{K}} & & & \\
\underline{\underline{\underline{M}}} & & \overline{\overline{P}} & & & \uparrow & & & \\
\uparrow & & \uparrow & & & \overbrace{G} & & & \\
|||^{-1} & & \overline{\overline{\overline{L}}} & & & \uparrow & & & \\
\backslash & & \uparrow & & & \overline{\overline{\overline{F}}} & & & \\
 & & ||| & & & & & & \\
 & & / & \text{FVprt} & & & \backslash & & \text{(A.3 .3.2),} \\
 & \overline{\overline{\overline{B}}} & & & / & & ||| & & \\
 & \uparrow & & & |||^{-1} & & \uparrow & & \\
 & \overbrace{W} & & & \uparrow & & \overline{\overline{\overline{T}}} & & \\
 & \uparrow & & & \underline{\underline{\underline{A}}} & & \uparrow & & \\
 & \overline{\overbrace{J}} & & & \uparrow & & \overline{\overline{Y}} & & \\
 & \uparrow & & & \underline{\underline{S}} & & \uparrow & & \\
 & \overline{\overline{\overbrace{O}}} & & & \uparrow & & \overline{U} & & \\
 & \cdots & & & \underline{E} & & \uparrow & & \\
 & & & & & \leftarrow & H & & \\
\end{array}
$$

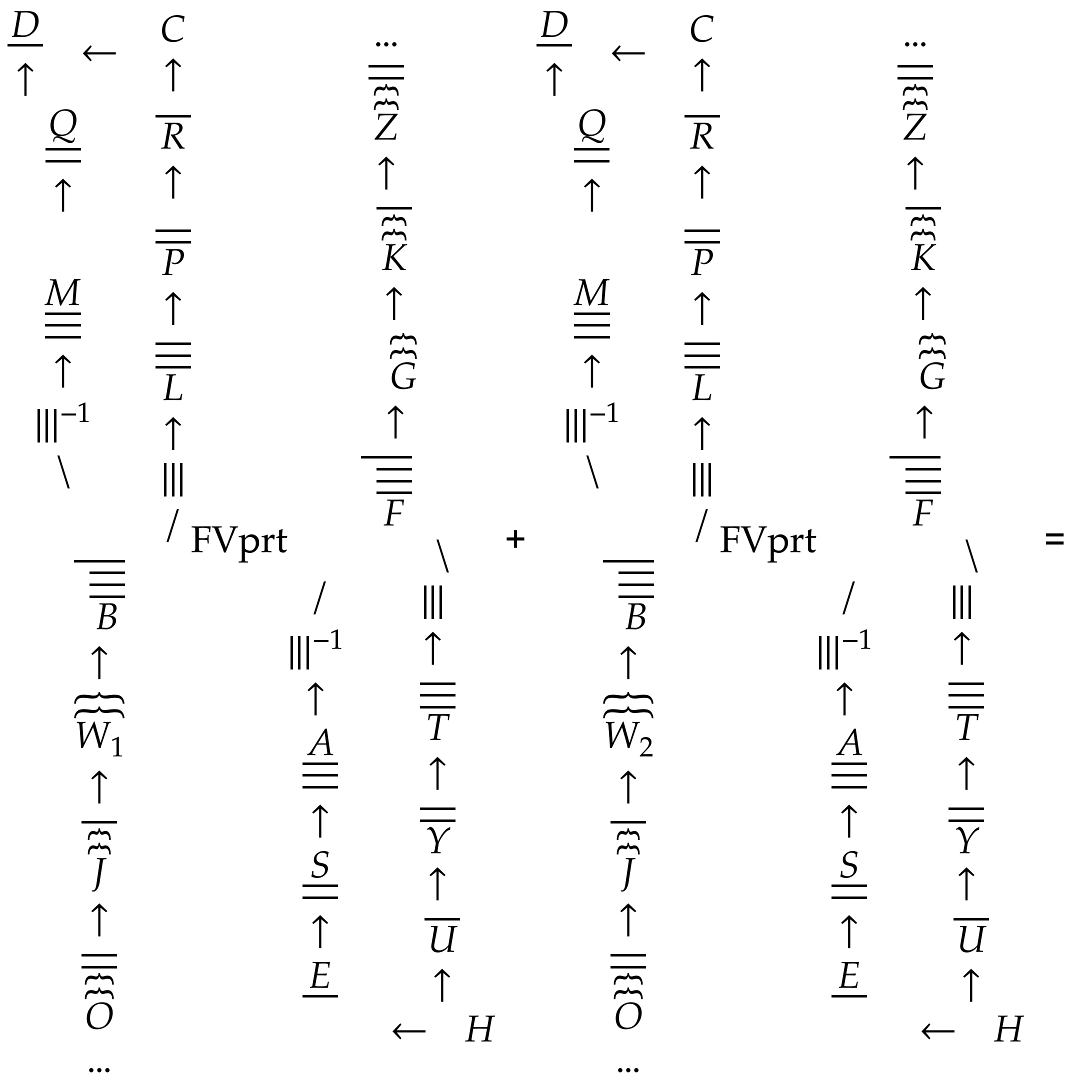




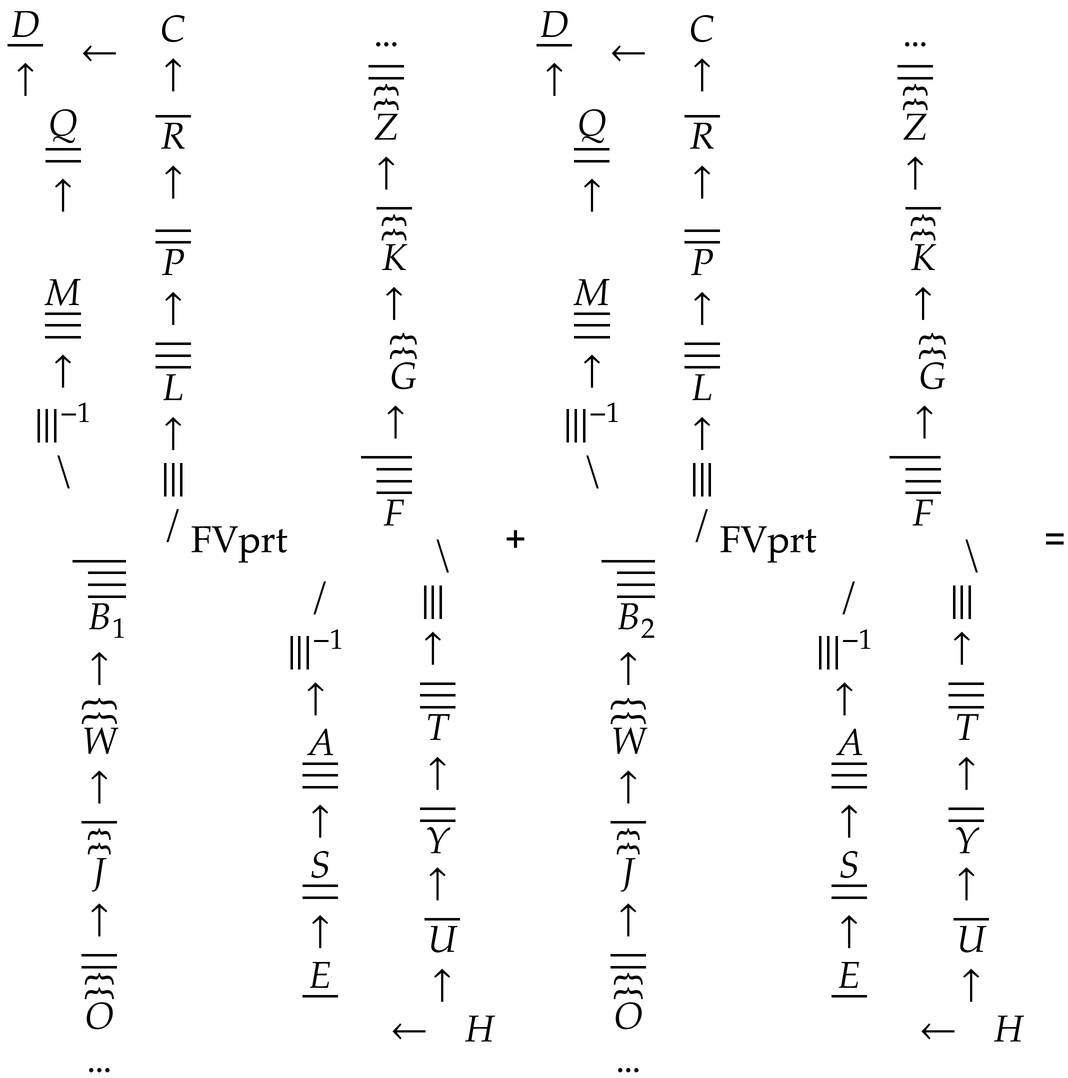
(A.3 .3.3),



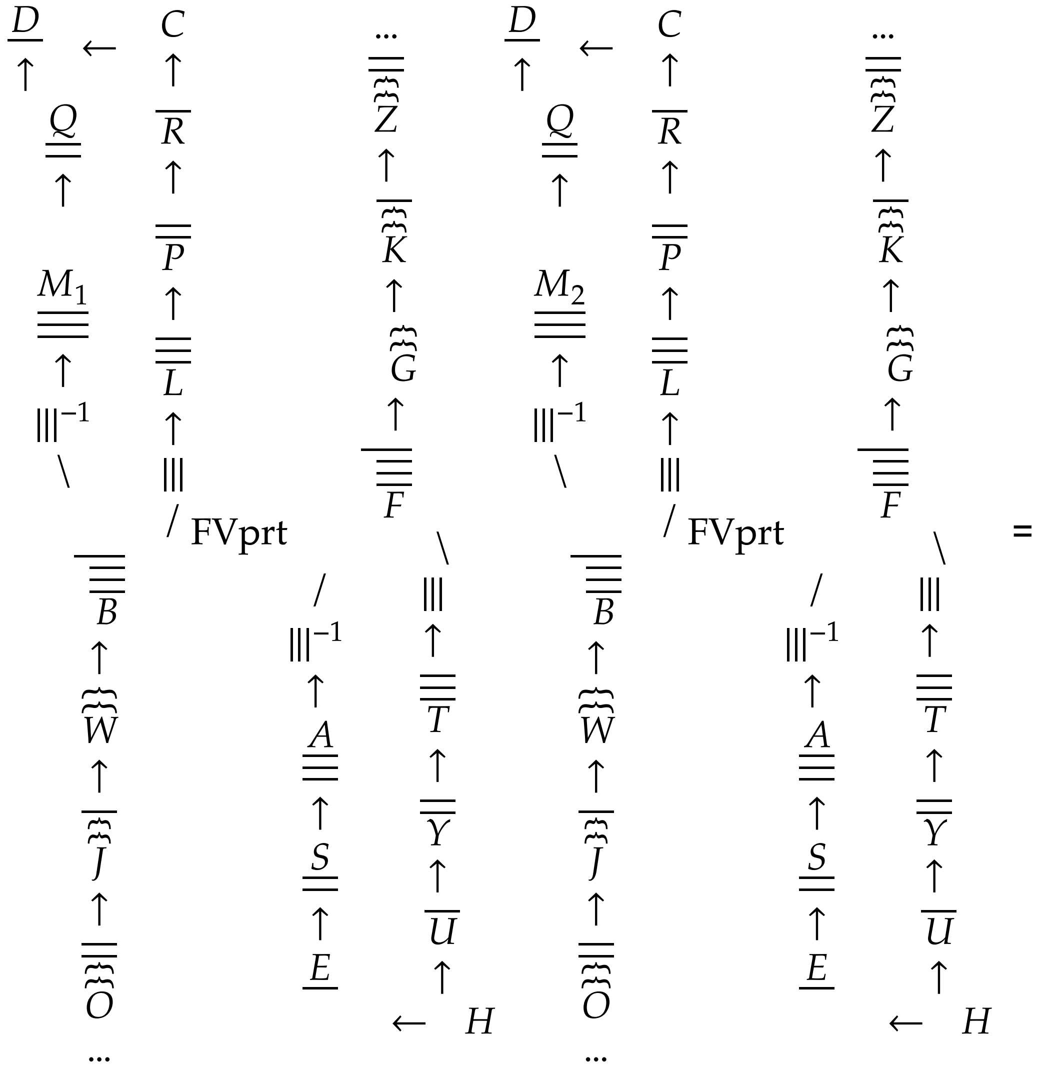
$$
\begin{array}{ccccccc}
\underline{D} \; \leftarrow & C & & & \cdots & & \\
\uparrow & \uparrow & & & \overline{\overline{\overbrace{\overbrace{Z}}}} & & \\
\underline{\underline{Q}} & \overline{R} & & & \uparrow & & \\
\uparrow & \uparrow & & & \overline{\overbrace{\overbrace{K}}} & & \\
& \overline{\overline{P}} & & & \uparrow & & \\
\underline{\underline{\underline{M}}} & \uparrow & & & \overbrace{\overbrace{G}} & & \\
\uparrow & \overline{\overline{\overline{L}}} & & & \uparrow & & \\
|||^{-1} & \uparrow & & & \overline{\overline{\overline{\overline{F}}}} & & \\
\backslash & ||| & & & & & \\
& / \; \mathrm{FVprt} & & & & \backslash & \text{(A.3 .3.4),} \\
\overline{\overline{\overline{B}}} & & & / & & ||| & \\
\uparrow & & & |||^{-1} & & \uparrow & \\
\overbrace{\overbrace{W}} & & & \uparrow & & \overline{\overline{\overline{T}}} & \\
\uparrow & & & \underline{\underline{\underline{A}}} & & \uparrow & \\
\overline{\overbrace{\overbrace{J_1}}} \cup \overline{\overbrace{\overbrace{J_2}}} & & & \uparrow & & \overline{\overline{Y}} & \\
\uparrow & & & \underline{\underline{S}} & & \uparrow & \\
\overline{\overline{\overbrace{\overbrace{O}}}} & & & \uparrow & & \overline{U} & \\
\cdots & & & \underline{E} & & \uparrow & \\
& & & & \leftarrow & H &
\end{array}
$$


FVprt
+
FVprt
=

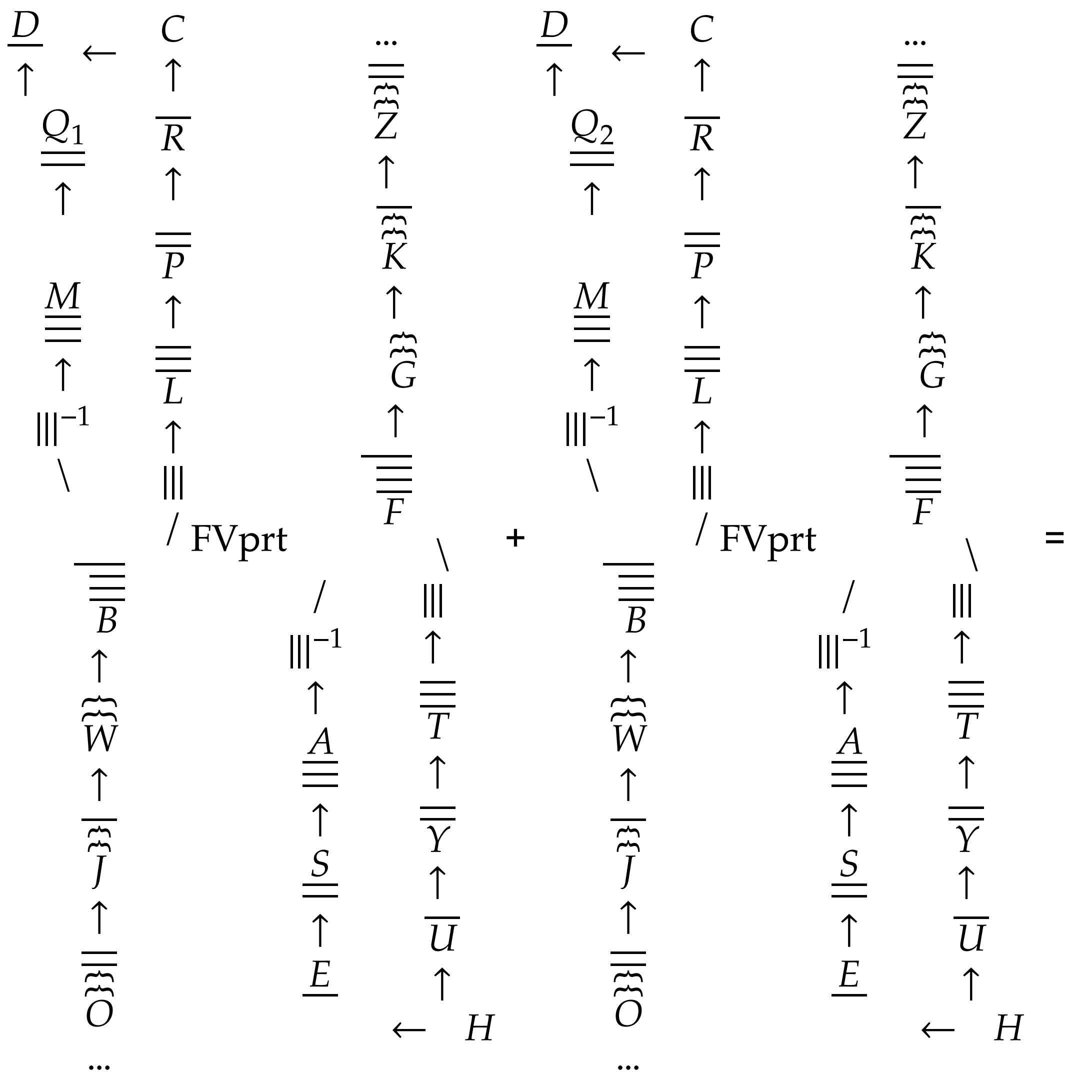
$$
\begin{array}{ccccccc}
\underline{D} & \leftarrow & C & & & \cdots & \\
\uparrow & & \uparrow & & & \overline{\overline{\overline{\overbrace{Z}}}} & \\
\underline{\underline{Q}} & & \overline{R} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overline{\overbrace{K}} & \\
\underline{\underline{\underline{M}}} & & \overline{\overline{P}} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{G} & \\
|||^{-1} & & \overline{\overline{\overline{L}}} & & & \uparrow & \\
\backslash & & \uparrow & & & \overline{\overline{\overline{F}}} & \\
 & & ||| & & & & \\
 & & / & \text{FVprt} & & \backslash & \text{(A.3 .3.5),} \\
\overline{\overline{\overline{B}}} & & & & / & & ||| \\
\uparrow & & & & |||^{-1} & & \uparrow \\
\overbrace{W}_1 \cup \overbrace{W}_2 & & & & \uparrow & & \overline{\overline{\overline{T}}} \\
\uparrow & & & & \underline{\underline{\underline{A}}} & & \uparrow \\
\overline{\overbrace{J}} & & & & \uparrow & & \overline{\overline{Y}} \\
\uparrow & & & & \underline{\underline{S}} & & \uparrow \\
\overline{\overline{\overline{\overbrace{O}}}} & & & & \uparrow & & \overline{U} \\
\cdots & & & & \underline{E} & & \uparrow \\
 & & & & & \leftarrow & H
\end{array}
$$



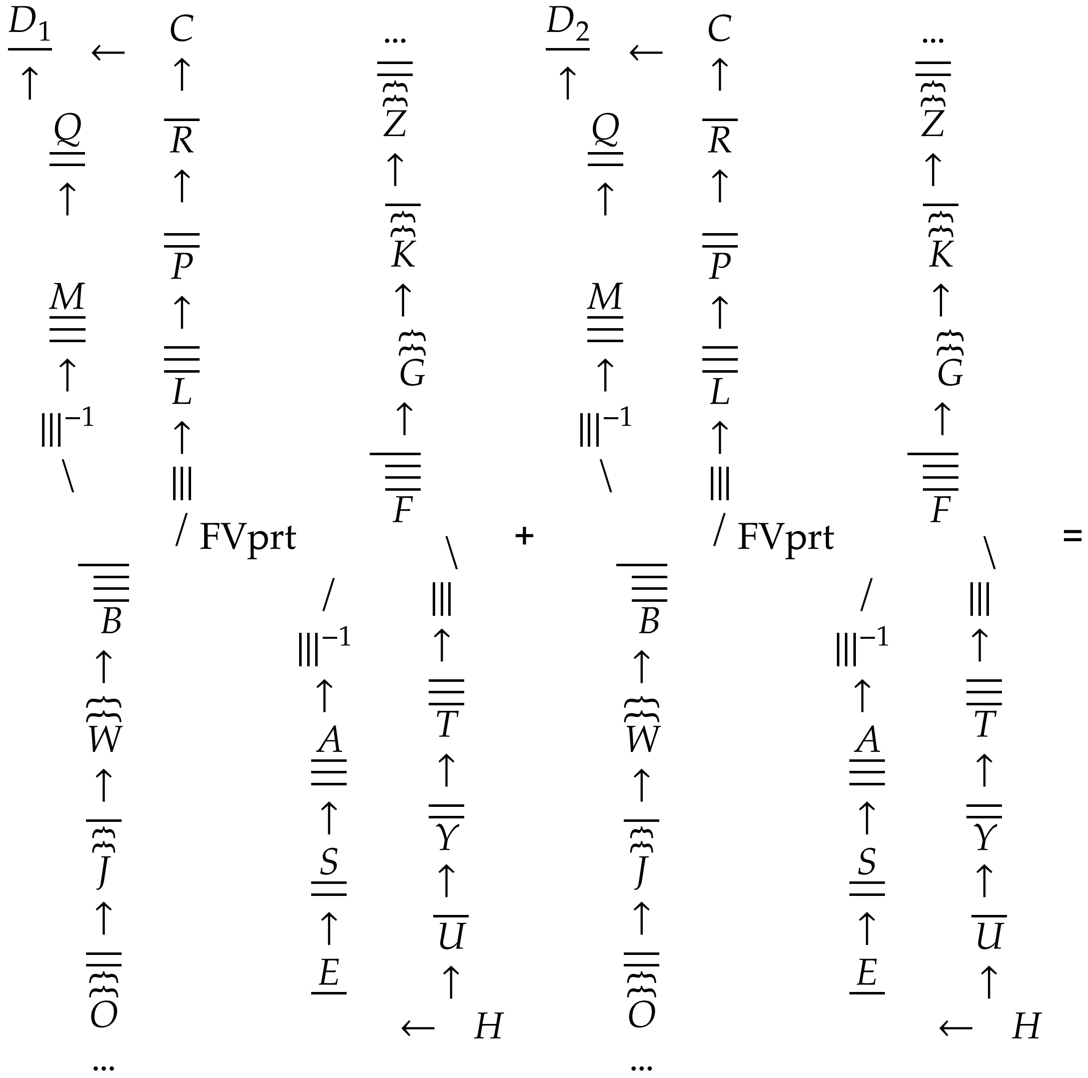
$$
\begin{array}{cccccc}
\underline{D} & \leftarrow & C & & \cdots & \\
\uparrow & & \uparrow & & \overline{\overline{\overbrace{\overbrace{Z}}}} & \\
\underline{\underline{Q}} & & \overline{R} & & \uparrow & \\
\uparrow & & \uparrow & & \overline{\overbrace{\overbrace{K}}} & \\
 & & \overline{\overline{P}} & & \uparrow & \\
\underline{\underline{\underline{M}}} & & \uparrow & & \overbrace{\overbrace{G}} & \\
\uparrow & & \overline{\overline{\overline{L}}} & & \uparrow & \\
|||^{-1} & & \uparrow & & \overline{\overline{\overline{\overline{F}}}} & \\
\backslash & & ||| & & & \\
 & & / \ \text{FVprt} & & & \backslash \\
\overline{\overline{\overline{\overline{B_1}}}} \cup \overline{\overline{\overline{\overline{B_2}}}} & & & / & & ||| \\
\uparrow & & & |||^{-1} & & \uparrow \\
\overbrace{\overbrace{W}} & & & \uparrow & & \overline{\overline{\overline{T}}} \\
\uparrow & & & \underline{\underline{\underline{A}}} & & \uparrow \\
\overline{\overbrace{\overbrace{J}}} & & & \uparrow & & \overline{\overline{Y}} \\
\uparrow & & & \underline{\underline{S}} & & \uparrow \\
\overline{\overline{\overbrace{\overbrace{O}}}} & & & \uparrow & & \overline{U} \\
\cdots & & & \underline{E} & & \uparrow \\
 & & & & \leftarrow & H
\end{array}
\qquad \text{(A.3 .3.6),}
$$


D C D C
Q R Q R
Z K Z K
M1 P M2 P
G L G L
|||−1 ||| F |||−1 ||| F
FVprt FVprt =
B ||| B |||
|||−1 |||−1
W A T W A T
J S Y J S Y
O E U O E U
H H

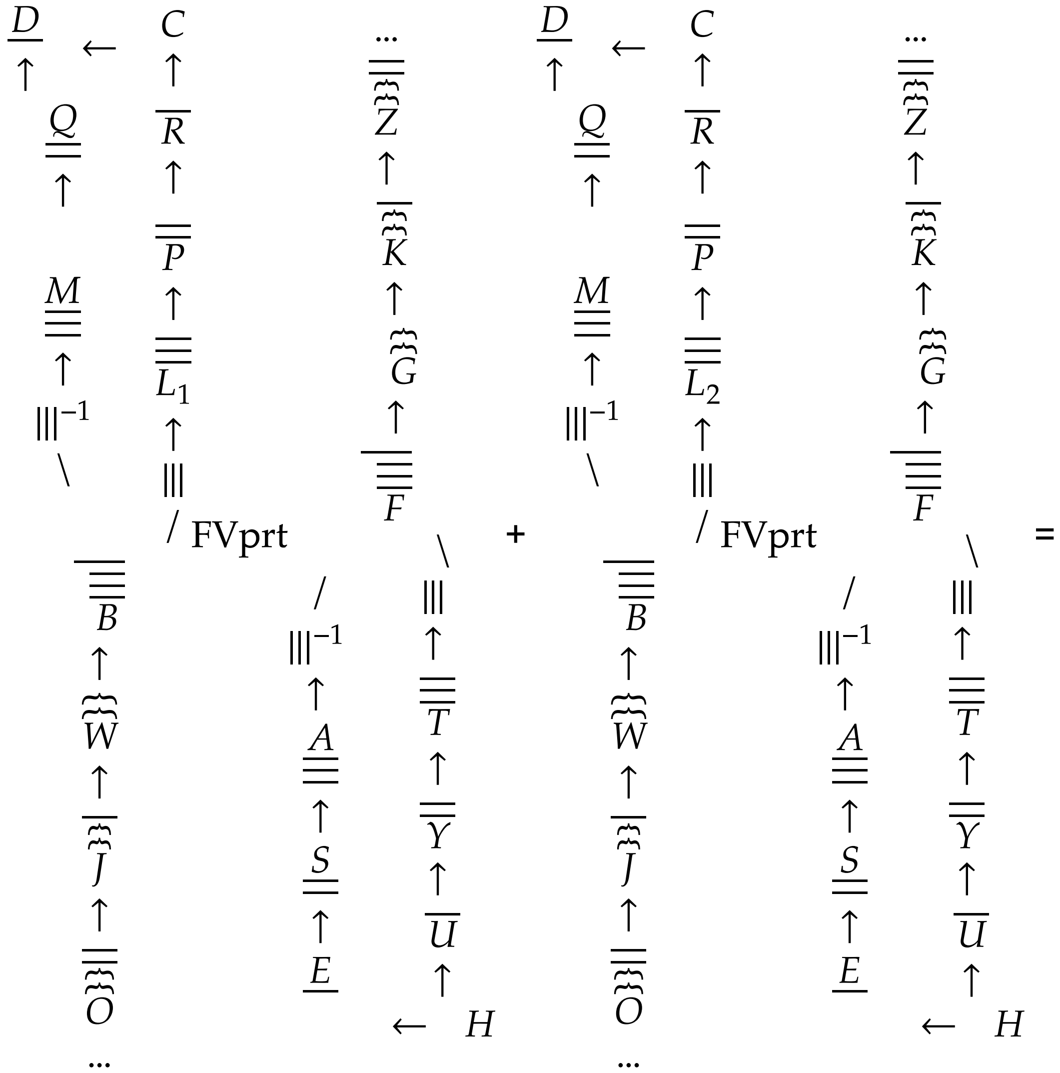
$$
\begin{array}{ccccccc}
\underline{D} & \leftarrow & C & & \cdots & & \\
\uparrow & & \uparrow & & \overbrace{\overline{\overline{Z}}} & & \\
\underline{\underline{Q}} & & \overline{R} & & \uparrow & & \\
\uparrow & & \uparrow & & \overbrace{\overline{K}} & & \\
 & & \overline{\overline{P}} & & \uparrow & & \\
\underline{\underline{\underline{M_1}}} \cup \underline{\underline{\underline{M_2}}} & & \uparrow & & \overbrace{G} & & \\
\uparrow & & \overline{\overline{\overline{L}}} & & \uparrow & & \\
|||^{-1} & & \uparrow & & \overline{\overline{\overline{\overline{F}}}} & & \\
\backslash & & ||| & & & & \\
 & & / \ \mathrm{FVprt} & & & \backslash & \text{(A.3 .3.7),} \\
\overline{\overline{\overline{\overline{B}}}} & & & / & & ||| & \\
\uparrow & & & |||^{-1} & & \uparrow & \\
\overbrace{W} & & & \uparrow & & \overline{\overline{\overline{T}}} & \\
\uparrow & & & \underline{\underline{\underline{A}}} & & \uparrow & \\
\overbrace{\overline{J}} & & & \uparrow & & \overline{\overline{Y}} & \\
\uparrow & & & \underline{\underline{S}} & & \uparrow & \\
\overbrace{\overline{\overline{O}}} & & & \uparrow & & \overline{U} & \\
\cdots & & & \underline{E} & & \uparrow & \\
 & & & & \leftarrow & H &
\end{array}
$$



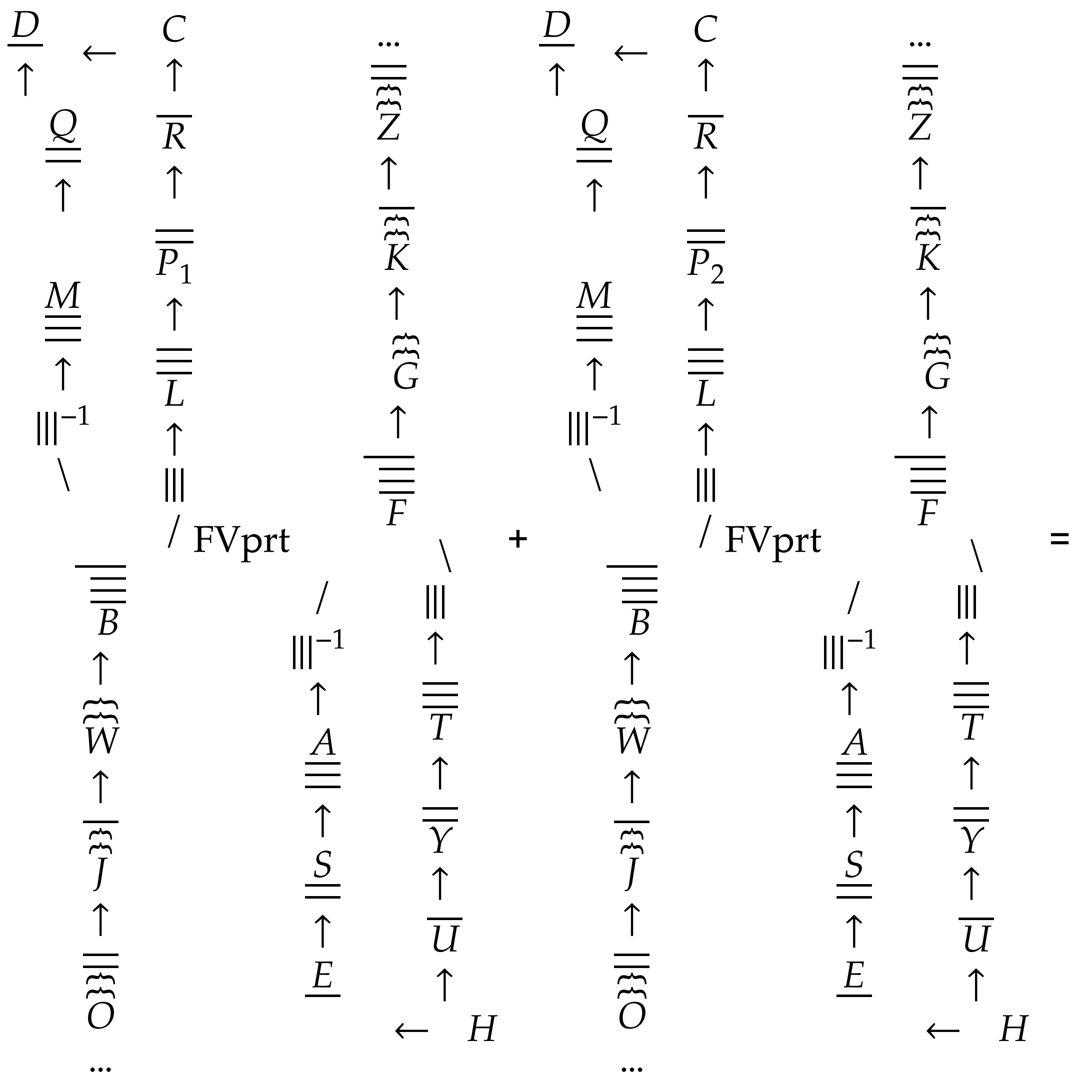
$$
\begin{array}{ccccccc}
\underline{D} & \leftarrow & C & & & \cdots & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overbrace{\overline{\overline{Z}}}}} & \\
\underline{\underline{\underline{Q_1}}} \cup \underline{\underline{\underline{Q_2}}} & & \overline{R} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
& & \overline{\overline{P}} & & & \uparrow & \\
\underline{\underline{\underline{M}}} & & \uparrow & & & \overbrace{\overbrace{\overbrace{G}}} & \\
\uparrow & & \overline{\overline{\overline{L}}} & & & \uparrow & \\
|||^{-1} & & \uparrow & & & \overline{\overline{\overline{\overline{F}}}} & \\
\backslash & & ||| & & & & \\
& & / & \mathrm{FVprt} & & & \backslash \\
\overline{\overline{\overline{\overline{B}}}} & & & & / & & ||| \\
\uparrow & & & & |||^{-1} & & \uparrow \\
\overbrace{\overbrace{\overbrace{W}}} & & & & \uparrow & & \overline{\overline{\overline{T}}} \\
\uparrow & & & & \underline{\underline{\underline{A}}} & & \uparrow \\
\overline{\overbrace{\overbrace{\overbrace{J}}}} & & & & \uparrow & & \overline{\overline{Y}} \\
\uparrow & & & & \underline{\underline{S}} & & \uparrow \\
\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & & & & \uparrow & & \overline{U} \\
\cdots & & & & \underline{E} & & \uparrow \\
& & & & & \leftarrow & H
\end{array}
\qquad \text{(A.3 .3.8),}
$$


D_1
C
Q
R
P
M
L
Z
K
G
F
FVprt
B
W
J
O
A
S
E
T
Y
U
H
+
D_2
FVprt
=

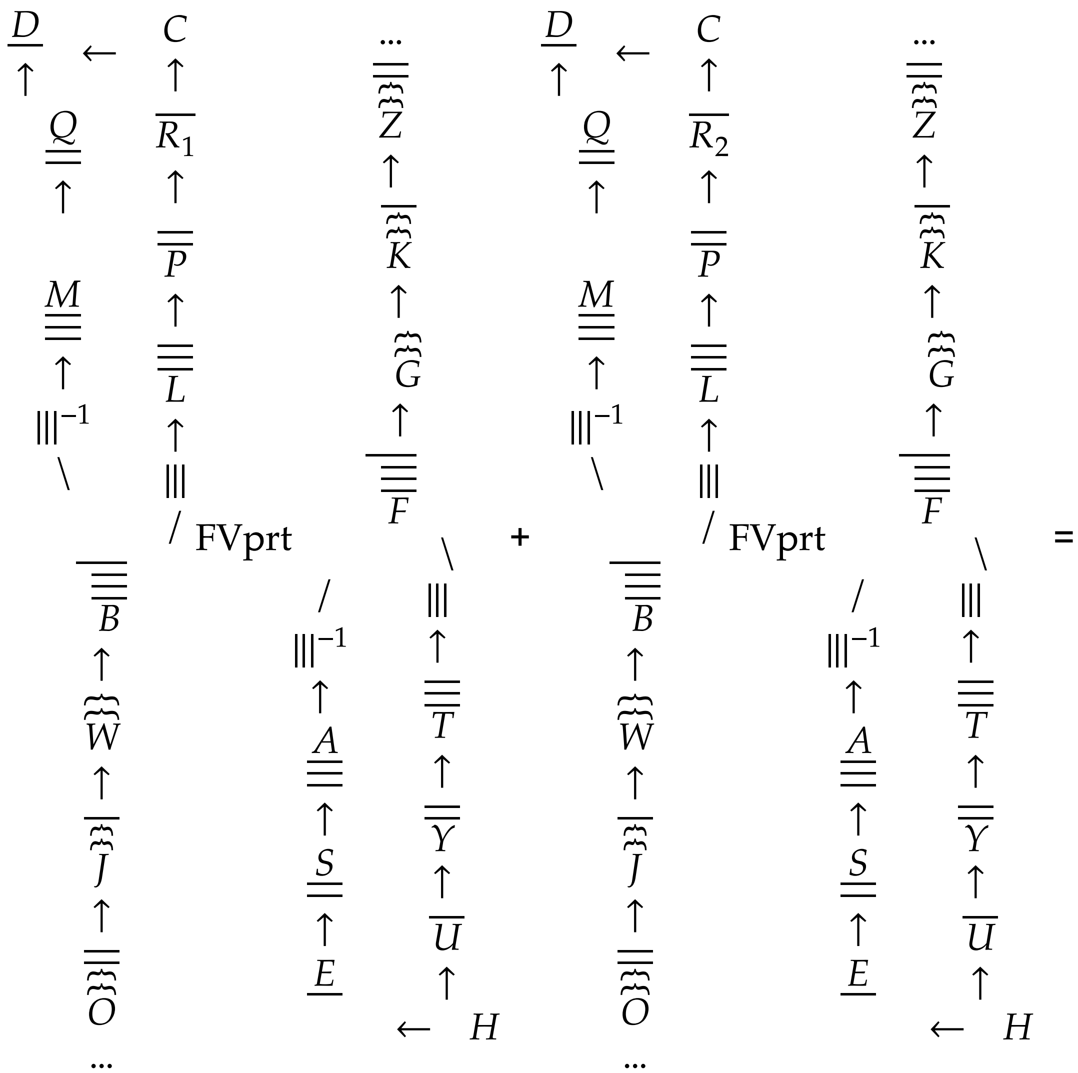
$$
\begin{array}{ccccccc}
\underline{D_1} \cup \underline{D_2} & \leftarrow & C & & \ldots & & \\
\uparrow & & \uparrow & & \overline{\overline{\overbrace{Z}}} & & \\
\underline{\underline{Q}} & & \overline{R} & & \uparrow & & \\
\uparrow & & \uparrow & & \overline{\overbrace{K}} & & \\
\underline{\underline{\underline{M}}} & & \overline{\overline{P}} & & \uparrow & & \\
\uparrow & & \uparrow & & \overbrace{G} & & \\
|||^{-1} & & \overline{\overline{\overline{L}}} & & \uparrow & & \\
\backslash & & \uparrow & & \overline{\overline{\overline{\overline{F}}}} & & \\
 & & ||| & & & & \\
 & & / \ \mathrm{FVprt} & & & \backslash & \text{(A.3 .3.9),} \\
\overline{\overline{\overline{\overline{B}}}} & & & / & & ||| & \\
\uparrow & & & |||^{-1} & & \uparrow & \\
\overbrace{W} & & & \uparrow & & \overline{\overline{\overline{T}}} & \\
\uparrow & & & \underline{\underline{\underline{A}}} & & \uparrow & \\
\overline{\overbrace{J}} & & & \uparrow & & \overline{\overline{Y}} & \\
\uparrow & & & \underline{\underline{S}} & & \uparrow & \\
\overline{\overline{\overbrace{O}}} & & & \uparrow & & \overline{U} & \\
\ldots & & & \underline{E} & & \uparrow & \\
 & & & & \leftarrow & H &
\end{array}
$$



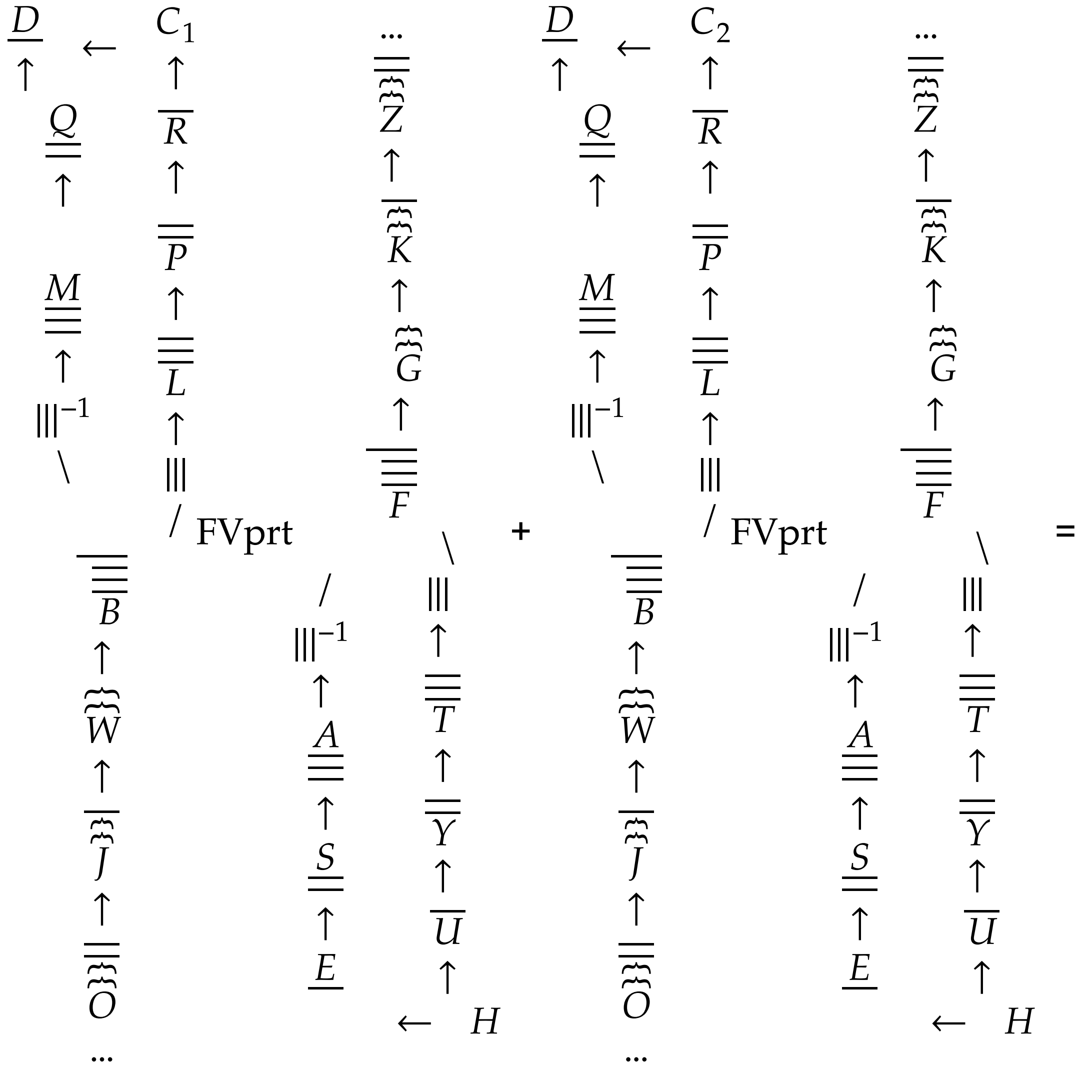
$$
\begin{array}{ccccccccc}
\underline{D} & \leftarrow & C & & & \cdots & & & \\
\uparrow & & \uparrow & & & \overline{\overline{\widetilde{Z}}} & & & \\
\underline{\underline{Q}} & & \overline{R} & & & \uparrow & & & \\
\uparrow & & \uparrow & & & \overline{\widetilde{K}} & & & \\
\underline{\underline{\underline{M}}} & & \overline{\overline{P}} & & & \uparrow & & & \\
\uparrow & & \overline{\overline{\overline{L}}}_1 \cup \overline{\overline{\overline{L}}}_2 & & & \widetilde{G} & & & \\
|||^{-1} & & \uparrow & & & \uparrow & & & \\
\backslash & & ||| & & & \overline{\overline{\overline{\overline{F}}}} & & & \\
 & & / & \text{FVprt} & & & \backslash & & \text{(A.3 .3.10),} \\
 & \overline{\overline{\overline{\overline{B}}}} & & & / & & ||| & & \\
 & \uparrow & & & |||^{-1} & & \uparrow & & \\
 & \widetilde{W} & & & \uparrow & & \overline{\overline{\overline{T}}} & & \\
 & \uparrow & & & \underline{\underline{\underline{A}}} & & \uparrow & & \\
 & \overline{\widetilde{J}} & & & \uparrow & & \overline{\overline{Y}} & & \\
 & \uparrow & & & \underline{\underline{S}} & & \uparrow & & \\
 & \overline{\overline{\widetilde{O}}} & & & \uparrow & & \overline{U} & & \\
 & \cdots & & & \underline{E} & & \uparrow & & \\
 & & & & & \leftarrow & H & &
\end{array}
$$

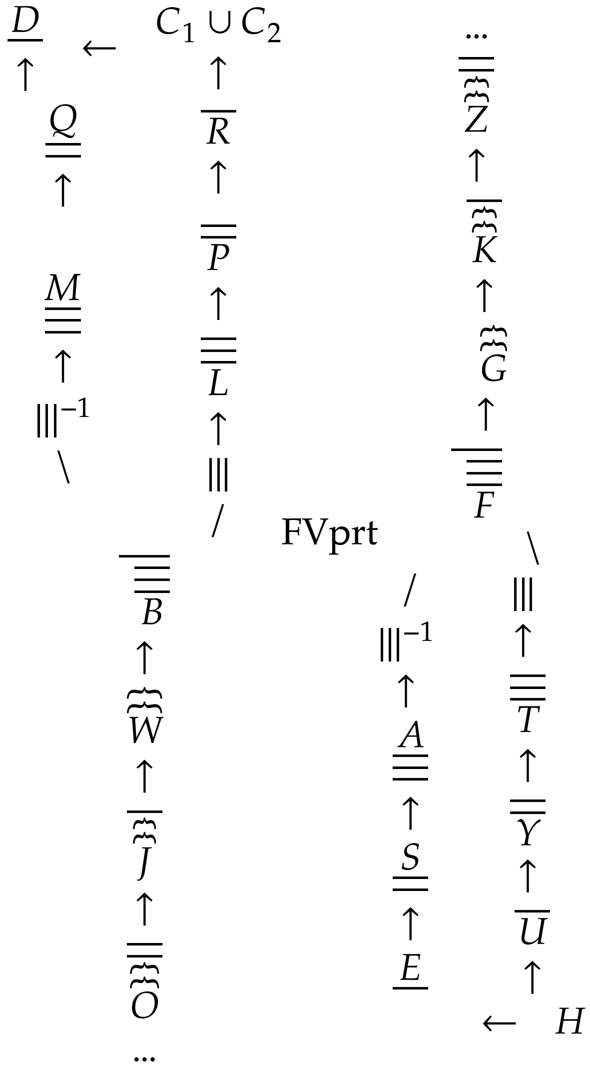


$$
\begin{array}{cccccccc}
\underline{D} & \leftarrow & C & & & & \cdots & \\
\uparrow & & \uparrow & & & & \equiv & \\
\underline{\underline{Q}} & & \overline{R} & & & & Z & \\
\uparrow & & \uparrow & & & & \uparrow & \\
 & & \overline{\overline{P_1}} \cup \overline{\overline{P_2}} & & & & \overline{K} & \\
\underline{\underline{\underline{M}}} & & \uparrow & & & & \uparrow & \\
\uparrow & & \overline{\overline{\overline{L}}} & & & & G & \\
|||^{-1} & & \uparrow & & & & \uparrow & \\
\backslash & & ||| & & & & \overline{\overline{\overline{\overline{F}}}} & \\
 & & / & \text{FVprt} & & & \backslash & \text{(A.3 .3.11),} \\
 & \overline{\overline{\overline{\overline{B}}}} & & & / & & ||| & \\
 & \uparrow & & & |||^{-1} & & \uparrow & \\
 & W & & & \uparrow & & \overline{\overline{\overline{T}}} & \\
 & \uparrow & & & \underline{\underline{\underline{A}}} & & \uparrow & \\
 & \overline{J} & & & \uparrow & & \overline{\overline{Y}} & \\
 & \uparrow & & & \underline{\underline{S}} & & \uparrow & \\
 & \overline{\overline{\overline{O}}} & & & \uparrow & & \overline{U} & \\
 & & & & \underline{E} & & \uparrow & \\
 & \cdots & & & & \leftarrow & H & \\
\end{array}
$$

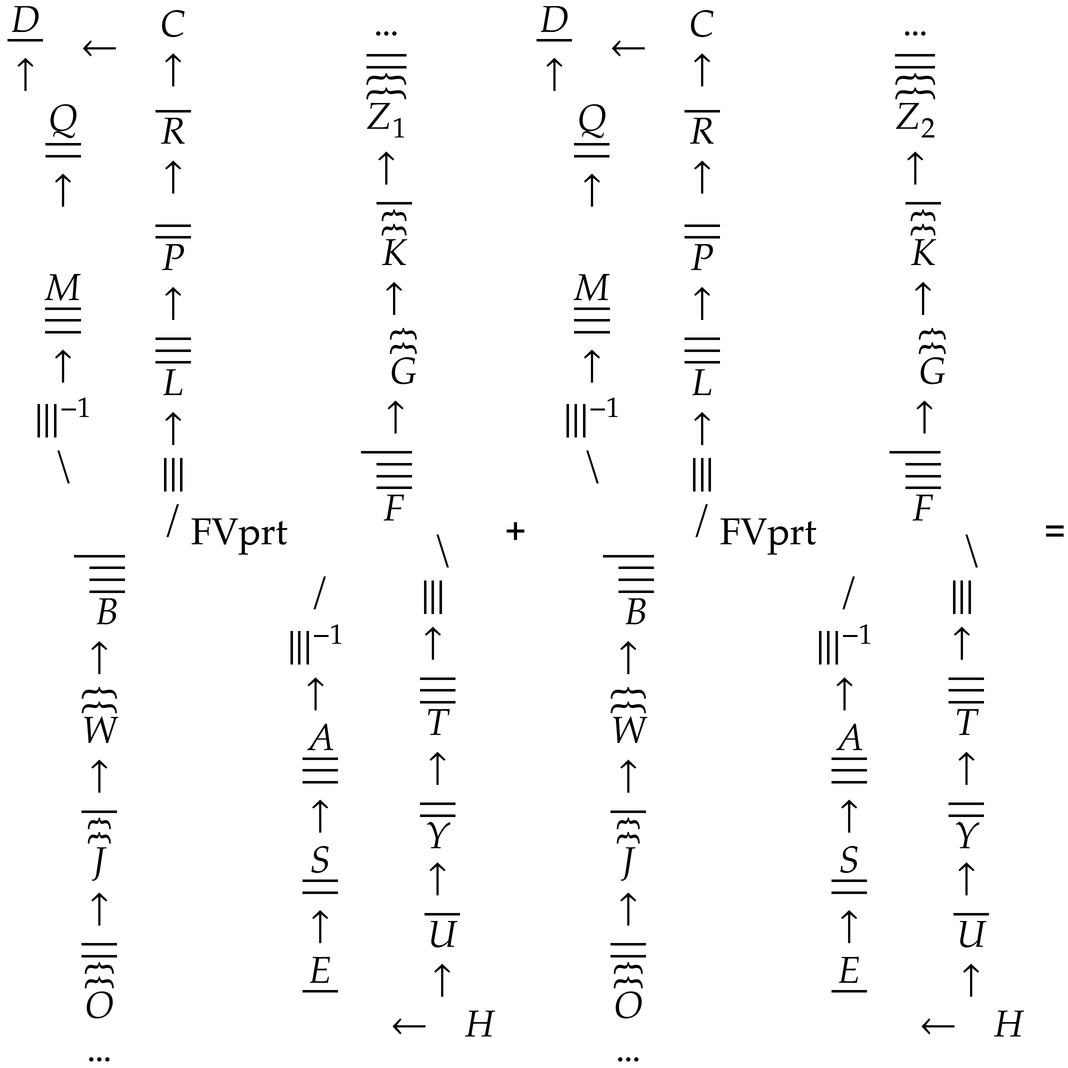


$$
\begin{array}{ccccccccc}
\underline{D} & \leftarrow & C & & & & \cdots & & \\
\uparrow & & \uparrow & & & & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & & \\
\underline{\underline{Q}} & & \overline{R_1} \cup \overline{R_2} & & & & \uparrow & & \\
\uparrow & & \uparrow & & & & \overline{\overbrace{\overbrace{\overbrace{K}}}} & & \\
& & \overline{\overline{P}} & & & & \uparrow & & \\
\underline{\underline{\underline{M}}} & & \uparrow & & & & \overbrace{\overbrace{\overbrace{G}}} & & \\
\uparrow & & \overline{\overline{\overline{L}}} & & & & \uparrow & & \\
|||^{-1} & & \uparrow & & & & \overline{\overline{\overline{F}}} & & \\
\backslash & & ||| & & & & & & \\
& & / & \mathrm{FVprt} & & & & \backslash & \text{(A.3 .3.12),} \\
& \overline{\overline{\overline{B}}} & & & & / & & ||| & \\
& \uparrow & & & & |||^{-1} & & \uparrow & \\
& \overbrace{\overbrace{\overbrace{W}}} & & & & \uparrow & & \overline{\overline{\overline{T}}} & \\
& \uparrow & & & & \underline{\underline{\underline{A}}} & & \uparrow & \\
& \overline{\overbrace{\overbrace{\overbrace{J}}}} & & & & \uparrow & & \overline{\overline{Y}} & \\
& \uparrow & & & & \underline{\underline{S}} & & \uparrow & \\
& \overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & & & & \uparrow & & \overline{U} & \\
& \cdots & & & & \underline{E} & & \uparrow & \\
& & & & & & \leftarrow & H &
\end{array}
$$


FVprt
+
FVprt
=

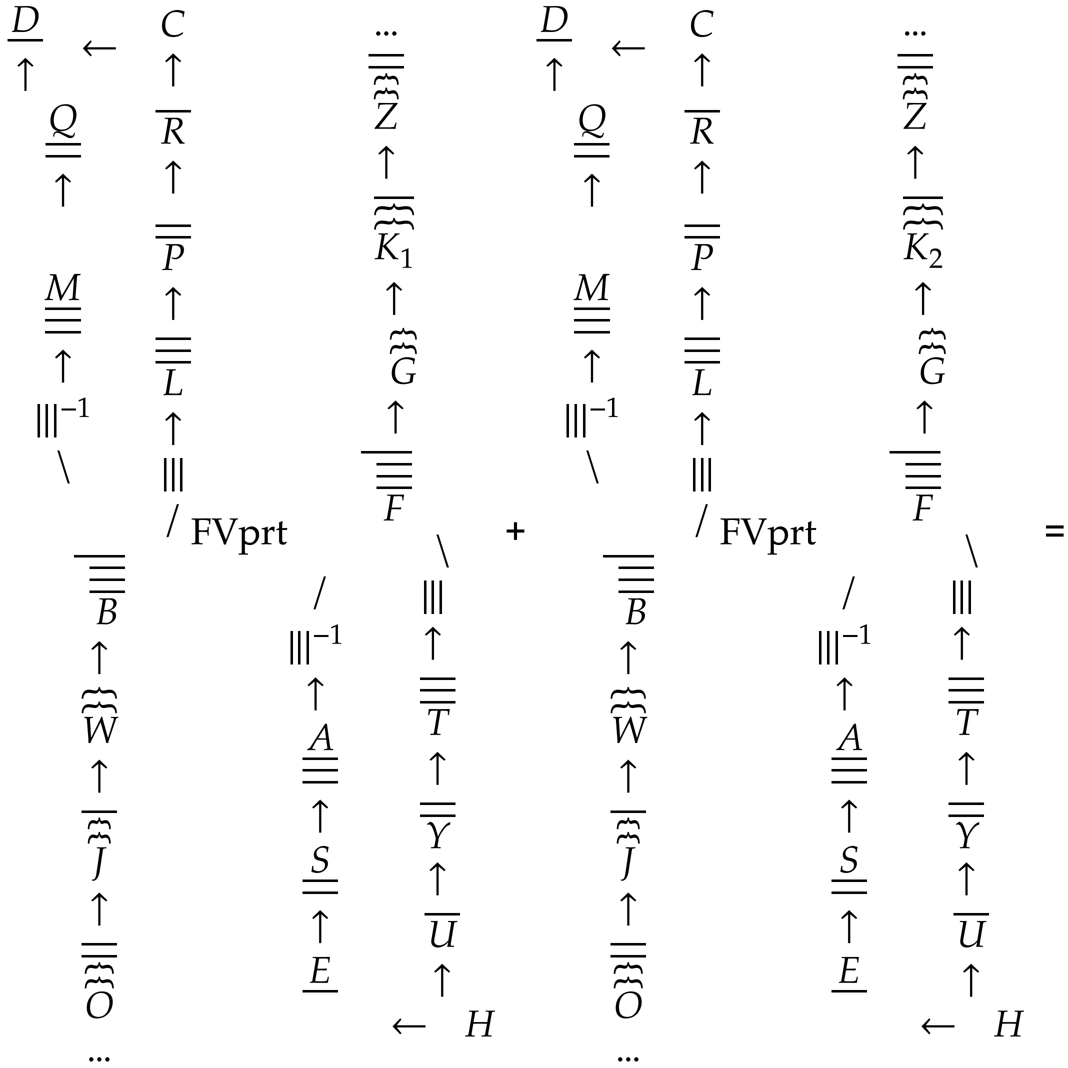


(A.3 .3.13),

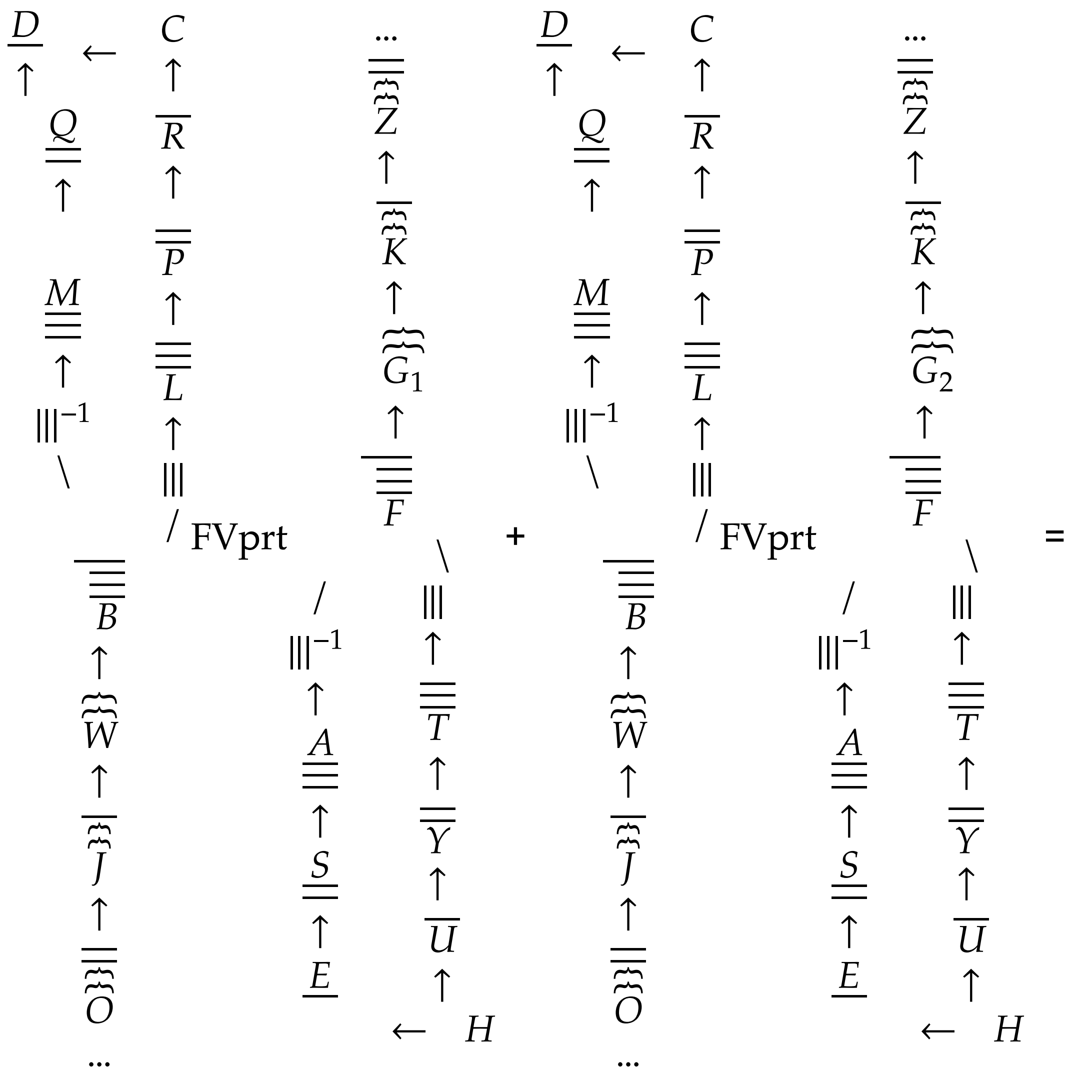

FVprt
+
FVprt
=

$$
\begin{array}{ccccc}
\underline{D} & \leftarrow & C & & \cdots \\
\uparrow & & \uparrow & & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z_1}}}}}} \cup \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z_2}}}}}} \\
\underline{\underline{Q}} & & \overline{R} & & \uparrow \\
\uparrow & & \uparrow & & \overline{\overbrace{\overbrace{\overbrace{K}}}} \\
& & \overline{\overline{P}} & & \uparrow \\
\underline{\underline{\underline{M}}} & & \uparrow & & \overbrace{\overbrace{\overbrace{G}}} \\
\uparrow & & \overline{\overline{\overline{L}}} & & \uparrow \\
|||^{-1} & & \uparrow & & \overline{\overline{\overline{\overline{F}}}} \\
\backslash & & ||| & & \\
& & / \ \text{FVprt} & & \backslash
\end{array}
\qquad \text{(A.3 .3.14),}
$$

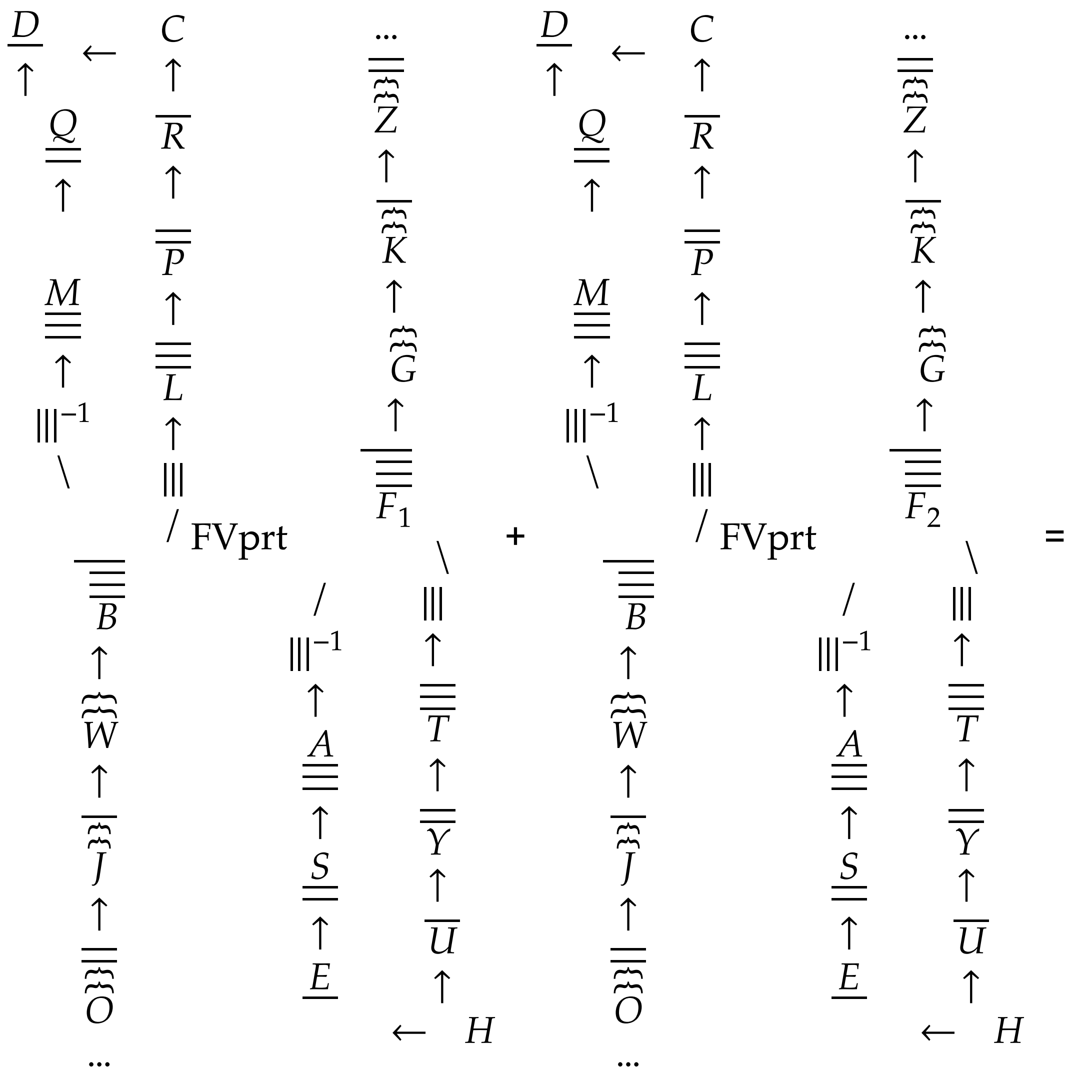
$$
\begin{array}{ccc}
\overline{\overline{\overline{\overline{B}}}} & / & \\
\uparrow & |||^{-1} & ||| \\
\overbrace{\overbrace{\overbrace{W}}} & \uparrow & \uparrow \\
\uparrow & \underline{\underline{\underline{A}}} & \overline{\overline{\overline{T}}} \\
\overline{\overbrace{\overbrace{\overbrace{J}}}} & \uparrow & \uparrow \\
\uparrow & \underline{\underline{S}} & \overline{\overline{Y}} \\
\overline{\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}}} & \uparrow & \uparrow \\
\cdots & \underline{E} & \overline{U} \\
& & \uparrow \\
& \leftarrow & H
\end{array}
$$

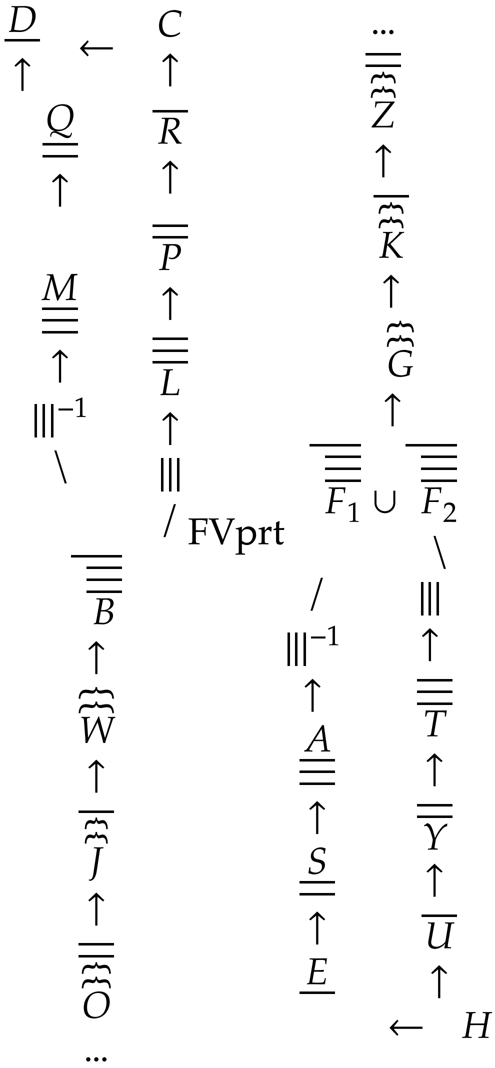

FVprt
+
FVprt
=

$$
\begin{array}{ccccccc}
\underline{D} & \leftarrow & C & & & \dots & \\
\uparrow & & \uparrow & & & \overline{\overline{\overbrace{\overbrace{Z}}}} & \\
\underline{\underline{Q}} & & \overline{R} & & & \uparrow & \\
\uparrow & & \uparrow & & \overline{\overline{\overbrace{\overbrace{K_1}}}} & \cup & \overline{\overline{\overbrace{\overbrace{K_2}}}} \\
\underline{\underline{\underline{M}}} & & \overline{\overline{P}} & & \uparrow & & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{G}} & \\
|||^{-1} & & \overline{\overline{\overline{L}}} & & & \uparrow & \\
\backslash & & \uparrow & & & \overline{\overline{\overline{\overline{F}}}} & \\
 & & ||| & & & & \\
 & & / & \mathrm{FVprt} & & & \backslash \\
\overline{\overline{\overline{\overline{B}}}} & & & & / & & ||| \\
\uparrow & & & & |||^{-1} & & \uparrow \\
\overbrace{\overbrace{W}} & & & & \uparrow & & \overline{\overline{\overline{T}}} \\
\uparrow & & & & \underline{\underline{\underline{A}}} & & \uparrow \\
\overline{\overbrace{\overbrace{J}}} & & & & \uparrow & & \overline{\overline{Y}} \\
\uparrow & & & & \underline{\underline{S}} & & \uparrow \\
\overline{\overline{\overbrace{\overbrace{O}}}} & & & & \uparrow & & \overline{U} \\
\dots & & & & \underline{E} & & \uparrow \\
 & & & & & \leftarrow & H
\end{array}
\qquad \text{(A.3 .3.15),}
$$

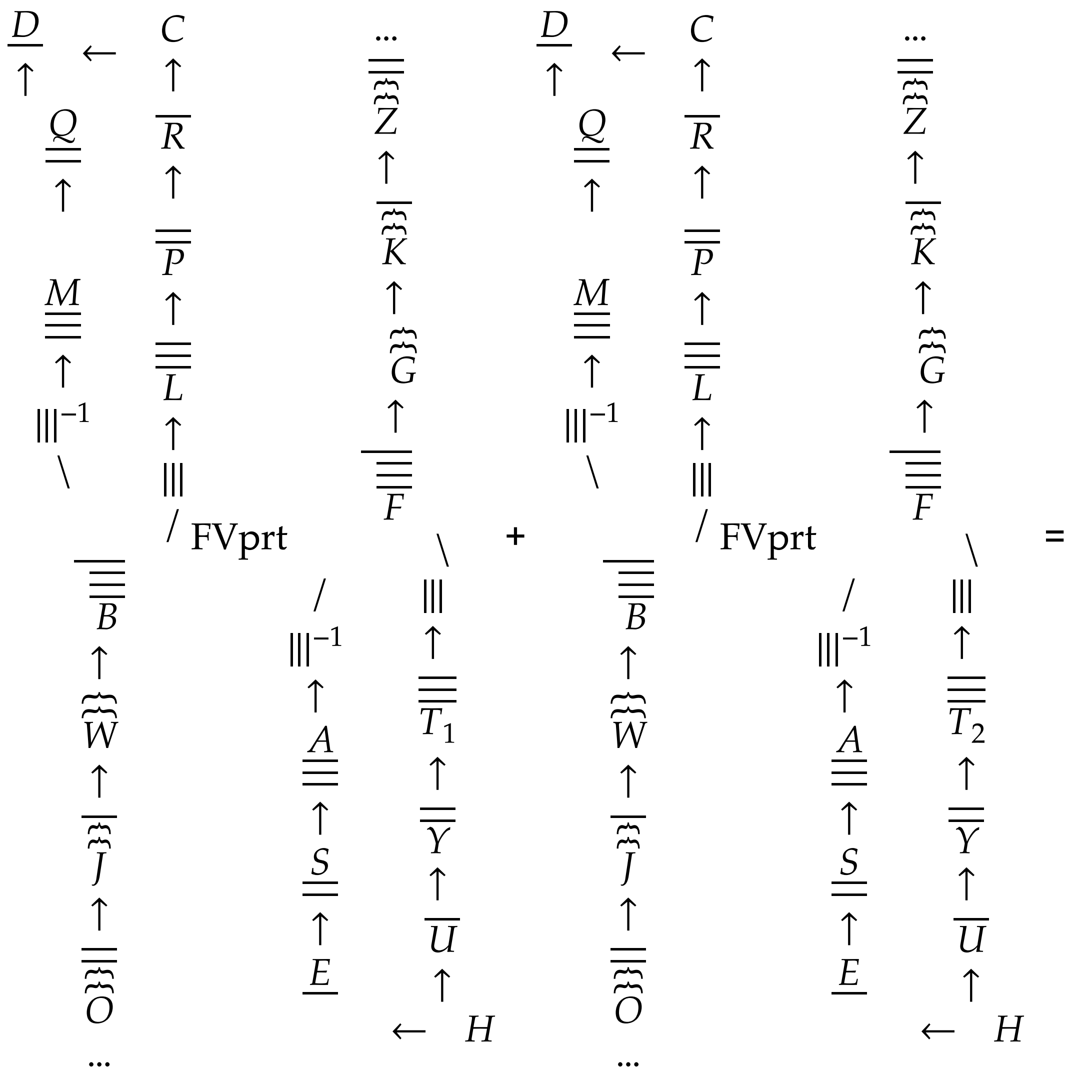


$$
\begin{array}{ccccccc}
\underline{D} & \leftarrow & C & & & \cdots & \\
\uparrow & & \uparrow & & & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
\underline{\underline{Q}} & & \overline{R} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overline{\overbrace{\overbrace{K}}} & \\
 & & \overline{\overline{P}} & & & \uparrow & \\
\underline{\underline{\underline{M}}} & & \uparrow & & & \overbrace{\overbrace{G_1}} \cup \overbrace{\overbrace{G_2}} & \\
\uparrow & & \overline{\overline{\overline{L}}} & & & \uparrow & \\
\vert\vert\vert^{-1} & & \uparrow & & & \overline{\overline{\overline{\overline{F}}}} & \\
\backslash & & \vert\vert\vert & & & & \\
 & & / & \mathrm{FVprt} & & & \backslash \\
\overline{\overline{\overline{\overline{B}}}} & & & & / & & \vert\vert\vert \\
\uparrow & & & & \vert\vert\vert^{-1} & & \uparrow \\
\overbrace{\overbrace{\overbrace{W}}} & & & & \uparrow & & \overline{\overline{\overline{T}}} \\
\uparrow & & & & \underline{\underline{\underline{A}}} & & \uparrow \\
\overline{\overbrace{\overbrace{J}}} & & & & \uparrow & & \overline{\overline{Y}} \\
\uparrow & & & & \underline{\underline{S}} & & \uparrow \\
\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & & & & \uparrow & & \overline{U} \\
\cdots & & & & \underline{E} & & \uparrow \\
 & & & & & \leftarrow & H
\end{array}
\qquad \text{(A.3 .3.16),}
$$

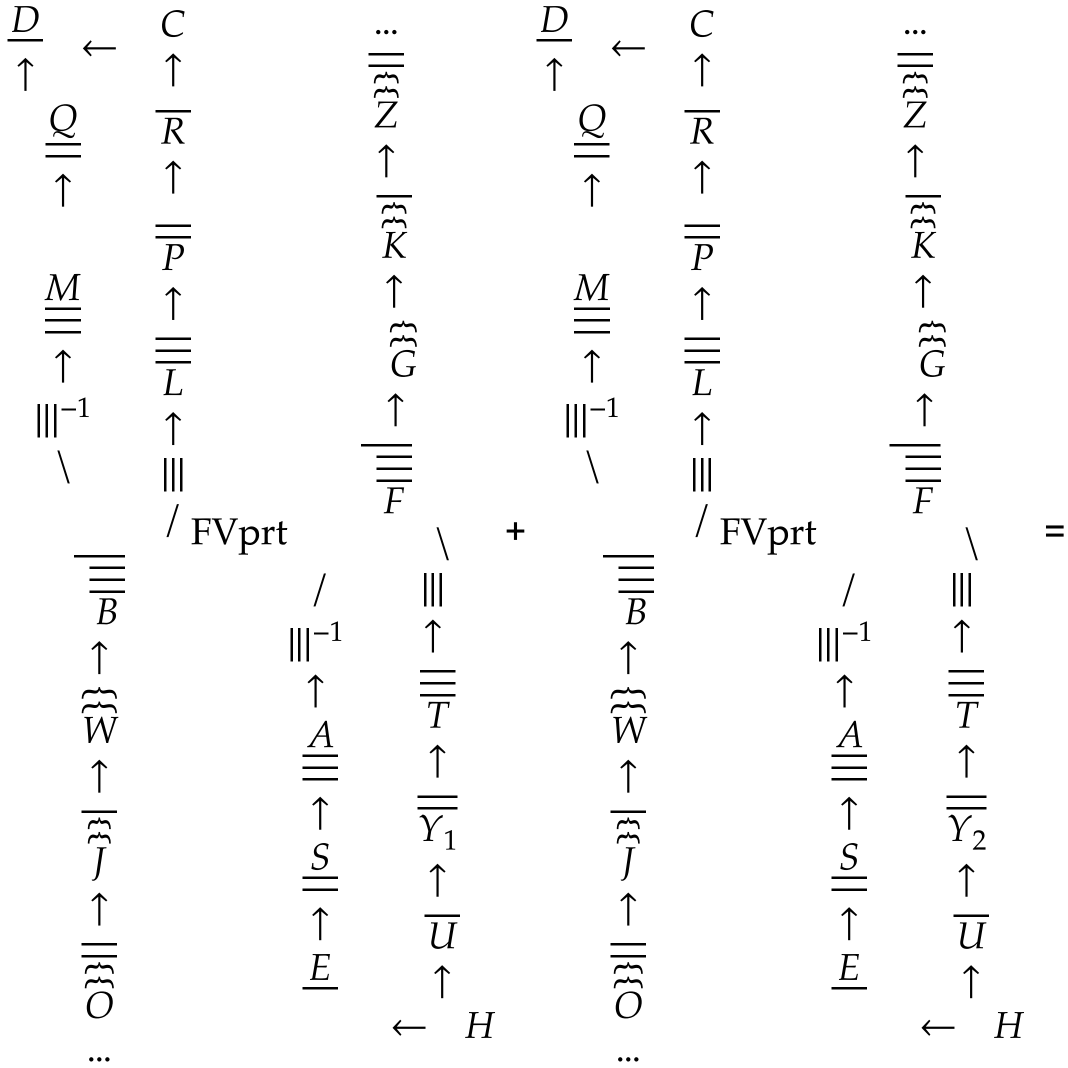

FVprt
+
FVprt
=



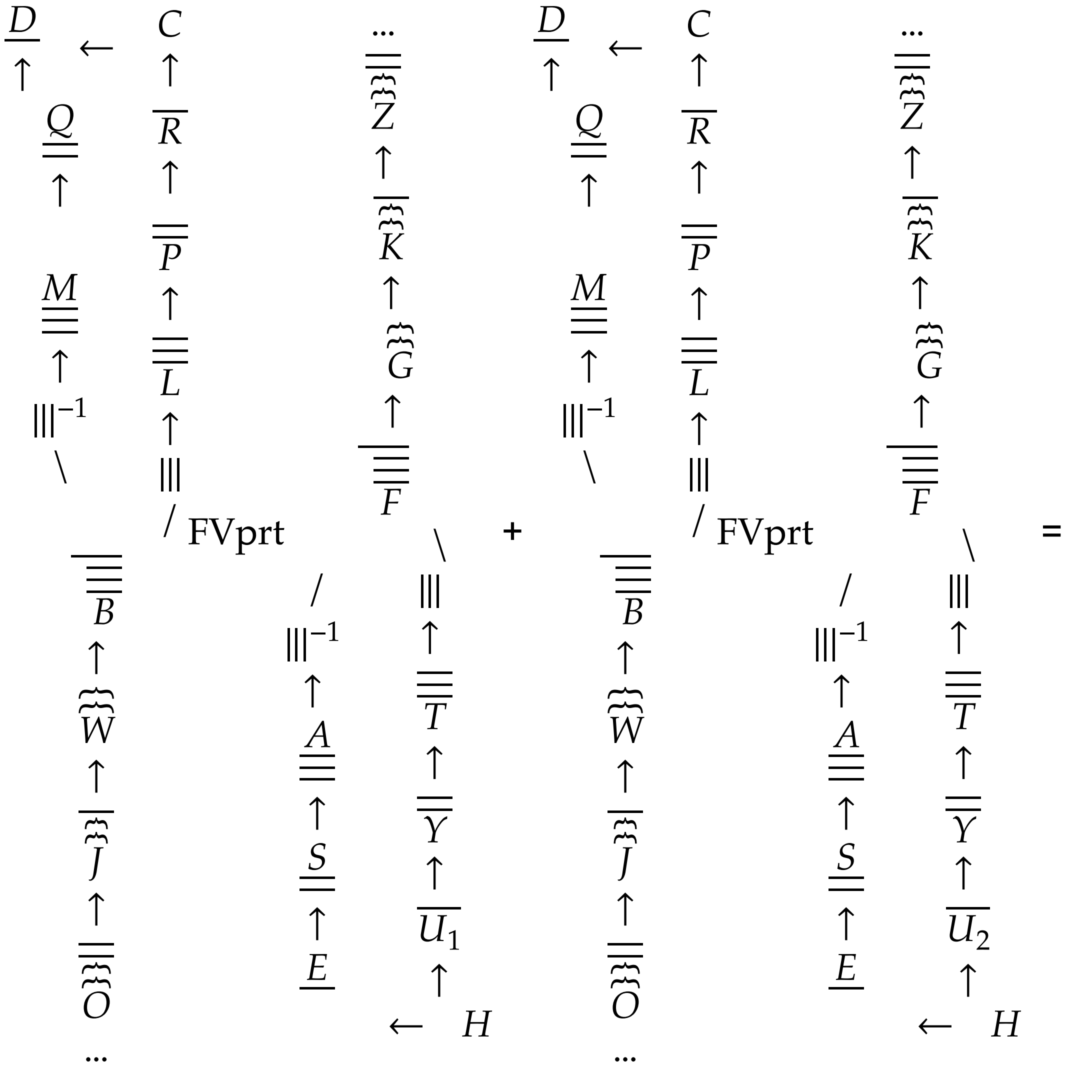
(A.3 .3.17),


FVprt
+
FVprt
=

$$
\begin{array}{cccccc}
\underline{D} & \leftarrow & C & & \cdots & \\
\uparrow & & \uparrow & & \overline{\overline{\overbrace{\overbrace{Z}}}} & \\
\underline{\underline{Q}} & & \overline{R} & & \uparrow & \\
\uparrow & & \uparrow & & \overline{\overbrace{\overbrace{K}}} & \\
 & & \overline{\overline{P}} & & \uparrow & \\
\underline{\underline{\underline{M}}} & & \uparrow & & \overbrace{\overbrace{G}} & \\
\uparrow & & \overline{\overline{\overline{L}}} & & \uparrow & \\
|||^{-1} & & \uparrow & & \overline{\overline{\overline{\overline{F}}}} & \\
\backslash & & ||| & & & \\
 & & / \ \mathrm{FVprt} & & & \backslash \qquad \text{(A.3 .3.18),} \\
\overline{\overline{\overline{\overline{B}}}} & & & / & ||| & \\
\uparrow & & & |||^{-1} & \uparrow & \\
\overbrace{\overbrace{W}} & & & \uparrow & \overline{\overline{\overline{T_1}}} \cup \overline{\overline{\overline{T_2}}} & \\
\uparrow & & & \underline{\underline{\underline{A}}} & \uparrow & \\
\overline{\overbrace{\overbrace{J}}} & & & \uparrow & \overline{\overline{Y}} & \\
\uparrow & & & \underline{\underline{S}} & \uparrow & \\
\overline{\overline{\overline{\overbrace{\overbrace{O}}}}} & & & \uparrow & \overline{U} & \\
\cdots & & & \underline{E} & \uparrow & \\
 & & & & \leftarrow \quad H & \\
\end{array}
$$


FVprt
+
FVprt
=

$$
\begin{array}{cccccc}
\underline{D} & \leftarrow & C & & \cdots & \\
\uparrow & & \uparrow & & \overline{\overline{\overbrace{Z}}} & \\
\underline{\underline{Q}} & & \overline{R} & & \uparrow & \\
\uparrow & & \uparrow & & \overline{\overbrace{K}} & \\
 & & \overline{\overline{P}} & & \uparrow & \\
\underline{\underline{\underline{M}}} & & \uparrow & & \overbrace{G} & \\
\uparrow & & \overline{\overline{\overline{L}}} & & \uparrow & \\
|||^{-1} & & \uparrow & & \overline{\overline{\overline{\overline{F}}}} & \\
\backslash & & ||| & & & \\
 & & /\ \mathrm{FVprt} & & \backslash & \quad \text{(A.3 .3.19),} \\
\overline{\overline{\overline{\overline{B}}}} & & & / & ||| & \\
\uparrow & & & |||^{-1} & \uparrow & \\
\overbrace{W} & & & \uparrow & \overline{\overline{\overline{T}}} & \\
\uparrow & & & \underline{\underline{\underline{A}}} & \uparrow & \\
\overline{\overbrace{J}} & & & \uparrow & \overline{\overline{Y_1}} \cup \overline{\overline{Y_2}} & \\
\uparrow & & & \underline{\underline{S}} & \uparrow & \\
\overline{\overline{\overbrace{O}}} & & & \uparrow & \overline{U} & \\
\cdots & & & \underline{E} & \uparrow & \\
 & & & & \leftarrow\ H &
\end{array}
$$



$\underline{D} \quad \leftarrow \quad C \qquad \qquad \dots$

$\uparrow \qquad \uparrow \qquad \overline{\overbrace{\overbrace{\overbrace{}}}}$

$\underline{\underline{Q}} \quad \overline{R} \qquad Z$

$\uparrow \qquad \uparrow \qquad \uparrow$

$\overline{\overline{P}} \qquad \overline{\overbrace{\overbrace{K}}}$

$\underline{\underline{\underline{M}}} \quad \uparrow \qquad \uparrow$

$\uparrow \quad \overline{\overline{\overline{L}}} \qquad \overbrace{\overbrace{G}}$

$|||^{-1} \quad \uparrow \qquad \uparrow$

$\backslash \quad ||| \qquad \overline{\overline{\overline{\overline{F}}}}$

$/ \ \mathrm{FVprt} \qquad \backslash \qquad$ (A.3 .3.20),

$\overline{\overline{\overline{\overline{B}}}} \qquad / \qquad |||$

$\uparrow \qquad |||^{-1} \qquad \uparrow$

$\overbrace{\overbrace{W}} \qquad \uparrow \qquad \overline{\overline{\overline{T}}}$

$\uparrow \qquad \underline{\underline{\underline{A}}} \qquad \uparrow$

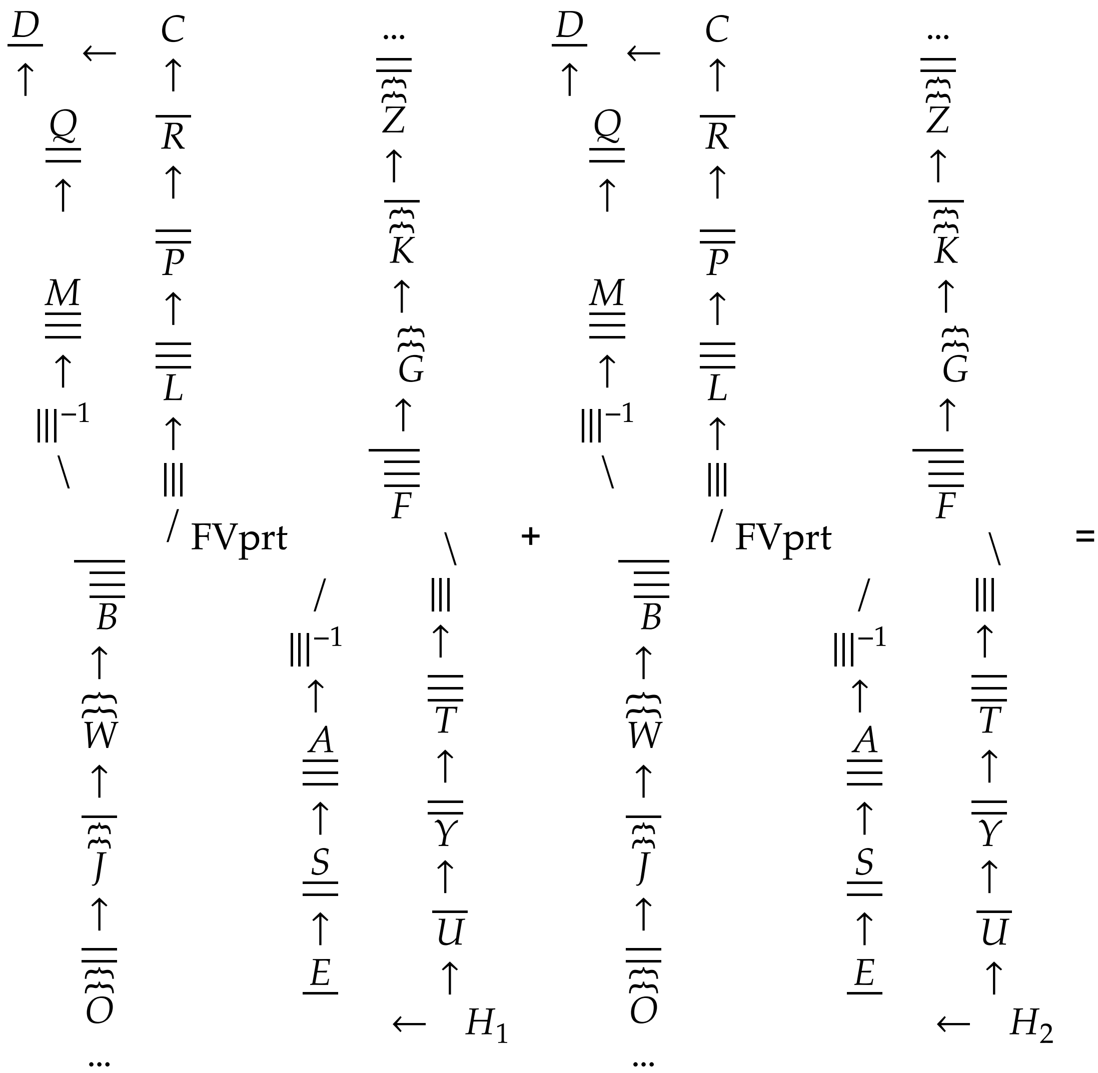
$\overline{\overbrace{\overbrace{J}}} \qquad \uparrow \qquad \overline{\overline{Y}}$

$\uparrow \qquad \underline{\underline{S}} \qquad \uparrow$

$\overline{\overline{\overline{\overbrace{\overbrace{O}}}}} \qquad \uparrow \qquad \overline{U_1} \cup \overline{U_2}$

$\dots \qquad \underline{E} \qquad \uparrow$

$\leftarrow \quad H$



$$
\begin{array}{ccccccc}
\underline{D} \quad \leftarrow & C & & & \ldots & & \\
\uparrow & \uparrow & & & \overbrace{\overline{\overline{Z}}} & & \\
\underline{\underline{Q}} & \overline{R} & & & \uparrow & & \\
\uparrow & \uparrow & & & \overbrace{\overline{K}} & & \\
\underline{\underline{\underline{M}}} & \overline{\overline{P}} & & & \uparrow & & \\
\uparrow & \uparrow & & & \overbrace{G} & & \\
|||^{-1} & \overline{\overline{\overline{L}}} & & & \uparrow & & \\
\backslash & \uparrow & & & \overline{\overline{\overline{\overline{F}}}} & & \\
 & ||| & & & & & \\
 & / \ \mathrm{FVprt} & & & & \backslash & \text{(A.3 .3.21),} \\
\overline{\overline{\overline{\overline{B}}}} & & / & & & ||| & \\
\uparrow & & |||^{-1} & & & \uparrow & \\
\overbrace{W} & & \uparrow & & & \overline{\overline{\overline{T}}} & \\
\uparrow & & \underline{\underline{\underline{A}}} & & & \uparrow & \\
\overline{\overbrace{J}} & & \uparrow & & & \overline{\overline{Y}} & \\
\uparrow & & \underline{\underline{S}} & & & \uparrow & \\
\overline{\overline{\overbrace{O}}} & & \uparrow & & & \overline{U} & \\
\ldots & & \underline{E} & & & \uparrow & \\
 & & & \leftarrow & & H_1 \cup H_2 &
\end{array}
$$

We consider the following self-type FVprt-structure, paradoxical self-type FVprt-structure (paself-type FVprt-structure) of the first type:

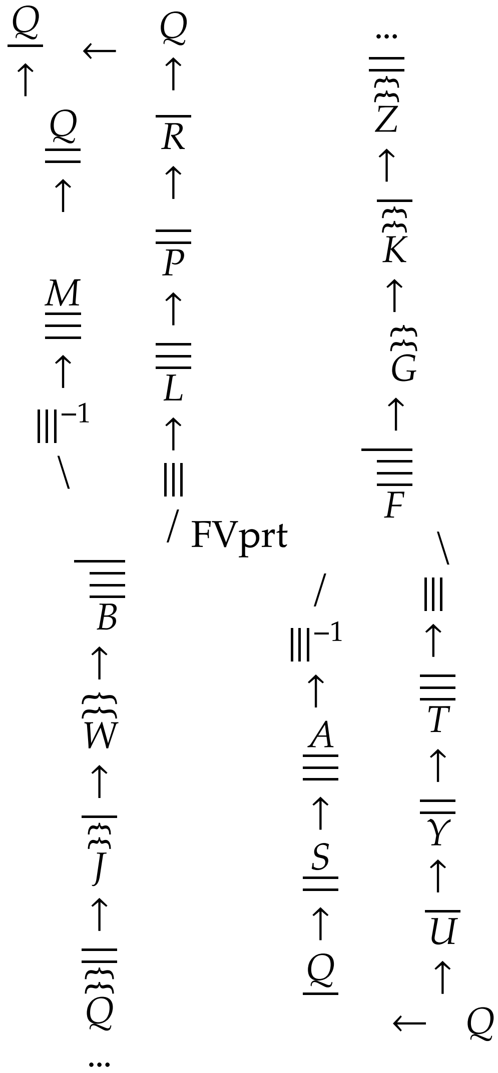
$$
\begin{array}{c}
\underline{Q} \leftarrow Q \\
\uparrow \qquad \uparrow \\
\underline{\underline{Q}} \qquad \overline{Q} \\
\uparrow \qquad \uparrow \\
\underline{\underline{\underline{Q}}} \qquad \overline{\overline{Q}} \\
\uparrow \qquad \uparrow \\
|||^{-1} \qquad \overline{\overline{\overline{Q}}} \\
\backslash \qquad \uparrow \\
\qquad ||| \\
/ \ \mathrm{FVprt}
\end{array}
$$

$$\overline{\overline{\overline{Q}}} \to \overbrace{Q} \to \overbrace{Q}| \to \overbrace{Q}|| \cdots$$

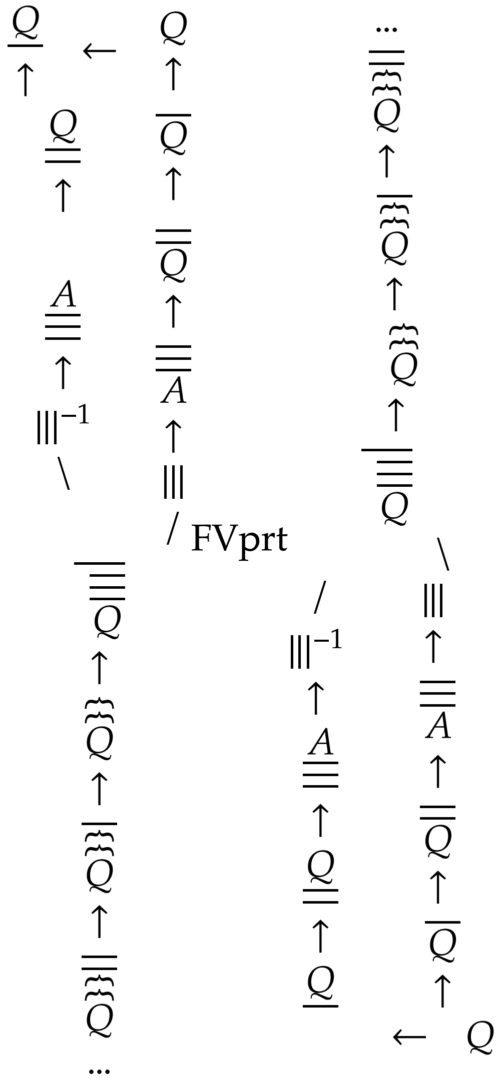
$$\overline{\overline{\overline{Q}}} \to \overbrace{Q} \to \overbrace{Q}| \to \overbrace{Q}|| \cdots$$

$$
\begin{array}{c}
/ \qquad \backslash \\
|||^{-1} \qquad ||| \\
\uparrow \qquad \uparrow \\
\underline{\underline{\underline{Q}}} \qquad \overline{\overline{\overline{Q}}} \\
\uparrow \qquad \uparrow \\
\underline{\underline{Q}} \qquad \overline{\overline{Q}} \\
\uparrow \qquad \uparrow \\
\underline{Q} \qquad \overline{Q} \\
\qquad \uparrow \\
\leftarrow Q
\end{array}
$$

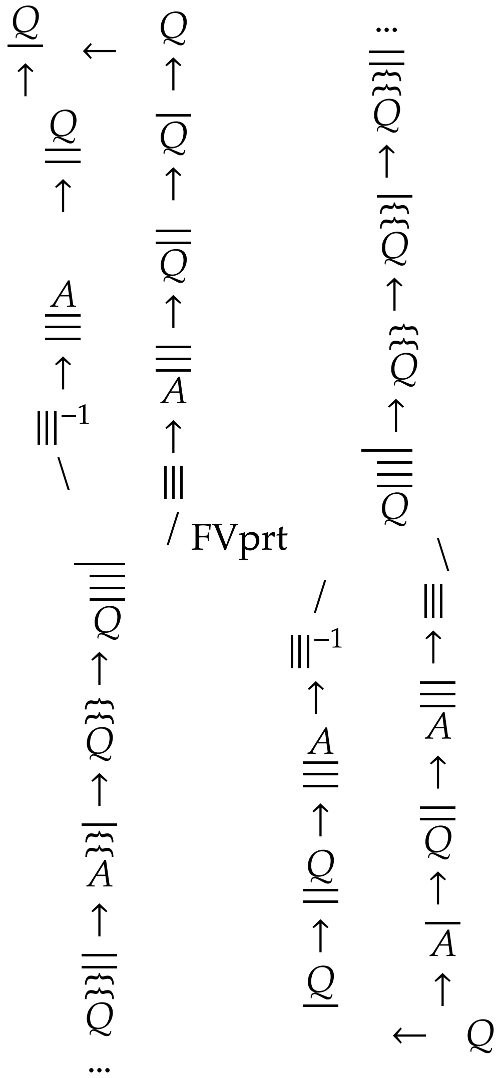
denote $FV_1 f Q$,



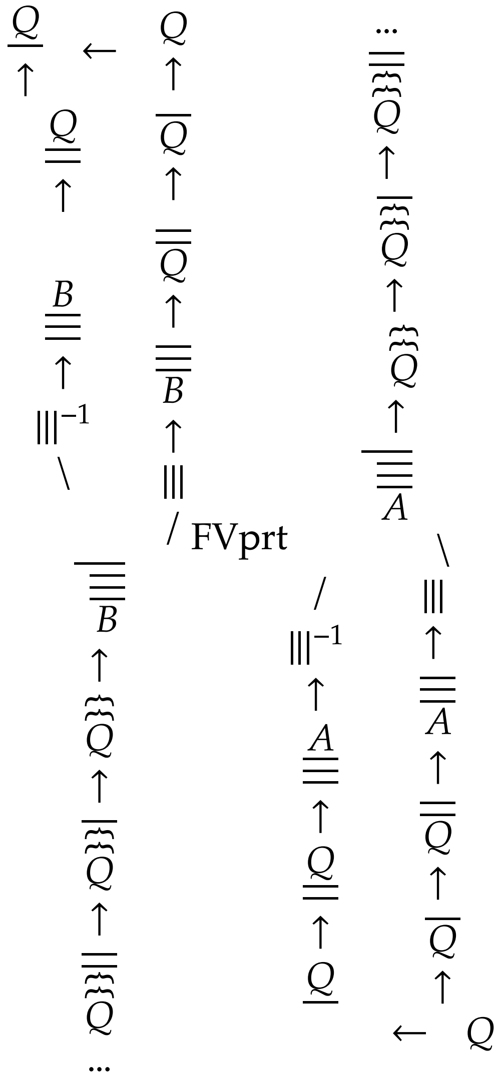
denote $FV_2 f$,



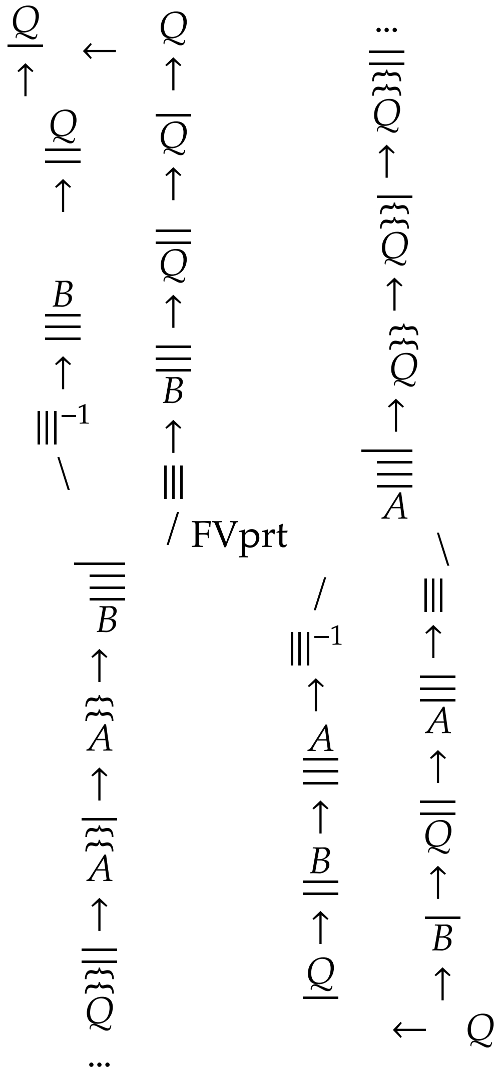
denote $FV_3 f$,



denote $FV_4 f$,



denote $FV_5 f$,



denote $FV_6 f$,

and any other possible options of self for (A.3 .1) etc.

It can be considered a simpler version of the dynamic operator

$$
\begin{array}{ccccc}
 & & \vdots & & \\
 & & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & & \\
 & & \uparrow & & \\
 & & \overline{\overbrace{\overbrace{\overbrace{K}}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{\overbrace{G}}} & & \\
 & & \uparrow & & \\
\text{FVprt} & & \overline{\overline{\overline{\overline{F}}}} & & \text{(A.3 .8),} \\
 & / & & \backslash & \\
 & |||^{-1} & & ||| & \\
 & \uparrow & & \uparrow & \\
 & \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} & \\
 & \uparrow & & \uparrow & \\
 & \underline{\underline{S}} & & \overline{\overline{Y}} & \\
 & \uparrow & & \uparrow & \\
 & \underline{E} & & \overline{U} & \\
 & & & \uparrow & \\
 & & \leftarrow & & H
\end{array}
$$

the result of this process will be described by the expression

$$\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
\text{FVrt} & & \backslash \\
/ & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{T}}} \\
\underline{\underline{\underline{A}}} & & \uparrow \\
\uparrow & & \overline{\overline{Y}} \\
\underline{\underline{S}} & & \uparrow \\
\uparrow & & \overline{U} \\
\underline{E} & & \uparrow \\
 & \leftarrow & H
\end{array} \qquad (A.3\ .9)$$

or

$$
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & /
\end{array}
\text{ FVprt (A.3 .10),}
$$

$$
\begin{array}{c}
\overline{\overline{\overline{\overline{B}}}} \\
\uparrow \\
\overbrace{\overbrace{W}} \\
\uparrow \\
\overline{\overbrace{\overbrace{J}}} \\
\uparrow \\
\overline{\overline{\overbrace{\overbrace{O}}}} \\
\ldots
\end{array}
$$

the result of this process will be described by the expression

$$
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{M}}} & & \overline{\overline{P}} \\
\uparrow & & \uparrow \\
|||^{-1} & & \overline{\overline{\overline{L}}} \\
 & & \uparrow \\
 & & ||| \\
\backslash & & /
\end{array}
\text{ FVprt (A.3 .11).}
$$

$$
\begin{array}{c}
\overline{\overline{\overline{\overline{B}}}} \\
\uparrow \\
\overbrace{\overbrace{W}} \\
\uparrow \\
\overline{\overbrace{\overbrace{J}}} \\
\uparrow \\
\overline{\overline{\overbrace{\overbrace{O}}}} \\
\ldots
\end{array}
$$

Definition 1,2. The dynamic operator (A.3 .8) we shall call FVprt – element of the second type, (A.3 .9) we shall call FVrt – element of the second type.

It’s allowed to add FVprt – elements of the second type:

$$
\mathrm{FVprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z_1}}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
+\mathrm{FVprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z_2}}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
=\mathrm{FVprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z_1}}}}}} \cup \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z_2}}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
\quad (A.3\ .12),
$$

$$
\text{FVprt}
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K_1}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
 ||| ^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{\underline{A}}}} & & \overline{\overline{\overline{T}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{S}}} & & \overline{\overline{Y}} \\
 \uparrow & & \uparrow \\
 \underline{E} & & \overline{U} \\
 & \leftarrow & H
\end{array}
+ \text{FVprt}
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K_2}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
 ||| ^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{\underline{A}}}} & & \overline{\overline{\overline{T}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{S}}} & & \overline{\overline{Y}} \\
 \uparrow & & \uparrow \\
 \underline{E} & & \overline{U} \\
 & \leftarrow & H
\end{array}
= \text{FVprt}
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K_1}}}} \cup \overline{\overbrace{\overbrace{\overbrace{K_2}}}} & \\
 & \uparrow \quad \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
 ||| ^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{\underline{A}}}} & & \overline{\overline{\overline{T}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{S}}} & & \overline{\overline{Y}} \\
 \uparrow & & \uparrow \\
 \underline{E} & & \overline{U} \\
 & \leftarrow & H
\end{array}
\quad \text{(A.3 .13),}
$$

$$
\mathrm{FVprt}\;
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G_1}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S}} & & \overline{\overline{Y}} \\
 \uparrow & & \uparrow \\
 \underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
+\;\mathrm{FVprt}\;
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G_2}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S}} & & \overline{\overline{Y}} \\
 \uparrow & & \uparrow \\
 \underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
=\;\mathrm{FVprt}\;
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G_1}}} \cup \overbrace{\overbrace{\overbrace{G_2}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S}} & & \overline{\overline{Y}} \\
 \uparrow & & \uparrow \\
 \underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
\quad \text{(A.3 .13.1),}
$$

$$\mathrm{FVprt}\begin{array}{ccc} & \vdots & \\ & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{G}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overline{F_1}}}} & \\ / & & \backslash \\ |||^{-1} & & ||| \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\ \uparrow & & \uparrow \\ \underline{\underline{S}} & & \overline{\overline{Y}} \\ \uparrow & & \uparrow \\ \underline{E} & & \overline{U} \\ & & \uparrow \\ & \leftarrow & H \end{array} + \mathrm{FVprt}\begin{array}{ccc} & \vdots & \\ & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{G}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overline{F_2}}}} & \\ / & & \backslash \\ |||^{-1} & & ||| \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\ \uparrow & & \uparrow \\ \underline{\underline{S}} & & \overline{\overline{Y}} \\ \uparrow & & \uparrow \\ \underline{E} & & \overline{U} \\ & & \uparrow \\ & \leftarrow & H \end{array} = \mathrm{FVprt}\begin{array}{ccc} & \vdots & \\ & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{G}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overline{F_1}}}} \cup \overline{\overline{\overline{\overline{F_2}}}} & \\ / & & \backslash \\ |||^{-1} & & ||| \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\ \uparrow & & \uparrow \\ \underline{\underline{S}} & & \overline{\overline{Y}} \\ \uparrow & & \uparrow \\ \underline{E} & & \overline{U} \\ & & \uparrow \\ & \leftarrow & H \end{array} \quad \text{(A.3 .13.2),}$$

$$
\mathrm{FVprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A_1}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
+\ \mathrm{FVprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A_2}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
=\ \mathrm{FVprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 / & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A_1}}} \cup \underline{\underline{\underline{A_2}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
\quad (A.3\ .13.3),
$$

$$\mathrm{FVprt}\begin{array}{ccc} & \cdots & \\ & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{G}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overline{F}}}} & \\ / & & \backslash \\ |||^{-1} & & ||| \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{\underline{A}}}} & & \overline{\overline{\overline{T}}} \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{S_1}}} & & \overline{\overline{Y}} \\ \uparrow & & \uparrow \\ \underline{E} & & \overline{U} \\ & & \uparrow \\ & \leftarrow & H \end{array} + \mathrm{FVprt}\begin{array}{ccc} & \cdots & \\ & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{G}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overline{F}}}} & \\ / & & \backslash \\ |||^{-1} & & ||| \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{\underline{A}}}} & & \overline{\overline{\overline{T}}} \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{S_2}}} & & \overline{\overline{Y}} \\ \uparrow & & \uparrow \\ \underline{E} & & \overline{U} \\ & & \uparrow \\ & \leftarrow & H \end{array} = \mathrm{FVprt}\begin{array}{ccc} & \cdots & \\ & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{G}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overline{F}}}} & \\ / & & \backslash \\ |||^{-1} & & ||| \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{\underline{A}}}} & & \overline{\overline{\overline{T}}} \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{S_1}}} \cup \underline{\underline{\underline{S_2}}} & & \overline{\overline{Y}} \\ \uparrow & & \uparrow \\ \underline{E} & & \overline{U} \\ & & \uparrow \\ & \leftarrow & H \end{array} \quad \text{(A.3 .13.4),}$$

$$
\mathrm{FVprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 & & \backslash \\
/ & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{T}}} \\
\underline{\underline{\underline{A}}} & & \uparrow \\
\uparrow & & \overline{\overline{Y}} \\
\underline{\underline{S}} & & \uparrow \\
\uparrow & & \overline{U} \\
\underline{E_1} & & \uparrow \\
 & \leftarrow & H
\end{array}
+\mathrm{FVprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 & & \backslash \\
/ & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{T}}} \\
\underline{\underline{\underline{A}}} & & \uparrow \\
\uparrow & & \overline{\overline{Y}} \\
\underline{\underline{S}} & & \uparrow \\
\uparrow & & \overline{U} \\
\underline{E_2} & & \uparrow \\
 & \leftarrow & H
\end{array}
=\mathrm{FVprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
 & & \backslash \\
/ & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{T}}} \\
\underline{\underline{\underline{A}}} & & \uparrow \\
\uparrow & & \overline{\overline{Y}} \\
\underline{\underline{S}} & & \uparrow \\
\uparrow & & \overline{U} \\
\underline{E_1} \cup \underline{E_2} & & \uparrow \\
 & \leftarrow & H
\end{array}
\quad \text{(A.3 .13.5),}
$$

$$\mathrm{FVprt}\begin{array}{c} \cdots \\ \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} \\ \uparrow \\ \overline{\overbrace{\overbrace{\overbrace{K}}}} \\ \uparrow \\ \overbrace{\overbrace{\overbrace{G}}} \\ \uparrow \\ \overline{\overline{\overline{\overline{F}}}} \\ / \qquad \backslash \\ \begin{array}{cc} |||^{-1} & ||| \\ \uparrow & \uparrow \\ \underline{\underline{\underline{A}}} & \overline{\overline{\overline{T_1}}} \\ \uparrow & \uparrow \\ \underline{\underline{S}} & \overline{\overline{Y}} \\ \uparrow & \uparrow \\ \underline{E} & \overline{U} \\ & \uparrow \\ \leftarrow & H \end{array} \end{array} + \mathrm{FVprt}\begin{array}{c} \cdots \\ \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} \\ \uparrow \\ \overline{\overbrace{\overbrace{\overbrace{K}}}} \\ \uparrow \\ \overbrace{\overbrace{\overbrace{G}}} \\ \uparrow \\ \overline{\overline{\overline{\overline{F}}}} \\ / \qquad \backslash \\ \begin{array}{cc} |||^{-1} & ||| \\ \uparrow & \uparrow \\ \underline{\underline{\underline{A}}} & \overline{\overline{\overline{T_2}}} \\ \uparrow & \uparrow \\ \underline{\underline{S}} & \overline{\overline{Y}} \\ \uparrow & \uparrow \\ \underline{E} & \overline{U} \\ & \uparrow \\ \leftarrow & H \end{array} \end{array} = \mathrm{FVprt}\begin{array}{c} \cdots \\ \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} \\ \uparrow \\ \overline{\overbrace{\overbrace{\overbrace{K}}}} \\ \uparrow \\ \overbrace{\overbrace{\overbrace{G}}} \\ \uparrow \\ \overline{\overline{\overline{\overline{F}}}} \\ / \qquad \backslash \\ \begin{array}{cc} |||^{-1} & ||| \\ \uparrow & \uparrow \\ \underline{\underline{\underline{A}}} & \overline{\overline{\overline{T_1}}} \cup \overline{\overline{\overline{T_2}}} \\ \uparrow & \uparrow \\ \underline{\underline{S}} & \overline{\overline{Y}} \\ \uparrow & \uparrow \\ \underline{E} & \overline{U} \\ & \uparrow \\ \leftarrow & H \end{array} \end{array} \quad (\text{A.3 .13.6}),$$

$$
\mathrm{FVprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\widetilde{\widetilde{\widetilde{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\widetilde{\widetilde{\widetilde{K}}}} & \\
 & \uparrow & \\
 & \widetilde{\widetilde{\widetilde{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y_1}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
+\mathrm{FVprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\widetilde{\widetilde{\widetilde{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\widetilde{\widetilde{\widetilde{K}}}} & \\
 & \uparrow & \\
 & \widetilde{\widetilde{\widetilde{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y_2}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
=\mathrm{FVprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\widetilde{\widetilde{\widetilde{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\widetilde{\widetilde{\widetilde{K}}}} & \\
 & \uparrow & \\
 & \widetilde{\widetilde{\widetilde{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y_1}} \cup \overline{\overline{Y_2}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
\quad (\text{A.3 .13.7}),
$$

$$
\text{FVprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U_1} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
+\text{FVprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U_2} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
=\text{FVprt}\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U_1}\cup\overline{U_2} \\
 & & \uparrow \\
 & \leftarrow & H
\end{array}
\quad \text{(A.3 .13.8),}
$$

$$
\text{FVprt}\begin{array}{ccc}
 & \vdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{\underline{A}}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{S}}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H_1
\end{array}
+\text{FVprt}\begin{array}{ccc}
 & \vdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{\underline{A}}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{S}}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H_2
\end{array}
=\text{FVprt}\begin{array}{ccc}
 & \vdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F}}}} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{\underline{A}}}} & & \overline{\overline{\overline{T}}} \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{S}}} & & \overline{\overline{Y}} \\
\uparrow & & \uparrow \\
\underline{E} & & \overline{U} \\
 & & \uparrow \\
 & \leftarrow & H_1 \cup H_2
\end{array}
$$

(A.3 .13.9).

We consider the following self-type FVprt-structures of the second type:

$$\overline{\overline{\overline{Q}}} \to \overbrace{Q} \to \overbrace{\overbrace{Q}} \to \overbrace{\overbrace{\overbrace{Q}}} \to \cdots$$

FVprt (A.3 .14),

$$|||^{-1} \leftarrow \underline{\underline{\underline{Q}}} \leftarrow \underline{\underline{Q}} \leftarrow \underline{Q} \leftarrow Q \to \overline{Q} \to \overline{\overline{Q}} \to \overline{\overline{\overline{Q}}} \to |||$$

$$
\begin{array}{ccc}
 & \vdots & \\
 & \overline{\overline{\overset{\frown\frown\frown}{A}}} & \\
 & \uparrow & \\
 & \overline{\overset{\frown\frown\frown}{Q}} & \\
 & \uparrow & \\
 & \overset{\frown\frown\frown}{Q} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{Q}}} & \\
\text{FVprt} & & (\text{A.3 .14.1}), \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{Q}}} & & \overline{\overline{\overline{Q}}} \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{\overline{Q}} \\
\uparrow & & \uparrow \\
\underline{Q} & & \overline{Q} \\
 & & \uparrow \\
 & \leftarrow & a
\end{array}
$$

denote $FV_7 f\, A;Q;a,\ a \subset$ A,

$$\overline{\overline{\overline{Q}}} \to \widetilde{Q} \to \widetilde{\overline{Q}} \to \widetilde{a} \cdots$$

FVprt $\qquad\qquad\qquad \backslash \qquad\qquad$ (A.3 .15),

$$
\begin{array}{ccc}
/ & & |||\\
|||^{-1} & & \uparrow\\
\uparrow & & \overline{\overline{\overline{Q}}}\\
\underline{\underline{\underline{Q}}} & & \uparrow\\
\uparrow & & \overline{\overline{Q}}\\
\underline{\underline{Q}} & & \uparrow\\
\uparrow & & \overline{Q}\\
\underline{Q} & & \uparrow\\
 & \leftarrow & str\ A
\end{array}
$$

denote $FV_8 fa;Q;A$, $a \subset$ A,

$$
\begin{array}{ccccc}
 & & \overline{\overline{\overbrace{\overbrace{\overbrace{a}}}}}\ \cdots & & \\
 & & \uparrow & & \\
 & & \overline{\overbrace{\overbrace{\overbrace{A}}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{\overbrace{A}}} & & \\
 & & \uparrow & & \\
 & & \overline{\overline{\overline{\overline{Q}}}} & & \\
\text{FVprt} & & & \backslash & \text{(A.3 .16),} \\
 & / & & ||| & \\
 & |||^{-1} & & \uparrow & \\
 & \uparrow & & \overline{\overline{\overline{Q}}} & \\
 & \underline{\underline{\underline{Q}}} & & \uparrow & \\
 & \uparrow & & \overline{\overline{Q}} & \\
 & \underline{\underline{Q}} & & \uparrow & \\
 & \uparrow & & \overline{Q} & \\
 & \underline{Q} & & \uparrow & \\
 & & \leftarrow & str\ A &
\end{array}
$$

and any other possible options of self for (A.3 .8) etc.

Definition A.3 .3. The dynamic operator (A.3 .10) we shall call tprFV – element, (A.3 .11) we shall call trFV – element.

It’s allowed to add tprFV – elements:

$$
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M_1}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{B}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & \\
 & \ldots &
\end{array}
\text{FVprt} +
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M_2}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{B}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & \\
 & \ldots &
\end{array}
\text{FVprt} =
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M_1}}} \cup \underline{\underline{\underline{M_2}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{B}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & \\
 & \ldots &
\end{array}
\text{FVprt} \quad (\text{A.3 .17}),
$$

$$
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q_1}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & \overline{\overline{\overline{\overline{B}}}} & / \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O}}}} & \\
 & \dots &
\end{array}
\text{FVprt} \; + \;
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q_2}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & \overline{\overline{\overline{\overline{B}}}} & / \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O}}}} & \\
 & \dots &
\end{array}
\text{FVprt} =
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q_1}} \cup \underline{\underline{Q_2}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & \overline{\overline{\overline{\overline{B}}}} & / \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O}}}} & \\
 & \dots &
\end{array}
\text{FVprt (A.3 .18),}
$$

$$
\begin{array}{ccccccccccc}
\underline{D_1} & \leftarrow & C & & \underline{D_2} & \leftarrow & C & & \underline{D_1} \cup \underline{D_2} & \leftarrow & C \\
\uparrow & & \uparrow & & \uparrow & & \uparrow & & \uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} & & \underline{\underline{Q}} & & \overline{R} & & \underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow & & \uparrow & & \uparrow & & \uparrow & & \uparrow \\
 & & \overline{\overline{P}} & & & & \overline{\overline{P}} & & & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow & & \underline{\underline{\underline{M}}} & & \uparrow & & \underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} & & \uparrow & & \overline{\overline{\overline{L}}} & & \uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow & & |||^{-1} & & \uparrow & & |||^{-1} & & \uparrow \\
\backslash & & ||| & & \backslash & & ||| & & \backslash & & ||| \\
 & & / \text{ FVprt} & + & & & / \text{ FVprt} & = & & & / \text{ FVprt} \\
\overline{\overline{\overline{\overline{B}}}} & & & & \overline{\overline{\overline{\overline{B}}}} & & & & \overline{\overline{\overline{\overline{B}}}} & & \\
\uparrow & & & & \uparrow & & & & \uparrow & & \\
\overbrace{\overbrace{\overbrace{W}}} & & & & \overbrace{\overbrace{\overbrace{W}}} & & & & \overbrace{\overbrace{\overbrace{W}}} & & \\
\uparrow & & & & \uparrow & & & & \uparrow & & \\
\overline{\overbrace{\overbrace{\overbrace{J}}}} & & & & \overline{\overbrace{\overbrace{\overbrace{J}}}} & & & & \overline{\overbrace{\overbrace{\overbrace{J}}}} & & \\
\uparrow & & & & \uparrow & & & & \uparrow & & \\
\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & & & & \overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & & & & \overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & & \\
\ldots & & & & \ldots & & & & \ldots & &
\end{array}
$$

(A.3 .18.1),

$$
\begin{array}{ccc}
\underline{D} & \leftarrow & C_1 \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
\overline{\overline{\overline{\overline{B}}}} & & \\
\uparrow & & \\
\overbrace{\overbrace{\overbrace{W}}} & & \\
\uparrow & & \\
\overline{\overbrace{\overbrace{J}}} & & \\
\uparrow & & \\
\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & & \\
\ldots & &
\end{array}
\text{ FVprt } +
\begin{array}{ccc}
\underline{D} & \leftarrow & C_2 \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
\overline{\overline{\overline{\overline{B}}}} & & \\
\uparrow & & \\
\overbrace{\overbrace{\overbrace{W}}} & & \\
\uparrow & & \\
\overline{\overbrace{\overbrace{J}}} & & \\
\uparrow & & \\
\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & & \\
\ldots & &
\end{array}
\text{ FVprt } =
\begin{array}{ccc}
\underline{D} & \leftarrow & C_1 \cup C_2 \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
\overline{\overline{\overline{\overline{B}}}} & & \\
\uparrow & & \\
\overbrace{\overbrace{\overbrace{W}}} & & \\
\uparrow & & \\
\overline{\overbrace{\overbrace{J}}} & & \\
\uparrow & & \\
\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & & \\
\ldots & &
\end{array}
\text{ FVprt (A.3 .18.2),}
$$

$$
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R_1} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}}} & \\
 & \dots &
\end{array}
\text{FVprt} +
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R_2} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}}} & \\
 & \dots &
\end{array}
\text{FVprt} =
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R_1} \cup \overline{R_2} \\
\uparrow & & \uparrow \quad \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}}} & \\
 & \dots &
\end{array}
\text{FVprt} \quad (\text{A.3 .18.3}),
$$

$$
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P_1}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}}} & \\
 & \ldots &
\end{array}
\text{FVprt} \; + \;
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P_2}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}}} & \\
 & \ldots &
\end{array}
\text{FVprt} \; = \;
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P_1}} \cup \overline{\overline{P_2}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}}} & \\
 & \ldots &
\end{array}
\text{FVprt} \quad (\text{A.3 .18.4}),
$$

$$\begin{array}{ccc} \underline{D} & \leftarrow & C \\ \uparrow & & \uparrow \\ \underline{\underline{Q}} & & \overline{R} \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{M}}} & & \overline{\overline{P}} \\ \uparrow & & \uparrow \\ |||^{-1} & & \overline{\overline{\overline{L_1}}} \\ \backslash & & \uparrow \\ & & ||| \\ & & / \\ & \overline{\overline{\overline{\overline{B}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{W}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{\overbrace{J}}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}}} & \\ & \dots & \end{array} \text{FVprt} + \begin{array}{ccc} \underline{D} & \leftarrow & C \\ \uparrow & & \uparrow \\ \underline{\underline{Q}} & & \overline{R} \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{M}}} & & \overline{\overline{P}} \\ \uparrow & & \uparrow \\ |||^{-1} & & \overline{\overline{\overline{L_2}}} \\ \backslash & & \uparrow \\ & & ||| \\ & & / \\ & \overline{\overline{\overline{\overline{B}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{W}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{\overbrace{J}}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}}} & \\ & \dots & \end{array} \text{FVprt} = \begin{array}{ccc} \underline{D} & \leftarrow & C \\ \uparrow & & \uparrow \\ \underline{\underline{Q}} & & \overline{R} \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{M}}} & & \overline{\overline{P}} \\ \uparrow & & \uparrow \\ |||^{-1} & & \overline{\overline{\overline{L_1}}} \cup \overline{\overline{\overline{L_2}}} \\ \backslash & & \uparrow \\ & & ||| \\ & & / \\ & \overline{\overline{\overline{\overline{B}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{\overbrace{W}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{\overbrace{J}}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}}} & \\ & \dots & \end{array} \text{FVprt (A.3 .18.5),}$$

$$
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B_1}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & \\
 & \dots &
\end{array}
\text{FVprt} \; + \;
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B_2}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & \\
 & \dots &
\end{array}
\text{FVprt} \; = \;
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B_1}}}} \cup \overline{\overline{\overline{\overline{B_2}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & \\
 & \dots &
\end{array}
\text{FVprt (A.3 .18.6),}
$$

$$\begin{array}{ccc} \underline{D} & \leftarrow & C \\ \uparrow & & \uparrow \\ \underline{\underline{Q}} & & \overline{R} \\ \uparrow & & \uparrow \\ & & \overline{\overline{P}} \\ \underline{\underline{\underline{M}}} & & \uparrow \\ \uparrow & & \overline{\overline{\overline{L}}} \\ |||^{-1} & & \uparrow \\ \backslash & & ||| \\ & & / \\ & \overline{\overline{\overline{\overline{B}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{W_1}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{J}}} & \\ & \uparrow & \\ & \overline{\overline{\overbrace{\overbrace{O}}}} & \\ & \ldots & \end{array} \text{FVprt} + \begin{array}{ccc} \underline{D} & \leftarrow & C \\ \uparrow & & \uparrow \\ \underline{\underline{Q}} & & \overline{R} \\ \uparrow & & \uparrow \\ & & \overline{\overline{P}} \\ \underline{\underline{\underline{M}}} & & \uparrow \\ \uparrow & & \overline{\overline{\overline{L}}} \\ |||^{-1} & & \uparrow \\ \backslash & & ||| \\ & & / \\ & \overline{\overline{\overline{\overline{B}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{W_2}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{J}}} & \\ & \uparrow & \\ & \overline{\overline{\overbrace{\overbrace{O}}}} & \\ & \ldots & \end{array} \text{FVprt} = \begin{array}{ccc} \underline{D} & \leftarrow & C \\ \uparrow & & \uparrow \\ \underline{\underline{Q}} & & \overline{R} \\ \uparrow & & \uparrow \\ & & \overline{\overline{P}} \\ \underline{\underline{\underline{M}}} & & \uparrow \\ \uparrow & & \overline{\overline{\overline{L}}} \\ |||^{-1} & & \uparrow \\ \backslash & & ||| \\ & & / \\ & \overline{\overline{\overline{\overline{B}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{W_1}} \cup \overbrace{\overbrace{W_2}} & \\ & \uparrow \quad \uparrow & \\ & \overline{\overbrace{\overbrace{J}}} & \\ & \uparrow & \\ & \overline{\overline{\overbrace{\overbrace{O}}}} & \\ & \ldots & \end{array} \text{FVprt} \quad (A.3\ .18.7),$$

$$
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{J_1}}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & \\
 & \ldots &
\end{array}
\text{FVprt} \; + \;
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{J_2}}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & \\
 & \ldots &
\end{array}
\text{FVprt} \; = \;
\begin{array}{ccc}
\underline{D} & \leftarrow & C \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{R} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P}} \\
\underline{\underline{\underline{M}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{W}}} & \\
 & \uparrow & \\
\overline{\overbrace{\overbrace{\overbrace{J_1}}}} & \cup & \overline{\overbrace{\overbrace{\overbrace{J_2}}}} \\
\uparrow & & \uparrow \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{O}}}}} & \\
 & \ldots &
\end{array}
\text{FVprt (A.3 .18.8),}
$$

$$\begin{array}{ccc} \underline{D} & \leftarrow & C \\ \uparrow & & \uparrow \\ \underline{\underline{Q}} & & \overline{R} \\ \uparrow & & \uparrow \\ & & \overline{\overline{P}} \\ \underline{\underline{\underline{M}}} & & \uparrow \\ \uparrow & & \overline{\overline{\overline{L}}} \\ |||^{-1} & & \uparrow \\ \backslash & & ||| \\ & \overline{\overline{\overline{\overline{B}}}} & / \\ & \uparrow & \\ & \overbrace{\overbrace{W}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{\overbrace{J}}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{O_1}}}}}} & \\ & \dots & \end{array} \text{FVprt} + \begin{array}{ccc} \underline{D} & \leftarrow & C \\ \uparrow & & \uparrow \\ \underline{\underline{Q}} & & \overline{R} \\ \uparrow & & \uparrow \\ & & \overline{\overline{P}} \\ \underline{\underline{\underline{M}}} & & \uparrow \\ \uparrow & & \overline{\overline{\overline{L}}} \\ |||^{-1} & & \uparrow \\ \backslash & & ||| \\ & \overline{\overline{\overline{\overline{B}}}} & / \\ & \uparrow & \\ & \overbrace{\overbrace{W}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{\overbrace{J}}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{O_2}}}}}} & \\ & \dots & \end{array} \text{FVprt} = \begin{array}{ccc} \underline{D} & \leftarrow & C \\ \uparrow & & \uparrow \\ \underline{\underline{Q}} & & \overline{R} \\ \uparrow & & \uparrow \\ & & \overline{\overline{P}} \\ \underline{\underline{\underline{M}}} & & \uparrow \\ \uparrow & & \overline{\overline{\overline{L}}} \\ |||^{-1} & & \uparrow \\ \backslash & & ||| \\ & \overline{\overline{\overline{\overline{B}}}} & / \\ & \uparrow & \\ & \overbrace{\overbrace{W}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{\overbrace{J}}}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{O_1}}}}}} \cup \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{O_2}}}}}} & \\ & \dots & \end{array} \text{FVprt (A.3 .18.9).}$$

We consider the following self-type tprFV-structures:

$$\underline{Q} \quad \leftarrow \quad Q$$

$$\uparrow \qquad \uparrow$$

$$\underline{\underline{Q}} \qquad \overline{Q}$$

$$\uparrow \qquad \uparrow$$

$$\overline{\overline{Q}}$$

$$\underline{\underline{\underline{Q}}} \qquad \uparrow$$

$$\uparrow \qquad \overline{\overline{\overline{Q}}}$$

$$|||^{-1} \qquad \uparrow$$

$$\backslash \qquad |||$$

$/$ FVprt (A.3 .19),

$$\overline{\overline{\overline{\overline{Q}}}}$$

$$\uparrow$$

$$\widetilde{\widetilde{Q}}$$

$$\uparrow$$

$$\overline{\widetilde{\widetilde{Q}}}$$

$$\uparrow$$

$$\overline{\overline{\widetilde{\widetilde{Q}}}}$$

$$\vdots$$

$\underline{Q} \leftarrow str\ D$

$\uparrow \qquad \uparrow$

$\underline{\underline{Q}} \qquad \overline{Q}$

$\uparrow \qquad \uparrow$

$\underline{\underline{\underline{Q}}} \qquad \overline{\overline{Q}}$

$\uparrow \qquad \uparrow$

$|||^{-1} \qquad \overline{\overline{\overline{Q}}}$

$\qquad \uparrow$

$\qquad |||$

$\backslash \qquad /$ FVprt (A.3 .19.1),

$\overline{\overline{\overline{\overline{Q}}}}$

$\uparrow$

$\widetilde{\widetilde{\widetilde{Q}}}$

$\uparrow$

$\overline{\widetilde{\widetilde{\widetilde{Q}}}}$

$\uparrow$

$\overline{\overline{\widetilde{\widetilde{\widetilde{d}}}}}$

...

denote $FV_9 f d;Q;D$, $d \subset$ D,

$$\begin{array}{ccc}
\underline{Q} & \leftarrow & d \\
\uparrow & & \uparrow \\
\underline{\underline{Q}} & & \overline{Q} \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{Q}}} & & \overline{\overline{Q}} \\
\uparrow & & \uparrow \\
|||^{-1} & & \overline{\overline{\overline{Q}}} \\
\backslash & & \uparrow \\
& & ||| \\
& & /
\end{array}$$

FVprt (A.3 .20),

$$\begin{array}{c}
\overline{\overline{\overline{D}}} \\
\uparrow \\
\overbrace{Q} \\
\uparrow \\
\overline{\overbrace{Q}} \\
\uparrow \\
\overline{\overline{\overbrace{Q}}} \\
\cdots
\end{array}$$

denote $FV_{10}fD;Q;d$, $d \subset$ D,

and any other possible options of self for (A.3 .10) etc.

A.4 Dynamic FVprt – elements, self-type dynamic FVprt-structures

We considered FVprt – elements earlier. Here we consider dynamic FVprt – elements. We consider dynamic operators, whose elements change over time

$$
\begin{array}{cccccc}
\underline{D(t)} & \leftarrow & C(t) & & \ldots & \\
\uparrow & & \uparrow & & \overline{\overline{\overbrace{Z(t)}}} & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & \uparrow & \\
\uparrow & & \uparrow & & \overline{\overbrace{K(t)}} & \\
 & & \overline{\overline{P(t)}} & & \uparrow & \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & \overbrace{G(t)} & \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & \uparrow & \\
|||^{-1} & & \uparrow & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
\backslash & & ||| & & & \\
 & & / & \mathrm{FVprt}(t) & & \backslash \quad (A.4\ .1), \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & / & ||| & \\
\uparrow & & & |||^{-1} & \uparrow & \\
\overbrace{W(t)} & & & \uparrow & \overline{\overline{\overline{T(t)}}} & \\
\uparrow & & & \underline{\underline{\underline{A(t)}}} & \uparrow & \\
\overline{\overbrace{J(t)}} & & & \uparrow & \overline{\overline{Y(t)}} & \\
\uparrow & & & \underline{\underline{S(t)}} & \uparrow & \\
\overline{\overline{\overbrace{O(t)}}} & & & \uparrow & \overline{U(t)} & \\
\ldots & & & \underline{E(t)} & \uparrow & \\
 & & & & \leftarrow & H(t)
\end{array}
$$

where $\overline{\overline{\overbrace{Z(t)}}}$, $\overline{\overline{\overbrace{O(t)}}}$ - *parelf* levels of fuzzy Z(t) and fuzzy O(t) respectively, $\overline{\overbrace{J(t)}}$, $\overline{\overbrace{K(t)}}$ – singelf levels of fuzzy J(t) and fuzzy K(t) respectively, $\overbrace{G(t)}$, $\overbrace{W(t)}$ - paradoxical upper levels of fuzzy G(t) and fuzzy W(t) respectively, $\overline{\overline{\overline{\overline{F(t)}}}}$, $\overline{\overline{\overline{\overline{B(t)}}}}$ - paradoxical average levels of fuzzy F(t) and fuzzy B(t) respectively, $\overline{U(t)}$, $\overline{R(t)}$ - middle$_1$ levels of fuzzy U(t) and fuzzy R(t) respectively, $\underline{E(t)}$, $\underline{D(t)}$ - *ordinary energies exhibited* by fuzzy E(t), fuzzy D(t) respectively, $\underline{\underline{Q(t)}}$, $\underline{\underline{S(t)}}$ - first sublevel of fuzzy Q(t) and fuzzy S(t) respectively, $\underline{\underline{\underline{A(t)}}}$, $\underline{\underline{\underline{M(t)}}}$ - second sublevel of fuzzy A(t) and fuzzy M(t) respectively. The result of this process will be described by the expression

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & \cdots & & \\
\uparrow & & \uparrow & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & \uparrow & & \\
\uparrow & & \uparrow & & \overline{\overbrace{\overbrace{K(t)}}} & & \\
 & & \overline{\overline{P(t)}} & & \uparrow & & \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & \overbrace{\overbrace{G(t)}} & & \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & \uparrow & & \\
|||^{-1} & & \uparrow & & \overline{\overline{\overline{\overline{F(t)}}}} & & \\
\backslash & & ||| & & & & \\
 & & / \ \mathrm{FVrt}(t) & & & \backslash & (A.4\ .2). \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & / & & ||| & \\
\uparrow & & & |||^{-1} & & \uparrow & \\
\overbrace{\overbrace{W(t)}} & & & \uparrow & & \overline{\overline{\overline{T(t)}}} & \\
\uparrow & & & \underline{\underline{\underline{A(t)}}} & & \uparrow & \\
\overline{\overbrace{\overbrace{J(t)}}} & & & \uparrow & & \overline{\overline{Y(t)}} & \\
\uparrow & & & \underline{\underline{S(t)}} & & \uparrow & \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & \uparrow & & \overline{U(t)} & \\
\cdots & & & \underline{E(t)} & & \uparrow & \\
 & & & & \leftarrow & H(t) &
\end{array}
$$

Definition A.4 .2.1. The dynamic operator (A.4 .2.1) we shall call dynamic FVprt – element of the first type, (A.4 .2.2) we shall call dynamic FVrt – element of the first type.

It’s allowed to add dynamic FVprt – elements:

$$
\begin{array}{ccccc}
\underline{D(t)} & \leftarrow & C(t) & & \cdots \\
\uparrow & & \uparrow & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & \uparrow \\
\uparrow & & \uparrow & & \overbrace{\overbrace{\overline{K(t)}}} \\
 & & \overline{\overline{P(t)}} & & \uparrow \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & \overbrace{\overbrace{G(t)}} \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & \uparrow \\
|||^{-1} & & \uparrow & & \overline{\overline{\overline{\overline{F(t)}}}} \\
\backslash & & ||| & & \backslash \qquad + \\
 & & / \quad \mathrm{FVprt}(t) & / & ||| \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & |||^{-1} & \uparrow \\
\uparrow & & & \uparrow & \overline{\overline{\overline{T(t)}}} \\
\overbrace{\overbrace{W(t)}} & & & \underline{\underline{\underline{A(t)}}} & \uparrow \\
\uparrow & & & \uparrow & \overline{\overline{Y(t)}} \\
\overbrace{\overbrace{\overline{J(t)}}} & & & \underline{\underline{S(t)}} & \uparrow \\
\uparrow & & & \uparrow & \overline{U(t)} \\
\overbrace{\overbrace{\overline{\overline{O_1(t)}}}} & & & \underline{E(t)} & \uparrow \\
\cdots & & & & \leftarrow \quad H(t)
\end{array}
$$

$$\underline{D(t)} \leftarrow C(t) \qquad \cdots$$

$$\uparrow \qquad \uparrow \qquad \overbrace{\overbrace{\overline{\overline{Z(t)}}}}$$

$$\underline{\underline{Q(t)}} \qquad \overline{R(t)} \qquad \uparrow$$

$$\uparrow \qquad \uparrow \qquad \overbrace{\overbrace{\overline{K(t)}}}$$

$$\underline{\underline{\underline{M(t)}}} \qquad \overline{\overline{P(t)}} \qquad \uparrow$$

$$\uparrow \qquad \uparrow \qquad \overbrace{\overbrace{G(t)}}$$

$$|||^{-1} \qquad \overline{\overline{\overline{L(t)}}} \qquad \uparrow$$

$$\backslash \qquad \uparrow \qquad \overline{\overline{\overline{\overline{F(t)}}}}$$

$$||| \qquad \backslash \qquad =$$

$$/ \quad \mathrm{FVprt}(t)$$

$$\overline{\overline{\overline{\overline{B(t)}}}} \qquad / \qquad |||$$

$$\uparrow \qquad |||^{-1} \qquad \uparrow$$

$$\overbrace{\overbrace{W(t)}} \qquad \uparrow \qquad \overline{\overline{\overline{T(t)}}}$$

$$\uparrow \qquad \underline{\underline{\underline{A(t)}}} \qquad \uparrow$$

$$\overline{\overbrace{\overbrace{J(t)}}} \qquad \uparrow \qquad \overline{\overline{Y(t)}}$$

$$\uparrow \qquad \underline{\underline{S(t)}} \qquad \uparrow$$

$$\overline{\overline{\overbrace{\overbrace{O_2(t)}}}} \qquad \uparrow \qquad \overline{U(t)}$$

$$\cdots \qquad \underline{E(t)} \qquad \uparrow$$

$$\leftarrow H(t)$$

$$
\begin{array}{ccccc}
\underline{D(t)} & \leftarrow & C(t) & & \cdots \\
\uparrow & & \uparrow & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & \uparrow \\
\uparrow & & \uparrow & & \overline{\overbrace{\overbrace{K(t)}}} \\
 & & \overline{\overline{P(t)}} & & \uparrow \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & \overbrace{\overbrace{G(t)}} \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & \uparrow \\
|||^{-1} & & \uparrow & & \overline{\overline{\overline{\overline{F(t)}}}} \\
\backslash & & ||| & & \\
 & & / & \mathrm{FVprt}(t) &
\end{array}
$$

$$
\begin{array}{ccc}
\overline{\overline{\overline{\overline{B(t)}}}} & & \backslash \\
\uparrow & / & ||| \\
\overbrace{\overbrace{W(t)}} & |||^{-1} & \uparrow \\
\uparrow & \uparrow & \overline{\overline{\overline{T(t)}}} \\
\overline{\overbrace{\overbrace{J(t)}}} & \underline{\underline{\underline{A(t)}}} & \uparrow \\
\uparrow & \uparrow & \overline{\overline{Y(t)}} \\
\overline{\overline{\overbrace{\overbrace{O_1(t)}}}} \cup \overline{\overline{\overbrace{\overbrace{O_2(t)}}}} & \underline{\underline{S(t)}} & \uparrow \\
\cdots & \uparrow & \overline{U(t)} \\
 & \underline{E(t)} & \uparrow \\
 & & \leftarrow \quad H(t)
\end{array}
$$

(A.4 .2.2.1),

$$\underline{D(t)} \leftarrow C(t)$$

$$\uparrow \qquad \uparrow$$

$$\underline{\underline{Q(t)}} \qquad \overline{R(t)}$$

$$\uparrow \qquad \uparrow$$

$$\overline{\overline{P(t)}}$$

$$\uparrow$$

$$\underline{\underline{\underline{M(t)}}} \qquad \overline{\overline{\overline{L(t)}}}$$

$$\uparrow \qquad \uparrow$$

$$|||^{-1} \qquad |||$$

$$\backslash \qquad / \quad \mathrm{FVprt}(t)$$

$$\overline{\overline{\overline{\overline{B(t)}}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{W(t)}}$$

$$\uparrow$$

$$\overbrace{\overbrace{\overline{J_1(t)}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{\overline{\overline{O(t)}}}}$$

$$\ldots$$

$$\ldots$$

$$\overbrace{\overbrace{\overline{\overline{Z(t)}}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{\overline{K(t)}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{G(t)}}$$

$$\uparrow$$

$$\overline{\overline{\overline{\overline{F(t)}}}}$$

$$/ \qquad \backslash \qquad +$$

$$|||^{-1} \qquad |||$$

$$\uparrow \qquad \uparrow$$

$$\underline{\underline{\underline{A(t)}}} \qquad \overline{\overline{\overline{T(t)}}}$$

$$\uparrow \qquad \uparrow$$

$$\underline{\underline{S(t)}} \qquad \overline{\overline{Y(t)}}$$

$$\uparrow \qquad \uparrow$$

$$\underline{E(t)} \qquad \overline{U(t)}$$

$$\uparrow$$

$$\leftarrow H(t)$$

$$\underline{D(t)} \quad \leftarrow \quad C(t) \qquad\qquad \dots$$

$$\uparrow \qquad\qquad \uparrow \qquad\qquad \overbrace{\overbrace{\overline{\overline{Z(t)}}}}$$

$$\underline{\underline{Q(t)}} \qquad \overline{R(t)} \qquad \uparrow$$

$$\uparrow \qquad \uparrow \qquad \overbrace{\overline{K(t)}}$$

$$\underline{\underline{\underline{M(t)}}} \qquad \overline{\overline{P(t)}} \qquad \uparrow$$

$$\uparrow \qquad \uparrow \qquad \overbrace{G(t)}$$

$$|||^{-1} \qquad \overline{\overline{\overline{L(t)}}} \qquad \uparrow$$

$$\backslash \qquad \uparrow \qquad \overline{\overline{\overline{\overline{F(t)}}}}$$

$$||| \qquad\qquad \backslash \qquad =$$

$$/ \quad \mathrm{FVprt}(t)$$

$$\overline{\overline{\overline{\overline{B(t)}}}} \qquad / \qquad |||$$

$$\uparrow \qquad |||^{-1} \qquad \uparrow$$

$$\overbrace{\overbrace{W(t)}} \qquad \uparrow \qquad \overline{\overline{\overline{T(t)}}}$$

$$\uparrow \qquad \underline{\underline{\underline{A(t)}}} \qquad \uparrow$$

$$\overbrace{\overbrace{\overline{J_2(t)}}} \qquad \uparrow \qquad \overline{\overline{Y(t)}}$$

$$\uparrow \qquad \underline{\underline{S(t)}} \qquad \uparrow$$

$$\overbrace{\overbrace{\overline{\overline{O(t)}}}} \qquad \uparrow \qquad \overline{U(t)}$$

$$\dots \qquad \underline{E(t)} \qquad \uparrow$$

$$\leftarrow \quad H(t)$$

$$
\begin{array}{ccccc}
\underline{D(t)} \leftarrow & C(t) & & \overline{\overline{\overbrace{\overbrace{\dots}}}} & \\
\uparrow & \uparrow & & Z(t) & \\
\underline{\underline{Q(t)}} & \overline{R(t)} & & \uparrow & \\
\uparrow & \uparrow & & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \overline{\overline{P(t)}} & & \uparrow & \\
\underline{\underline{\underline{M(t)}}} & \uparrow & & \overbrace{\overbrace{G(t)}} & \\
\uparrow & \overline{\overline{\overline{L(t)}}} & & \uparrow & \\
|||^{-1} & \uparrow & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
\backslash & ||| & & & \backslash \\
 & / \; \mathrm{FVprt}(t) & & & \\
\overline{\overline{\overline{\overline{B(t)}}}} & & / & & ||| \\
\uparrow & & |||^{-1} & & \uparrow \\
\overbrace{\overbrace{W(t)}} & & \uparrow & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & \underline{\underline{\underline{A(t)}}} & & \uparrow \\
\overline{\overbrace{\overbrace{J_1(t)}}} \cup \overline{\overbrace{\overbrace{J_2(t)}}} & & \uparrow & & \overline{\overline{Y(t)}} \\
\uparrow \quad \uparrow & & \underline{\underline{S(t)}} & & \uparrow \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & \uparrow & & \overline{U(t)} \\
\dots & & \underline{E(t)} & & \uparrow \\
 & & & \leftarrow & H(t)
\end{array}
$$

(A.4 .2.2.2),

$$\underline{D(t)} \leftarrow C(t)$$

$$\begin{array}{c} \underline{D(t)} \\ \uparrow \\ \underline{\underline{Q(t)}} \\ \uparrow \\ \underline{\underline{\underline{M(t)}}} \\ \uparrow \\ |||^{-1} \\ \backslash \end{array} \qquad \begin{array}{c} C(t) \\ \uparrow \\ \overline{R(t)} \\ \uparrow \\ \overline{\overline{P(t)}} \\ \uparrow \\ \overline{\overline{\overline{L(t)}}} \\ \uparrow \\ ||| \\ / \end{array} \quad \mathrm{FVprt}(t) \qquad \begin{array}{c} \dots \\ \overline{\overline{\overbrace{\overbrace{Z(t)}}}} \\ \uparrow \\ \overline{\overbrace{\overbrace{K(t)}}} \\ \uparrow \\ \overbrace{\overbrace{G(t)}} \\ \uparrow \\ \overline{\overline{\overline{\overline{F(t)}}}} \\ \backslash \end{array} \qquad +$$

$$\begin{array}{c} \overline{\overline{\overline{\overline{B(t)}}}} \\ \uparrow \\ \overbrace{\overbrace{W_1(t)}} \\ \uparrow \\ \overline{\overbrace{\overbrace{J(t)}}} \\ \uparrow \\ \overline{\overline{\overbrace{\overbrace{O(t)}}}} \\ \dots \end{array} \qquad \begin{array}{c} / \\ |||^{-1} \\ \uparrow \\ \underline{\underline{\underline{A(t)}}} \\ \uparrow \\ \underline{\underline{S(t)}} \\ \uparrow \\ \underline{E(t)} \end{array} \qquad \begin{array}{c} ||| \\ \uparrow \\ \overline{\overline{\overline{T(t)}}} \\ \uparrow \\ \overline{\overline{Y(t)}} \\ \uparrow \\ \overline{U(t)} \\ \uparrow \\ H(t) \end{array}$$

$$\underline{E(t)} \leftarrow H(t)$$

$$
\begin{array}{cccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & & \cdots & \\
\uparrow & & \uparrow & & & & \overline{\overline{\overline{\overbrace{\overbrace{Z(t)}}}}} & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & & \uparrow & \\
\uparrow & & \uparrow & & & & \overline{\overline{\overbrace{\overbrace{K(t)}}}} & \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & & & \uparrow & \\
\uparrow & & \uparrow & & & & \overbrace{\overbrace{G(t)}} & \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} & & & & \uparrow & \\
\backslash & & \uparrow & & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 & & ||| & & & & \backslash & \\
 & & / & \mathrm{FVprt}(t) & & & & = \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & & & / & & ||| & \\
 & \uparrow & & & |||^{-1} & & \uparrow & \\
 & \overbrace{\overbrace{W_2(t)}} & & & \uparrow & & \overline{\overline{\overline{T(t)}}} & \\
 & \uparrow & & & \underline{\underline{\underline{A(t)}}} & & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & & & \uparrow & & \overline{\overline{Y(t)}} & \\
 & \uparrow & & & \underline{\underline{S(t)}} & & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & \uparrow & & \overline{U(t)} & \\
 & \cdots & & & \underline{E(t)} & & \uparrow & \\
 & & & & & \leftarrow & H(t) &
\end{array}
$$

$$
\begin{array}{cccccc}
\underline{D(t)} \;\leftarrow & C(t) & & & & \cdots \\
\uparrow & \uparrow & & & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} \\
\underline{\underline{Q(t)}} & \overline{R(t)} & & & & \uparrow \\
\uparrow & \uparrow & & & & \overbrace{\overbrace{\overline{K(t)}}} \\
 & \overline{\overline{P(t)}} & & & & \uparrow \\
\underline{\underline{\underline{M(t)}}} & \uparrow & & & & \overbrace{\overbrace{G(t)}} \\
\uparrow & \overline{\overline{\overline{L(t)}}} & & & & \uparrow \\
|||^{-1} & \uparrow & & & & \overline{\overline{\overline{\overline{F(t)}}}} \\
\backslash & ||| & & & & \backslash \\
 & / & \mathrm{FVprt}(t) & & & \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & / & & ||| \\
\uparrow & & & |||^{-1} & & \uparrow \\
\overbrace{\overbrace{W_1(t)}} \cup \overbrace{\overbrace{W_2(t)}} & & & \uparrow & & \overline{\overline{\overline{T(t)}}} \\
\uparrow \qquad \uparrow & & & \underline{\underline{\underline{A(t)}}} & & \uparrow \\
\overbrace{\overbrace{\overline{J(t)}}} & & & \uparrow & & \overline{\overline{Y(t)}} \\
\uparrow & & & \underline{\underline{S(t)}} & & \uparrow \\
\overbrace{\overbrace{\overline{\overline{O(t)}}}} & & & \uparrow & & \overline{U(t)} \\
\cdots & & & \underline{E(t)} & & \uparrow \\
 & & & & \leftarrow & H(t)
\end{array}
$$

(A.4 .2.2.3),

$$\underline{D(t)} \leftarrow C(t)$$

$$\uparrow \qquad \uparrow$$

$$\underline{\underline{Q(t)}} \qquad \overline{R(t)}$$

$$\uparrow \qquad \uparrow$$

$$\qquad \overline{\overline{P(t)}}$$

$$\underline{\underline{\underline{M(t)}}} \qquad \uparrow$$

$$\uparrow \qquad \overline{\overline{\overline{L(t)}}}$$

$$|||^{-1} \qquad \uparrow$$

$$\backslash \qquad |||$$

$$/ \quad \mathrm{FVprt}(t)$$

$$\overline{\overline{\overline{\overline{B_1(t)}}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{W(t)}}$$

$$\uparrow$$

$$\overbrace{\overbrace{\overline{J(t)}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{\overline{\overline{O(t)}}}}$$

$$\ldots$$

$$\ldots$$

$$\overbrace{\overbrace{\overline{\overline{Z(t)}}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{\overline{K(t)}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{G(t)}}$$

$$\uparrow$$

$$\overline{\overline{\overline{\overline{F(t)}}}}$$

$$/ \qquad \backslash \qquad +$$

$$|||^{-1} \qquad |||$$

$$\uparrow \qquad \uparrow$$

$$\underline{\underline{\underline{A(t)}}} \qquad \overline{\overline{\overline{T(t)}}}$$

$$\uparrow \qquad \uparrow$$

$$\underline{\underline{S(t)}} \qquad \overline{\overline{Y(t)}}$$

$$\uparrow \qquad \uparrow$$

$$\underline{E(t)} \qquad \overline{U(t)}$$

$$\qquad \uparrow$$

$$\leftarrow H(t)$$

$$
\begin{array}{cccccc}
\underline{D(t)} & \leftarrow & C(t) & & \overbrace{\overbrace{\overline{\overline{\overline{\dots}}}}} & \\
\uparrow & & \uparrow & & Z(t) & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & \uparrow & \\
\uparrow & & \uparrow & & \overbrace{\overbrace{\overline{\overline{K(t)}}}} & \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & \uparrow & \\
\uparrow & & \uparrow & & \overbrace{\overbrace{G(t)}} & \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} & & \uparrow & \\
\backslash & & \uparrow & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 & & ||| & & \backslash & = \\
 & & / \ \mathrm{FVprt}(t) & & ||| & \\
\overline{\overline{\overline{\overline{\overline{B_2(t)}}}}} & & / & & \uparrow & \\
\uparrow & & |||^{-1} & & \overline{\overline{\overline{T(t)}}} & \\
\overbrace{\overbrace{W(t)}} & & \uparrow & & \uparrow & \\
\uparrow & & \underline{\underline{\underline{A(t)}}} & & \overline{\overline{Y(t)}} & \\
\overbrace{\overbrace{\overline{J(t)}}} & & \uparrow & & \uparrow & \\
\uparrow & & \underline{\underline{S(t)}} & & \overline{U(t)} & \\
\overbrace{\overbrace{\overline{\overline{O(t)}}}} & & \uparrow & & \uparrow & \\
\dots & & \underline{E(t)} & \leftarrow & H(t) &
\end{array}
$$

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & & \cdots \\
\uparrow & & \uparrow & & & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & & \uparrow \\
\uparrow & & \uparrow & & & & \overbrace{\overbrace{\overline{K(t)}}} \\
 & & \overline{\overline{P(t)}} & & & & \uparrow \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & & & \overbrace{\overbrace{G(t)}} \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & & & \uparrow \\
|||^{-1} & & \uparrow & & & & \overline{\overline{\overline{\overline{F(t)}}}} \\
\backslash & & ||| & & & & \\
 & & / & \mathrm{FVprt}(t) & & & \backslash \\
\overline{\overline{\overline{\overline{B_1(t)}}}} & \cup & \overline{\overline{\overline{\overline{B_2(t)}}}} & & / & & ||| \\
 & \uparrow & & & |||^{-1} & & \uparrow \\
 & \overbrace{\overbrace{W(t)}} & & & \uparrow & & \overline{\overline{\overline{T(t)}}} \\
 & \uparrow & & & \underline{\underline{\underline{A(t)}}} & & \uparrow \\
 & \overbrace{\overbrace{\overline{J(t)}}} & & & \uparrow & & \overline{\overline{Y(t)}} \\
 & \uparrow & & & \underline{\underline{S(t)}} & & \uparrow \\
 & \overbrace{\overbrace{\overline{\overline{O(t)}}}} & & & \uparrow & & \overline{U(t)} \\
 & \cdots & & & \underline{E(t)} & & \uparrow \\
 & & & & & \leftarrow & H(t)
\end{array}
$$

(A.4 .2.2.4),

$$
\begin{array}{cccccccc}
\underline{D_1(t)} & \leftarrow & C(t) & & & \cdots & & \\
\uparrow & & \uparrow & & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow & & \\
\uparrow & & \uparrow & & & \overline{\overbrace{\overbrace{K(t)}}} & & \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & & \uparrow & & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{G(t)}} & & \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & & \\
\backslash & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & & \\
 & & ||| & & & & & \\
 & & / & \mathrm{FVprt}(t) & & & \backslash & + \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & & & / & & ||| & \\
 & \uparrow & & & |||^{-1} & & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & & & \uparrow & & \overline{\overline{\overline{T(t)}}} & \\
 & \uparrow & & & \underline{\underline{\underline{A(t)}}} & & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & & & \uparrow & & \overline{\overline{Y(t)}} & \\
 & \uparrow & & & \underline{\underline{S(t)}} & & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{O(t)}}}} & & & \uparrow & & \overline{U(t)} & \\
 & \cdots & & & \underline{E(t)} & & \uparrow & \\
 & & & & & \leftarrow & & H(t)
\end{array}
$$

$$\underline{D_2(t)} \quad \leftarrow \quad C(t)$$

$$\uparrow \qquad\qquad \uparrow$$

$$\underline{\underline{Q(t)}} \qquad \overline{R(t)}$$

$$\uparrow \qquad\qquad \uparrow$$

$$\underline{\underline{\underline{M(t)}}} \qquad \overline{\overline{P(t)}}$$

$$\uparrow \qquad\qquad \uparrow$$

$$|||^{-1} \qquad \overline{\overline{\overline{L(t)}}}$$

$$\backslash \qquad\qquad \uparrow$$

$$|||$$

$$/ \quad \mathrm{FVprt}(t)$$

$$\overline{\overline{\overline{\overline{B(t)}}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{W(t)}}$$

$$\uparrow$$

$$\overbrace{\overbrace{\overline{J(t)}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{\overline{\overline{O(t)}}}}$$

$$\ldots$$

$$\ldots$$

$$\overbrace{\overbrace{\overline{\overline{Z(t)}}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{\overline{K(t)}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{G(t)}}$$

$$\uparrow$$

$$\overline{\overline{\overline{\overline{F(t)}}}}$$

$$\backslash \qquad =$$

$$/ \qquad |||$$

$$|||^{-1} \qquad \uparrow$$

$$\uparrow \qquad \overline{\overline{\overline{T(t)}}}$$

$$\underline{\underline{\underline{A(t)}}} \qquad \uparrow$$

$$\uparrow \qquad \overline{\overline{Y(t)}}$$

$$\underline{\underline{S(t)}} \qquad \uparrow$$

$$\uparrow \qquad \overline{U(t)}$$

$$\underline{E(t)} \qquad \uparrow$$

$$\leftarrow \quad H(t)$$

$$
\begin{array}{ccccc}
\underline{D_1(t)} \cup \underline{D_2(t)} & \leftarrow & C(t) & & \cdots \\
\uparrow & & \uparrow & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & \uparrow \\
\uparrow & & \uparrow & & \overbrace{\overline{K(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & \uparrow \\
\uparrow & & \uparrow & & \overbrace{G(t)} \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} & & \uparrow \\
\backslash & & \uparrow & & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & & ||| & & \backslash \\
\overline{\overline{\overline{\overline{B(t)}}}} & & / \quad \mathrm{FVprt}(t) & / & ||| \\
\uparrow & & & |||^{-1} & \uparrow \\
\overbrace{W(t)} & & & \uparrow & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & & \underline{\underline{\underline{A(t)}}} & \uparrow \\
\overbrace{\overline{J(t)}} & & & \uparrow & \overline{\overline{Y(t)}} \\
\uparrow & & & \underline{\underline{S(t)}} & \uparrow \\
\overbrace{\overbrace{\overline{\overline{O(t)}}}} & & & \uparrow & \overline{U(t)} \\
\cdots & & & \underline{E(t)} & \uparrow \\
 & & & & \leftarrow \quad H(t)
\end{array}
$$

(A.4 .2.2.5),

$$
\begin{array}{ccccc}
\underline{D(t)} \leftarrow C(t) & & \dots & & \\
\uparrow \qquad \uparrow & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & & \\
\underline{\underline{Q_1(t)}} \qquad \overline{R(t)} & & \uparrow & & \\
\uparrow \qquad \uparrow & & \overline{\overbrace{\overbrace{K(t)}}} & & \\
\underline{\underline{\underline{M(t)}}} \qquad \overline{\overline{P(t)}} & & \uparrow & & \\
\uparrow \qquad \uparrow & & \overbrace{\overbrace{G(t)}} & & \\
|||^{-1} \qquad \overline{\overline{\overline{L(t)}}} & & \uparrow & & \\
\backslash \qquad \uparrow & & \overline{\overline{\overline{\overline{F(t)}}}} & & \\
\qquad ||| & & & & \\
\qquad / \ \ \mathrm{FVprt}(t) & & \backslash & & + \\
\overline{\overline{\overline{\overline{B(t)}}}} & / & ||| & & \\
\uparrow & |||^{-1} & \uparrow & & \\
\overbrace{\overbrace{W(t)}} & \uparrow & \overline{\overline{\overline{T(t)}}} & & \\
\uparrow & \underline{\underline{\underline{A(t)}}} & \uparrow & & \\
\overline{\overbrace{\overbrace{J(t)}}} & \uparrow & \overline{\overline{Y(t)}} & & \\
\uparrow & \underline{\underline{S(t)}} & \uparrow & & \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & \uparrow & \overline{U(t)} & & \\
\dots & \underline{E(t)} & \uparrow & & \\
 & & \leftarrow \ H(t) & &
\end{array}
$$

$$\underline{D(t)} \leftarrow C(t) \qquad \cdots$$

$$\uparrow \qquad \uparrow \qquad \overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}}$$

$$\underline{\underline{Q_2(t)}} \qquad \overline{R(t)} \qquad \uparrow$$

$$\uparrow \qquad \uparrow \qquad \overline{\overbrace{\overbrace{K(t)}}}$$

$$\overline{\overline{P(t)}} \qquad \uparrow$$

$$\underline{\underline{\underline{M(t)}}} \qquad \uparrow \qquad \overbrace{\overbrace{G(t)}}$$

$$\uparrow \qquad \overline{\overline{\overline{L(t)}}} \qquad \uparrow$$

$$|||^{-1} \qquad \uparrow \qquad \overline{\overline{\overline{\overline{F(t)}}}}$$

$$\backslash \qquad ||| \qquad \backslash \qquad =$$

$$/ \quad \mathrm{FVprt}(t)$$

$$\overline{\overline{\overline{\overline{B(t)}}}} \qquad / \qquad |||$$

$$\uparrow \qquad |||^{-1} \qquad \uparrow$$

$$\overbrace{\overbrace{W(t)}} \qquad \uparrow \qquad \overline{\overline{\overline{T(t)}}}$$

$$\uparrow \qquad \underline{\underline{\underline{A(t)}}} \qquad \uparrow$$

$$\overline{\overbrace{\overbrace{J(t)}}} \qquad \uparrow \qquad \overline{\overline{Y(t)}}$$

$$\uparrow \qquad \underline{\underline{S(t)}} \qquad \uparrow$$

$$\overline{\overline{\overbrace{\overbrace{O(t)}}}} \qquad \uparrow \qquad \overline{U(t)}$$

$$\cdots \qquad \underline{E(t)} \qquad \uparrow$$

$$\leftarrow H(t)$$

$$
\begin{array}{ccccc}
\underline{D(t)} \quad \leftarrow & C(t) & & & \cdots \\
\uparrow & \uparrow & & & \overbrace{\overbrace{\overline{\overline{}}}} \\
\underline{\underline{Q_1(t)}} \cup \underline{\underline{Q_2(t)}} & \overline{R(t)} & & & Z(t) \\
\uparrow & \uparrow & & & \uparrow \\
 & \overline{\overline{P(t)}} & & & \overbrace{\overbrace{\overline{K(t)}}} \\
\underline{\underline{\underline{M(t)}}} & \uparrow & & & \uparrow \\
\uparrow & \overline{\overline{\overline{L(t)}}} & & & \overbrace{\overbrace{G(t)}} \\
|||^{-1} & \uparrow & & & \uparrow \\
\backslash & ||| & & & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & / & \mathrm{FVprt}(t) & & \backslash \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & / & ||| \\
\uparrow & & & |||^{-1} & \uparrow \\
\overbrace{\overbrace{W(t)}} & & & \underline{\underline{\underline{A(t)}}} & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & & \uparrow & \uparrow \\
\overbrace{\overbrace{\overline{J(t)}}} & & & \underline{\underline{S(t)}} & \overline{\overline{Y(t)}} \\
\uparrow & & & \uparrow & \uparrow \\
\overbrace{\overbrace{\overline{\overline{O(t)}}}} & & & \underline{E(t)} & \overline{U(t)} \\
\cdots & & & & \uparrow \\
 & & & & \leftarrow \quad H(t)
\end{array}
$$

(A.4 .2.2.6),

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{\overline{\overline{Z(t)}}}}} & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{K(t)}}} & \\
 & & \overline{\overline{P(t)}} & & & \uparrow & \\
\underline{\underline{\underline{M_1(t)}}} & & \uparrow & & & \overbrace{\overbrace{G(t)}} & \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
|||^{-1} & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
\backslash & & ||| & & & & \\
 & & / & \mathrm{FVprt}(t) & & \backslash & + \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & ||| & \\
\uparrow & & & & |||^{-1} & \uparrow & \\
\overbrace{\overbrace{W(t)}} & & & & \uparrow & \overline{\overline{\overline{T(t)}}} & \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & \uparrow & \\
\overbrace{\overbrace{\overline{J(t)}}} & & & & \uparrow & \overline{\overline{Y(t)}} & \\
\uparrow & & & & \underline{\underline{S(t)}} & \uparrow & \\
\overbrace{\overbrace{\overline{\overline{O(t)}}}} & & & & \uparrow & \overline{U(t)} & \\
\cdots & & & & \underline{E(t)} & \uparrow & \\
 & & & & & \leftarrow & H(t)
\end{array}
$$

$$\underline{D(t)} \quad \leftarrow \quad C(t) \qquad\qquad \cdots$$

$$\uparrow \qquad\qquad \uparrow \qquad\qquad \overline{\overline{\overline{\overbrace{\overbrace{Z(t)}}}}}$$

$$\underline{\underline{Q(t)}} \qquad \overline{R(t)} \qquad \uparrow$$

$$\uparrow \qquad\qquad \uparrow \qquad\qquad \overline{\overline{\overbrace{\overbrace{K(t)}}}}$$

$$\overline{\overline{P(t)}} \qquad \uparrow$$

$$\underline{\underline{\underline{M_2(t)}}} \qquad \uparrow \qquad \overbrace{\overbrace{G(t)}}$$

$$\uparrow \qquad \overline{\overline{\overline{L(t)}}} \qquad \uparrow$$

$$|||^{-1} \qquad \uparrow \qquad \overline{\overline{\overline{\overline{F(t)}}}}$$

$$\backslash \qquad ||| \qquad\qquad\qquad\qquad\qquad =$$

$$/ \quad \mathrm{FVprt}(t) \qquad\qquad \backslash$$

$$\overline{\overline{\overline{\overline{B(t)}}}} \qquad\qquad / \qquad |||$$

$$\uparrow \qquad |||^{-1} \qquad \uparrow$$

$$\overbrace{\overbrace{W(t)}} \qquad \uparrow \qquad \overline{\overline{\overline{T(t)}}}$$

$$\uparrow \qquad \underline{\underline{\underline{A(t)}}} \qquad \uparrow$$

$$\overline{\overbrace{\overbrace{J(t)}}} \qquad \uparrow \qquad \overline{\overline{Y(t)}}$$

$$\uparrow \qquad \underline{\underline{S(t)}} \qquad \uparrow$$

$$\overline{\overline{\overbrace{\overbrace{O(t)}}}} \qquad \uparrow \qquad \overline{U(t)}$$

$$\cdots \qquad \underline{E(t)} \qquad \uparrow$$

$$\leftarrow \quad H(t)$$

$$
\begin{array}{ccccc}
\underline{D(t)} \;\leftarrow & C(t) & & \cdots & \\
\uparrow & \uparrow & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} & \\
\underline{\underline{Q(t)}} & \overline{R(t)} & & \uparrow & \\
\uparrow & \uparrow & & \overbrace{\overline{K(t)}} & \\
\underline{\underline{\underline{M_1(t)}}} \cup \underline{\underline{\underline{M_2(t)}}} & \overline{\overline{P(t)}} & & \uparrow & \\
\uparrow & \uparrow & & \overbrace{\overbrace{G(t)}} & \\
|||^{-1} & \overline{\overline{\overline{L(t)}}} & & \uparrow & \\
\backslash & \uparrow & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 & ||| & & & \backslash \\
 & / \;\; \mathrm{FVprt}(t) & / & & ||| \\
\overline{\overline{\overline{\overline{B(t)}}}} & & |||^{-1} & & \uparrow \\
\uparrow & & \uparrow & & \overline{\overline{T(t)}} \\
\overbrace{\overbrace{W(t)}} & & \underline{\underline{\underline{A(t)}}} & & \uparrow \\
\uparrow & & \uparrow & & \overline{\overline{Y(t)}} \\
\overbrace{\overline{J(t)}} & & \underline{\underline{S(t)}} & & \uparrow \\
\uparrow & & \uparrow & & \overline{U(t)} \\
\overbrace{\overbrace{\overline{\overline{O(t)}}}} & & \underline{E(t)} & & \uparrow \\
\cdots & & & \leftarrow & H(t)
\end{array}
$$

(A.4 .2.2.7),

$$\underline{D(t)} \leftarrow C(t)$$

$$\uparrow \qquad \uparrow$$

$$\underline{\underline{Q(t)}} \qquad \overline{R(t)}$$

$$\uparrow \qquad \uparrow$$

$$\underline{\underline{\underline{M(t)}}} \qquad \overline{\overline{P(t)}}$$

$$\uparrow \qquad \uparrow$$

$$|||^{-1} \qquad \overline{\overline{\overline{L_1(t)}}}$$

$$\qquad \uparrow$$

$$\backslash \qquad |||$$

$$/ \quad \mathrm{FVprt}(t)$$

$$\overline{\overline{\overline{\overline{B(t)}}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{W(t)}}$$

$$\uparrow$$

$$\overbrace{\overbrace{\overline{J(t)}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{\overline{\overline{O(t)}}}}$$

$$\ldots$$

$$\ldots$$

$$\overbrace{\overbrace{\overline{\overline{Z(t)}}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{\overline{K(t)}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{G(t)}}$$

$$\uparrow$$

$$\overline{\overline{\overline{\overline{F(t)}}}}$$

$$\backslash \qquad +$$

$$/ \qquad |||$$

$$|||^{-1} \qquad \uparrow$$

$$\uparrow \qquad \overline{\overline{\overline{T(t)}}}$$

$$\underline{\underline{\underline{A(t)}}} \qquad \uparrow$$

$$\uparrow \qquad \overline{\overline{Y(t)}}$$

$$\underline{\underline{S(t)}} \qquad \uparrow$$

$$\uparrow \qquad \overline{U(t)}$$

$$\underline{E(t)} \qquad \uparrow$$

$$\leftarrow H(t)$$

$\underline{D(t)} \leftarrow C(t)$ $\quad\quad$ $\dots$

$\uparrow \quad\quad \uparrow$ $\quad\quad$ $\overbrace{\overline{\overline{Z(t)}}}$

$\underline{\underline{Q(t)}} \quad \overline{R(t)}$ $\quad\quad \uparrow$

$\uparrow \quad\quad \uparrow$ $\quad\quad$ $\overbrace{\overline{K(t)}}$

$\overline{\overline{P(t)}}$ $\quad\quad \uparrow$

$\underline{\underline{\underline{M(t)}}} \quad \uparrow$ $\quad\quad$ $\overbrace{G(t)}$

$\uparrow \quad\quad \overline{\overline{\overline{L_2(t)}}}$ $\quad\quad \uparrow$

$|||^{-1} \quad\quad \uparrow$ $\quad\quad$ $\overline{\overline{\overline{\overline{F(t)}}}}$

$\backslash \quad\quad |||$

$/ \quad \mathrm{FVprt}(t)$ $\quad\quad \backslash \quad\quad =$

$\overline{\overline{\overline{\overline{B(t)}}}}$ $\quad\quad / \quad\quad |||$

$\uparrow$ $\quad\quad |||^{-1} \quad\quad \uparrow$

$\overbrace{W(t)}$ $\quad\quad \uparrow \quad\quad \overline{\overline{\overline{T(t)}}}$

$\uparrow$ $\quad\quad \underline{\underline{\underline{A(t)}}} \quad\quad \uparrow$

$\overbrace{\overline{J(t)}}$ $\quad\quad \uparrow \quad\quad \overline{\overline{Y(t)}}$

$\uparrow$ $\quad\quad \underline{\underline{S(t)}} \quad\quad \uparrow$

$\overbrace{\overline{\overline{O(t)}}}$ $\quad\quad \uparrow \quad\quad \overline{U(t)}$

$\dots$ $\quad\quad \underline{E(t)} \quad\quad \uparrow$

$\leftarrow \quad H(t)$

$$
\begin{array}{ccccc}
\underline{D(t)} \quad \leftarrow & C(t) & & & \cdots \\
\uparrow & \uparrow & & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} \\
\underline{\underline{Q(t)}} & \overline{R(t)} & & & \uparrow \\
\uparrow & \uparrow & & & \overbrace{\overbrace{\overline{K(t)}}} \\
\underline{\underline{\underline{M(t)}}} & \overline{\overline{P(t)}} & & & \uparrow \\
\uparrow & \uparrow & & & \overbrace{\overbrace{G(t)}} \\
|||^{-1} & \overline{\overline{\overline{L_1(t)}}} \cup \overline{\overline{\overline{L_2(t)}}} & & & \uparrow \\
\backslash & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & ||| & & & \backslash \\
 & / & \mathrm{FVprt}(t) & / & ||| \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & & |||^{-1} & \uparrow \\
 & \uparrow & & \uparrow & \overline{\overline{\overline{T(t)}}} \\
 & \overbrace{W(t)} & & \underline{\underline{\underline{A(t)}}} & \uparrow \\
 & \uparrow & & \uparrow & \overline{\overline{Y(t)}} \\
 & \overbrace{\overbrace{\overline{J(t)}}} & & \underline{\underline{S(t)}} & \uparrow \\
 & \uparrow & & \uparrow & \overline{U(t)} \\
 & \overbrace{\overbrace{\overline{\overline{O(t)}}}} & & \underline{E(t)} & \uparrow \\
 & \cdots & & \leftarrow & H(t)
\end{array}
$$

(A.4 .2.2.8),

$$\underline{D(t)} \quad \leftarrow \quad C(t) \qquad\qquad \cdots$$

$$\uparrow \qquad\quad \uparrow \qquad\qquad \overbrace{\overbrace{\overline{\overline{Z(t)}}}}$$

$$\underline{\underline{Q(t)}} \qquad \overline{R(t)} \qquad\qquad \uparrow$$

$$\uparrow \qquad\quad \uparrow \qquad\qquad \overbrace{\overbrace{\overline{K(t)}}}$$

$$\underline{\underline{\underline{M(t)}}} \qquad \overline{\overline{P_1(t)}} \qquad\qquad \uparrow$$

$$\uparrow \qquad\quad \uparrow \qquad\qquad \overbrace{\overbrace{G(t)}}$$

$$|||^{-1} \qquad \overline{\overline{\overline{L(t)}}} \qquad\qquad \uparrow$$

$$\backslash \qquad \uparrow \qquad\qquad \overline{\overline{\overline{\overline{F(t)}}}}$$

$$||| \qquad\qquad \backslash \qquad +$$

$$/ \quad \mathrm{FVprt}(t)$$

$$\overline{\overline{\overline{\overline{B(t)}}}} \qquad\qquad / \qquad |||$$

$$\uparrow \qquad\qquad |||^{-1} \qquad \uparrow$$

$$\overbrace{\overbrace{W(t)}} \qquad\qquad \uparrow \qquad \overline{\overline{\overline{T(t)}}}$$

$$\uparrow \qquad\qquad \underline{\underline{\underline{A(t)}}} \qquad \uparrow$$

$$\overbrace{\overbrace{\overline{J(t)}}} \qquad\qquad \uparrow \qquad \overline{\overline{Y(t)}}$$

$$\uparrow \qquad\qquad \underline{\underline{S(t)}} \qquad \uparrow$$

$$\overbrace{\overbrace{\overline{\overline{O(t)}}}} \qquad\qquad \uparrow \qquad \overline{U(t)}$$

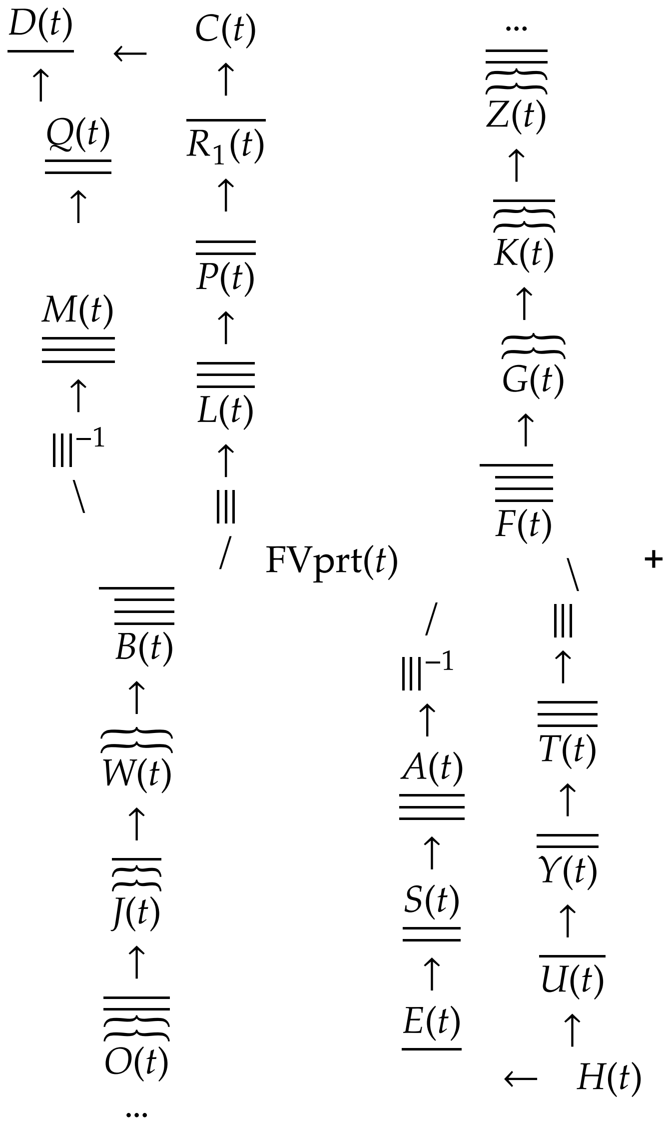
$$\cdots \qquad\qquad \underline{E(t)} \qquad \uparrow$$

$$\leftarrow \quad H(t)$$

$$
\begin{array}{cccccc}
\underline{D(t)} \;\leftarrow & C(t) & & & \cdots & \\
\uparrow & \uparrow & & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
\underline{\underline{Q(t)}} & \overline{R(t)} & & & \uparrow & \\
\uparrow & \uparrow & & & \overline{\overbrace{\overbrace{K(t)}}} & \\
\underline{\underline{\underline{M(t)}}} & \overline{\overline{P_2(t)}} & & & \uparrow & \\
\uparrow & \uparrow & & & \overbrace{\overbrace{G(t)}} & \\
|||^{-1} & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
\backslash & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 & ||| & & & & \\
 & / & \mathrm{FVprt}(t) & & \backslash & = \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & / & ||| & \\
\uparrow & & & |||^{-1} & \uparrow & \\
\overbrace{\overbrace{W(t)}} & & & \uparrow & \overline{\overline{\overline{T(t)}}} & \\
\uparrow & & & \underline{\underline{\underline{A(t)}}} & \uparrow & \\
\overline{\overbrace{\overbrace{J(t)}}} & & & \uparrow & \overline{\overline{Y(t)}} & \\
\uparrow & & & \underline{\underline{S(t)}} & \uparrow & \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & \uparrow & \overline{U(t)} & \\
\cdots & & & \underline{E(t)} & \uparrow & \\
 & & & & \leftarrow \; H(t) &
\end{array}
$$

$$
\begin{array}{cccccccc}
\underline{D(t)} & \leftarrow & & C(t) & & & \cdots & \\
\uparrow & & & \uparrow & & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
\underline{\underline{Q(t)}} & & & \overline{R(t)} & & & \uparrow & \\
\uparrow & & & \uparrow & & & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & & & \overline{\overline{P_1(t)}} \cup \overline{\overline{P_2(t)}} & & & \uparrow & \\
\underline{\underline{\underline{M(t)}}} & & & \uparrow & & & \overbrace{\overbrace{G(t)}} & \\
\uparrow & & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
|||^{-1} & & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
\backslash & & & ||| & & & & \\
 & & & / & \mathrm{FVprt}(t) & & \backslash & \\
 & & \overline{\overline{\overline{\overline{B(t)}}}} & & & / & ||| & \\
 & & \uparrow & & & |||^{-1} & \uparrow & \\
 & & \overbrace{\overbrace{W(t)}} & & & \uparrow & \overline{\overline{\overline{T(t)}}} & \\
 & & \uparrow & & & \underline{\underline{\underline{A(t)}}} & \uparrow & \\
 & & \overline{\overbrace{\overbrace{J(t)}}} & & & \uparrow & \overline{\overline{Y(t)}} & \\
 & & \uparrow & & & \underline{\underline{S(t)}} & \uparrow & \\
 & & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & \uparrow & \overline{U(t)} & \\
 & & \cdots & & & \underline{E(t)} & \uparrow & \\
 & & & & & & \leftarrow & H(t)
\end{array}
$$

(A.4 .2.2.9),


D(t)
C(t)
Q(t)
R1(t)
P(t)
M(t)
L(t)
|||−1
|||
FVprt(t)
+
...
Z(t)
K(t)
G(t)
F(t)
B(t)
W(t)
J(t)
O(t)
...
|||−1
|||
A(t)
S(t)
E(t)
T(t)
Y(t)
U(t)
H(t)

$$\underline{D(t)} \quad \leftarrow \quad C(t) \qquad\qquad\qquad \overbrace{\overbrace{\overline{\overline{\overline{Z(t)}}}}}^{\ldots}$$

$$\uparrow \qquad\qquad \uparrow \qquad\qquad\qquad\qquad \uparrow$$

$$\underline{\underline{Q(t)}} \qquad \overline{R_2(t)} \qquad\qquad\qquad \overbrace{\overbrace{\overline{K(t)}}}$$

$$\uparrow \qquad\qquad \uparrow \qquad\qquad\qquad\qquad \uparrow$$

$$\underline{\underline{\underline{M(t)}}} \qquad \overline{\overline{P(t)}} \qquad\qquad\qquad \overbrace{\overbrace{G(t)}}$$

$$\uparrow \qquad\qquad \uparrow \qquad\qquad\qquad\qquad \uparrow$$

$$|||^{-1} \qquad \overline{\overline{\overline{L(t)}}} \qquad\qquad\qquad \overline{\overline{\overline{\overline{F(t)}}}}$$

$$\backslash \qquad\qquad \uparrow \qquad\qquad\qquad\qquad \backslash \qquad =$$

$$||| \qquad\qquad\qquad\qquad\qquad |||$$

$$/ \quad \mathrm{FVprt}(t) \qquad / \qquad\qquad \uparrow$$

$$\overline{\overline{\overline{\overline{B(t)}}}} \qquad\qquad |||^{-1} \qquad \overline{\overline{\overline{T(t)}}}$$

$$\uparrow \qquad\qquad\qquad \uparrow \qquad\qquad \uparrow$$

$$\overbrace{\overbrace{W(t)}} \qquad\qquad \underline{\underline{\underline{A(t)}}} \qquad \overline{\overline{Y(t)}}$$

$$\uparrow \qquad\qquad\qquad \uparrow \qquad\qquad \uparrow$$

$$\overbrace{\overbrace{\overline{J(t)}}} \qquad\qquad \underline{\underline{S(t)}} \qquad \overline{U(t)}$$

$$\uparrow \qquad\qquad\qquad \uparrow \qquad\qquad \uparrow$$

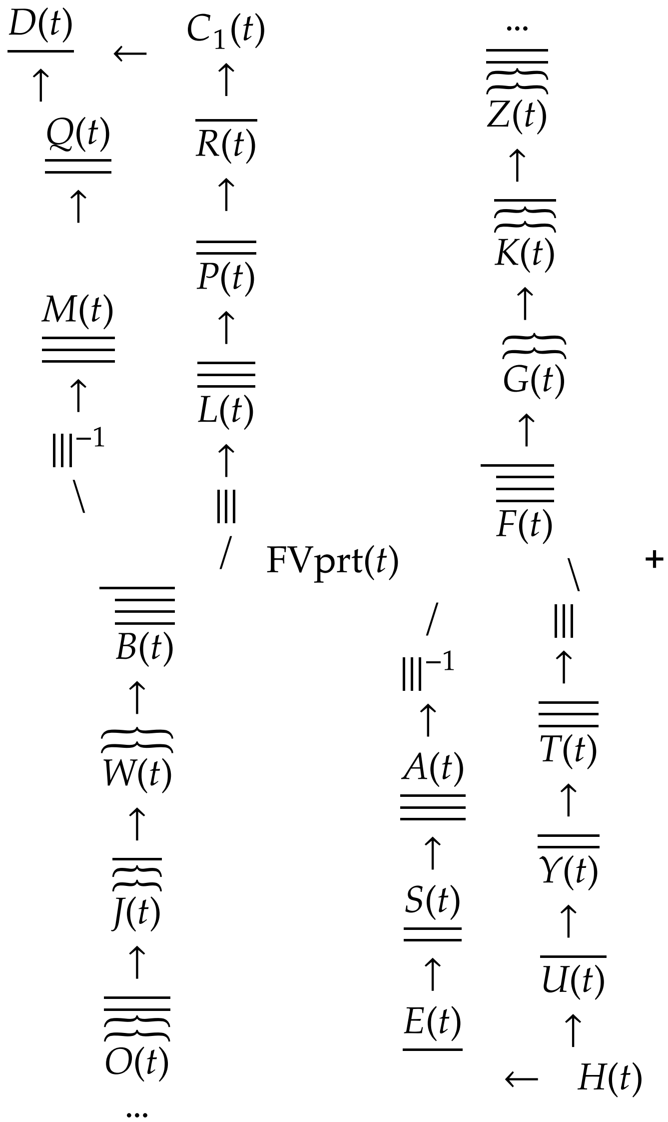
$$\overbrace{\overbrace{\overline{\overline{O(t)}}}} \qquad\qquad \underline{E(t)} \quad \leftarrow \quad H(t)$$

$$\ldots$$

$$
\begin{array}{ccccc}
\underline{D(t)} & \leftarrow & C(t) & & \cdots \\
\uparrow & & \uparrow & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} \\
\underline{\underline{Q(t)}} & \overline{R_1(t)} & \cup & \overline{R_2(t)} & \uparrow \\
\uparrow & \uparrow & & \uparrow & \overline{\overbrace{\overbrace{K(t)}}} \\
 & & \overline{\overline{P(t)}} & & \uparrow \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & \overbrace{\overbrace{G(t)}} \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & \uparrow \\
|||^{-1} & & \uparrow & & \overline{\overline{\overline{\overline{F(t)}}}} \\
\backslash & & ||| & & \\
 & & / & \mathrm{FVprt}(t) &
\end{array}
$$

$$
\begin{array}{ccc}
\overline{\overline{\overline{\overline{B(t)}}}} & / & \backslash \\
\uparrow & |||^{-1} & ||| \\
\overbrace{\overbrace{W(t)}} & \uparrow & \uparrow \\
\uparrow & \underline{\underline{\underline{A(t)}}} & \overline{\overline{\overline{T(t)}}} \\
\overline{\overbrace{\overbrace{J(t)}}} & \uparrow & \uparrow \\
\uparrow & \underline{\underline{S(t)}} & \overline{\overline{Y(t)}} \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & \uparrow & \uparrow \\
\cdots & \underline{E(t)} & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
$$

(A.4 .2.2.10),


D(t)
C1(t)
Q(t)
R(t)
P(t)
M(t)
L(t)
|||−1
|||
FVprt(t)
Z(t)
K(t)
G(t)
F(t)
+
|||
|||−1
B(t)
W(t)
J(t)
O(t)
A(t)
S(t)
E(t)
T(t)
Y(t)
U(t)
H(t)

$\underline{D(t)} \leftarrow C_2(t)$

$\uparrow \qquad \uparrow$

$\underline{\underline{Q(t)}} \qquad \overline{R(t)}$

$\uparrow \qquad \uparrow$

$\overline{\overline{P(t)}}$

$\uparrow$

$\underline{\underline{\underline{M(t)}}} \qquad \overline{\overline{\overline{L(t)}}}$

$\uparrow \qquad \uparrow$

$|||^{-1} \qquad |||$

$\backslash \qquad /$ FVprt(t)

$\overline{\overline{\overline{\overline{B(t)}}}}$

$\uparrow$

$\overbrace{\overbrace{W(t)}}$

$\uparrow$

$\overline{\overbrace{\overbrace{J(t)}}}$

$\uparrow$

$\overline{\overline{\overbrace{\overbrace{O(t)}}}}$

...

...

$\overline{\overline{\overbrace{\overbrace{Z(t)}}}}$

$\uparrow$

$\overline{\overbrace{\overbrace{K(t)}}}$

$\uparrow$

$\overbrace{\overbrace{G(t)}}$

$\uparrow$

$\overline{\overline{\overline{\overline{F(t)}}}}$

$\backslash \qquad =$

$/ \qquad |||$

$|||^{-1} \qquad \uparrow$

$\uparrow \qquad \overline{\overline{\overline{T(t)}}}$

$\underline{\underline{\underline{A(t)}}} \qquad \uparrow$

$\uparrow \qquad \overline{\overline{Y(t)}}$

$\underline{\underline{S(t)}} \qquad \uparrow$

$\uparrow \qquad \overline{U(t)}$

$\underline{E(t)} \qquad \uparrow$

$\leftarrow H(t)$

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C_1(t) \cup C_2(t) & & & & \cdots \\
\uparrow & & \uparrow & & & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & & \uparrow \\
\uparrow & & \uparrow & & & & \overbrace{\overbrace{\overline{K(t)}}} \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & & & \uparrow \\
\uparrow & & \uparrow & & & & \overbrace{\overbrace{G(t)}} \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} & & & & \uparrow \\
\backslash & & \uparrow & & & & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & & ||| & & & & \\
 & & / & & \mathrm{FVprt}(t) & & \backslash \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & & & / & & ||| \\
 & \uparrow & & & |||^{-1} & & \uparrow \\
 & \overbrace{\overbrace{W(t)}} & & & \uparrow & & \overline{\overline{T(t)}} \\
 & \uparrow & & & \underline{\underline{\underline{A(t)}}} & & \uparrow \\
 & \overbrace{\overbrace{\overline{J(t)}}} & & & \uparrow & & \overline{\overline{Y(t)}} \\
 & \uparrow & & & \underline{\underline{S(t)}} & & \uparrow \\
 & \overbrace{\overbrace{\overline{\overline{O(t)}}}} & & & \uparrow & & \overline{U(t)} \\
 & \cdots & & & \underline{E(t)} & & \uparrow \\
 & & & & & \leftarrow & H(t)
\end{array}
$$

(A.4 .2.2.11),

$$\underline{D(t)} \leftarrow C(t)$$

$$\uparrow \qquad \uparrow$$

$$\underline{\underline{Q(t)}} \qquad \overline{R(t)}$$

$$\uparrow \qquad \uparrow$$

$$\underline{\underline{\underline{M(t)}}} \qquad \overline{\overline{P(t)}}$$

$$\uparrow \qquad \uparrow$$

$$|||^{-1} \qquad \overline{\overline{\overline{L(t)}}}$$

$$\backslash \qquad \uparrow$$

$$|||$$

$$/ \quad \mathrm{FVprt}(t)$$

$$\overline{\overline{\overline{\overline{B(t)}}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{W(t)}}$$

$$\uparrow$$

$$\overline{\overbrace{\overbrace{J(t)}}}$$

$$\uparrow$$

$$\overline{\overline{\overbrace{\overbrace{O(t)}}}}$$

$$\ldots$$

$$\ldots$$

$$\overline{\overline{\overbrace{\overbrace{Z_1(t)}}}}$$

$$\uparrow$$

$$\overline{\overbrace{\overbrace{K(t)}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{G(t)}}$$

$$\uparrow$$

$$\overline{\overline{\overline{\overline{F(t)}}}}$$

$$/ \qquad \backslash \qquad +$$

$$|||^{-1} \qquad |||$$

$$\uparrow \qquad \uparrow$$

$$\underline{\underline{\underline{A(t)}}} \qquad \overline{\overline{\overline{T(t)}}}$$

$$\uparrow \qquad \uparrow$$

$$\underline{\underline{S(t)}} \qquad \overline{\overline{Y(t)}}$$

$$\uparrow \qquad \uparrow$$

$$\underline{E(t)} \qquad \overline{U(t)}$$

$$\uparrow$$

$$\leftarrow H(t)$$

$$\underline{D(t)} \leftarrow C(t) \qquad \cdots$$

$$\uparrow \qquad \uparrow \qquad \overline{\overline{\overbrace{\overbrace{Z_2(t)}}}}$$

$$\underline{\underline{Q(t)}} \qquad \overline{R(t)} \qquad \uparrow$$

$$\uparrow \qquad \uparrow \qquad \overline{\overbrace{\overbrace{K(t)}}}$$

$$\overline{\overline{P(t)}} \qquad \uparrow$$

$$\underline{\underline{\underline{M(t)}}} \qquad \uparrow \qquad \overbrace{\overbrace{G(t)}}$$

$$\uparrow \qquad \overline{\overline{\overline{L(t)}}} \qquad \uparrow$$

$$|||^{-1} \qquad \uparrow \qquad \overline{\overline{\overline{\overline{F(t)}}}}$$

$$\backslash \qquad ||| \qquad$$

$$/ \quad \mathrm{FVprt}(t) \qquad \backslash \qquad =$$

$$\overline{\overline{\overline{\overline{B(t)}}}} \qquad / \qquad |||$$

$$\uparrow \qquad |||^{-1} \qquad \uparrow$$

$$\overbrace{\overbrace{W(t)}} \qquad \uparrow \qquad \overline{\overline{\overline{T(t)}}}$$

$$\uparrow \qquad \underline{\underline{\underline{A(t)}}} \qquad \uparrow$$

$$\overline{\overbrace{\overbrace{J(t)}}} \qquad \uparrow \qquad \overline{\overline{Y(t)}}$$

$$\uparrow \qquad \underline{\underline{S(t)}} \qquad \uparrow$$

$$\overline{\overline{\overbrace{\overbrace{O(t)}}}} \qquad \uparrow \qquad \overline{U(t)}$$

$$\cdots \qquad \underline{E(t)} \qquad \leftarrow \quad H(t) \qquad \uparrow$$

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots & \\
\uparrow & & \uparrow & & & \overline{\overline{\overbrace{\overbrace{Z_1(t)}}}} \cup \overline{\overline{\overbrace{\overbrace{Z_2(t)}}}} & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & & \overline{\overline{P(t)}} & & & \uparrow & \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & & \overbrace{\overbrace{G(t)}} & \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
|||^{-1} & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
\backslash & & ||| & & & & \backslash \\
 & & / & \mathrm{FVprt}(t) & / & & ||| \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & |||^{-1} & & \uparrow \\
\uparrow & & & & \uparrow & & \overline{\overline{\overline{T(t)}}} \\
\overbrace{\overbrace{W(t)}} & & & & \underline{\underline{\underline{A(t)}}} & & \uparrow \\
\uparrow & & & & \uparrow & & \overline{\overline{Y(t)}} \\
\overline{\overbrace{\overbrace{J(t)}}} & & & & \underline{\underline{S(t)}} & & \uparrow \\
\uparrow & & & & \uparrow & & \overline{U(t)} \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & & \underline{E(t)} & & \uparrow \\
\cdots & & & & & \leftarrow & H(t)
\end{array}
$$

(A.4 .2.2.11.1),

$$
\begin{array}{ccccc}
\underline{D(t)} & \leftarrow & C(t) & & \cdots \\
\uparrow & & \uparrow & & \overbrace{\overbrace{\overline{\overline{}}}} \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & Z(t) \\
\uparrow & & \uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} & & \overbrace{\overbrace{\overline{K_1(t)}}} \\
M(t) & & \uparrow & & \uparrow \\
\underline{\underline{\underline{}}} & & \overline{\overline{\overline{\overline{L(t)}}}} & & \overbrace{\overbrace{G(t)}} \\
\uparrow & & \uparrow & & \uparrow \\
|||^{-1} & & ||| & & \overline{\overline{\overline{\overline{\overline{F(t)}}}}} \\
\backslash & & / \;\; \mathrm{FVprt}(t) & & \backslash \qquad + \\
\end{array}
$$

$$
\begin{array}{ccccc}
\overline{\overline{\overline{\overline{B(t)}}}} & & / & & ||| \\
\uparrow & & |||^{-1} & & \uparrow \\
\overbrace{\overbrace{W(t)}} & & \uparrow & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & \underline{\underline{\underline{A(t)}}} & & \uparrow \\
\overbrace{\overbrace{\overline{J(t)}}} & & \uparrow & & \overline{\overline{Y(t)}} \\
\uparrow & & \underline{\underline{S(t)}} & & \uparrow \\
\overbrace{\overbrace{\overline{\overline{\overline{O(t)}}}}} & & \uparrow & & \overline{U(t)} \\
\cdots & & \underline{E(t)} & & \uparrow \\
 & & & \leftarrow & H(t) \\
\end{array}
$$

$$\underline{D(t)} \leftarrow C(t) \qquad \cdots$$

$$\uparrow \qquad \uparrow \qquad \overline{\overline{\overbrace{\overbrace{Z(t)}}}}$$

$$\underline{\underline{Q(t)}} \qquad \overline{R(t)} \qquad \uparrow$$

$$\uparrow \qquad \uparrow \qquad \overline{\overbrace{\overbrace{K_2(t)}}}$$

$$\underline{\underline{\underline{M(t)}}} \qquad \overline{\overline{P(t)}} \qquad \uparrow$$

$$\uparrow \qquad \uparrow \qquad \overbrace{\overbrace{G(t)}}$$

$$|||^{-1} \qquad \overline{\overline{\overline{L(t)}}} \qquad \uparrow$$

$$\backslash \qquad \uparrow \qquad \overline{\overline{\overline{\overline{F(t)}}}}$$

$$||| \qquad \backslash$$

$$/ \quad \mathrm{FVprt}(t) \qquad =$$

$$\overline{\overline{\overline{\overline{B(t)}}}} \qquad / \qquad |||$$

$$\uparrow \qquad |||^{-1} \qquad \uparrow$$

$$\overbrace{\overbrace{W(t)}} \qquad \uparrow \qquad \overline{\overline{\overline{T(t)}}}$$

$$\uparrow \qquad \underline{\underline{\underline{A(t)}}} \qquad \uparrow$$

$$\overline{\overbrace{\overbrace{J(t)}}} \qquad \uparrow \qquad \overline{\overline{Y(t)}}$$

$$\uparrow \qquad \underline{\underline{S(t)}} \qquad \uparrow$$

$$\overline{\overline{\overline{\overbrace{\overbrace{O(t)}}}}} \qquad \uparrow \qquad \overline{U(t)}$$

$$\cdots \qquad \underline{E(t)} \qquad \uparrow$$

$$\leftarrow H(t)$$

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \overline{\overline{\overbrace{\overbrace{\cdots}}}} & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{Z(t)}} & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & \overline{\overbrace{\overbrace{K_1(t)}}} & \cup & \overline{\overbrace{\overbrace{K_2(t)}}} \\
 & & \overline{\overline{P(t)}} & & \uparrow & & \uparrow \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & & \overbrace{\overbrace{G(t)}} & \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
|||^{-1} & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
\backslash & & ||| & & & & \backslash \\
 & & / & \mathrm{FVprt}(t) & / & & ||| \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & |||^{-1} & & \uparrow \\
\uparrow & & & & \uparrow & & \overline{\overline{\overline{T(t)}}} \\
\overbrace{\overbrace{W(t)}} & & & & \underline{\underline{\underline{A(t)}}} & & \uparrow \\
\uparrow & & & & \uparrow & & \overline{\overline{Y(t)}} \\
\overline{\overbrace{\overbrace{J(t)}}} & & & & \underline{\underline{S(t)}} & & \uparrow \\
\uparrow & & & & \uparrow & & \overline{U(t)} \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & & \underline{E(t)} & & \uparrow \\
\cdots & & & & & \leftarrow & H(t)
\end{array}
$$

(A.4 .2.2.12),

$$
\begin{array}{cccccc}
\underline{D(t)} & \leftarrow & C(t) & & \cdots & \\
\uparrow & & \uparrow & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & \uparrow & \\
\uparrow & & \uparrow & & \overbrace{\overbrace{\overline{K(t)}}} & \\
 & & \overline{\overline{P(t)}} & & \uparrow & \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & \overbrace{\overbrace{G_1(t)}} & \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & \uparrow & \\
|||^{-1} & & \uparrow & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
\backslash & & ||| & & & \\
 & & / \quad \mathrm{FVprt}(t) & & \backslash & + \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & / & ||| & \\
\uparrow & & & |||^{-1} & \uparrow & \\
\overbrace{\overbrace{\overbrace{W(t)}}} & & & \uparrow & \overline{\overline{\overline{T(t)}}} & \\
\uparrow & & & \underline{\underline{\underline{A(t)}}} & \uparrow & \\
\overbrace{\overbrace{\overline{J(t)}}} & & & \uparrow & \overline{\overline{Y(t)}} & \\
\uparrow & & & \underline{\underline{S(t)}} & \uparrow & \\
\overbrace{\overbrace{\overline{\overline{\overline{O(t)}}}}} & & & \uparrow & \overline{U(t)} & \\
\cdots & & & \underline{E(t)} & \uparrow & \\
 & & & & \leftarrow \quad H(t) &
\end{array}
$$

$$\underline{D(t)} \leftarrow C(t) \qquad \cdots$$

$$\uparrow \qquad \uparrow \qquad \overbrace{\overbrace{\overline{\overline{Z(t)}}}}$$

$$\underline{\underline{Q(t)}} \qquad \overline{R(t)} \qquad \uparrow$$

$$\uparrow \qquad \uparrow \qquad \overbrace{\overbrace{\overline{K(t)}}}$$

$$\overline{\overline{P(t)}} \qquad \uparrow$$

$$\underline{\underline{\underline{M(t)}}} \qquad \uparrow \qquad \overbrace{\overbrace{G_2(t)}}$$

$$\uparrow \qquad \overline{\overline{\overline{L(t)}}} \qquad \uparrow$$

$$|||^{-1} \qquad \uparrow \qquad \overline{\overline{\overline{\overline{F(t)}}}}$$

$$\backslash \qquad ||| \qquad \backslash \qquad =$$

$$/ \quad \mathrm{FVprt}(t)$$

$$\overline{\overline{\overline{\overline{B(t)}}}} \qquad / \qquad |||$$

$$\uparrow \qquad |||^{-1} \qquad \uparrow$$

$$\overbrace{\overbrace{W(t)}} \qquad \uparrow \qquad \overline{\overline{\overline{T(t)}}}$$

$$\uparrow \qquad \underline{\underline{\underline{A(t)}}} \qquad \uparrow$$

$$\overbrace{\overbrace{\overline{J(t)}}} \qquad \uparrow \qquad \overline{\overline{Y(t)}}$$

$$\uparrow \qquad \underline{\underline{S(t)}} \qquad \uparrow$$

$$\overbrace{\overbrace{\overline{\overline{O(t)}}}} \qquad \uparrow \qquad \overline{U(t)}$$

$$\cdots \qquad \underline{E(t)} \qquad \leftarrow \quad H(t)$$

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
 & & \overline{\overline{\overline{L(t)}}} \\
\uparrow & & \uparrow \\
|||^{-1} & & ||| \\
\diagdown & & / \quad \mathrm{FVprt}(t) \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \dots &
\end{array}
\qquad
\begin{array}{ccc}
 & \dots & \\
 & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G_1(t)}} \cup \overbrace{\overbrace{G_2(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
/ & & \diagdown \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
\uparrow & & \uparrow \\
\underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
$$

(A.4 .2.2.12.1),

$$\underline{D(t)} \quad \leftarrow \quad C(t)$$

$$\underline{D(t)} \uparrow \underline{\underline{Q(t)}} \uparrow \underline{\underline{\underline{M(t)}}} \uparrow |||^{-1}$$

$$C(t) \uparrow \overline{R(t)} \uparrow \overline{\overline{P(t)}} \uparrow \overline{\overline{\overline{L(t)}}} \uparrow |||$$

$$\text{FVprt}(t)$$

$$\overline{\overline{\overline{\overline{B(t)}}}} \uparrow \overbrace{\overbrace{W(t)}} \uparrow \overline{\overbrace{\overbrace{J(t)}}} \uparrow \overline{\overline{\overbrace{\overbrace{O(t)}}}} \; \ldots$$

$$\ldots \; \overline{\overline{\overbrace{\overbrace{Z(t)}}}} \uparrow \overline{\overbrace{\overbrace{K(t)}}} \uparrow \overbrace{\overbrace{G(t)}} \uparrow \overline{\overline{\overline{\overline{F_1(t)}}}}$$

$$+$$

$$|||^{-1} \uparrow \underline{\underline{\underline{A(t)}}} \uparrow \underline{\underline{S(t)}} \uparrow \underline{E(t)}$$

$$||| \uparrow \overline{\overline{\overline{T(t)}}} \uparrow \overline{\overline{Y(t)}} \uparrow \overline{U(t)} \uparrow H(t)$$

$$\underline{E(t)} \quad \leftarrow \quad H(t)$$

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & \overbrace{\overbrace{\overline{\overline{\overline{\cdots}}}}} & & \\
\uparrow & & \uparrow & & Z(t) & & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & \uparrow & & \\
\uparrow & & \uparrow & & \overbrace{\overbrace{\overline{K(t)}}} & & \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & \uparrow & & \\
\uparrow & & \uparrow & & \overbrace{\overbrace{G(t)}} & & \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} & & \uparrow & & \\
\backslash & & \uparrow & & \overline{\overline{\overline{\overline{F_2(t)}}}} & & \\
 & & ||| & & & \backslash & = \\
\overline{\overline{\overline{\overline{B(t)}}}} & & / & \mathrm{FVprt}(t) & / & ||| & \\
\uparrow & & & & |||^{-1} & \uparrow & \\
\overbrace{\overbrace{W(t)}} & & & & \uparrow & \overline{\overline{\overline{T(t)}}} & \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & \uparrow & \\
\overbrace{\overbrace{\overline{J(t)}}} & & & & \uparrow & \overline{\overline{Y(t)}} & \\
\uparrow & & & & \underline{\underline{S(t)}} & \uparrow & \\
\overbrace{\overbrace{\overline{\overline{O(t)}}}} & & & & \uparrow & \overline{U(t)} & \\
\cdots & & & & \underline{E(t)} & \uparrow & \\
 & & & & & \leftarrow & H(t)
\end{array}
$$

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & & \overline{\overline{\overbrace{\overbrace{\cdots}}}} \\
\uparrow & & \uparrow & & & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & & \uparrow \\
\uparrow & & \uparrow & & & & \overbrace{\overbrace{\overline{K(t)}}} \\
 & & \overline{\overline{P(t)}} & & & & \uparrow \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & & & \overbrace{\overbrace{G(t)}} \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & & & \uparrow \\
|||^{-1} & & \uparrow & & \overline{\overline{\overline{\overline{F_1(t)}}}} & \cup & \overline{\overline{\overline{\overline{F_2(t)}}}} \\
\backslash & & ||| & & / & & \backslash \\
 & & / & \mathrm{FVprt}(t) & |||^{-1} & & ||| \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & \uparrow & & \uparrow \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
\overbrace{\overbrace{W(t)}} & & & & \uparrow & & \uparrow \\
\uparrow & & & & \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
\overbrace{\overbrace{\overline{J(t)}}} & & & & \uparrow & & \uparrow \\
\uparrow & & & & \underline{E(t)} & & \overline{U(t)} \\
\overbrace{\overbrace{\overline{\overline{\overline{O(t)}}}}} & & & & & & \uparrow \\
\cdots & & & & & \leftarrow & H(t)
\end{array}
$$

(A.4 .2.2.13),

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & \cdots & & \\
\uparrow & & \uparrow & & \overbrace{\overline{\overline{\overline{Z(t)}}}} & & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & \uparrow & & \\
\uparrow & & \uparrow & & \overbrace{\overline{K(t)}} & & \\
 & & \overline{\overline{P(t)}} & & \uparrow & & \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & \overbrace{G(t)} & & \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & \uparrow & & \\
|||^{-1} & & \uparrow & & \overline{\overline{\overline{\overline{F(t)}}}} & & \\
\backslash & & ||| & & & & \\
 & & / & \mathrm{FVprt}(t) & & \backslash & + \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & / & & ||| & \\
\uparrow & & & |||^{-1} & & \uparrow & \\
\overbrace{W(t)} & & & \uparrow & & \overline{\overline{\overline{T(t)}}} & \\
\uparrow & & & \underline{\underline{\underline{A_1(t)}}} & & \uparrow & \\
\overbrace{\overline{J(t)}} & & & \uparrow & & \overline{\overline{Y(t)}} & \\
\uparrow & & & \underline{\underline{S(t)}} & & \uparrow & \\
\overbrace{\overline{\overline{\overline{O(t)}}}} & & & \uparrow & & \overline{U(t)} & \\
\cdots & & & \underline{E(t)} & & \uparrow & \\
 & & & & \leftarrow & H(t) & \\
\end{array}
$$

$$\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots & \\
\uparrow & & \uparrow & & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overline{\overbrace{\overbrace{K(t)}}} & \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{G(t)}} & \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
\backslash & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 & & ||| & & & & \\
 & & / & \mathrm{FVprt}(t) & & \backslash & = \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & / & & ||| & \\
\uparrow & & & |||^{-1} & & \uparrow & \\
\overbrace{\overbrace{W(t)}} & & & \uparrow & & \overline{\overline{\overline{T(t)}}} & \\
\uparrow & & & \underline{\underline{\underline{A_2(t)}}} & & \uparrow & \\
\overline{\overbrace{\overbrace{J(t)}}} & & & \uparrow & & \overline{\overline{Y(t)}} & \\
\uparrow & & & \underline{\underline{S(t)}} & & \uparrow & \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & \uparrow & & \overline{U(t)} & \\
\cdots & & & \underline{E(t)} & \leftarrow & H(t) &
\end{array}$$

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \quad \mathrm{FVprt}(t) \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
\qquad
\begin{array}{ccc}
 & \ldots & \\
 & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
/ & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A_1(t)}}} \cup \underline{\underline{\underline{A_2(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
\uparrow & & \uparrow \\
\underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
$$

(A.4 .2.2.14),

$$\underline{D(t)} \leftarrow C(t)$$

$$\underline{D(t)} \uparrow \underline{\underline{Q(t)}} \uparrow \underline{\underline{\underline{M(t)}}} \uparrow |||^{-1} \setminus$$

$$C(t) \uparrow \overline{R(t)} \uparrow \overline{\overline{P(t)}} \uparrow \overline{\overline{\overline{L(t)}}} \uparrow ||| \; / \quad \mathrm{FVprt}(t)$$

$$\overline{\overline{\overline{\overline{B(t)}}}} \uparrow \overbrace{\overbrace{W(t)}} \uparrow \overline{\overbrace{\overbrace{J(t)}}} \uparrow \overline{\overline{\overbrace{\overbrace{O(t)}}}} \ldots$$

$$-$$

$$|||^{-1} \uparrow \underline{\underline{\underline{A(t)}}} \uparrow \underline{\underline{S_1(t)}} \uparrow \underline{E(t)} \leftarrow H(t)$$

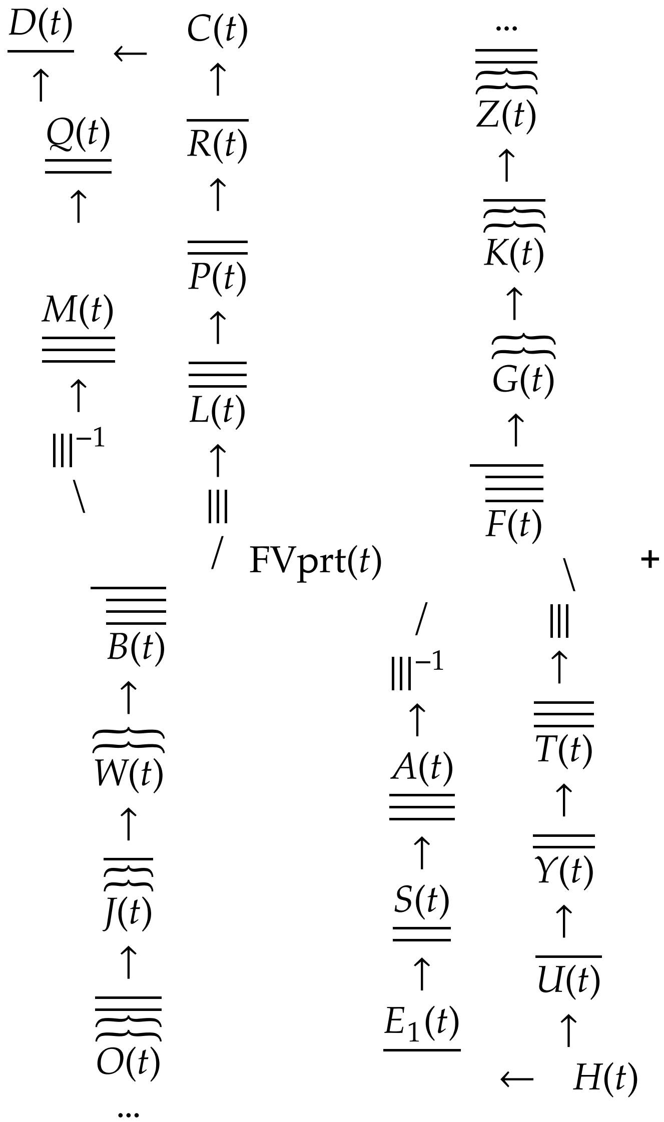
$$\ldots \overline{\overline{\overbrace{\overbrace{Z(t)}}}} \uparrow \overline{\overbrace{\overbrace{K(t)}}} \uparrow \overbrace{\overbrace{G(t)}} \uparrow \overline{\overline{\overline{\overline{F(t)}}}} \quad \setminus \quad +$$

$$||| \uparrow \overline{\overline{\overline{T(t)}}} \uparrow \overline{\overline{Y(t)}} \uparrow \overline{U(t)} \uparrow H(t)$$

$$
\begin{array}{cccccc}
\underline{D(t)} \quad \leftarrow & C(t) & & & \cdots & \\
\uparrow & \uparrow & & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
\underline{\underline{Q(t)}} & \overline{R(t)} & & & \uparrow & \\
\uparrow & \uparrow & & & \overline{\overbrace{\overbrace{K(t)}}} & \\
\underline{\underline{\underline{M(t)}}} & \overline{\overline{P(t)}} & & & \uparrow & \\
\uparrow & \uparrow & & & \overbrace{\overbrace{G(t)}} & \\
|||^{-1} & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
\backslash & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 & ||| & & & & \\
 & / & \mathrm{FVprt}(t) & & \backslash & = \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & / & ||| & \\
\uparrow & & & |||^{-1} & \uparrow & \\
\overbrace{\overbrace{W(t)}} & & & \uparrow & \overline{\overline{\overline{T(t)}}} & \\
\uparrow & & & \underline{\underline{\underline{A(t)}}} & \uparrow & \\
\overline{\overbrace{\overbrace{J(t)}}} & & & \uparrow & \overline{\overline{Y(t)}} & \\
\uparrow & & & \underline{\underline{S_2(t)}} & \uparrow & \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & \uparrow & \overline{U(t)} & \\
\cdots & & & \underline{E(t)} & \uparrow & \\
 & & & & \leftarrow \quad H(t) &
\end{array}
$$

$$\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t)\\
\uparrow & & \uparrow\\
\underline{\underline{Q(t)}} & & \overline{R(t)}\\
\uparrow & & \uparrow\\
 & & \overline{\overline{P(t)}}\\
\underline{\underline{\underline{M(t)}}} & & \uparrow\\
\uparrow & & \overline{\overline{\overline{L(t)}}}\\
|||^{-1} & & \uparrow\\
\backslash & & |||\\
 & & / \quad \mathrm{FVprt}(t)\\
\overline{\overline{\overline{\overline{B(t)}}}} & & \\
\uparrow & & \\
\overbrace{\overbrace{\overbrace{W(t)}}} & & \\
\uparrow & & \\
\overline{\overbrace{\overbrace{J(t)}}} & & \\
\uparrow & & \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & \\
\ldots & &
\end{array}
\qquad
\begin{array}{ccc}
 & \ldots & \\
 & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
/ & & \backslash\\
|||^{-1} & & |||\\
\uparrow & & \uparrow\\
\underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}}\\
\uparrow & & \uparrow\\
\underline{\underline{S_1(t)}} \cup \underline{\underline{S_2(t)}} & & \overline{\overline{Y(t)}}\\
\uparrow & & \uparrow\\
\underline{E(t)} & & \overline{U(t)}\\
 & & \uparrow\\
 & \leftarrow & H(t)
\end{array}$$

(A.4 .2.2.15),


D(t)
C(t)
Q(t)
R(t)
P(t)
M(t)
L(t)
|||⁻¹
|||
FVprt(t)
Z(t)
K(t)
G(t)
F(t)
+
B(t)
W(t)
J(t)
O(t)
|||⁻¹
A(t)
S(t)
E₁(t)
|||
T(t)
Y(t)
U(t)
H(t)

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{\overline{K(t)}} & \\
 & & \overline{\overline{P(t)}} & & & \uparrow & \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & & \overbrace{G(t)} & \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
|||^{-1} & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
\backslash & & ||| & & & & \\
 & & / & \mathrm{FVprt}(t) & & \backslash & = \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & ||| & \\
\uparrow & & & & |||^{-1} & \uparrow & \\
\overbrace{\overbrace{W(t)}} & & & & \uparrow & \overline{\overline{\overline{T(t)}}} & \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & \uparrow & \\
\overbrace{\overbrace{\overline{J(t)}}} & & & & \uparrow & \overline{\overline{Y(t)}} & \\
\uparrow & & & & \underline{\underline{S(t)}} & \uparrow & \\
\overbrace{\overbrace{\overline{\overline{O(t)}}}} & & & & \uparrow & \overline{U(t)} & \\
\cdots & & & & \underline{E_2(t)} & \leftarrow & H(t)
\end{array}
$$

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots & \\
\uparrow & & \uparrow & & & & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
\uparrow & & \uparrow & & & \uparrow & \\
 & & \overline{\overline{P(t)}} & & & \overline{\overbrace{\overbrace{K(t)}}} & \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & & \uparrow & \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & & \overbrace{\overbrace{G(t)}} & \\
|||^{-1} & & \uparrow & & & \uparrow & \\
\backslash & & ||| & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 & & / & \mathrm{FVprt}(t) & & & \backslash \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & & & / & & ||| \\
 & \uparrow & & & |||^{-1} & & \uparrow \\
 & \overbrace{\overbrace{\overbrace{W(t)}}} & & & \uparrow & & \overline{\overline{\overline{T(t)}}} \\
 & \uparrow & & & \underline{\underline{\underline{A(t)}}} & & \uparrow \\
 & \overline{\overbrace{\overbrace{J(t)}}} & & & \uparrow & & \overline{\overline{Y(t)}} \\
 & \uparrow & & & \underline{\underline{S(t)}} & & \uparrow \\
 & \overline{\overline{\overline{\overbrace{\overbrace{O(t)}}}}} & & & \uparrow & & \overline{U(t)} \\
 & \cdots & & & \underline{E_1(t)} \cup \underline{E_2(t)} & & \uparrow \\
 & & & & & \leftarrow & H(t)
\end{array}
$$

(A.4 .2.2.16),

$$\underline{D(t)} \leftarrow C(t)$$

$$\underline{D(t)} \uparrow \underline{\underline{Q(t)}} \uparrow \quad \underline{\underline{\underline{M(t)}}} \uparrow |||^{-1} \quad \backslash$$

$$C(t) \uparrow \overline{R(t)} \uparrow \overline{\overline{P(t)}} \uparrow \overline{\overline{\overline{L(t)}}} \uparrow ||| \quad / \quad \mathrm{FVprt}(t)$$

$$\cdots \quad \overline{\overline{\overbrace{\overbrace{Z(t)}}}} \uparrow \overline{\overbrace{\overbrace{K(t)}}} \uparrow \overbrace{\overbrace{G(t)}} \uparrow \overline{\overline{\overline{\overline{F(t)}}}} \quad \backslash \quad ||| \uparrow \overline{\overline{\overline{T_1(t)}}} \uparrow \overline{\overline{Y(t)}} \uparrow \overline{U(t)} \uparrow H(t)$$

$$+$$

$$\overline{\overline{\overline{\overline{B(t)}}}} \uparrow \overbrace{\overbrace{W(t)}} \uparrow \overline{\overbrace{\overbrace{J(t)}}} \uparrow \overline{\overline{\overline{\overbrace{\overbrace{O(t)}}}}} \quad \cdots$$

$$/ \quad |||^{-1} \uparrow \underline{\underline{\underline{A(t)}}} \uparrow \underline{\underline{S(t)}} \uparrow \underline{E(t)} \leftarrow H(t)$$

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{K(t)}}} & \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{G(t)}} & \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
\backslash & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 & & ||| & & & \backslash & = \\
 & & / & \mathrm{FVprt}(t) & / & ||| & \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & |||^{-1} & \uparrow & \\
\uparrow & & & & \uparrow & \overline{\overline{\overline{T_2(t)}}} & \\
\overbrace{\overbrace{W(t)}} & & & & \underline{\underline{\underline{A(t)}}} & \uparrow & \\
\uparrow & & & & \uparrow & \overline{\overline{Y(t)}} & \\
\overbrace{\overbrace{\overline{J(t)}}} & & & & \underline{\underline{S(t)}} & \uparrow & \\
\uparrow & & & & \uparrow & \overline{U(t)} & \\
\overbrace{\overbrace{\overline{\overline{O(t)}}}} & & & & \underline{E(t)} & \uparrow & \\
\cdots & & & & & \leftarrow & H(t)
\end{array}
$$

$$
\begin{array}{ccccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & & \cdots & & \\
\uparrow & & \uparrow & & & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} & & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & & \uparrow & & \\
\uparrow & & \uparrow & & & & \overbrace{\overbrace{\overline{K(t)}}} & & \\
 & & \overline{\overline{P(t)}} & & & & \uparrow & & \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & & & \overbrace{\overbrace{\overbrace{G(t)}}} & & \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & & & \uparrow & & \\
|||^{-1} & & \uparrow & & & & \overline{\overline{\overline{\overline{F(t)}}}} & & \\
\backslash & & ||| & & & & & \backslash & \\
 & & / & \mathrm{FVprt}(t) & & & & ||| & \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & & & \uparrow & \\
\uparrow & & & & |||^{-1} & & \overline{\overline{\overline{T_1(t)}}} & \cup & \overline{\overline{\overline{T_2(t)}}} \\
\overbrace{\overbrace{\overbrace{W(t)}}} & & & & \uparrow & & \uparrow & & \uparrow \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & & & \overline{\overline{Y(t)}} & \\
\overbrace{\overbrace{\overline{J(t)}}} & & & & \uparrow & & & \uparrow & \\
\uparrow & & & & \underline{\underline{S(t)}} & & & \overline{U(t)} & \\
\overbrace{\overbrace{\overline{\overline{O(t)}}}} & & & & \uparrow & & & \uparrow & \\
\cdots & & & & \underline{E(t)} & & \leftarrow & H(t) & \\
\end{array}
$$

(A.4 .2.2.17),

$$\underline{D(t)} \leftarrow C(t)$$

$$\uparrow \qquad \uparrow$$

$$\underline{\underline{Q(t)}} \qquad \overline{R(t)}$$

$$\uparrow \qquad \uparrow$$

$$\underline{\underline{\underline{M(t)}}} \qquad \overline{\overline{P(t)}}$$

$$\uparrow \qquad \uparrow$$

$$|||^{-1} \qquad \overline{\overline{\overline{L(t)}}}$$

$$\qquad \uparrow$$

$$\backslash \qquad |||$$

$$\qquad / \quad \mathrm{FVprt}(t)$$

$$\overline{\overline{\overline{\overline{B(t)}}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{\overbrace{W(t)}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{\overline{J(t)}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{\overline{\overline{O(t)}}}}$$

$$\ldots$$

$$\ldots$$

$$\overbrace{\overbrace{\overline{\overline{Z(t)}}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{\overline{K(t)}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{G(t)}}$$

$$\uparrow$$

$$\overline{\overline{\overline{\overline{F(t)}}}}$$

$$\backslash \qquad +$$

$$/ \qquad |||$$

$$|||^{-1} \qquad \uparrow$$

$$\uparrow \qquad \overline{\overline{\overline{T(t)}}}$$

$$\underline{\underline{\underline{A(t)}}} \qquad \uparrow$$

$$\uparrow \qquad \overline{\overline{Y_1(t)}}$$

$$\underline{\underline{S(t)}} \qquad \uparrow$$

$$\uparrow \qquad \overline{U(t)}$$

$$\underline{E(t)} \qquad \uparrow$$

$$\leftarrow \quad H(t)$$

$$\underline{D(t)} \leftarrow C(t)$$

$$\begin{array}{c}
\underline{D(t)} \\ \uparrow \\ \underline{\underline{Q(t)}} \\ \uparrow \\ \underline{\underline{\underline{M(t)}}} \\ \uparrow \\ |||^{-1} \\ \backslash
\end{array}
\qquad
\begin{array}{c}
C(t) \\ \uparrow \\ \overline{R(t)} \\ \uparrow \\ \overline{\overline{P(t)}} \\ \uparrow \\ \overline{\overline{\overline{L(t)}}} \\ \uparrow \\ ||| \\ /
\end{array}
\quad \mathrm{FVprt}(t) \quad
\begin{array}{c}
\cdots \\ \overline{\overline{\overbrace{\overbrace{Z(t)}}}} \\ \uparrow \\ \overline{\overbrace{\overbrace{K(t)}}} \\ \uparrow \\ \overbrace{\overbrace{G(t)}} \\ \uparrow \\ \overline{\overline{\overline{\overline{F(t)}}}} \\ \backslash
\end{array}
\quad =$$

$$\begin{array}{c}
\overline{\overline{\overline{\overline{B(t)}}}} \\ \uparrow \\ \overbrace{\overbrace{\overbrace{W(t)}}} \\ \uparrow \\ \overline{\overbrace{\overbrace{J(t)}}} \\ \uparrow \\ \overline{\overline{\overline{\overbrace{\overbrace{O(t)}}}}} \\ \cdots
\end{array}
\qquad
\begin{array}{c}
/ \\ |||^{-1} \\ \uparrow \\ \underline{\underline{\underline{A(t)}}} \\ \uparrow \\ \underline{\underline{S(t)}} \\ \uparrow \\ \underline{E(t)}
\end{array}
\qquad
\begin{array}{c}
||| \\ \uparrow \\ \overline{\overline{\overline{T(t)}}} \\ \uparrow \\ \overline{\overline{Y_2(t)}} \\ \uparrow \\ \overline{U(t)} \\ \uparrow \\ \leftarrow \ H(t)
\end{array}$$

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & & \cdots \\
\uparrow & & \uparrow & & & & \overbrace{\overbrace{\overline{\overline{\overline{Z(t)}}}}} \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & & \uparrow \\
\uparrow & & \uparrow & & & & \overbrace{\overbrace{\overline{K(t)}}} \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & & & \uparrow \\
\uparrow & & \uparrow & & & & \overbrace{\overbrace{G(t)}} \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} & & & & \uparrow \\
\backslash & & \uparrow & & & & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & & ||| & & & & \backslash \\
 & & / & \mathrm{FVprt}(t) & / & & ||| \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & |||^{-1} & & \uparrow \\
\uparrow & & & & \uparrow & & \overline{\overline{\overline{T(t)}}} \\
\overbrace{\overbrace{W(t)}} & & & & \underline{\underline{\underline{A(t)}}} & & \uparrow \\
\uparrow & & & & \uparrow & & \overline{\overline{Y_1(t)}} \cup \overline{\overline{Y_2(t)}} \\
\overbrace{\overbrace{\overline{J(t)}}} & & & & \underline{\underline{S(t)}} & & \uparrow \\
\uparrow & & & & \uparrow & & \overline{U(t)} \\
\overbrace{\overbrace{\overline{\overline{O(t)}}}} & & & & \underline{E(t)} & & \uparrow \\
\cdots & & & & & & \leftarrow \quad H(t)
\end{array}
$$

(A.4 .2.2.18),

$$
\begin{array}{cccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots & & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} & & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow & & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{K(t)}}} & & \\
 & & \overline{\overline{P(t)}} & & & \uparrow & & \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & & \overbrace{\overbrace{G(t)}} & & \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & & \\
|||^{-1} & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & & \\
\backslash & & ||| & & & & & \\
 & & / & \mathrm{FVprt}(t) & & & \backslash & + \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & & ||| & \\
\uparrow & & & & |||^{-1} & & \uparrow & \\
\overbrace{\overbrace{W(t)}} & & & & \uparrow & & \overline{\overline{\overline{T(t)}}} & \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & & \uparrow & \\
\overbrace{\overbrace{\overline{J(t)}}} & & & & \uparrow & & \overline{\overline{Y(t)}} & \\
\uparrow & & & & \underline{\underline{S(t)}} & & \uparrow & \\
\overbrace{\overbrace{\overline{\overline{\overline{O(t)}}}}} & & & & \uparrow & & \overline{U_1(t)} & \\
\cdots & & & & \underline{E(t)} & & \uparrow & \\
 & & & & & \leftarrow & H(t) &
\end{array}
$$

$$\underline{D(t)} \quad \leftarrow \quad C(t)$$

$$\uparrow \qquad\qquad \uparrow$$

$$\underline{\underline{Q(t)}} \qquad \overline{R(t)}$$

$$\uparrow \qquad\qquad \uparrow$$

$$\overline{\overline{P(t)}}$$

$$\uparrow$$

$$\underline{\underline{\underline{M(t)}}} \qquad \overline{\overline{\overline{L(t)}}}$$

$$\uparrow \qquad\qquad \uparrow$$

$$|||^{-1} \qquad\qquad |||$$

$$\backslash \qquad\qquad /$$

$$\mathrm{FVprt}(t)$$

$$\overline{\overline{\overline{\overline{B(t)}}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{W(t)}}$$

$$\uparrow$$

$$\overline{\overbrace{\overbrace{J(t)}}}$$

$$\uparrow$$

$$\overline{\overline{\overbrace{\overbrace{O(t)}}}}$$

$$\ldots$$

$$\ldots$$

$$\overline{\overline{\overbrace{\overbrace{Z(t)}}}}$$

$$\uparrow$$

$$\overline{\overbrace{\overbrace{K(t)}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{G(t)}}$$

$$\uparrow$$

$$\overline{\overline{\overline{\overline{F(t)}}}}$$

$$/ \qquad\qquad \backslash \qquad =$$

$$|||^{-1} \qquad\qquad |||$$

$$\uparrow \qquad\qquad \uparrow$$

$$\underline{\underline{\underline{A(t)}}} \qquad \overline{\overline{\overline{T(t)}}}$$

$$\uparrow \qquad\qquad \uparrow$$

$$\underline{\underline{S(t)}} \qquad \overline{\overline{Y(t)}}$$

$$\uparrow \qquad\qquad \uparrow$$

$$\overline{U_2(t)}$$

$$\uparrow \qquad\qquad \uparrow$$

$$\underline{E(t)} \quad \leftarrow \quad H(t)$$

$$
\begin{array}{ccccccc}
\underline{D(t)} \quad \leftarrow & C(t) & & & & \cdots & \\
\uparrow & \uparrow & & & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} & \\
\underline{\underline{Q(t)}} & \overline{R(t)} & & & & \uparrow & \\
\uparrow & \uparrow & & & & \overbrace{\overbrace{\overline{K(t)}}} & \\
& \overline{\overline{P(t)}} & & & & \uparrow & \\
\underline{\underline{\underline{M(t)}}} & \uparrow & & & & \overbrace{\overbrace{G(t)}} & \\
\uparrow & \overline{\overline{\overline{L(t)}}} & & & & \uparrow & \\
|||^{-1} & \uparrow & & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
\backslash & ||| & & & & & \\
& / & \mathrm{FVprt}(t) & & & & \backslash \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & / & & & ||| \\
\uparrow & & & |||^{-1} & & & \uparrow \\
\overbrace{\overbrace{W(t)}} & & & \uparrow & & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & & \underline{\underline{\underline{A(t)}}} & & & \uparrow \\
\overbrace{\overbrace{\overline{J(t)}}} & & & \uparrow & & & \overline{\overline{Y(t)}} \\
\uparrow & & & \underline{\underline{S(t)}} & & & \uparrow \\
\overbrace{\overbrace{\overline{\overline{\overline{O(t)}}}}} & & & \uparrow & & & \overline{U_1(t)} \cup \overline{U_2(t)} \\
\cdots & & & \underline{E(t)} & & & \uparrow \\
& & & & & \leftarrow & H(t)
\end{array}
$$

(A.4 .2.2.19),

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & \cdots & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{\overline{Z(t)}}}} & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{\overline{K(t)}}} & \\
& & \overline{\overline{P(t)}} & & & \uparrow & \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & & \overbrace{\overbrace{G(t)}} & \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & & \uparrow & \\
|||^{-1} & & \uparrow & & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
\backslash & & ||| & & & & \\
& & / & \mathrm{FVprt}(t) & & \backslash & + \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & ||| & \\
\uparrow & & & & |||^{-1} & \uparrow & \\
\overbrace{\overbrace{W(t)}} & & & & \uparrow & \overline{\overline{\overline{T(t)}}} & \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & \uparrow & \\
\overbrace{\overbrace{\overline{J(t)}}} & & & & \uparrow & \overline{\overline{Y(t)}} & \\
\uparrow & & & & \underline{\underline{S(t)}} & \uparrow & \\
\overbrace{\overbrace{\overline{\overline{O(t)}}}} & & & & \uparrow & \overline{U(t)} & \\
\cdots & & & & \underline{E(t)} & \uparrow & \\
& & & & & \leftarrow & H_1(t)
\end{array}
$$

$$\underline{D(t)} \leftarrow C(t)$$

$$\uparrow \qquad \uparrow$$

$$\underline{\underline{Q(t)}} \qquad \overline{R(t)}$$

$$\uparrow \qquad \uparrow$$

$$\overline{\overline{P(t)}}$$

$$\uparrow$$

$$\underline{\underline{\underline{M(t)}}} \qquad \overline{\overline{\overline{L(t)}}}$$

$$\uparrow \qquad \uparrow$$

$$|||^{-1} \qquad |||$$

$$\backslash \qquad / \quad \mathrm{FVprt}(t)$$

$$\overline{\overline{\overline{\overline{B(t)}}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{\overbrace{W(t)}}}$$

$$\uparrow$$

$$\overline{\overbrace{\overbrace{J(t)}}}$$

$$\uparrow$$

$$\overline{\overline{\overbrace{\overbrace{O(t)}}}}$$

$$\dots$$

$$\dots$$

$$\overline{\overline{\overbrace{\overbrace{Z(t)}}}}$$

$$\uparrow$$

$$\overline{\overbrace{\overbrace{K(t)}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{G(t)}}$$

$$\uparrow$$

$$\overline{\overline{\overline{\overline{F(t)}}}}$$

$$/ \qquad \backslash \qquad =$$

$$|||^{-1} \qquad |||$$

$$\uparrow \qquad \uparrow$$

$$\underline{\underline{\underline{A(t)}}} \qquad \overline{\overline{\overline{T(t)}}}$$

$$\uparrow \qquad \uparrow$$

$$\underline{\underline{S(t)}} \qquad \overline{\overline{Y(t)}}$$

$$\uparrow \qquad \uparrow$$

$$\underline{E(t)} \qquad \overline{U(t)}$$

$$\uparrow$$

$$\leftarrow H_2(t)$$

$$
\begin{array}{ccccccc}
\underline{D(t)} & \leftarrow & C(t) & & & & \cdots \\
\uparrow & & \uparrow & & & & \overbrace{\overbrace{\overline{\overline{\overline{Z(t)}}}}} \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & & & \uparrow \\
\uparrow & & \uparrow & & & & \overbrace{\overbrace{\overline{K(t)}}} \\
\underline{\underline{\underline{M(t)}}} & & \overline{\overline{P(t)}} & & & & \uparrow \\
\uparrow & & \uparrow & & & & \overbrace{\overbrace{\overbrace{G(t)}}} \\
|||^{-1} & & \overline{\overline{\overline{L(t)}}} & & & & \uparrow \\
\backslash & & \uparrow & & & & \overline{\overline{\overline{\overline{F(t)}}}} \\
 & & ||| & & & & \backslash \\
 & & / & \mathrm{FVprt}(t) & & & ||| \\
\overline{\overline{\overline{\overline{B(t)}}}} & & & & / & & \uparrow \\
\uparrow & & & & |||^{-1} & & \overline{\overline{\overline{T(t)}}} \\
\overbrace{\overbrace{\overbrace{W(t)}}} & & & & \uparrow & & \uparrow \\
\uparrow & & & & \underline{\underline{\underline{A(t)}}} & & \overline{\overline{Y(t)}} \\
\overbrace{\overbrace{\overline{J(t)}}} & & & & \uparrow & & \uparrow \\
\uparrow & & & & \underline{\underline{S(t)}} & & \overline{U(t)} \\
\overbrace{\overbrace{\overbrace{\overline{\overline{\overline{O(t)}}}}}} & & & & \uparrow & & \uparrow \\
\cdots & & & & \underline{E(t)} & \leftarrow & H_1(t) \cup H_2(t)
\end{array}
$$

(A.4 .2.2.20).

We consider the following self-type dynamic FVprt-structures of the first type:

$$
\begin{array}{ccccccc}
\underline{Q(t)} & \leftarrow & Q(t) & & & & \cdots \\
\uparrow & & \uparrow & & & & \overline{\overline{\overbrace{\overbrace{Q(t)}}}} \\
\underline{\underline{Q(t)}} & & \overline{Q(t)} & & & & \uparrow \\
\uparrow & & \uparrow & & & & \overline{\overbrace{\overbrace{Q(t)}}} \\
\underline{\underline{\underline{Q(t)}}} & & \overline{\overline{Q(t)}} & & & & \uparrow \\
\uparrow & & \uparrow & & & & \overbrace{\overbrace{Q(t)}} \\
|||^{-1} & & \overline{\overline{\overline{Q(t)}}} & & & & \uparrow \\
\backslash & & \uparrow & & & & \overline{\overline{\overline{\overline{Q(t)}}}} \\
 & & ||| & & & & \backslash \\
 & & / & \mathrm{FVprt}(t) & & & ||| \\
\overline{\overline{\overline{\overline{Q(t)}}}} & & & & / & & \uparrow \\
\uparrow & & & & |||^{-1} & & \overline{\overline{\overline{Q(t)}}} \\
\overbrace{\overbrace{Q(t)}} & & & & \uparrow & & \uparrow \\
\uparrow & & & & \underline{\underline{\underline{Q(t)}}} & & \overline{\overline{Q(t)}} \\
\overline{\overbrace{\overbrace{Q(t)}}} & & & & \uparrow & & \uparrow \\
\uparrow & & & & \underline{\underline{Q(t)}} & & \overline{Q(t)} \\
\overline{\overline{\overbrace{\overbrace{Q(t)}}}} & & & & \uparrow & & \uparrow \\
\cdots & & & & \underline{Q(t)} & \leftarrow & Q(t)
\end{array}
\qquad \text{(A.4 .2.3),}
$$

$$
\begin{array}{ccccccc}
\underline{A(t)} & \leftarrow & Q(t) & & & \cdots & \\
\uparrow & & \uparrow & & & \overline{\overline{\overbrace{\overbrace{A(t)}}}} & \\
\underline{\underline{Q(t)}} & & \overline{Q(t)} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overline{\overbrace{\overbrace{Q(t)}}} & \\
\underline{\underline{\underline{Q(t)}}} & & \overline{\overline{Q(t)}} & & & \uparrow & \\
\uparrow & & \uparrow & & & \overbrace{\overbrace{Q(t)}} & \\
|||^{-1} & & \overline{\overline{\overline{Q(t)}}} & & & \uparrow & \\
\backslash & & \uparrow & & & \overline{\overline{\overline{\overline{Q(t)}}}} & \\
 & & ||| & & & & \\
 & & / & \mathrm{FVprt}(t) & & \backslash & \quad \text{(A.4 .2.4),} \\
\overline{\overline{\overline{\overline{Q(t)}}}} & & & & / & ||| & \\
\uparrow & & & & |||^{-1} & \uparrow & \\
\overbrace{\overbrace{Q(t)}} & & & & \uparrow & \overline{\overline{\overline{Q(t)}}} & \\
\uparrow & & & & \underline{\underline{\underline{Q(t)}}} & \uparrow & \\
\overline{\overbrace{\overbrace{Q(t)}}} & & & & \uparrow & \overline{\overline{Q(t)}} & \\
\uparrow & & & & \underline{\underline{Q(t)}} & \uparrow & \\
\overline{\overline{\overbrace{\overbrace{a(t)}}}} & & & & \uparrow & \overline{Q(t)} & \\
\cdots & & & & \underline{Q(t)} & \uparrow & \\
 & & & & & \leftarrow \; a(t) &
\end{array}
$$

denote $FV_{11}(t) f A(t);Q(t);a(t)$, $a(t) \subset$ A(t),

$$
\begin{array}{ccccccc}
\underline{A(t)} \;\leftarrow & A(t) & & & \cdots & & \\
\uparrow & \uparrow & & & \overline{\overline{\overbrace{\overbrace{A(t)}}}} & & \\
\underline{\underline{Q(t)}} & \overline{Q(t)} & & & \uparrow & & \\
\uparrow & \uparrow & & & \overline{\overbrace{\overbrace{Q(t)}}} & & \\
 & \overline{\overline{Q(t)}} & & & \uparrow & & \\
\underline{\underline{\underline{Q(t)}}} & \uparrow & & & \overbrace{\overbrace{Q(t)}} & & \\
\uparrow & \overline{\overline{\overline{Q(t)}}} & & & \uparrow & & \\
|||^{-1} & \uparrow & & & \overline{\overline{\overline{\overline{Q(t)}}}} & & \\
\backslash & ||| & & & & & \\
 & / & \mathrm{FVprt}(t) & & & \backslash & \text{(A.4 .2.5),} \\
\overline{\overline{\overline{\overline{Q(t)}}}} & & & / & & ||| & \\
\uparrow & & & |||^{-1} & & \uparrow & \\
\overbrace{\overbrace{Q(t)}} & & & \uparrow & & \overline{\overline{\overline{Q(t)}}} & \\
\uparrow & & & \underline{\underline{\underline{Q(t)}}} & & \uparrow & \\
\overline{\overbrace{\overbrace{Q(t)}}} & & & \uparrow & & \overline{\overline{Q(t)}} & \\
\uparrow & & & \underline{\underline{Q(t)}} & & \uparrow & \\
\overline{\overline{\overbrace{\overbrace{A(t)}}}} & & & \uparrow & & \overline{Q(t)} & \\
\cdots & & & \underline{A(t)} & & \uparrow & \\
 & & & & \leftarrow & A(t) &
\end{array}
$$

$$
\begin{array}{ccccc}
\underline{A(t)} & \leftarrow & a(t) & & \cdots \\
\uparrow & & \uparrow & & \overbrace{\overline{\overline{A(t)}}} \\
\underline{\underline{Q(t)}} & & \overline{Q(t)} & & \uparrow \\
\uparrow & & \uparrow & & \overbrace{\overline{Q(t)}} \\
 & & \overline{\overline{Q(t)}} & & \uparrow \\
\underline{\underline{\underline{Q(t)}}} & & \uparrow & & \overbrace{Q(t)} \\
\uparrow & & \overline{\overline{\overline{Q(t)}}} & & \uparrow \\
|||^{-1} & & \uparrow & & \overline{\overline{\overline{\overline{Q(t)}}}} \\
\backslash & & ||| & & \backslash \\
 & & / & \mathrm{FVprt}(t) & |||
\end{array}
$$

$$
\begin{array}{ccccc}
\overline{\overline{\overline{\overline{Q(t)}}}} & & / & & \uparrow \\
\uparrow & & |||^{-1} & & \overline{\overline{\overline{Q(t)}}} \\
\overbrace{Q(t)} & & \uparrow & & \uparrow \\
\uparrow & & \underline{\underline{\underline{Q(t)}}} & & \overline{\overline{Q(t)}} \\
\overbrace{\overline{Q(t)}} & & \uparrow & & \uparrow \\
\uparrow & & \underline{\underline{Q(t)}} & & \overline{Q(t)} \\
\overbrace{\overline{\overline{a(t)}}} & & \uparrow & & \uparrow \\
\cdots & & \underline{Q(t)} & \leftarrow & a(t)
\end{array}
$$

denote $FV_{12}(t) f a(t);Q(t);A(t)$, $a(t) \subset$ A(t),

$$
\begin{array}{ccccccc}
\underline{Q(t)} & \leftarrow & Q(t) & & & & \cdots \\
\uparrow & & \uparrow & & & & \overbrace{\overline{\overline{\overline{Q(t)}}}} \\
\underline{\underline{Q(t)}} & & \overline{Q(t)} & & & & \uparrow \\
\uparrow & & \uparrow & & & & \overbrace{\overline{\overline{Q(t)}}} \\
 & & \overline{\overline{Q(t)}} & & & & \uparrow \\
\underline{\underline{\underline{A(t)}}} & & \uparrow & & & & \overbrace{Q(t)} \\
\uparrow & & \overline{\overline{\overline{A(t)}}} & & & & \uparrow \\
|||^{-1} & & \uparrow & & & & \overline{\overline{\overline{\overline{A(t)}}}} \\
\backslash & & ||| & & & & \\
 & & / & \mathrm{FVprt}(t) & & & \backslash
\end{array}
\quad \text{(A.4 .2.7),}
$$

$$
\begin{array}{ccccc}
\overline{\overline{\overline{\overline{A(t)}}}} & & / & & ||| \\
\uparrow & & |||^{-1} & & \uparrow \\
\overbrace{Q(t)} & & \uparrow & & \overline{\overline{a(t)}} \\
\uparrow & & \underline{\underline{\underline{A(t)}}} & & \uparrow \\
\overbrace{\overline{\overline{Q(t)}}} & & \uparrow & & \overline{\overline{Q(t)}} \\
\uparrow & & \underline{\underline{Q(t)}} & & \uparrow \\
\overbrace{\overline{\overline{\overline{Q(t)}}}} & & \uparrow & & \overline{Q(t)} \\
\cdots & & \underline{Q(t)} & & \uparrow \\
 & & & \leftarrow & Q(t)
\end{array}
$$

and any other possible options of self for (A.4 .2.1) etc.

It can be considered a simpler version of the dynamic operator

$$
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
\text{FVprt}(t) & & \backslash \\
/ & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{T(t)}}} \\
\underline{\underline{\underline{A(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{Y(t)}} \\
\underline{\underline{S(t)}} & & \uparrow \\
\uparrow & & \overline{U(t)} \\
\underline{E(t)} & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
\qquad (\text{A.4 .2.8}),
$$

the result of this process will be described by the expression

$$
\begin{array}{lccc}
 & & \cdots & \\
 & & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
 & & \uparrow & \\
 & & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & & \uparrow & \\
 & & \overbrace{\overbrace{G(t)}} & \\
 & & \uparrow & \\
 & & \overline{\overline{\overline{\overline{F(t)}}}} & \\
\mathrm{FVrt}(t) & & \quad \backslash & \text{(A.4 .2.9),} \\
 & / & ||| & \\
 & |||^{-1} & \uparrow & \\
 & \uparrow & \overline{\overline{\overline{T(t)}}} & \\
 & \underline{\underline{\underline{A(t)}}} & \uparrow & \\
 & \uparrow & \overline{\overline{Y(t)}} & \\
 & \underline{\underline{S(t)}} & \uparrow & \\
 & \uparrow & \overline{U(t)} & \\
 & \underline{E(t)} & \uparrow & \\
 & & \leftarrow \quad H(t) & \\
\end{array}
$$

or

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & /
\end{array}
\quad \mathrm{FVprt}(t) \text{ (A.4 .2.10),}
$$

$$
\begin{array}{c}
\overline{\overline{\overline{\overline{B(t)}}}} \\
\uparrow \\
\overbrace{\overbrace{W(t)}} \\
\uparrow \\
\overline{\overbrace{\overbrace{J(t)}}} \\
\uparrow \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} \\
\dots
\end{array}
$$

the result of this process will be described by the expression

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
 & & \overline{\overline{\overline{L(t)}}} \\
\uparrow & & \uparrow \\
|||^{-1} & & ||| \\
\backslash & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{O(t)}}}}} & \\
 & \ldots &
\end{array}
\quad \mathrm{FVrt}(t) \quad \text{(A.4 .2.11)},
$$

Definition A.4 .2.2. The dynamic operator (A.4 .2.8) we shall call dynamic FVprt – element of the second type, (A.4 .2.9) we shall call dynamic FVrt – element of the second type.

It's allowed to add dynamic FVprt – elements of the second type:

$$\mathrm{FVprt}(t)\begin{array}{cc} & \cdots \\ & \overline{\overline{\overline{\overbrace{\overbrace{Z_1(t)}}}}} \\ & \uparrow \\ & \overline{\overbrace{\overbrace{K(t)}}} \\ & \uparrow \\ & \overbrace{\overbrace{G(t)}} \\ & \uparrow \\ & \overline{\overline{\overline{\overline{F(t)}}}} \\ / & \backslash \\ |||^{-1} & ||| \\ \uparrow & \uparrow \\ \underline{\underline{\underline{A(t)}}} & \overline{\overline{\overline{T(t)}}} \\ \uparrow & \uparrow \\ \underline{\underline{S(t)}} & \overline{\overline{Y(t)}} \\ \uparrow & \uparrow \\ \underline{E(t)} & \overline{U(t)} \\ & \uparrow \\ \leftarrow & H(t) \end{array} + \mathrm{FVprt}(t)\begin{array}{cc} & \cdots \\ & \overline{\overline{\overline{\overbrace{\overbrace{Z_2(t)}}}}} \\ & \uparrow \\ & \overline{\overbrace{\overbrace{K(t)}}} \\ & \uparrow \\ & \overbrace{\overbrace{G(t)}} \\ & \uparrow \\ & \overline{\overline{\overline{\overline{F(t)}}}} \\ / & \backslash \\ |||^{-1} & ||| \\ \uparrow & \uparrow \\ \underline{\underline{\underline{A(t)}}} & \overline{\overline{\overline{T(t)}}} \\ \uparrow & \uparrow \\ \underline{\underline{S(t)}} & \overline{\overline{Y(t)}} \\ \uparrow & \uparrow \\ \underline{E(t)} & \overline{U(t)} \\ & \uparrow \\ \leftarrow & H(t) \end{array} = \mathrm{FVprt}(t)\begin{array}{cc} & \cdots \\ & \overline{\overline{\overline{\overbrace{\overbrace{Z_1(t)}}}}} \cup \overline{\overline{\overline{\overbrace{\overbrace{Z_2(t)}}}}} \\ & \uparrow \\ & \overline{\overbrace{\overbrace{K(t)}}} \\ & \uparrow \\ & \overbrace{\overbrace{G(t)}} \\ & \uparrow \\ & \overline{\overline{\overline{\overline{F(t)}}}} \\ / & \backslash \\ |||^{-1} & ||| \\ \uparrow & \uparrow \\ \underline{\underline{\underline{A(t)}}} & \overline{\overline{\overline{T(t)}}} \\ \uparrow & \uparrow \\ \underline{\underline{S(t)}} & \overline{\overline{Y(t)}} \\ \uparrow & \uparrow \\ \underline{E(t)} & \overline{U(t)} \\ & \uparrow \\ \leftarrow & H(t) \end{array}$$

(A.4 .2.12),

$$
\mathrm{FVprt}(t)\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K_1(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
 \uparrow & & \uparrow \\
 \underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
+\mathrm{FVprt}(t)\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K_2(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
 \uparrow & & \uparrow \\
 \underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
=\mathrm{FVprt}(t)\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K_1(t)}}} \cup \overline{\overbrace{\overbrace{K_2(t)}}} & \\
 & \uparrow \qquad \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
 \uparrow & & \uparrow \\
 \underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
$$

(A.4 .2.13),

$$\mathrm{FVprt}(t)\begin{array}{ccc} & \cdots & \\ & \overline{\overline{\overline{\overbrace{\overbrace{Z(t)}}}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{K(t)}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{G_1(t)}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overline{F(t)}}}} & \\ / & & \backslash \\ |||^{-1} & & ||| \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\ \uparrow & & \uparrow \\ \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\ \uparrow & & \uparrow \\ \underline{E(t)} & & \overline{U(t)} \\ & & \uparrow \\ & \leftarrow & H(t) \end{array} + \mathrm{FVprt}(t)\begin{array}{ccc} & \cdots & \\ & \overline{\overline{\overline{\overbrace{\overbrace{Z(t)}}}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{K(t)}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{G_2(t)}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overline{F(t)}}}} & \\ / & & \backslash \\ |||^{-1} & & ||| \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\ \uparrow & & \uparrow \\ \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\ \uparrow & & \uparrow \\ \underline{E(t)} & & \overline{U(t)} \\ & & \uparrow \\ & \leftarrow & H(t) \end{array} = \mathrm{FVprt}(t)\begin{array}{ccc} & \cdots & \\ & \overline{\overline{\overline{\overbrace{\overbrace{Z(t)}}}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{K(t)}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{G_1(t)}} \cup \overbrace{\overbrace{G_2(t)}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overline{F(t)}}}} & \\ / & & \backslash \\ |||^{-1} & & ||| \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\ \uparrow & & \uparrow \\ \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\ \uparrow & & \uparrow \\ \underline{E(t)} & & \overline{U(t)} \\ & & \uparrow \\ & \leftarrow & H(t) \end{array}$$

(A.4 .2.13.1),

$$
\mathrm{FVprt}(t)\begin{array}{ccc} & \cdots & \\ & \overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{K(t)}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{G(t)}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overline{F_1(t)}}}} & \\ / & & \backslash \\ |||^{-1} & & ||| \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\ \uparrow & & \uparrow \\ \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\ \uparrow & & \uparrow \\ \underline{E(t)} & & \overline{U(t)} \\ & & \uparrow \\ & \leftarrow & H(t) \end{array}
+\ \mathrm{FVprt}(t)\begin{array}{ccc} & \cdots & \\ & \overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{K(t)}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{G(t)}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overline{F_2(t)}}}} & \\ / & & \backslash \\ |||^{-1} & & ||| \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\ \uparrow & & \uparrow \\ \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\ \uparrow & & \uparrow \\ \underline{E(t)} & & \overline{U(t)} \\ & & \uparrow \\ & \leftarrow & H(t) \end{array}
=\ \mathrm{FVprt}(t)\begin{array}{ccc} & \cdots & \\ & \overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{K(t)}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{G(t)}} & \\ & \uparrow & \\ & \overline{\overline{\overline{\overline{F_1(t)}}}} \cup \overline{\overline{\overline{\overline{F_2(t)}}}} & \\ / & & \backslash \\ |||^{-1} & & ||| \\ \uparrow & & \uparrow \\ \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\ \uparrow & & \uparrow \\ \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\ \uparrow & & \uparrow \\ \underline{E(t)} & & \overline{U(t)} \\ & & \uparrow \\ & \leftarrow & H(t) \end{array}
$$

(A.4 .2.13.2),

$$
\mathrm{FVprt}(t)
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{Z(t)}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{\overline{F(t)}}}}} & \\
 / & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A_1(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
\uparrow & & \uparrow \\
\underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
+ \mathrm{FVprt}(t)
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{Z(t)}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{\overline{F(t)}}}}} & \\
 / & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A_2(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
\uparrow & & \uparrow \\
\underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
= \mathrm{FVprt}
$$

$$
\begin{array}{ccccc}
 & & \cdots & & \\
 & & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}}} & & \\
 & & \uparrow & & \\
 & & \overline{\overbrace{\overbrace{K(t)}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{G(t)}} & & \\
 & & \uparrow & & \\
 & & \overline{\overline{\overline{\overline{F(t)}}}} & & \\
(t) & & & \backslash & \text{(A.4 .2.13.3),} \\
 & / & & ||| & \\
 & |||^{-1} & & \uparrow & \\
 & \uparrow & & \overline{\overline{\overline{T(t)}}} & \\
 & \underline{\underline{\underline{A_1(t)}}} \cup \underline{\underline{\underline{A_2(t)}}} & & \uparrow & \\
 & \uparrow & & \overline{\overline{Y(t)}} & \\
 & \underline{\underline{S(t)}} & & \uparrow & \\
 & \uparrow & & \overline{U(t)} & \\
 & \underline{E(t)} & & \uparrow & \\
 & & \leftarrow & H(t) & \\
\end{array}
$$

$$
\mathrm{FVprt}(t)
\begin{array}{ccc}
 & \cdots & \\
 & \overbrace{\overbrace{\overbrace{\overline{\overline{Z(t)}}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overline{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 / & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S_1(t)}} & & \overline{\overline{Y(t)}} \\
\uparrow & & \uparrow \\
\underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
+ \mathrm{FVprt}(t)
\begin{array}{ccc}
 & \cdots & \\
 & \overbrace{\overbrace{\overbrace{\overline{\overline{Z(t)}}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overline{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 / & & \backslash \\
|||^{-1} & & ||| \\
\uparrow & & \uparrow \\
\underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
\uparrow & & \uparrow \\
\underline{\underline{S_2(t)}} & & \overline{\overline{Y(t)}} \\
\uparrow & & \uparrow \\
\underline{E(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
= \mathrm{FVprt}
$$

$$\overset{\cdots}{\overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}}}}$$

$$\uparrow$$

$$\overline{\overbrace{\overbrace{\overbrace{K(t)}}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{G(t)}}$$

$$\uparrow$$

$$\overline{\overline{\overline{\overline{\overline{F(t)}}}}}$$

(t) $\qquad\qquad\qquad\qquad\qquad \backslash$ $\qquad$ (A.4 .2.13.4),

$$/ \qquad\qquad\qquad |||$$

$$|||^{-1} \qquad\qquad \uparrow$$

$$\uparrow \qquad\qquad \overline{\overline{\overline{T(t)}}}$$

$$\underline{\underline{\underline{A(t)}}} \qquad\qquad \uparrow$$

$$\uparrow \qquad\qquad \overline{\overline{Y(t)}}$$

$$\underline{\underline{S_1(t)}} \cup \underline{\underline{S_2(t)}} \qquad \uparrow$$

$$\uparrow \qquad\qquad \overline{U(t)}$$

$$\underline{E(t)} \qquad\qquad \uparrow$$

$$\leftarrow \quad H(t)$$

$$
\text{FVprt}(t)\;
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
 \uparrow & & \uparrow \\
 \underline{E_1(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
\;+\;\text{FVprt}(t)\;
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
 \uparrow & & \uparrow \\
 \underline{E_2(t)} & & \overline{U(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
\;=\;\text{FVprt}
$$

$$\cdots$$

$$\overbrace{\overbrace{\overline{\overline{\overline{Z(t)}}}}}$$

$$\uparrow$$

$$\overline{\overbrace{\overbrace{K(t)}}}$$

$$\uparrow$$

$$\overbrace{\overbrace{G(t)}}$$

$$\uparrow$$

$$\overline{\overline{\overline{\overline{\overline{F(t)}}}}}$$

$$(t) \qquad\qquad\qquad \backslash \qquad \text{(A.4 .2.13.),}$$

$$
\begin{array}{ccc}
/ & & |||\\
|||^{-1} & & \uparrow\\
\uparrow & & \overline{\overline{\overline{T(t)}}}\\
\underline{\underline{\underline{A(t)}}} & & \uparrow\\
\uparrow & & \overline{\overline{Y(t)}}\\
\underline{\underline{S(t)}} & & \uparrow\\
\uparrow & & \overline{U(t)}\\
\underline{E_1(t)} \cup \underline{E_2(t)} & & \uparrow\\
 & \leftarrow & H(t)
\end{array}
$$

$$
\begin{array}{cccccccccc}
 & & \cdots & & & & & \cdots & & \\
 & & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}}} & & & & & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}}} & & \\
 & & \uparrow & & & & & \uparrow & & \\
 & & \overline{\overbrace{\overbrace{K(t)}}} & & & & & \overline{\overbrace{\overbrace{K(t)}}} & & \\
 & & \uparrow & & & & & \uparrow & & \\
 & & \overbrace{\overbrace{G(t)}} & & & & & \overbrace{\overbrace{G(t)}} & & \\
 & & \uparrow & & & & & \uparrow & & \\
 & & \overline{\overline{\overline{\overline{F(t)}}}} & & & & & \overline{\overline{\overline{\overline{F(t)}}}} & & \\
\text{FVprt}(t) & & & \backslash & + \text{FVprt}(t) & & & & \backslash & = \text{FVprt} \\
 & / & & ||| & & & / & & ||| & \\
 & |||^{-1} & & \uparrow & & & |||^{-1} & & \uparrow & \\
 & \uparrow & & \overline{\overline{\overline{T_1(t)}}} & & & \uparrow & & \overline{\overline{\overline{T_2(t)}}} & \\
 & \underline{\underline{\underline{A(t)}}} & & \uparrow & & & \underline{\underline{\underline{A(t)}}} & & \uparrow & \\
 & \uparrow & & \overline{\overline{Y(t)}} & & & \uparrow & & \overline{\overline{Y(t)}} & \\
 & \underline{\underline{S(t)}} & & \uparrow & & & \underline{\underline{S(t)}} & & \uparrow & \\
 & \uparrow & & \overline{U(t)} & & & \uparrow & & \overline{U(t)} & \\
 & \underline{E(t)} & & \uparrow & & & \underline{E(t)} & & \uparrow & \\
 & & \leftarrow & H(t) & & & & \leftarrow & H(t) &
\end{array}
$$

$$
\begin{array}{ccccc}
 & & \cdots & & \\
 & & \overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}} & & \\
 & & \uparrow & & \\
 & & \overline{\overbrace{\overbrace{K(t)}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{G(t)}} & & \\
 & & \uparrow & & \\
 & & \overline{\overline{\overline{\overline{F(t)}}}} & & \\
(t) & & \backslash & & \\
/ & & ||| & & \\
|||^{-1} & & \uparrow & & \\
\uparrow & \overline{\overline{\overline{T_1(t)}}} & \cup & \overline{\overline{\overline{T_2(t)}}} & \\
\underline{\underline{\underline{A(t)}}} & \uparrow & & \uparrow & \\
\uparrow & & \overline{\overline{Y(t)}} & & \\
\underline{\underline{\underline{S(t)}}} & & \uparrow & & \\
\uparrow & & \overline{U(t)} & & \\
\underline{\underline{E(t)}} & & \uparrow & & \\
 & \leftarrow & H(t) & &
\end{array}
\qquad \text{(A.4 .2.13.6),}
$$

$$
\mathrm{FVprt}(t)
\begin{array}{ccccc}
 & & \cdots & & \\
 & & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}}} & & \\
 & & \uparrow & & \\
 & & \overline{\overbrace{\overbrace{K(t)}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{G(t)}} & & \\
 & & \uparrow & & \\
 & & \overline{\overline{\overline{\overline{F(t)}}}} & & \\
 & & & \backslash & \\
 & / & & ||| & \\
 & |||^{-1} & & \uparrow & \\
 & \uparrow & & \overline{\overline{\overline{T(t)}}} & \\
 & \underline{\underline{\underline{A(t)}}} & & \uparrow & \\
 & \uparrow & & \overline{\overline{Y_1(t)}} & \\
 & \underline{\underline{S(t)}} & & \uparrow & \\
 & \uparrow & & \overline{U(t)} & \\
 & \underline{E(t)} & & \uparrow & \\
 & & \leftarrow & H(t) &
\end{array}
+ \mathrm{FVprt}(t)
\begin{array}{ccccc}
 & & \cdots & & \\
 & & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}}} & & \\
 & & \uparrow & & \\
 & & \overline{\overbrace{\overbrace{K(t)}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{G(t)}} & & \\
 & & \uparrow & & \\
 & & \overline{\overline{\overline{\overline{F(t)}}}} & & \\
 & & & \backslash & \\
 & / & & ||| & \\
 & |||^{-1} & & \uparrow & \\
 & \uparrow & & \overline{\overline{\overline{T(t)}}} & \\
 & \underline{\underline{\underline{A(t)}}} & & \uparrow & \\
 & \uparrow & & \overline{\overline{Y_2(t)}} & \\
 & \underline{\underline{S(t)}} & & \uparrow & \\
 & \uparrow & & \overline{U(t)} & \\
 & \underline{E(t)} & & \uparrow & \\
 & & \leftarrow & H(t) &
\end{array}
= \mathrm{FVprt}
$$

$$
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
(t) & & \backslash \qquad \text{(A.4 .2.13.7),} \\
/ & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{T(t)}}} \\
\underline{\underline{\underline{A(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{Y_1(t)}} \cup \overline{\overline{Y_2(t)}} \\
\underline{\underline{S(t)}} & & \uparrow \\
\uparrow & & \overline{U(t)} \\
\underline{E(t)} & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
$$

$$
\mathsf{FVprt}(t)
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{\overline{F(t)}}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
 \uparrow & & \uparrow \\
 \underline{E(t)} & & \overline{U_1(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
+ \mathsf{FVprt}(t)
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{\overbrace{K(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overbrace{G(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{\overline{F(t)}}}}} & \\
 / & & \backslash \\
 |||^{-1} & & ||| \\
 \uparrow & & \uparrow \\
 \underline{\underline{\underline{A(t)}}} & & \overline{\overline{\overline{T(t)}}} \\
 \uparrow & & \uparrow \\
 \underline{\underline{S(t)}} & & \overline{\overline{Y(t)}} \\
 \uparrow & & \uparrow \\
 \underline{E(t)} & & \overline{U_2(t)} \\
 & & \uparrow \\
 & \leftarrow & H(t)
\end{array}
= \mathsf{FVprt}
$$

$$
\begin{array}{ccc}
 & \cdots & \\
 & \overbrace{\overbrace{\overbrace{\overline{Z(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overline{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
(t) & \backslash & (\text{A.4 .2.13.8}), \\
/ & ||| & \\
|||^{-1} & \uparrow & \\
\uparrow & \overline{\overline{\overline{T(t)}}} & \\
\underline{\underline{\underline{A(t)}}} & \uparrow & \\
\uparrow & \overline{\overline{Y(t)}} & \\
\underline{\underline{S(t)}} & \uparrow & \\
\uparrow & \overline{U_1(t)} \cup \overline{U_2(t)} & \\
\underline{E(t)} & \uparrow & \\
 & \leftarrow \quad H(t) &
\end{array}
$$

$$\mathrm{FVprt}(t)\begin{array}{ccc} & & \cdots \\ & & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}}} \\ & & \uparrow \\ & & \overline{\overbrace{\overbrace{\overbrace{K(t)}}}} \\ & & \uparrow \\ & & \overbrace{\overbrace{\overbrace{G(t)}}} \\ & & \uparrow \\ & & \overline{\overline{\overline{\overline{F(t)}}}} \\ & & \backslash \\ / & & ||| \\ |||^{-1} & & \uparrow \\ \uparrow & & \overline{\overline{\overline{T(t)}}} \\ \underline{\underline{\underline{A(t)}}} & & \uparrow \\ \uparrow & & \overline{\overline{Y(t)}} \\ \underline{\underline{S(t)}} & & \uparrow \\ \uparrow & & \overline{U(t)} \\ \underline{E(t)} & & \uparrow \\ & \leftarrow & H_1(t) \end{array} + \mathrm{FVprt}(t)\begin{array}{ccc} & & \cdots \\ & & \overline{\overline{\overline{\overbrace{\overbrace{\overbrace{Z(t)}}}}}} \\ & & \uparrow \\ & & \overline{\overbrace{\overbrace{\overbrace{K(t)}}}} \\ & & \uparrow \\ & & \overbrace{\overbrace{\overbrace{G(t)}}} \\ & & \uparrow \\ & & \overline{\overline{\overline{\overline{F(t)}}}} \\ & & \backslash \\ / & & ||| \\ |||^{-1} & & \uparrow \\ \uparrow & & \overline{\overline{\overline{T(t)}}} \\ \underline{\underline{\underline{A(t)}}} & & \uparrow \\ \uparrow & & \overline{\overline{Y(t)}} \\ \underline{\underline{S(t)}} & & \uparrow \\ \uparrow & & \overline{U(t)} \\ \underline{E(t)} & & \uparrow \\ & \leftarrow & H_2(t) \end{array} = \mathrm{FVprt}$$

$$
\begin{array}{ccc}
 & \cdots & \\
 & \overline{\overline{\overbrace{\overbrace{Z(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{K(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{G(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{F(t)}}}} & \\
(t) & & \backslash \\
/ & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{T(t)}}} \\
\underline{\underline{\underline{A(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{Y(t)}} \\
\underline{\underline{S(t)}} & & \uparrow \\
\uparrow & & \overline{U(t)} \\
\underline{E(t)} & & \uparrow \\
 & \leftarrow & H_1(t) \cup H_2(t)
\end{array}
\qquad \text{(A.4 .2.13.9),}
$$

We consider the following self-type dynamic FVprt-structures of the second t type:

$$
\begin{array}{ccc}
 & \dots & \\
 & \overline{\overline{\overbrace{\overbrace{Q(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{Q(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{Q(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{Q(t)}}}} & \\
\text{FVprt}(t) & & \backslash \qquad \text{(A.4 .2.14),} \\
 / & & ||| \\
 |||^{-1} & & \uparrow \\
 \uparrow & & \overline{\overline{\overline{Q(t)}}} \\
 \underline{\underline{\underline{Q(t)}}} & & \uparrow \\
 \uparrow & & \overline{\overline{Q(t)}} \\
 \underline{\underline{Q(t)}} & & \uparrow \\
 \uparrow & & \overline{Q(t)} \\
 \underline{Q(t)} & & \uparrow \\
 & \leftarrow & Q(t)
\end{array}
$$

$$
\begin{array}{lccc}
 & & \dots & \\
 & & \overline{\overline{\overbrace{\overbrace{A(t)}}}} & \\
 & & \uparrow & \\
 & & \overline{\overbrace{\overbrace{Q(t)}}} & \\
 & & \uparrow & \\
 & & \overbrace{\overbrace{Q(t)}} & \\
 & & \uparrow & \\
 & & \overline{\overline{\overline{\overline{Q(t)}}}} & \\
\text{FVprt}(t) & & & \backslash \qquad \text{(A.4 .2.15),} \\
 & / & & ||| \\
 & |||^{-1} & & \uparrow \\
 & \uparrow & & \overline{\overline{\overline{Q(t)}}} \\
 & \underline{\underline{\underline{Q(t)}}} & & \uparrow \\
 & \uparrow & & \overline{\overline{Q(t)}} \\
 & \underline{\underline{Q(t)}} & & \uparrow \\
 & \uparrow & & \overline{Q(t)} \\
 & \underline{Q(t)} & & \uparrow \\
 & & \leftarrow & a(t)
\end{array}
$$

denote $FV_{13}(t) f A(t);Q(t);a(t)$, $a(t) \subset$ A(t),

$$
\begin{array}{ccccc}
 & & \cdots & & \\
 & & \overline{\overline{\overbrace{\overbrace{a(t)}}}} & & \\
 & & \uparrow & & \\
 & & \overline{\overbrace{\overbrace{Q(t)}}} & & \\
 & & \uparrow & & \\
 & & \overbrace{\overbrace{Q(t)}} & & \\
 & & \uparrow & & \\
 & & \overline{\overline{\overline{\overline{Q(t)}}}} & & \\
\text{FVprt}(t) & & & \backslash & \text{(A.4 .2.16),} \\
 & / & & ||| & \\
 & |||^{-1} & & \uparrow & \\
 & \uparrow & & \overline{\overline{\overline{Q(t)}}} & \\
 & \underline{\underline{\underline{Q(t)}}} & & \uparrow & \\
 & \uparrow & & \overline{\overline{Q(t)}} & \\
 & \underline{\underline{Q(t)}} & & \uparrow & \\
 & \uparrow & & \overline{Q(t)} & \\
 & \underline{Q(t)} & & \uparrow & \\
 & & \leftarrow & A(t) &
\end{array}
$$

denote $FV_{14}(t) f a(t);Q(t);A(t)$, $a(t) \subset \mathrm{A(t)}$,

and any other possible options of self for (A.4 .2.8) etc.

Definition A.4 .2.3. The dynamic operator (A.4 .2.10) we shall call dynamic tprFV – element, (A.4 .2.11) we shall call dynamic trFV – element.

It’s allowed to add dynamic tprFV – elements:

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M_1(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{W(t)} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
\;\; \mathrm{FVprt}(t) \;+\;
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M_2(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{W(t)} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
\;\; \mathrm{FVprt}(t) \;=
$$

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M_1(t)}}} \cup \underline{\underline{\underline{M_2(t)}}} & & \uparrow \\
 & & \overline{\overline{\overline{L(t)}}} \\
\uparrow & & \uparrow \\
|||^{-1} & & ||| \\
\backslash & & / \quad \text{FVprt}(t) \text{ (A.4 .2.17),} \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
$$

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q_1(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \quad \mathrm{FVprt}(t) + \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
\qquad
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q_2(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \quad \mathrm{FVprt}(t) = \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
$$

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q_1(t)}} \cup \underline{\underline{Q_2(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \quad \mathrm{FVprt}(t) \text{ (A.4 .2.18),} \\
\overline{\overline{\overline{\overline{B(t)}}}} & & \\
\uparrow & & \\
\overbrace{\overbrace{W(t)}} & & \\
\uparrow & & \\
\overline{\overbrace{\overbrace{J(t)}}} & & \\
\uparrow & & \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & \\
\ldots & &
\end{array}
$$

$$\begin{array}{ccc} \underline{D_1(t)} & \leftarrow & C(t) \\ \uparrow & & \uparrow \\ \underline{\underline{Q(t)}} & & \overline{R(t)} \\ \uparrow & & \uparrow \\ & & \overline{\overline{P(t)}} \\ \underline{\underline{\underline{M(t)}}} & & \uparrow \\ & & \overline{\overline{\overline{L(t)}}} \\ \uparrow & & \uparrow \\ |||^{-1} & & ||| \\ \backslash & & / \\ & \overline{\overline{\overline{\overline{B(t)}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{W(t)}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{J(t)}}} & \\ & \uparrow & \\ & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\ & \ldots & \end{array} \mathrm{FVprt}(t) + \begin{array}{ccc} \underline{D_2(t)} & \leftarrow & C(t) \\ \uparrow & & \uparrow \\ \underline{\underline{Q(t)}} & & \overline{R(t)} \\ \uparrow & & \uparrow \\ & & \overline{\overline{P(t)}} \\ \underline{\underline{\underline{M(t)}}} & & \uparrow \\ & & \overline{\overline{\overline{L(t)}}} \\ \uparrow & & \uparrow \\ |||^{-1} & & ||| \\ \backslash & & / \\ & \overline{\overline{\overline{\overline{B(t)}}}} & \\ & \uparrow & \\ & \overbrace{\overbrace{W(t)}} & \\ & \uparrow & \\ & \overline{\overbrace{\overbrace{J(t)}}} & \\ & \uparrow & \\ & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\ & \ldots & \end{array} \mathrm{FVprt}(t) =$$

$$
\begin{array}{ccc}
\underline{D_1(t)} \cup \underline{D_2(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
& & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
& & / \quad \mathrm{FVprt}(t) \text{ (A.4 .2.18.1),} \\
\overline{\overline{\overline{\overline{B(t)}}}} & & \\
\uparrow & & \\
\overbrace{\overbrace{W(t)}} & & \\
\uparrow & & \\
\overline{\overbrace{\overbrace{J(t)}}} & & \\
\uparrow & & \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & \\
\ldots & &
\end{array}
$$

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C_1(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
 & & \overline{\overline{\overline{L(t)}}} \\
\uparrow & & \uparrow \\
|||^{-1} & & ||| \\
\backslash & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{O(t)}}}}} & \\
 & \ldots &
\end{array}
\quad \mathrm{FVprt}(t) +
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C_2(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
 & & \overline{\overline{\overline{L(t)}}} \\
\uparrow & & \uparrow \\
|||^{-1} & & ||| \\
\backslash & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overbrace{\overbrace{O(t)}}}}} & \\
 & \ldots &
\end{array}
\quad \mathrm{FVprt}(t) =
$$

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C_1(t) \cup C_2(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
 & & ||| \\
\backslash & & /
\end{array}
\qquad \mathrm{FVprt}(t) \text{ (A.4 .2.18.2),}
$$

$$
\begin{array}{c}
\overline{\overline{\overline{\overline{\overline{B(t)}}}}} \\
\uparrow \\
\overbrace{\overbrace{W(t)}} \\
\uparrow \\
\overline{\overbrace{\overbrace{J(t)}}} \\
\uparrow \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} \\
\ldots
\end{array}
$$

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R_1(t)} \\
\uparrow & & \uparrow \\
& & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
& & / \quad \mathrm{FVprt}(t)\ + \\
& \overline{\overline{\overline{\overline{B(t)}}}} & \\
& \uparrow & \\
& \overbrace{\overbrace{W(t)}} & \\
& \uparrow & \\
& \overline{\overbrace{\overbrace{J(t)}}} & \\
& \uparrow & \\
& \overbrace{\overbrace{\overline{\overline{O(t)}}}} & \\
& \ldots &
\end{array}
\qquad
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R_2(t)} \\
\uparrow & & \uparrow \\
& & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
& & / \quad \mathrm{FVprt}(t)\ = \\
& \overline{\overline{\overline{\overline{B(t)}}}} & \\
& \uparrow & \\
& \overbrace{\overbrace{W(t)}} & \\
& \uparrow & \\
& \overline{\overbrace{\overbrace{J(t)}}} & \\
& \uparrow & \\
& \overbrace{\overbrace{\overline{\overline{O(t)}}}} & \\
& \ldots &
\end{array}
$$

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R_1(t)} \cup \overline{R_2(t)} \\
\uparrow & & \uparrow \qquad \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & /
\end{array}
\qquad \text{FVprt}(t) \text{ (A.4 .2.18.3),}
$$

$$
\begin{array}{c}
\overline{\overline{\overline{\overline{B(t)}}}} \\
\uparrow \\
\overbrace{\overbrace{W(t)}} \\
\uparrow \\
\overline{\overbrace{\overbrace{J(t)}}} \\
\uparrow \\
\overline{\overline{\overline{\overbrace{\overbrace{O(t)}}}}} \\
\ldots
\end{array}
$$

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P_1(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & {}^{-} \quad \mathrm{FVprt}(t) \; + \\
\overline{\overline{\overline{\overline{B(t)}}}} & & \\
\uparrow & & \\
\overbrace{\overbrace{W(t)}} & & \\
\uparrow & & \\
\overline{\overbrace{\overbrace{J(t)}}} & & \\
\uparrow & & \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & \\
\ldots & &
\end{array}
\qquad
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P_2(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & {}^{-} \quad \mathrm{FVprt}(t) \; = \\
\overline{\overline{\overline{\overline{B(t)}}}} & & \\
\uparrow & & \\
\overbrace{\overbrace{W(t)}} & & \\
\uparrow & & \\
\overline{\overbrace{\overbrace{J(t)}}} & & \\
\uparrow & & \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} & & \\
\ldots & &
\end{array}
$$

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P_1(t)}} \cup \overline{\overline{P_1(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
 & & \overline{\overline{\overline{L(t)}}} \\
\uparrow & & \uparrow \\
|||^{-1} & & ||| \\
\backslash & & - \\
\end{array}
\quad \mathrm{FVprt}(t) \text{ (A.4 .2.18.4),}
$$

$$
\begin{array}{c}
\overline{\overline{\overline{\overline{B(t)}}}} \\
\uparrow \\
\overbrace{\overbrace{W(t)}} \\
\uparrow \\
\overline{\overbrace{\overbrace{J(t)}}} \\
\uparrow \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} \\
\ldots
\end{array}
$$

$$\begin{array}{ccccc}
\underline{D(t)} & \leftarrow & C(t) & & \\
\uparrow & & \uparrow & & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & \\
\uparrow & & \uparrow & & \\
 & & \overline{\overline{P(t)}} & & \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & \\
\uparrow & & \overline{\overline{\overline{L_1(t)}}} & & \\
|||^{-1} & & \uparrow & & \\
\backslash & & ||| & & \\
 & & / & \text{FVprt}(t) & + \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & & & \\
 & \uparrow & & & \\
 & \overbrace{\overbrace{W(t)}} & & & \\
 & \uparrow & & & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & & & \\
 & \uparrow & & & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & \\
 & \ldots & & &
\end{array}
\begin{array}{ccccc}
\underline{D(t)} & \leftarrow & C(t) & & \\
\uparrow & & \uparrow & & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & \\
\uparrow & & \uparrow & & \\
 & & \overline{\overline{P(t)}} & & \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & \\
\uparrow & & \overline{\overline{\overline{L_2(t)}}} & & \\
|||^{-1} & & \uparrow & & \\
\backslash & & ||| & & \\
 & & / & \text{FVprt}(t) & = \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & & & \\
 & \uparrow & & & \\
 & \overbrace{\overbrace{W(t)}} & & & \\
 & \uparrow & & & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & & & \\
 & \uparrow & & & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & \\
 & \ldots & & &
\end{array}$$

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
& & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L_1(t)}}} \cup \overline{\overline{\overline{L_2(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
& & /
\end{array}
$$

$$
\begin{array}{c}
\overline{\overline{\overline{\overline{B(t)}}}} \\
\uparrow \\
\overbrace{\overbrace{W(t)}} \\
\uparrow \\
\overline{\overbrace{\overbrace{J(t)}}} \\
\uparrow \\
\overline{\overline{\overbrace{\overbrace{O(t)}}}} \\
\ldots
\end{array}
$$

FVprt(t) (A.4 .2.18.5),

$$
\begin{array}{ccccccccccccc}
\underline{D(t)} & \leftarrow & C(t) & & \underline{D(t)} & \leftarrow & C(t) & & \underline{D(t)} & \leftarrow & C(t) & & \\
\uparrow & & \uparrow & & \uparrow & & \uparrow & & \uparrow & & \uparrow & & \\
\underline{\underline{Q(t)}} & & \overline{R(t)} & & \underline{\underline{Q(t)}} & & \overline{R(t)} & & \underline{\underline{Q(t)}} & & \overline{R(t)} & & \\
\uparrow & & \uparrow & & \uparrow & & \uparrow & & \uparrow & & \uparrow & & \\
 & & \overline{\overline{P(t)}} & & & & \overline{\overline{P(t)}} & & & & \overline{\overline{P(t)}} & & \\
\underline{\underline{\underline{M(t)}}} & & \uparrow & & \underline{\underline{\underline{M(t)}}} & & \uparrow & & \underline{\underline{\underline{M(t)}}} & & \uparrow & & \\
\uparrow & & \overline{\overline{\overline{L(t)}}} & & \uparrow & & \overline{\overline{\overline{L(t)}}} & & \uparrow & & \overline{\overline{\overline{L(t)}}} & & \\
|||^{-1} & & \uparrow & & |||^{-1} & & \uparrow & & |||^{-1} & & \uparrow & & \\
\backslash & & ||| & & \backslash & & ||| & & \backslash & & ||| & & \\
 & & / & \text{FVprt}(t) + & & & / & \text{FVprt}(t) = & & & / & \text{FVprt}(t) & \\
 & \overline{\overline{\overline{\overline{B_1(t)}}}} & & & & \overline{\overline{\overline{\overline{B_2(t)}}}} & & & & \overline{\overline{\overline{\overline{B_1(t)}}}} \cup \overline{\overline{\overline{\overline{B_2(t)}}}} & & & \\
 & \uparrow & & & & \uparrow & & & & \uparrow & & & \\
 & \overbrace{\overbrace{W(t)}} & & & & \overbrace{\overbrace{W(t)}} & & & & \overbrace{\overbrace{W(t)}} & & & \\
 & \uparrow & & & & \uparrow & & & & \uparrow & & & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & & & & \overline{\overbrace{\overbrace{J(t)}}} & & & & \overline{\overbrace{\overbrace{J(t)}}} & & & \\
 & \uparrow & & & & \uparrow & & & & \uparrow & & & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & & & \\
 & \dots & & & & \dots & & & & \dots & & &
\end{array}
$$

(A.4 .2.18.6),

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W_1(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
\mathrm{FVprt}(t) +
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W_2(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
\mathrm{FVprt}(t) =
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W_1(t)}} \cup \overbrace{\overbrace{W_2(t)}} & \\
 & \uparrow \qquad \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
\mathrm{FVprt}(t)
$$

(A.4 .2.18.7),

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J_1(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
\;\mathrm{FVprt}(t) +
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J_2(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
\;\mathrm{FVprt}(t) =
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J_1(t)}}} \cup \overline{\overbrace{\overbrace{J_2(t)}}} & \\
 & \uparrow \qquad \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O(t)}}}} & \\
 & \ldots &
\end{array}
\;\mathrm{FVprt}(t)
$$

(A.4 .2.18.8),

$$
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{\overline{B(t)}}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O_1(t)}}}} & \\
 & \ldots &
\end{array}
\mathrm{FVprt}(t) +
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{\overline{B(t)}}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O_2(t)}}}} & \\
 & \ldots &
\end{array}
\mathrm{FVprt}(t) =
\begin{array}{ccc}
\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \\
 & \overline{\overline{\overline{\overline{\overline{B(t)}}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{O_1(t)}}}} \cup \overline{\overline{\overbrace{\overbrace{O_2(t)}}}} & \\
 & \ldots &
\end{array}
\mathrm{FVprt}(t)
$$

(A.4 .2.18.9),

We consider the following self-type dynamic tprFV-structures:

$$
\begin{array}{ccc}
 & \dots & \\
 & \overline{\overline{\overbrace{\overbrace{a(t)}}}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{Q(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{Q(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{Q(t)}}}} & \\
 & & \backslash \\
/ & & ||| \\
|||^{-1} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{Q(t)}}} \\
\underline{\underline{\underline{Q(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{Q(t)}} \\
\underline{\underline{Q(t)}} & & \uparrow \\
\uparrow & & \overline{Q(t)} \\
\underline{Q(t)} & & \uparrow \\
 & \leftarrow & A(t)
\end{array}
$$

FVprt(t) (A.4 .2.19)

$$
\begin{array}{ccc}
str\underline{D(t)} & \leftarrow & C(t) \\
\uparrow & & \uparrow \\
\underline{\underline{Q(t)}} & & \overline{R(t)} \\
\uparrow & & \uparrow \\
 & & \overline{\overline{P(t)}} \\
\underline{\underline{\underline{M(t)}}} & & \uparrow \\
\uparrow & & \overline{\overline{\overline{L(t)}}} \\
|||^{-1} & & \uparrow \\
\backslash & & ||| \\
 & & / \quad \text{FVprt}(t) \quad (\text{A.4 .2.20}), \\
 & \overline{\overline{\overline{\overline{B(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{W(t)}} & \\
 & \uparrow & \\
 & \overline{\overbrace{\overbrace{J(t)}}} & \\
 & \uparrow & \\
 & \overline{\overline{\overbrace{\overbrace{d(t)}}}} & \\
 & \ldots &
\end{array}
$$

denote $FV_{15}(t)f$, where $d(t) \subset$ D(t),

$$
\begin{array}{ccc}
 & \cdots & \\
 & \overbrace{\overbrace{\overline{\overline{d(t)}}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{\overline{Q(t)}}} & \\
 & \uparrow & \\
 & \overbrace{\overbrace{Q(t)}} & \\
 & \uparrow & \\
 & \overline{\overline{\overline{\overline{Q(t)}}}} & \\
 & & \backslash \qquad \text{FVprt}(t) \quad \text{(A.4 .2.21)}, \\
 / & & ||| \\
 |||^{-1} & & \uparrow \\
 \uparrow & & \overline{\overline{\overline{Q(t)}}} \\
 \underline{\underline{\underline{Q(t)}}} & & \uparrow \\
 \uparrow & & \overline{\overline{Q(t)}} \\
 \underline{\underline{Q(t)}} & & \uparrow \\
 \uparrow & & \overline{Q(t)} \\
 \underline{Q(t)} & & \uparrow \\
 & \leftarrow & D(t)
\end{array}
$$

denote $FV_{16}(t)f$, where $d(t) \subset$ D(t),

and any other possible options of self for (A.4 .2.10) etc.

B. PrSCprt – elements and Their Applications

B.1 PrSCprt – elements, self-type PrSCprt - structures

Introduction.

We consider expression

$$\begin{array}{ccccccc} C_1 C_2 & \cdots & C_m & & A_1 & A_2 & \cdots A_n \\ g_{12} g_{22} & \cdots & g_{m2} & \text{PrSCprt} & g_{11} & g_{21} & \cdots g_{n1} \\ D_1 D_2 & \cdots & D_m & & B_1 & B_2 & \cdots B_n \end{array} \quad (*_{B.1.1})$$

where A_1 fits into B_1 with type of containment g_{11}, A_2 fits into B_2 with type of containment g_{21}, …, A_n fits into B_n with type of containment g_{n1}, D_1 is forced out of C_1 with type of expelling g_{12}, D_2 is forced out of C_2 with type of expelling g_{22}, …, D_m is forced out of C_m with type of expelling g_{m2} simultaneously. A_1, B_1, A_2, B_2, …, A_n, B_n, D_1, C_1, D_2, C_2, …, D_m, C_m may be by fuzzy sets. The result of this process will be described by the expression

$$\begin{array}{ccccccc} C_1 C_2 & \cdots & C_m & & A_1 & A_2 & \cdots A_n \\ g_{12} g_{22} & \cdots & g_{m2} & \text{PrSCrt} & g_{11} & g_{21} & \cdots g_{n1} \\ D_1 D_2 & \cdots & D_m & & B_1 & B_2 & \cdots B_n \end{array} \quad (*_{B.1.2}).$$

If A_1, B_1, A_2, B_2, …, A_n, B_n, D_1, C_1, D_2, C_2, …, D_m, C_m are taken as fuzzy sets, then we will call ($*_{B.1.1}$) a parallel dynamic fuzzy set. The need ($*_{B.1.1}$) arose to describe processes in networks. Threshold element PrSCprt -

$$\begin{array}{ccccccc} B_1 & B_2 & \cdots & B_n & \{ax\}_1 & \{ax\}_2 & \cdots \{ax\}_n \\ g_{12} & g_{22} & \cdots & g_{n2} \ \text{PrSCprt} & g_{11} & g_{21} & \cdots \ g_{n1} \\ \{qy\}_1 & \{qy\}_2 & \cdots & \{qy\}_n & B_1 & B_2 & \cdots \ B_n \end{array}$$

, B_1, B_2, …, B_n - artificial neurons of type PrSCprt (designation - mnPrSCprt) , $\tilde{x}=(x_1|\mu_{\tilde{x}}(x_1), x_2|\mu_{\tilde{x}}(x_2)|,\dots,x_n|\mu_{\tilde{x}}(x_n)|)$ are the fuzzy values of the initial signals, $a=(a_1,a_2,\dots,a_n)$ are the weights of PrSCprt-synapses and $\tilde{y}=(y_1|\mu_{\tilde{y}}(y_1), y_2|\mu_{\tilde{y}}(y_2)|,\dots, y_n|\mu_{\tilde{y}}(y_n)|)$ are the fuzzy values of the output signals $\{qy\}$ with weights $q=(q_1,q_2,\dots,q_n)$. It can be considered a simpler version of the Parallel dynamic set

$$\begin{array}{c} A_1 \ A_2 \ \dots A_n \\ \mathrm{PrSCprt}\, g_{11} \ g_{21} \ \dots g_{n1} \\ B_1 \ B_2 \ \dots B_n \end{array} \quad (**_{B.1.1}),$$

where A_1 fits into B_1 with type of containment g_{11}, A_2 fits into B_2 with type of containment g_{21}, …, A_n fits into B_n with type of containment g_{n1}, simultaneously, the result of this process will be described by the expression

$$\begin{array}{c} A_1 \ A_2 \ \dots A_n \\ \mathrm{PrSCrt}\, g_{11} \ g_{21} \ \dots g_{n1} \\ B_1 \ B_2 \ \dots B_n \end{array} \quad (**_{B.1.2})$$

or

$$\begin{array}{c} C_1 C_2 \ \dots \ C_m \\ g_{12} g_{22} \ \dots \ g_{m2}\, \mathrm{PrSCprt} \\ D_1 D_2 \ \dots \ D_m \end{array} (***_{B.1.1}),$$

where D_1 is forced out of C_1 with type of expelling g_{12}, D_2 is forced out of C_2 with type of expelling g_{22}, …, D_m is forced out of C_m with type of expelling g_{m2} simultaneously, the result of this process will be described by the expression

$$\begin{array}{c} C_1 C_2 \ \dots \ C_m \\ g_{12} g_{22} \ \dots \ g_{m2}\, \mathrm{PrSCrt} \\ D_1 D_2 \ \dots \ D_m \end{array} (***_{B.1.2})$$

We consider the measure: $\begin{pmatrix} C_1 C_1 \ \dots \ C_1 & A_1 \ A_2 \ \dots A_n \\ g_{12} g_{22} \ \dots \ g_{m2}\, \mathrm{PrSCprt} & g_{11} \ g_{21} \ \dots g_{n1} \\ D_1 D_2 \ \dots \ D_m & C_1 \ C_1 \ \dots C_1 \end{pmatrix}^{**(}$

$$\begin{array}{c} C_1 C_1 \ \dots \ C_1 \quad A_1 \ A_2 \ \dots A_n \\ g_{12} g_{22} \ \dots \ g_{m2}\, \mathrm{PrSCprt}\, g_{11} \ g_{21} \ \dots g_{n1} \\ D_1 D_2 \ \dots \ D_m \quad C_1 \ C_1 \ \dots C_1 \end{array}) = \frac{\mu(A_1)*\mu(A_2)*\dots*\mu(A_n)*\mu_{11}*\mu_{21}*\dots*\mu_{n1}}{\mu(D_1)*\mu(D_2)*\dots*\mu(D_m)*\mu_{12}*\mu_{22}*\dots*\mu_{m2}},$$ where

m(A_i),m(D_j)–usual measures of sets A_i, D_j , $\mu_{ij} = \mu(g_{ij})$ –measures of containments with type g_{ij}, (i = 1, 2, …, n; j = 1, 2, …, m).

Remark. One can consider some generalization for $(*_{B.1.1})$, $(*_{B.1.2})$:

$$\begin{array}{cccc} q_1(C_1) q_2(C_2) & \dots & q_m(C_m) & \\ g_{12} \quad g_{22} & \dots & g_{m2} & \mathrm{PrSCprt} \\ D_1 \quad D_2 & \dots & D_m & \end{array} \begin{array}{ccc} A_1 & A_2 & \dots \ A_n \\ g_{11} & g_{21} & \dots \ g_{n1} \\ w_1(B_1) & w_2(B_2) & \dots w_n(B_n) \end{array},$$

$$\begin{array}{cccc} q_1(C_1) q_2(C_2) & \dots & q_m(C_m) & \\ g_{12} \quad g_{22} & \dots & g_{m2} & \mathrm{PrSCrt} \\ D_1 \quad D_2 & \dots & D_m & \end{array} \begin{array}{ccc} A_1 & A_2 & \dots \ A_n \\ g_{11} & g_{21} & \dots \ g_{n1} \\ w_1(B_1) & w_2(B_2) & \dots w_n(B_n) \end{array}$$, where A_1 fits into B_1 through w_1 with type of containment g_{11}, A_2 fits into B_2 through w_2 with type of containment g_{21}, …, A_n fits into B_n through w_n with type of containment g_{n1}, D_1

is forced out of C_1 through q_1 with type of expelling μ_{12}, D_2 is forced out of C_2 through q_2 with type of expelling g_{22}, …, D_m is forced out of C_m through q_m with type of expelling g_{m2}, simultaneously. A_i, B_i, D_j, C_j (i = 1, 2, …, n; j = 1, 2, …, m) can be taken as fuzzy sets.

Similarly, for (**$_{B.1.1}$): PrSCprt $\begin{matrix} A_1 & A_2 & \cdots & A_n \\ g_{11} & g_{21} & \cdots & g_{n1} \\ w_1(B_1) & w_2(B_2) & \cdots & w_n(B_n) \end{matrix}$, for (***$_{B.1.1}$):

$\begin{matrix} q_1(C_1) & q_2(C_2) & \cdots & q_m(C_m) \\ g_{12} & g_{22} & \cdots & g_{m2} \\ D_1 & D_2 & \cdots & D_m \end{matrix}$ PrSCprt. The result of this process will be described by

the expression $\begin{matrix} q_1(C_1) & q_2(C_2) & \cdots & q_m(C_m) \\ g_{12} & g_{22} & \cdots & g_{m2} \\ D_1 & D_2 & \cdots & D_m \end{matrix}$ PrSCrt.

We construct new mathematical objects constructively without formalism. By its contradiction, formalism may destroy this thry by Gödel's theorem on the incompleteness of any formal theory. But in the next monograph, we will give the formalism of the theory it's due: the proof of axioms and theorems.

PrSCprt – elements, self-type PrSCprt- structures.

Definition B.1.1.1. The set of elements $\tilde{w}$=($w_1|\mu_{\tilde{w}}(w_1)$, $w_2|\mu_{\tilde{w}}(w_2)$, …, $w_n|\mu_{\tilde{w}}(w_n)$) at one point x = $(x_1,x_2,...,x_n)$ of space X we shall call PrSCprt – element, and such a point x in space X is called parallel fcapacity of the PrSCprt – element. We shall denote PrSCprt$\begin{matrix} w_1 & w_2 & \cdots w_n \\ g_{11} & g_{21} & \cdots g_{n1} \\ x_1 & x_2 & \cdots x_n \end{matrix}$.

Definition B.1.1.2. PrSCprt$\begin{matrix} w_1 & w_2 & \cdots w_n \\ g_{11} & g_{21} & \cdots g_{n1} \\ x_1 & x_2 & \cdots x_n \end{matrix}$ - a parallel dynamic fuzzy set $\tilde{w}$ at x.

Definition B.1.1.3. An ordered set of elements at one point in the space is called an ordered PrSCprt–element.

It's possible to PrSCprt$\begin{matrix} w_1 & w_2 & \cdots w_n \\ g_{11} & g_{21} & \cdots g_{n1} \\ x_1 & x_2 & \cdots x_n \end{matrix}$ correspond to the set $\tilde{w}$, and the ordered PrSCprt - element - a vector, a matrix, a tensor, a directed segment in the case when the totality of elements is understood as a set of elements in a segment.

It's allowed to sum PrSCprt – elements: $\mathrm{PrSCprt}\begin{matrix} w_1 & w_2 & \dots w_n \\ g_{11} & g_{21} & \dots g_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$ +

$\mathrm{PrSCprt}\begin{matrix} b_1 & b_2 & \dots b_n \\ g_{11} & g_{21} & \dots g_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix} = \mathrm{PrSCprt}\begin{matrix} w_1 \cup b_1 & w_2 \cup b_2 & \dots w_n \cup b_n \\ g_{11} & g_{21} & \dots \quad g_{n1} \\ x_1 & x_2 & \dots \quad x_n \end{matrix}$.

It's allowed to multiply PrSCprt – elements: $\mathrm{PrSCprt}\begin{matrix} w_1 & w_2 & \dots w_n \\ g_{11} & g_{21} & \dots g_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$ *

$\mathrm{PrSCprt}\begin{matrix} b_1 & b_2 & \dots b_n \\ g_{11} & g_{21} & \dots g_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix} = \mathrm{PrSCprt}\begin{matrix} w_1 \cap b_1 & w_2 \cap b_2 & \dots w_n \cap b_n \\ g_{11} & g_{21} & \dots \quad g_{n1} \\ x_1 & x_2 & \dots \quad x_n \end{matrix}$.

The operator $\mathrm{PrSCprt}\begin{matrix} w_1 \cup b_1 & w_2 \cup b_2 & \dots w_n \cup b_n \\ g_{11} & g_{21} & \dots \quad g_{n1} \\ x_1 & x_2 & \dots \quad x_n \end{matrix}$ is not equal the set of $w_i \cup b_i$, (i = 1, 2, …, n), rather, it is Parallel dynamic — contraction of the set of $w_i \cup b_i$, (i = 1, 2, …, n), to the point x. Similarly, for $\mathrm{PrSCprt}\begin{matrix} w_1 \cap b_1 & w_2 \cap b_2 & \dots w_n \cap b_n \\ g_{11} & g_{21} & \dots \quad g_{n1} \\ x_1 & x_2 & \dots \quad x_n \end{matrix}$.

This is more suitable for using sets for energy space, for any objects. The operator PrSCprt is adapted for ordinary energies, using their property to overlap.

Parallel capacity in itself.

Definition B.1.1.4. The fcapacity $\mathrm{PrSCrt}\begin{matrix} w_1 & w_2 & \dots w_n \\ g_{11} & g_{21} & \dots g_{n1} \\ A_1 & A_2 & \dots A_n \end{matrix}$ is called the parallel fcapacity A = $(A_1, A_2, \dots, A_n)$ for $\tilde{w}$=($w_1|\mu_{\tilde{w}}(w_1)$, $w_2|\mu_{\tilde{w}}(w_2)$, …, $w_n|\mu_{\tilde{w}}(w_n)$).

Definition B.1.1.4.1. The parallel fcapacity A in itself of the first type is the parallel fcapacity containing itself as an element. Denote PrS_1CfA. PrS_1CfA =

$\mathrm{PrSCrt}\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ A_1 & A_2 & \dots A_n \end{matrix}$.

Definition B.1.1.5. The parallel fcapacity A in itself of the second type is the parallel fcapacity that contains elements from which it can be generated. Denote PrS_2CfA.

An example of the parallel fcapacity in itself of the first type is a set containing itself in parallel. An example of parallel fcapacity in itself of the second type is a living organism since it contains a program: DNA and RNA.

Definition B.1.1.6. Partial parallel fcapacity A in itself of the third type is the parallel fcapacity A in itself, which partially contains itself or contains fuzzy elements from which it can be generated in part or both simultaneously. Let us denote PrS_3CfA.

Let us introduce the following notations: A*B=PrSCprt$\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix}$, A^2 = PrCSelf A =$PrSCrt_A^A$, A^3 = PrCSelf^{2}A, …, A^{n+1} = PrCSelf^{n}A, ….There is no commutativity here: A*B ≠ B*A. We can consider operator functions: $e^A = 1 + \frac{A}{1!} + \frac{A^2}{2!} + \frac{A^3}{3!} + \dots$, $(A+B)^n = \sum_{k=0}^{n} \binom{n}{k} A^k B^{n-k}$, $(1+A)^n = 1 + \frac{Ax}{1!} + \frac{n(n-1)A^2}{2!} + \dots$, etc.

You can consider a more "hard" option: A*B=$PPrSCprt_B^{\overset{A}{g}}$, where $PPrSCprt_B^{\overset{A}{g}}$ – operator, g-containing A in every element of B, A^2 = PPrCSelf A =$PPrSCprt_A^{\overset{A}{g}}$, A^3 = PPrCSelf^{2}A, …, A^{n+1} = PPrCSelf^{n}A, ….There is no commutativity here: A*B ≠ B*A. We can consider operator functions: $e^A = 1 + \frac{A}{1!} + \frac{A^2}{2!} + \frac{A^3}{3!} + \dots$, $(A+B)^n = \sum_{k=0}^{n} \binom{n}{k} A^k B^{n-k}$, $(1+A)^n = 1 + \frac{Ax}{1!} + \frac{n(n-1)A^2}{2!} + \dots$, etc.

All parallel capacities in parallel self-space are parallel capacities in themselves by definition. Parallel capacities in themselves can appear as PrSCprt -capacities and ordinary capacities. In these cases, the usual measures and methods of topology are used.

Connection of PrSCprt – elements with parallel capacities in themselves.

For example, $PrSCrt_{g\{R\}}^{\{R\}}$ is the parallel capacity in itself of the second type if $g\{R\}$ is a parallel program capable of generating $\{R\}$.

Consider a third type of parallel fcapacity in itself. For example, based on PrSCprt$\begin{matrix} w_1 & w_2 & \dots w_n \\ g_{11} & g_{21} & \dots g_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$, where $\tilde{w}$=($w_1|\mu_{\tilde{w}}(w_1)$, $w_2|\mu_{\tilde{w}}(w_2)$, …, $w_n|\mu_{\tilde{w}}(w_n)$), i.e. n -

elements at one point x = (x_1,x_2,...,x_n), we can consider the fcapacity $PrSC_3f$ in itself with m elements from $\tilde{w}$, m<n, which is formed according to the form (1.1), that is, the structure PrS_3Cf contains only m elements, or in forms (1.1.1) - (1.1.5), summarizing it. fcapacities in themselves of the third type can be formed for any other structure, not necessarily PrS_3Cf only by necessarily reducing the number of elements in the structure, in particular, using form (1.2). Structures more complex thanPrS_3Cf can be introduced. For example, through a form (1.3), where A is compressed (fits) in C in the compression structure B in C (i.e., in the structure $PrSC_3f$); or through the forms (1.3.1) - (1.4) and corresponding generalizations of (1.4) on (1.3.1) - (1.3.4), etc.

(1.3.1) - (1.3.4) schematically interpret the formation of capacity in itself through a pseudo 3-connected form with a 2-connected form. The ideology of PrSCprt and PrS_3Cf can be used for programming.

Remark B.1.1.1. self, in particular, according to a form-analogue of the form of type (1.1): (2.1*).

By analogy the same for the form of type (1.1.1) – (1.4).

Math PrCSelf.

Let's consider PrSCprt arithmetic first:

1. Simultaneous parallel addition of sets elements $\tilde{u}_i$=(u_{i_1}|$\mu_{\tilde{u}_i}$(u_{i_1}), u_{i_2}|$\mu_{\tilde{u}_i}$(u_{i_2}), ..., $u_{i_{m_j}}$|$\mu_{\tilde{u}_i}$($u_{i_{m_j}}$)), i = 1,2,…,n, j =1,2,…,k is carried out using

   PrSCprt $\begin{matrix} \{u_1\}+ & \{u_2\}+ & ...\{u_n\}+ \\ g_{11} & g_{21} & ... \ g_{n1} \\ x_1 & x_2 & ... \ x_n \end{matrix}$.

2. Similarly, for simultaneous parallel multiplication:

   PrSCprt $\begin{matrix} \{u_1\}* & \{u_2\}* & ...\{u_n\}* \\ g_{11} & g_{21} & ... \ g_{n1} \\ w_1 & w_2 & ... \ w_n \end{matrix}$, the notation of the set B_l, l =1,2,…,n, with

   elements $b_{li_1i_2...i_{m_j}}$ =

$Sprt_{x_l}^{\left\{u_{l_{1_{i_1}}}*,\ u_{l_{2_{i_2}}}*,\dots,\ u_{l_{m_{j_{i_{m_j}}}}}\right\}})_{R_l}$ for any $\left\{l_{i_1}, l_{i_2},\dots, l_{i_{m_j}}\right\}$ without repetitions,x_l =

$Sprt_w^{\{K_l\}}$,K_l-set of any $\left\{k_{l_{i_1}}*, k_{l_{i_2}}*,\dots, k_{l_{i_{m_j}}}*\right\}$ without repeating them, l = 1,2,…,n, $k_{l_{i_j}}$-any digit, i =1,2,…, m_j, R_l= $Sprt_w^{\left\{l_{i_1}+, l_{i_2}+,\dots, l_{i_{m_j}}\right\}}$, R_l is the index of the lower discharge (we choose an index on the scale of discharges):

Table B.1.1. Index on the scale of discharges

index	discharge
n	n
…	…
1	1
,	0
-1	1st digit to the right of the point
-2	2nd digit to the right of the point
...	...

Then $PrSCprt \begin{matrix} \{B_1\}+ & \{B_2\}+ & \dots\{B_n\}+ \\ g_{11} & g_{21} \quad \dots & g_{n1} \\ x_1 & x_2 \quad \dots & x_n \end{matrix}$ gives the final result of simultaneous multiplication. Any system of calculus can be chosen, in particular binary. The most straightforward functional scheme of the assumed arithmetic-logical device for PrSCprt-multiplication:

Register of entering a set of numbers to multiply.

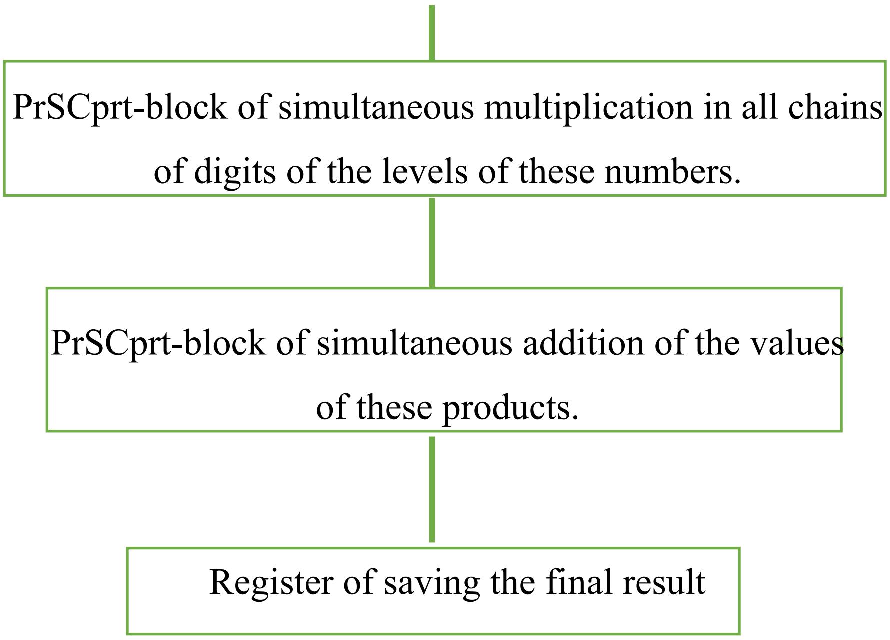


Fig. B.1.1. The straightforward functional scheme of the assumed arithmetic-logical device for PrSCprt-multiplication.

Remark. The algorithm for simultaneously adding a set of numbers can also be implemented as the simultaneous addition of elements of a simultaneously formed composite matrix: a triangular matrix in which the elements of the first row are represented by multiplying the first number from the set by the rest: each multiplication is represented by a matrix of multiplying the digits of 2 numbers, taking into account the bit depth, the elements of the second rows are represented by multiplying the second number from the set by the ones following it, etc.

3. Similarly for simultaneous execution of various operations:

PrSCprt $\begin{array}{cccc} \{u_1Q_1\} & \{u_2Q_2\} & \ldots & \{u_nQ_n\} \\ g_{11} & g_{21} & \ldots & g_{n1} \\ w_1 & w_2 & \ldots & w_n \end{array}$, where $\tilde{Q}$=($Q_1|\mu_{\tilde{Q}}(Q_1)$, $Q_2|\mu_{\tilde{Q}}(Q_2)$, …, $Q_n|\mu_{\tilde{Q}}(Q_n)$). Q_i -an operation, i = 1, …, n.

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

PrSCprt $\begin{array}{cccc} \{F_1u_1\} & \{F_2u_2\} & \ldots & \{F_nu_n\} \\ g_{11} & g_{21} & \ldots & g_{n1} \\ w_1 & w_2 & \ldots & w_n \end{array}$, where $\tilde{F}$=($F_1|\mu_{\tilde{F}}(F_1)$, $F_2|\mu_{\tilde{F}}(F_2)$, …, $F_n|\mu_{\tilde{F}}(F_n)$). F_i is an operator, i = 1, …, n.

5. The arithmetic itself for capacities in themselves will be similar: addition - $PrS_1Cf\{u+\}$, (or$PrS_3Cf\{u+\}$) for the third type), multiplication $PrS_1Cf\{u*\}$, ($PrS_3Cf\{u*\}$).
6. Similarly with different operations: $PrS_1Cf\{uq\}$, ($PrS_3Cf\{uq\}$), and with different operators: $PrS_1Cf\{Fu\}$, ($PrS_3Cf\{Fu\}$).
7. $\text{PrSCrt}\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix}$ – the result of the containment operator. For sets A_i, B_i, (i = 1, 2, …, n), we have

$$\text{PrSCrt}\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix} = \left\{\sum_{i=1}^{n} A_i \cup B_i - A_i \cap B_i\ , \sum_{i=1}^{n} D_i\right\} =$$

$\left\{\begin{matrix} \sum_{i=1}^{n} D_i \\ \sum_{i=1}^{n} A_i \cup B_i - A_i \cap B_i \end{matrix}\right\}$, where D_i is self-(set) for $A_i \cap B_i$ (i = 1, 2, …, n).

There is the same for structures if they are considered as sets. Similarly, for sets C_i, D_i: $\begin{matrix} C_1 C_2 & \dots & C_m \\ g_{12} g_{22} & \dots & g_{m2} \\ D_1 D_2 & \dots & D_m \end{matrix}\text{PrSCrt} =$

$$\left\{\begin{matrix} \sum_{i=1}^{m} Q_i + \begin{matrix} \{\ \} & \{\ \} & \dots & \{\ \} \\ D_1 - D_1 \cap C_1 & D_2 - D_2 \cap C_2 & \dots & D_m - D_m \cap C_m \end{matrix}\text{PrSCrt} \\ \sum_{i=1}^{m} (\ C_i - D_i \cap C_i) - (D_i - D_i \cap C_i) \end{matrix}\right\},$$

where Q_i is oself-(set) for $\left(D_i \cap C_i\right)$ (i = 1, 2, …, m) [14].

8. PrSCprt-derivative of $f(x_1,x_2,\dots,x_n) = \begin{pmatrix} f_1(x_1,x_2,\dots,x_n) \\ f_2(x_1,x_2,\dots,x_n) \\ \dots \\ f_k(x_1,x_2,\dots,x_n) \end{pmatrix}$ is

$$\text{PrSCprt}\begin{matrix} \frac{\partial}{\partial x_{1_i}} & \frac{\partial}{\partial x_{2_i}} & \dots & \frac{\partial}{\partial x_{k_i}} \\ g_{11} & g_{21} & \dots & g_{n1} \\ f_1(x_1,x_2,\dots,x_n) & f_2(x_1,x_2,\dots,x_n) & \dots & f_k(x_1,x_2,\dots,x_n) \end{matrix}$$

, where $x=(x_{1_i}, x_{2_i},\dots x_{k_i})$- any set from $\tilde{x}=(x_1|\mu_{\tilde{x}}(x_1), x_2|\mu_{\tilde{x}}(x_2), \dots, x_n|\mu_{\tilde{x}}(x_n))$. The same is done for PrSCprt- $\frac{\partial^k f(x)}{\partial x_{1_i}\partial x_{2_i}\dots\partial x_{k_i}}$. PrSCprt-integral off $(x_1,x_2,\dots,x_n)$ is

$$\text{PrSCprt}\begin{matrix} \int()dx_{1_i} & \int()dx_{2_i} & \dots & \int()dx_{k_i} \\ g_{11} & g_{21} & \dots & g_{n1} \\ f_1(x_1,x_2,\dots,x_n) & f_2(x_1,x_2,\dots,x_n) & \dots & f_k(x_1,x_2,\dots,x_n) \end{matrix}$$

, where (x_{1_i}, x_{2_i},… x_{k_i})- any set from $\tilde{x}$=(x1|$\mu_{\tilde{x}}$(x1), x2|$\mu_{\tilde{x}}$(x2), …, xn|$\mu_{\tilde{x}}$(xn)). The same is done for PrSCprt-∫…∫ $f(x)dx_{1_i}dx_{2_i}\dots dx_{k_i}$-k-multiple integral. PrSCprt-lim off $\tilde{x}$=(x1|$\mu_{\tilde{x}}$(x1), x2|$\mu_{\tilde{x}}$(x2), …, xn|$\mu_{\tilde{x}}$(xn)) is

$$\text{PrSCprt}\begin{matrix} \lim\limits_{x_{1_i}\to a_{1_i}} & \lim\limits_{x_{2_i}\to a_{2_i}} & \dots & \lim\limits_{x_{k_i}\to a_{k_i}} \\ g_{11} & g_{21} & \dots & g_{n1} \\ f_1(x_1,x_2,\dots,x_n) & f_2(x_1,x_2,\dots,x_n) & \dots & f_k(x_1,x_2,\dots,x_n) \end{matrix}.$$

The same is done for PrSCprt- $\lim\limits_{\substack{x_{1_i} \to a_{1_i} \\ \cdot \quad \cdot \quad \cdot \\ x_{k_i} \to a_{k_i}}}$ f(x_1,,x_2,…,x_n). $PrS_3Cf\{\lim\limits_{x\to a}\}$ =

$$\text{PrSCprt}\begin{matrix} \lim\limits_{x_{1_i}\to a_{1_i}} & \lim\limits_{x_{2_i}\to a_{2_i}} & \dots & \lim\limits_{x_{k_i}\to a_{k_i}} \\ g_{11} & g_{21} & \dots & g_{n1} \\ \lim\limits_{x_{1_i}\to a_{1_i}} & \lim\limits_{x_{2_i}\to a_{2_i}} & \dots & \lim\limits_{x_{k_i}\to a_{k_i}} \end{matrix}.$$

9. In the case of PrCSelf-derivatives, inclusions of multiple derivatives are obtained. The same is true for PrCSelf-integrals: we get inclusions of multiple integrals.
10. Let's denote PrCSelf-(PrCSelf-Q) through PrCSelf^2-Q , ffSC(n,Q)= PrCSelf-(PrCSelf-(…(PrCSelf-Q))) = PrCSelf^n-Q for n-multiple PrCSelf.

Operator PrCitself.

Definition B.1.1.7. An operator that transforms $\text{PrSCprt}\begin{matrix} w_1 & w_2 & \dots w_n \\ g_{11} & g_{21} & \dots g_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$ into any Pr $S_iCf\{\tilde{b}\}, i = 2,3$; where $\{\tilde{b}\} \subset \{\tilde{g}\}$ is the operator PrCitself.

Example. The operator contains the set in PrCitself.

Lim-PrCitself.

1. Lim PrSCprt

   For example, the double limit: $\lim\limits_{\substack{xa1 \\ ya2}} G(x,y)$ corresponds to

$$\text{PrSCprt}\begin{matrix} G(x,y) & G(x,y) \\ g_{11} & g_{21} \\ xa1 & ya2 \end{matrix}.$$

   Similarly, for lim PrSCprt with n variables.

In the case of lim-PrCitself, for example, for m variables, it suffices to use the form (1.1) of lim PrSCprt for n variables (n>m). The same is true for integrals of variables m (for example, the double integral over a rectangular region is through the double limit).

About PrSCprt and PrS_3Cf programming.

The ideology of PrSCprt and PrS_3Cf can be used for programming. Here are some of the PrSCprt programming operators.

1. Simultaneous assignment of the expressions $\tilde{p}=(p_1|\mu_{\tilde{p}}(p_1), p_2|\mu_{\tilde{p}}(p_2), \ldots, p_n|\mu_{\tilde{p}}(p_n))$ to the variables $\tilde{x}=(x_1|\mu_{\tilde{x}}(x_1), x_2|\mu_{\tilde{x}}(x_2), \ldots, x_n|\mu_{\tilde{x}}(x_n))$. This is implemented via PrSCprt $\begin{matrix} x_1 := & x_2 := & \ldots x_n := \\ g_{11} & g_{21} & \ldots & g_{n1} \\ p_1 & p_2 & \ldots & p_n \end{matrix}$.
2. Simultaneous checking the set of conditions $\tilde{w}=(w_1|\mu_{\tilde{w}}(w_1), w_2|\mu_{\tilde{w}}(w_2), \ldots, w_n|\mu_{\tilde{w}}(w_n))$ for the set of expressions $\tilde{B}=(B_1|\mu_{\tilde{B}}(B_1), B_2|\mu_{\tilde{B}}(B_2), \ldots, B_n|\mu_{\tilde{B}}(B_n))$. Implemented via PrSCprt $\begin{matrix} IF\{B_1w_1\}\ then & IF\{B_2w_2\}\ then & \ldots IF\{B_nw_n\}\ then \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ u_1 & u_2 & \ldots & u_n \end{matrix}$, where u_i (i = 1, …, n) can be anything.
3. Similarly for loop operators and others.

PrS_3Cf– software operators will differ only in that the aggregates $\{\tilde{w}\},\{\tilde{p}\},\{\tilde{B}\},\{\tilde{x}\}$ will be formed from the corresponding PrSCprt program operators in form (1.1) and for more complex operators in the forms (1.1.1) –(1.4), (2.1*) and analogs of forms (1.1.1) - (1.4) by type (2.1*).

The OS (operating system), the computer's principles, and the modes of operation for this programming are interesting. But this is already the material for the following articles.

Using elements of the mathematics of PrSCrt we introduce the concept of PrSCrt – the change in physical quantity B: PrSCprt $\begin{matrix} \Delta_1 B & \Delta_2 B & \ldots \Delta_n B \\ g_{11} & g_{21} & \ldots & g_{n1} \\ x_1 & x_2 & \ldots & x_n \end{matrix}$. Then the mean PrSCrt - velocity will be $v_{cpPrSCrt}(t, \Delta t)$ = PrSCprt $\begin{matrix} \frac{\Delta_1 B}{\Delta t} & \frac{\Delta_2 B}{\Delta t} & \cdots \frac{\Delta_n B}{\Delta t} \\ g_{11} & g_{21} & \cdots g_{n1} \\ x_1 & x_2 & \cdots x_n \end{matrix}$ and PrSCrt-velocity at time t:$v_{Prffsrt} = \lim_{\Delta t \to 0} v_{cpPrffst}(t, \Delta t)$. PrSCrt – acceleration $a_{Prffsrt} = \frac{dv_{Prffsrt}}{dt}$. The nuclei of atoms can be considered as PrSCprt elements.

Remark B.1.1.2. PrSCprt – elements are all ordinary, but with "target weights," they become peculiar. Here you need the necessary energy to carry them out. As a rule, this energy is at the level of PrCSelf. This is natural since it's much easier to manage elements of the k level via the elements of a more structured k +1 level. Let us consider the concepts of capacities of physical objects in themselves. The question arises about the fself-energy of the object. In particular, $PrSCrt_B^B$ will mean PrS_1CfB. For example, PrS$prt_{DNA}^{\overset{DNA}{g}}$ allows you to reach the level of DNA self-energy, $PrSCprt_Q^{\overset{Q}{g}}$ allows you to reach the level of self-energy Q. The law of self-energy conservation operates already at the level of self-energy. Also, in addition to capacities in themselves, you can consider the types of containment of oneself in oneself: the first type of the containment of oneself in oneself: the second type of the containment of oneself in oneself: potentially, for example, in the form of programming oneself, the third type is partial containment of oneself in themselves—for example, PrCSelf-operator, PrCSelf-action, whirlwind. A container containing itself can be formed by self-containment, i.e., containment in oneself. Let us clarify the concept of the term capacity in itself: it is a capacity containing itself potentially. Consider PrCSelf-Q, where Q can be anything, including Q=PrCSelf; in particular, it can be any action. Therefore, PrCSelf-Q is when Q is made by PrCitself; it makes itself. There is a partial PrCSelf-Q for any Q with partial PrCSelf-fulfillment. Let's consider several examples for capacities in themselves: ordinary lightning, electric arc discharge, and ball lightning.

PrSCprt is also great for working with structures, for example:

1) PrSCprt $\begin{array}{cccc} fstrA_1 & fstrA_2 & \dots & fstrA_n \\ g_{11} & g_{21} & \dots & g_{n1} \\ B_1 & B_2 & \dots & B_n \end{array}$ - the structure A_i that fits into B_i with type of containment μ_{i1}, where B_i (i = 1, …, n) can be any capacity, another structure etc.

2) PrSCprt $\begin{array}{cccc} fstr_{Q_1} & fstr_{Q_2} & \dots & fstr_{Q_n} \\ g_{11} & g_{21} & \dots & g_{n1} \\ B_1 & B_2 & \dots & B_n \end{array}$ is embedding structure from Q_i into B_i.

Similarly for displacement: 1) $\begin{array}{cccc} C_1 & C_2 & \dots & C_m \\ g_{12} & g_{22} & \dots & g_{m2} \\ fstrD_1 & fstrD_2 & \dots & fstrD_m \end{array}$ PrSCrt - displacement of structure $fstrD_j$ from C_j with type of containment g_{j1}, (j = 1, …, m), 2) $\begin{array}{cccc} C_1 & C_2 & \dots & C_m \\ g_{12} & g_{22} & \dots & g_{m2} \\ fstr_{Q_1} & fstr_{Q_2} & \dots & fstr_{Q_m} \end{array}$ PrSCprt -displacement of the structure Q_i from C_i, (i = 1, …, m). To work with structures, you can introduce a special operator PrCCprt:

PrCCprt$\begin{array}{cccc} A_1 & A_2 & \dots & A_n \\ g_{11} & g_{21} & \dots & g_{n1} \\ B_1 & B_2 & \dots & B_n \end{array}$ structures B_i with the structure A_i, (i = 1, …, n),

PrCCprt $\begin{array}{cccc} fstr_{Q_1} & fstr_{Q_2} & \dots & fstr_{Q_n} \\ g_{11} & g_{21} & \dots & g_{n1} \\ B_1 & B_2 & \dots & B_n \end{array}$ structures B_i with the structure from Q_i, (i = 1, …, n), $\begin{array}{cccc} C_1 & C_2 & \dots & C_m \\ g_{12} & g_{22} & \dots & g_{m2} \\ D_1 & D_2 & \dots & D_m \end{array}$PrCCprt destructors C_i by the structure of D_i,

$\begin{array}{cccc} C_1 & C_2 & \dots & C_m \\ g_{12} & g_{22} & \dots & g_{m2} \\ fstr_{Q_1} & fstr_{Q_2} & \dots & fstr_{Q_m} \end{array}$ PrCCprt destructors C_i from the structure that structures Q_i, (i = 1, …, m).

Definition B.1.1.8. A structure with a second degree of freedom will be called complete, i.e., "capable" of reversing itself concerning any of its elements explicitly, but not necessarily in known operators; it can form (create) new special operators (in particular, special functions).

In particular, PrCCprt$\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ A_1 & A_2 & \dots A_n \end{matrix}$, PrCCrt$\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ A_1 & A_2 & \dots A_n \end{matrix}$ are such structures.

Similarly, for working with models, each is structured by its structure; for example, use PrSCprt-groups, PrSCprt-rings, PrSCprt-fields, PrSCprt-spaces, PrCself-groups, PrCSelf-rings, PrCSelf-fields, and PrCSelf-spaces. Like any task, this is also a structure of the appropriate capacity .

PrCSelf-H (PrCSelf-hydrogen), like other PrCSelf-particles, does not exist in the ordinary, but all PrCSelf-molecules, PrCSelf-atoms, and PrCSelf-particles are elements of the energy space.

Remark B.1.1.3. The concept of elements of physics PrSCprt is introduced for energy space. The ideology of PrSCprt elements allows us to go to the border of the world familiar to us, which allows us to act more effectively.

Dynamic PrSCprt – elements.

We considered stationary PrSCprt – elements earlier. Here we consider dynamic PrSCprt – elements.

Definition B.1.2.1. The process of fitting a set of elements $\widetilde{w(t)}$=($w_1(t)|\mu_{\widetilde{w(t)}}$ ($w_1(t)$), $w_2(t)|\mu_{\widetilde{w}(t)}(w_2(t))$, ..., $w_n(t)|\mu_{\widetilde{w(t)}}(w_n(t)))$ into one point x= $(x_1,x_2,...,x_n)$ of the space X at time t will be called a dynamic PrSCprt – element. We will denote

PrSCprt(t) $\begin{matrix} w_1(t) & w_2(t) & \dots w_n(t) \\ g_{11} & g_{21} & \dots\ g_{n1} \\ x_1 & x_2 & \dots\ x_n \end{matrix}$.

Definition B.1.2.2. fitting an ordered set of elements into one point in space is called a dynamic ordered PrSCprt–element.

It is allowed to sum dynamic PrSCprt – elements:

$$\text{PrSCprt}\,(t) \begin{matrix} w_1(t) & w_2(t) & \dots w_n(t) \\ g_{11} & g_{21} & \dots\ g_{n1} \\ x_1 & x_2 & \dots\ x_n \end{matrix} + \text{PrSCprt}(t) \begin{matrix} b_1(t) & b_2(t) & \dots b_n(t) \\ g_{11} & g_{21} & \dots\ g_{n1} \\ x_1 & x_2 & \dots\ x_n \end{matrix} = \text{PrSCprt}$$

$$(t) \begin{matrix} w_1(t) \cup b_1(t) & w_2(t) \cup b_n(t) & \dots w_n(t) \cup b_n(t) \\ g_{11} & g_{21} & \dots\quad g_{n1} \\ x_1 & x_2 & \dots\quad x_n \end{matrix}.$$

It's allowed to multiply PrSCprt – elements: $\mathrm{PrSCprt}(t)\begin{array}{cccc} w_1(t) & w_2(t) & \dots w_n(t) \\ g_{11} & g_{21} & \dots & g_{n1} \\ x_1 & x_2 & \dots & x_n \end{array} *$

$\mathrm{PrSCprt}(t)\begin{array}{cccc} b_1(t) & b_2(t) & \dots b_n(t) \\ g_{11} & g_{21} & \dots & g_{n1} \\ x_1 & x_2 & \dots & x_n \end{array}$ = PrSCprt

$(t)\begin{array}{cccc} w_1(t)\cap b_1(t) & w_2(t)\cap b_n(t) & \dots w_n(t)\cap b_n(t) \\ g_{11} & g_{21} & \dots & g_{n1} \\ x_1 & x_2 & \dots & x_n \end{array}$

Parallel dynamic containment of oneself.

Definition B.1.2.3. Parallel dynamic Sprt- capacity

$\mathrm{PrSCprt}(t)\begin{array}{cccc} R_1(t) & R_2(t) & \dots R_n(t) \\ g_{11} & g_{21} & \dots & g_{n1} \\ Q_1(t) & Q_2(t) & \dots Q_n(t) \end{array}$ is the process of embedding $R_i(t)$ into $Q_i(t)$, (i = 1, …, n), simultaneously.

Definition B.1.2.4. Parallel dynamic fcapacity $\widetilde{Q(t)}$=($Q_1(t)|\mu_{\widetilde{Q(t)}}(Q_1(t))$, $Q_2(t)|\mu_{\tilde{Q}(t)}(Q_2(t))$, …, $Q_n(t)|\mu_{\widetilde{Q(t)}}(Q_n(t))$) containing itself as an element of the first type is the process of parallel containing $\widetilde{Q(t)}$ in $\widetilde{Q(t)}$

$\mathrm{PrSCprt}(t)\begin{array}{cccc} Q_1(t) & Q_2(t) & \dots Q_n(t) \\ g_{11} & g_{21} & \dots & g_{n1} \\ Q_1(t) & Q_2(t) & \dots Q_n(t) \end{array}$. Denote $PrS_1Cf(t)\widetilde{Q(t)}$.

Definition B.1.2.5. Parallel dynamic capacity C(t) in itself of the second type is the process of parallel containing elements from which it can be parallel generated. Let's denote $PrS_2Cf(t)C(t)$.

Definition B.1.2.6. Parallel dynamic partial capacity B(t) in itself of the third type is a process of partial parallel containment of B(t) in itself or parallel embedding elements from which it can be parallel generated partially or both at the same time. Denote $PrS_3Cf(t)B(t)$.

All parallel dynamic capacities in a parallel dynamic self-space are, by definition, parallel dynamic capacities in themselves. Parallel dynamic capacity itself can manifest itself as parallel dynamic SCprt- capacity and ordinary parallel dynamic capacity . In these cases, the usual measures and methods of topology are used.

Connection of dynamic PrSCprt – elements with parallel dynamic containment of oneself.

Consider third type of parallel dynamic partial containment of oneself. For example, based on PrSCprt (t) $\begin{matrix} Q_1(t) & Q_2(t) & \dots Q_n(t) \\ g_{11} & g_{21} & \dots\ g_{n1} \\ x_1 & x_2 & \dots\ x_n \end{matrix}$, where $\widetilde{Q(t)}$=(Q_1(t)|$\mu_{\widetilde{Q(t)}}$(Q_1(t)), Q_2(t)|$\mu_{\tilde{Q}(t)}$(Q_2(t)), …, Q_n(t)|$\mu_{\widetilde{Q(t)}}$(Q_n(t))), i.e. n – elements at one point x = $(x_1,x_2,\dots,x_n)$, we can consider the parallel dynamic capacity in itself $PrS_3Cf(t)$ with m elements from $\widetilde{Q(t)}$, m<n, which is process formed according to the form (1.1), that is, only m elements from $\widetilde{Q(t)}$ are in the structure

$$\text{PrSCprt (t)} \begin{matrix} Q_1(t) & Q_2(t) & \dots Q_n(t) \\ g_{11} & g_{21} & \dots\ g_{n1} \\ x_1 & x_2 & \dots\ x_n \end{matrix} .$$

Parallel dynamic containment of oneself of the third type can be formed for any other structure, not necessarily PrSCprt, only through the obligatory reduction in the number of elements in the structure. In particular, using the forms (1.1.1) - (1.4), (2.1*) and analogs of forms (1.1.1) - (1.4) by type (2.1*).

It is possible to introduce structures more complex than $PrS_3Cf(t)$.

Parallel dynamic math itself.

1. The process of simultaneous parallel addition of sets elements $\{\widetilde{u_i(t)}\}$ = $\left(u_{i_1}(t)|\mu_{\widetilde{u_i(t)}}(u_{i_1}(t)),\ u_{i_2}(t)|\mu_{\widetilde{u_i(t)}}(u_{i_2}(t)),\ \dots,\ u_{i_{m_j}}(t)|\mu_{\widetilde{u(t)}}(u_{i_{m_j}}(t)) \right)$, i = 1,2,…,n, j =1,2,…,k are realized by PrSCprt(t) $\begin{matrix} \{\widetilde{u_1(t)}\}+ & \{\widetilde{u_2(t)}\}+ & \dots\{\widetilde{u_n(t)}\}+ \\ g_{11} & g_{21} & \dots\ g_{n1} \\ x_1 & x_2 & \dots\ x_n \end{matrix}$.

2. By analogy, for simultaneous multiplication:

$$\text{PrSCprt(t)} \begin{matrix} \{\widetilde{u_1(t)}\}* & \{\widetilde{u_2(t)}\}* & \dots\{\widetilde{u_n(t)}\}* \\ g_{11} & g_{21} & \dots\ g_{n1} \\ x_1 & x_2 & \dots\ x_n \end{matrix} .$$

2. Similarly for simultaneous execution of various operations:

$$\text{PrSCprt(t)} \begin{matrix} w_1(t)Q_1(t) & w_2(t)Q_2(t) & \dots w_n(t)Q_n(t) \\ g_{11} & g_{21} & \dots & g_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix}$$

, where $\widetilde{Q(t)}$=(Q₁(t)| $\mu_{\widetilde{Q(t)}}$(Q₁(t)), Q₂(t)|$\mu_{\tilde{Q}(t)}$(Q₂(t)), …, Qₙ(t)|$\mu_{\widetilde{Q(t)}}$(Qₙ(t))), $Q_i(t)$-an operation, i = 1, …, n, $\widetilde{w(t)}$=($w_1(t)$|$\mu_{\widetilde{w(t)}}$($w_1(t)$), $w_2(t)$|$\mu_{\tilde{w}(t)}$($w_2(t)$), …, $w_n(t)$|$\mu_{\widetilde{w(t)}}$($w_n(t)$)).

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

$$\text{PrSCprt(t)} \begin{matrix} F_1(t)\, w_1(t) & F_2(t)\, w_2(t) & \dots F_n(t)\, w_n(t) \\ g_{11} & g_{21} & \dots & g_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix}$$

, where $\widetilde{F(t)}$=($F_1(t)$|$\mu_{\widetilde{F(t)}}$($F_1(t)$), $F_2(t)$|$\mu_{\tilde{F}(t)}$($F_2(t)$), …, $F_n(t)$|$\mu_{\widetilde{F(t)}}$($F_n(t)$)), $F_i(t)$ is an operator, i = 1, …, n.

4. Parallel dynamic arithmetic itself for containments of oneself will be similar: Parallel dynamic addition - $PrS_1Cf(t)\{\widetilde{w(t)}\,+\}$, (or $PrS_3Cf(t)\{\widetilde{w(t)}\,+\}$ for the third type), Parallel dynamic multiplication $PrS_1Cf(t)\{\widetilde{w(t)}\,*\}$, ($PrS_3Cf(t)\{\widetilde{w(t)}\,*\}$).

5. Similarly with different operations: $PrS_1Cf(t)\{\widetilde{w(t)}\ \widetilde{Q(t)}\}$, ($PrS_3Cf(t)\{\widetilde{w(t)}\ \widetilde{Q(t)}\}$) and with different operators: $PrS_1Cf(t)\{\widetilde{F(t)}\widetilde{w(t)}\}$, ($PrS_3Cf(t)\{\widetilde{F(t)}\widetilde{w(t)}\}$).

6. $\text{PrSCprt}\,(t) \begin{matrix} A_1(t) & A_2(t) & \dots A_n(t) \\ g_{11} & g_{21} & \dots\ g_{n1} \\ B_1(t) & B_2(t) & \dots B_n(t) \end{matrix}$ gives the result

$$\text{PrSCrt}\,(t) \begin{matrix} A_1(t) & A_2(t) & \dots A_n(t) \\ g_{11} & g_{21} & \dots\ g_{n1} \\ B_1(t) & B_2(t) & \dots B_n(t) \end{matrix} =$$

$\{\sum_{i=1}^{n} A_i(t) \cup B_i(t) - A_i(t) \cap B_i(t)\ , \sum_{i=1}^{n} D_i(t)\}$, for sets $A_i(t)$, $B_i(t)$, where $D_i(t)$ is self-set for $A_i(t) \cap B_i(t)$, (i = 1, 2, …, n). The same is true for structures if they are treated as sets,

7. $\begin{matrix} C_1(t) & C_2(t) & \dots C_m(t) \\ g_{11} & g_{21} & \dots\ g_{n1} \\ D_1(t) & D_2(t) & \dots D_m(t) \end{matrix}$ PrSCrt(t) =

$$\left\{\begin{matrix} \sum_{i=1}^{m} Q_i(t) + \begin{matrix} \{\} \\ D_1(t) - D_1(t) \cap C_1(t) \end{matrix} \begin{matrix} \{\} \quad \dots \\ D_2(t) - D_2(t) \cap C_2(t) \quad \dots \end{matrix} \begin{matrix} \{\} \\ D_2(t) - D_2(t) \cap C_2(t) \end{matrix} \text{PrfSrt} \\ \sum_{i=1}^{m} \left(C_i(t) - D_i(t) \cap C_i(t)\right) - (D_i(t) - D_i(t) \cap C_i(t)) \end{matrix}\right\}$$

for sets $C_i(t)$, $D_i(t)$, where $Q_i(t)$ is oself-set for $\left(D_i(t) \cap C_i(t)\right)$(i = 1, 2, …, m) [14].

8. Similarly, for dynamic PrSCprt-derivatives, dynamic PrSCprt-integrals, dynamic PrSCprt-lim, parallel dynamic self-derivatives, parallel dynamic self-integrals
9. Denote parallel dynamic self-(parallel dynamic self-Q(t)) through parallel dynamic self^2-Q(t) , pCS(t)(n,Q(t))= parallel dynamic self-(parallel dynamic self-(…((parallel dynamic self)-Q(t)))) = (parallel dynamic self^n)-Q(t) for n-multiple parallel dynamic self.

Remark B.1.2.1. Then the notation

$$\begin{matrix} C_1(t) & C_2(t) & \dots C_m(t) \\ g_{12} & g_{22} & \dots\ g_{m2} \\ D_1(t) & D_2(t) & \dots D_m(t) \end{matrix} \text{PrSCprt(t)} \begin{matrix} A_1(t) & A_2(t) & \dots A_n(t) \\ g_{11} & g_{21} & \dots\ g_{n1} \\ B_1(t) & B_2(t) & \dots B_n(t) \end{matrix}$$

where A_1(t) fits into B_1(t) with type of containment g_{11}, A_2(t) fits into B_2(t) with type of containment g_{21}, …, A_n(t) fits into B_n(t) with type of containment g_{n1}, D_1(t) is forced out of C_1(t) with type of expelling g_{12}, D_2(t) is forced out of C_2(t) with type of expelling g_{22}, …, D_m(t) is forced out of C_m(t) with type of expelling g_{m2} simultaneously. It is dynamic PrSCprt-containment of A_i(t) in B_i(t) and dynamic PrSCprt-displacement of D_j(t) from C_j(t) simultaneously, (i = 1, 2, …, n, j = 1, 2, …, m). The result of this process will be described by the expression

$$\begin{matrix} C_1(t) & C_2(t) & \dots C_m(t) \\ g_{12} & g_{22} & \dots\ g_{m2} \\ D_1(t) & D_2(t) & \dots D_m(t) \end{matrix} \text{PrSCprt}(t) \begin{matrix} A_1(t) & A_2(t) & \dots A_n(t) \\ g_{11} & g_{21} & \dots\ g_{n1} \\ B_1(t) & B_2(t) & \dots B_n(t) \end{matrix}.$$

$$\text{PrSCrt(t)} \begin{matrix} B_1(t) & B_2(t) & \dots B_n(t) \\ g_{11} & g_{21} & \cdots & g_{n1} \\ B_1(t) & B_2(t) & \dots B_n(t) \end{matrix}$$ will mean $PrS_1Cf(t)B(t)$.

$$\begin{matrix} C_1(t) & C_2(t) & \dots C_m(t) \\ g_{12} & g_{22} & \cdots & g_{m2} \\ C_1(t) & C_2(t) & \dots C_m(t) \end{matrix}$$ PrSCprt(t) denotes the parallel dynamic expelling $\widetilde{C(t)}$ =($C_1(t)|\mu_{\widetilde{C(t)}}(C_1(t))$, $C_2(t)|\mu_{\tilde{C}(t)}(C_2(t))$, …, $C_n(t)|\mu_{\widetilde{C(t)}}(C_n(t))$) oneself out of oneself,

$$\begin{matrix} A_1(t) & A_2(t) & \dots A_n(t) \\ g_{11} & g_{21} & \cdots & g_{n1} \\ A_1(t) & A_2(t) & \dots A_n(t) \end{matrix} \text{ PrSCprt(t) } \begin{matrix} A_1(t) & A_2(t) & \dots A_n(t) \\ g_{11} & g_{21} & \cdots & g_{n1} \\ A_1(t) & A_2(t) & \dots A_n(t) \end{matrix}$$ —simultaneous parallel dynamic containment $\widetilde{A(t)}$=($A_1(t)|\mu_{\widetilde{A(t)}}(A_1(t))$, $A_2(t)|\mu_{\tilde{A}(t)}(A_2(t))$, …, $A_n(t)|\mu_{\widetilde{A(t)}}(A_n(t))$) of oneself in oneself and parallel dynamic expelling $\widetilde{A(t)}$ oneself out of oneself. $$\begin{matrix} A_1(t) & A_2(t) & \dots A_n(t) \\ g_{11} & g_{21} & \cdots & g_{n1} \\ B_1(t) & B_2(t) & \dots B_n(t) \end{matrix}$$ PrSCprt(t) will be called parallel dynamic anti-fcapacity from oneself. For example, “white hole” in physics is such simple anti-fcapacity.

We may consider the following axiom: any fcapacity is the fcapacity of oneself. This is for each energy fcapacity .

About dynamic PrSCprt and $PrS_3Cf(t)$ programminF.

The ideology of dynamic PrSCprt and $PrS_3Cf(t)$ can be used for programming:

1. The process of simultaneous assignment of the expressions $\widetilde{p(t)}$=($p_1(t)|\mu_{\widetilde{p(t)}}(p_1(t))$, $p_2(t)|\mu_{\widetilde{p(t)}}(p_2(t))$, …, $p_n(t)|\mu_{\widetilde{p(t)}}(p_n(t))$) to the variables $\widetilde{x(t)}$=($x_1(t)|\mu_{\widetilde{x(t)}}(x_1(t))$, $x_2(t)|\mu_{\tilde{x}(t)}(x_2(t))$, …, $x_n(t)|\mu_{\widetilde{x(t)}}(x_n(t))$) is implemented through

$$\text{PrSCprt(t)} \begin{matrix} x_1(t) := & x_2(t) := & \dots x_n(t) := \\ g_{11} & g_{21} & \cdots & g_{n1} \\ p_1(t) & p_2(t) & \dots & p_n(t) \end{matrix} .$$

2. The process of simultaneous check the set of conditions $\widetilde{A(t)}$=($A_1(t)|\mu_{\widetilde{A(t)}}(A_1(t))$, $A_2(t)|\mu_{\tilde{A}(t)}(A_2(t))$, …, $A_n(t)|\mu_{\widetilde{A(t)}}(A_n(t))$) for a set of expressions $\widetilde{B(t)}$=($B_1(t)|\mu_{\widetilde{B(t)}}(B_1(t))$, $B_2(t)|\mu_{\tilde{B}(t)}(B_2(t))$, …, $B_n(t)|\mu_{\widetilde{B(t)}}(B_n(t))$) is implemented through

$$\text{PrSCprt(t)}\begin{array}{cccc} IF\{B_1(t)A_1(t)\}\ then & IF\{B_2(t)A_2(t)\}\ then & ...IF\{B_n(t)A_n(t)\}\ then \\ g_{11} & g_{21} & \cdots & g_{n1} \\ w_1(t) & w_2(t) & \cdots & w_n(t) \end{array}$$

here w(t) = $(w_1(t), w_2(t), \ldots, w_n(t))$. can be any.

3.Similarly for loop operators and others.

$PrS_3Cf(t)$– software operators will differ only in that the aggregates $\{\widetilde{A(t)}\},\{\widetilde{p(t)}\},\{\widetilde{B(t)}\},\{\widetilde{x(t)}\}$ will be formed from corresponding processes PrSCprt(t) for the above-mentioned programming operators through form (1.1) or forms (1.1.1) - (.1.4), (2.1*) and analogs of forms (1.1.1) – (1.4) by type (2.1*) for more complex operators.

Remark B.1.2.2. It is the parallel containment of oneself in oneself that can “give birth” to the parallel capacities in itself – that is what parallel self-organization is.

Remark B.1.2.3.

$$\text{PrSCprt(t)}\begin{array}{cccc} \text{PrSCprt(t)}\begin{array}{ccc} B_1(t) & B_2(t) & ...B_n(t) \\ g_{11} & g_{21} & \cdots g_{n1} \\ B_1(t) & B_2(t) & ...B_n(t) \end{array} & \text{PrSCprt(t)}\begin{array}{ccc} B_1(t) & B_2(t) & ...B_n(t) \\ g_{11} & g_{21} & \cdots g_{n1} \\ B_1(t) & B_2(t) & ...B_n(t) \end{array} & \ldots & \text{PrSCprt(t)}\begin{array}{ccc} B_1(t) & B_2(t) & ...B_n(t) \\ g_{11} & g_{21} & \cdots g_{n1} \\ B_1(t) & B_2(t) & ...B_n(t) \end{array} \\ \mu_{11} & \mu_{21} & \cdots & \mu_{n1} \\ \text{PrSCprt(t)}\begin{array}{ccc} B_1(t) & B_2(t) & ...B_n(t) \\ g_{11} & g_{21} & \cdots g_{n1} \\ B_1(t) & B_2(t) & ...B_n(t) \end{array} & \text{PrSCprt(t)}\begin{array}{ccc} B_1(t) & B_2(t) & ...B_n(t) \\ g_{11} & g_{21} & \cdots g_{n1} \\ B_1(t) & B_2(t) & ...B_n(t) \end{array} & \ldots & \text{PrSCprt(t)}\begin{array}{ccc} B_1(t) & B_2(t) & ...B_n(t) \\ g_{11} & g_{21} & \cdots g_{n1} \\ B_1(t) & B_2(t) & ...B_n(t) \end{array} \end{array} \text{ can}$$

increase parallel self- level of $\widetilde{B(t)}=(B_1(t)|\mu_{\widetilde{B(t)}}(B_1(t)), B_2(t)|\mu_{\widetilde{B(t)}}(B_2(t)), \ldots, B_n(t)|\mu_{\widetilde{B(t)}}(B_n(t)))$.

Remark B.1.2.4. For example, the operator PrCitself is $PrS_1Cf(t)$.

Remark B.1.2.5. May be considered the following derivatives:

$$\frac{d\text{PrSCprt(t)}\begin{array}{ccc} A_1(t) & A_2(t) & ...A_n(t) \\ g_{11} & g_{21} & \cdots\ g_{n1} \\ B_1(t) & B_2(t) & ...B_n(t) \end{array}, d\begin{array}{ccc} C_1(t) & C_2(t) & ...C_m(t) \\ g_{12} & g_{22} & \cdots\ g_{m2} \\ D_1(t) & D_2(t) & ...D_m(t) \end{array}\text{PrSCrt(t))}}{dt},$$

$$\frac{d\begin{array}{ccc} C_1(t) & C_2(t) & ...C_m(t) \\ g_{12} & g_{22} & \cdots\ g_{m2} \\ D_1(t) & D_2(t) & ...D_m(t) \end{array}\text{PrSCrt(t)}\begin{array}{ccc} A_1(t) & A_2(t) & ...A_n(t) \\ g_{11} & g_{21} & \cdots\ g_{n1} \\ B_1(t) & B_2(t) & ...B_n(t) \end{array}}{dt}, \frac{dPrS_i\text{Cf(t)}}{dt}, \text{ i=1,2,3.}$$

Remark B.1.2.6. It is the parallel containment of oneself in itself as an element that can be interpreted as parallel dynamic capacities in itself.

Remark B.1.2.7. Not every capacity parallel containing itself as an element will manifest itself as a sedentary parallel capacity or parallel capacity.

PrSCprt – elements for continual sets.

Earlier, we considered finite-dimensional discrete PrSCprt-elements and self-fcapacities in itself as an element. Here we believe some continual PrSCprt-elements and continual parallel ffself-capacities in themselves as an element.

Definition B.1.3.1. The dynamic set of continual elements $\tilde{w}$=($w_1|\mu_{\tilde{w}}(w_1)$, $w_2|\mu_{\tilde{w}}(w_2)$, …, $w_n|\mu_{\tilde{w}}(w_n)$) at one point x = $(x_1,x_2,\dots,x_n)$ of space X will be called continual PrSCprt – element, and such a point in space will be called parallel fcapacity of the continual PrSCprt – element. We will denote

$$\mathrm{PrSCprt}\begin{matrix} w_1 & w_2 & \dots w_n \\ g_{11} & g_{21} & \dots g_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}.$$

Definition B.1.3.2. An ordered dynamic set of continual elements at one point in space is called an ordered continual PrSCprt–element.

It's allowed to sum continual PrSCprt – elements: : $\mathrm{PrSCprt}\begin{matrix} w_1 & w_2 & \dots w_n \\ g_{11} & g_{21} & \dots g_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix} +$

$\mathrm{PrSCprt}\begin{matrix} b_1 & b_2 & \dots b_n \\ g_{11} & g_{21} & \dots g_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix} = \mathrm{PrSCprt}\begin{matrix} w_1 \cup b_1 & w_2 \cup b_2 & \dots w_n \cup b_n \\ g_{11} & g_{21} & \dots \; g_{n1} \\ x_1 & x_2 & \dots \; x_n \end{matrix}$., where some or any elements may be ordered continual elements. It's allowed to multiply continual PrSCprt – elements: $\mathrm{PrSCprt}\begin{matrix} w_1 & w_2 & \dots w_n \\ g_{11} & g_{21} & \dots g_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix} * \mathrm{PrSCprt}\begin{matrix} b_1 & b_2 & \dots b_n \\ g_{11} & g_{21} & \dots g_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix} =$

$$\mathrm{PrSCprt}\begin{matrix} w_1 \cap b_1 & w_2 \cap b_2 & \dots w_n \cap b_n \\ g_{11} & g_{21} & \dots \; g_{n1} \\ x_1 & x_2 & \dots \; x_n \end{matrix}.$$

Definition B.1.3.3. The continual PrCSelf-capacity A in itself as an element of the first type is the continual capacity parallel containing itself as an element. Denote

PrS_1CA. $PrS_1CA = \mathrm{PrSCrt}\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ A_1 & A_2 & \dots A_n \end{matrix}.$

Definition B.1.3.4. The ordered continual PrCself-capacity A in itself as an element of the first type is the ordered continual fcapacity parallel containing itself as an element. Denote $\overrightarrow{PrS_1CfA}$.

For example, PrSCprt $\begin{matrix} \sin\infty & tg(-\infty) & \ldots\sin(-\infty) \\ g_{11} & g_{21} & \ldots & g_{n1} \\ x_1 & x_2 & \ldots & x_n \end{matrix}$ =

PrSCprt $\begin{matrix} \uparrow I \downarrow_{-1}^{1} & \downarrow I \uparrow_{-\infty}^{\infty} & \ldots\downarrow I \uparrow_{-1}^{1} \\ g_{11} & g_{21} & \ldots & g_{n1} \\ x_1 & x_2 & \ldots & x_n \end{matrix}$, don't confuse with values of these functions.

Definition B.1.3.5. The continual PrCSelf-capacity A in itself, as an element of the second type, is the capacity parallel containing continual elements from which it can be parallel generated. Let's denote PrS_2CfA.

An example of continual self- capacity in itself as an element of the second type is a living organism since it contains the programs: DNA and RNA.

Definition B.1.3.6. Partial continual PrCSelf-capacity in itself as an element of the third type is called continual PrCSelf-capacity in itself as an element that partially parallel contains itself or parallel contains elements from which it can be parallel generated in part or both simultaneously. Denote PrS_3Cf.

All continual capacities in PrCSelf-space are continual PrCSelf-capacities in itself as an element by definition. The continual PrCSelf-capacities in itself as an element may appear as continual PrSCrt- capacities and usual continual capacities. In these cases, there are used typical measure and topology methods.

The connection of continual PrSCprt – elements with continual PrCSelf-capacities in themselves as an element.

Consider a third type of continual PrCSelf- fcapacity in itself as an element. For example, based on PrSCprt$\begin{matrix} w_1 & w_2 & \ldots w_n \\ g_{11} & g_{21} & \ldots g_{n1} \\ x_1 & x_2 & \ldots x_n \end{matrix}$, where $\tilde{w}$=($w_1|\mu_{\tilde{w}}(w_1)$, $w_2|\mu_{\tilde{w}}(w_2)$, ..., $w_n|\mu_{\tilde{w}}(w_n)$), i.e. n - continual elements at one point x = $(x_1, x_2, \ldots, x_n)$, The continual PrCSelf- fcapacity in itself as an element with m continual elements from $\tilde{w}$, at m<n, can be considered as PrS_3Cf, which is formed by the form (1.1), i.e., only m continual elements are located in the structure

PrSCprt$\begin{matrix} w_1 & w_2 & \dots w_n \\ g_{11} & g_{21} & \dots g_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$. Continual fself-capacities in itself as an element of the third type can be formed for any other structure, not necessarily PrSCprt, only by obligatory reducing the number of continual elements in the structure. In particular, using the forms (1.1.1) - (1.4), (2.1*) and analogs of forms (1.1.1) - (1.4) by type (2.1*). Structures more complex than PrS_3Cf can be introduced.

Mathematics PrCitself for continual elements.

1.Simultaneous parallel addition of the sets continual elements $\tilde{w}$=($w_1|\mu_{\tilde{w}}(w_1)$, $w_2|\mu_{\tilde{w}}(w_2)$, …, $w_n|\mu_{\tilde{w}}(w_n)$), i = 1,2,…,n, j = 1,2,…,k, is implemented using

PrSCprt $\begin{matrix} \{w_1\} \cup & \{w_2\} \cup & \dots\{w_n\} \cup \\ g_{11} & g_{21} & \dots & g_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix}$.

2. By analogy, for simultaneous multiplication:

PrSCprt $\begin{matrix} \{w_1\} \cap & \{w_2\} \cap & \dots\{w_n\} \cap \\ g_{11} & g_{21} & \dots & g_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix}$.

3. Similarly for simultaneous execution of various operations:

PrSCprt $\begin{matrix} \{w_1 Q_1\} & \{w_2 Q_2\} & \dots\{w_n Q_n\} \\ g_{11} & g_{21} & \dots & g_{n1} \\ u_1 & u_2 & \dots & u_n \end{matrix}$, , where $\tilde{Q}$=($Q_1|\mu_{\tilde{Q}}(Q_1)$, $Q_2|\mu_{\tilde{Q}}(Q_2)$, …, $Q_n|\mu_{\tilde{Q}}(Q_n)$). Q_i -an operation, i = 1, …, n.

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

PrSCprt $\begin{matrix} \{F_1 w_1\} & \{F_2 w_2\} & \dots\{F_n w_n\} \\ g_{11} & g_{21} & \dots & g_{n1} \\ u_1 & u_2 & \dots & u_n \end{matrix}$, where $\tilde{F}$=($F_1|\mu_{\tilde{F}}(F_1)$, $F_2|\mu_{\tilde{F}}(F_2)$, …, $F_n|\mu_{\tilde{F}}(F_n)$). F_i is an operator, i = 1, …, n.

5. The arithmetic itself for parallel continual capacities in themselves will be similar: addition - $PrS_1Cf\{w \cup\}$, (or$PrS_3Cf\{w \cup\}$)for the third type), multiplication $PrS_1Cf\{w \cap\}$, (or$PrS_3Cf\{w \cap\}$).
6. Similarly with different operations: $PrS_1Cf\{gQ\}$, ($PrS_3Cf\{gQ\}$), and with different operators: $PrS_1Cf\{Fw\}$, ($PrS_3Cf\{Fw\}$).
7. $\mathrm{PrSCrt}\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix}$ – the result of the parallel containment operator.

For continual sets A_i, B_i, (i = 1, 2, …, n), we have

$$\mathrm{PrSCrt}\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix} = \left\{\sum_{i=1}^{n} A_i \cup B_i - A_i \cap B_i \,, \sum_{i=1}^{n} D_i\right\},$$ where D_i is self-(set) for $A_i \cap B_i$ (i = 1, 2, …, n). There is the same for structures if they are considered as continual sets, for sets C_i, D_i $\begin{matrix} C_1 C_2 & \dots & C_m \\ g_{12} g_{22} & \dots & g_{m2} \\ D_1 D_2 & \dots & D_m \end{matrix}\mathrm{PrSCrt}=$

$$\left\{\begin{matrix} \sum_{i=1}^{m} Q_i + \begin{matrix} \{\,\} \\ D_1 - D_1 \cap C_1 \end{matrix} \; \begin{matrix} \{\,\} \\ D_2 - D_2 \cap C_2 \end{matrix} \; \begin{matrix} \dots \\ \dots \end{matrix} \; \begin{matrix} \{\,\} \\ D_m - D_m \cap C_m \end{matrix} \mathrm{PrfSrt} \\ \sum_{i=1}^{m} (\, C_i - D_i \cap C_i) - (D_i - D_i \cap C_i) \end{matrix}\right\},$$

where Q_i is oself-(set) for $\left(D_i \cap C_i\right)$(i = 1, 2, …, m) [14].

Remark B.1.3.1. $\begin{matrix} C_1 C_2 & \dots & C_m \\ g_{12} g_{22} & \dots & g_{m2} \\ D_1 D_2 & \dots & D_m \end{matrix}\mathrm{PrSCprt}$, where continual D_1 is forced out of continual C_1 with type of expelling g_{12}, continual D_2 is forced out of continual C_2 with type of expelling g_{22}, …, continual D_m is forced out of continual C_m with type of expelling g_{m2}. $\begin{matrix} C_1 C_2 & \dots & C_m \\ g_{12} g_{22} & \dots & g_{m2} \\ D_1 D_2 & \dots & D_m \end{matrix}\mathrm{PrSCprt}\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix}$

where continual A_1 fits into continual B_1 with type of containment g_{11}, continual A_2 fits into continual B_2 with type of containment g_{21}, …, continual A_n fits into continual B_n with type of containment g_{n1}, continual D_1 is forced out of continual C_1 with type of expelling g_{12}, continual D_2 is forced out of continual C_2 with type of expelling g_{22}, …, continual D_m is forced out of continual C_m with type of expelling g_{m2} simultaneously.

We can consider the concept of a continual PrSCprt - element as PrSCprt $\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix}$, where continual A_1 fits into continual B_1 with type of containment g, continual A_2 fits into continual B_2 with type of containment g_{21}, …, continual A_n fits into continual B_n with type of containment g_{n1}. Then

PrSCprt$\begin{matrix} B_1 & B_2 & \dots B_n \\ g_{11} & g_{21} & \dots g_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix}$ will mean PrS_1Cf B.

These elements are used for PrSCprt-coding, PrSCprt translation, coding PrCSelf, and translation PrCSelf for networks, which is suitable for electric current of ultrahigh frequency. More complex elements can be considered as continual sets of numbers with their " activation " in mutual directions. For example, ranges of function values, particularly those representing the shape of lightning. differential geometry can be applied here. Also, n-dimensional elements can be considered. The space of such elements is Banach space if we introduce the usual norm for functions or vectors. We call this space - CSelb-space. Then we introduce the scalar product for functions or vectors and get the Hilbert space. We call this space CSelh-space. In particular, one can try to describe some processes with these elements by differential equations and use methods from [4]. You can also try to optimize and research some processes with these elements using the techniques from [5]. Let’s introduce operators for transforming capacity to PrCSelf- capacity in itself as an element: $PrfQ_1SC(A)$ transforms A to PrS_1CA, $PrfQ_0SC(B)$ transforms B to $\begin{matrix} B_1 & B_2 & \dots B_m \\ g_{11} & g_{21} & \dots g_{n1} \\ B_1 & B_2 & \dots B_m \end{matrix}$ PrSCprt .

Can be considered Q($\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix}$PrSCprt$\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix}$), Q-any operator.

Dynamic continual PrSCprt – elements.

Definition B.1.4.1. The process of containing the set of continual elements $\tilde{w}$ =($w_1|\mu_{\tilde{w}}(w_1)$, $w_2|\mu_{\tilde{w}}(w_2)$, …, $w_n|\mu_{\tilde{w}}(w_n)$) into one point x= $(x_1,x_2,...,x_n)$ of the space X at time will be called the dynamic continual PrSCprt – element. We will denote PrSCprt(t) $\begin{matrix} w_1(t) & w_2(t) & ...w_n(t) \\ g_{11} & g_{21} & ... \; g_{n1} \\ x_1 & x_2 & ... \; x_n \end{matrix}$.

Definition B.1.4.2. The process of containing an ordered set of continual elements at one point in space is called dynamic continual ordered PrSCprt – element.

It is allowed to sum dynamic continual PrSCprt – elements:

$$\text{PrSCprt}(t) \begin{matrix} w_1(t) & w_2(t) & ...w_n(t) \\ g_{11} & g_{21} & ... \; g_{n1} \\ x_1 & x_2 & ... \; x_n \end{matrix} + \text{PrSCprt}(t) \begin{matrix} b_1(t) & b_2(t) & ...b_n(t) \\ g_{11} & g_{21} & ... \; g_{n1} \\ x_1 & x_2 & ... \; x_n \end{matrix} = \text{PrSCprt}$$

$$(t) \begin{matrix} w_1(t) \cup b_1(t) & w_2(t) \cup b_n(t) & ...w_n(t) \cup b_n(t) \\ g_{11} & g_{21} \quad ... & g_{n1} \\ x_1 & x_2 \quad ... & x_n \end{matrix}$$

. It's allowed to multiply dynamic continual PrSCprt – elements: $\text{PrSCprt}(t) \begin{matrix} w_1(t) & w_2(t) & ...w_n(t) \\ g_{11} & g_{21} & ... \; g_{n1} \\ x_1 & x_2 & ... \; x_n \end{matrix} *$

$$\text{PrSCprt}(t) \begin{matrix} b_1(t) & b_2(t) & ...b_n(t) \\ g_{11} & g_{21} & ... \; g_{n1} \\ x_1 & x_2 & ... \; x_n \end{matrix} = \text{PrSCprt}$$

$$(t) \begin{matrix} w_1(t) \cap b_1(t) & w_2(t) \cap b_n(t) & ...w_n(t) \cap b_n(t) \\ g_{11} & g_{21} \quad ... & g_{n1} \\ x_1 & x_2 \quad ... & x_n \end{matrix} .$$

Parallel dynamic continual containment of oneself in oneself as an element.

Definition B.1.4.3. The dynamic continual PrSCprt- fcapacity $\text{PrSCprt}(t) \begin{matrix} R_1(t) & R_2(t) & ... \; R_n(t) \\ g_{11} & g_{21} & ... \; g_{n1} \\ Q_1(t) & Q_2(t) & ...Q_n(t) \end{matrix}$ is the process of embedding continual $R_i(t)$ into continual $Q_i(t)$, (i = 1, …, n).

Definition B.1.4.4. Parallel dynamic continual fcapacity $\widetilde{Q(t)}$=($Q_1(t)|\mu_{\widetilde{Q(t)}}(Q_1(t))$, $Q_2(t)|\mu_{\tilde{Q}(t)}(Q_2(t))$, …, $Q_n(t)|\mu_{\widetilde{Q(t)}}(Q_n(t))$) containing itself as an element of the first type is the process of parallel containing $\widetilde{Q(t)}$ in $\widetilde{Q(t)}$

$$\text{PrSCprt (t)} \begin{array}{cccc} Q_1(t) & Q_2(t) & \dots & Q_n(t) \\ g_{11} & g_{21} & \dots & g_{n1} \\ Q_1(t) & Q_2(t) & \dots & Q_n(t) \end{array}$$. Denote $PrS_1Cf(t)\widetilde{Q(t)}$.

Definition B.1.4.5. The dynamic parallel containment continual C(t) of oneself of the second type parallel contains the continual elements from which it can be parallel generated. Denote $PrS_2Cf(t)C(t)$.

Definition B.1.4.6. The partial parallel dynamic containment continual B(t) of oneself of the third type is the process of partial parallel embedding continual B(t) into oneself or parallel embedding continual elements from which it can be parallel generated in part or both simultaneously. Denote $PrS_3Cf(t)B(t)$.

The connection of dynamic continual PrSCprt – elements with parallel dynamic continual containment of oneself in oneself as an element.
Let us consider the partial parallel dynamic continual containment of oneself in oneself as an element of the third type. For example, based on

$$\text{PrSCprt (t)} \begin{array}{cccc} Q_1(t) & Q_2(t) & \dots & Q_n(t) \\ g_{11} & g_{21} & \dots & g_{n1} \\ x_1 & x_2 & \dots & x_n \end{array}$$, where $\widetilde{Q(t)}$=($Q_1(t)|\mu_{\widetilde{Q(t)}}(Q_1(t))$, $Q_2(t)|\mu_{\tilde{Q}(t)}$ $(Q_2(t))$, …, $Q_n(t)|\mu_{\widetilde{Q(t)}}(Q_n(t))$), i.e. n – continual elements at one point x = $(x_1,x_2,\dots,x_n)$, we can consider the parallel dynamic continual capacity in itself $PrS_3Cf(t)$ with m elements from $\widetilde{Q(t)}$, m<n, which is process formed according to the form (1.1), that is, only m elements from $\widetilde{Q(t)}$ are in the structure

$$\text{PrSCprt (t)} \begin{array}{cccc} Q_1(t) & Q_2(t) & \dots & Q_n(t) \\ g_{11} & g_{21} & \dots & g_{n1} \\ x_1 & x_2 & \dots & x_n \end{array} ..$$

Parallel dynamic continual containments of oneself in oneself as an element of the third type can be formed for any other structure, not necessarily PrSCprt, only by necessarily reducing the number of continual elements in the structure. In particular, with the help of forms (1.1.1) - (1.4), (2.1*) and analogs of forms (1.1.1) - (1.4) by type (2.1*).

It is possible to introduce structures more complex than $PrS_3Cf(t)$.

Parallel dynamic continual mathematics self.

1. The process of simultaneous parallel addition of sets continual elements $\left\{\widetilde{u_i(t)}\right\} = \left(u_{i_1}(t)|\mu_{\widetilde{u_i(t)}}(u_{i_1}(t)),\, u_{i_2}(t)|\mu_{\widetilde{u_i(t)}}(u_{i_2}(t)),\, \ldots,\, u_{i_{m_j}}(t)|\mu_{\widetilde{u(t)}}(u_{i_{m_j}}(t)) \right)$, i = 1,2,…,n, j =1,2,…,k are realized by

   $$PrSCprt(t)\begin{matrix} \{\widetilde{u_1(t)}\} \cup & \{\widetilde{u_2(t)}\} \cup & \ldots\{\widetilde{u_n(t)}\} \cup \\ g_{11} & g_{21} & \ldots\ g_{n1} \\ x_1 & x_2 & \ldots\ x_n \end{matrix}.$$

2. By analogy, for simultaneous multiplication:

   $$PrSCprt(t)\begin{matrix} \{\widetilde{u_1(t)}\} \cap & \{\widetilde{u_2(t)}\} \cap & \ldots\{\widetilde{u_n(t)}\} \cap \\ g_{11} & g_{21} & \ldots\ g_{n1} \\ x_1 & x_2 & \ldots\ x_n \end{matrix}.$$

   Similarly for simultaneous execution of various operations:

   $$PrSCprt(t)\begin{matrix} w_1(t)Q_1(t) & w_2(t)Q_2(t) & \ldots w_n(t)Q_n(t) \\ g_{11} & g_{21} & \ldots\ g_{n1} \\ x_1 & x_2 & \ldots\ x_n \end{matrix},$$ where $\widetilde{Q(t)}$=($Q_1(t)|\mu_{\widetilde{Q(t)}}(Q_1(t))$, $Q_2(t)|\mu_{\tilde{Q}(t)}(Q_2(t))$, …, $Q_n(t)|\mu_{\widetilde{Q(t)}}(Q_n(t))$), $Q_i(t)$-an operation, i = 1, …, n, $\widetilde{w(t)}$=($w_1(t)|\mu_{\widetilde{w(t)}}(w_1(t))$, $w_2(t)|\mu_{\tilde{w}(t)}(w_2(t))$, …, $w_n(t)|\mu_{\widetilde{w(t)}}(w_n(t))$).

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

   $$PrSCprt(t)\begin{matrix} F_1(t)\,w_1(t) & F_2(t)\,w_2(t) & \ldots F_n(t)\,w_n(t) \\ g_{11} & g_{21} & \ldots\ g_{n1} \\ x_1 & x_2 & \ldots\ x_n \end{matrix},$$ where $\widetilde{F(t)}$=($F_1(t)|\mu_{\widetilde{F(t)}}(F_1(t))$, $F_2(t)|\mu_{\tilde{F}(t)}(F_2(t))$, …, $F_n(t)|\mu_{\widetilde{F(t)}}(F_n(t))$), $F_i(t)$ is an operator, i = 1, …, n.

4. Parallel dynamic arithmetic itself for continual containments of oneself will be similar: Parallel dynamic addition - $PrS_1Cf(t)\left\{\widetilde{w(t)} \cup\right\}$, (or $PrS_3Cf(t)\left\{\widetilde{w(t)} \cup\right\}$, for the third type), Parallel dynamic multiplication $PrS_1Cf(t)\left\{\widetilde{w(t)} \cap\right\}$, (or$PrS_3Cf(t)\left\{\widetilde{w(t)} \cap\right\}$.

5. Similarly with different operations: $PrS_1Cf(t)\{\widetilde{w(t)}\ \widetilde{Q(t)}\}$, ($PrS_3Cf(t)\{\widetilde{w(t)}\ \widetilde{Q(t)}\}$) and with different operators: $PrS_1Cf(t)\{\widetilde{F(t)}\widetilde{w(t)}\}$, ($PrS_3Cf(t)\{\widetilde{F(t)}\widetilde{w(t)}\}$).

6. PrSCprt (t) $\begin{matrix} A_1(t) & A_2(t) & \dots A_n(t) \\ g_{11} & g_{21} & \dots\ g_{n1} \\ B_1(t) & B_2(t) & \dots B_n(t) \end{matrix}$ gives the result

   PrSCrt (t) $\begin{matrix} A_1(t) & A_2(t) & \dots A_n(t) \\ g_{11} & g_{21} & \dots\ g_{n1} \\ B_1(t) & B_2(t) & \dots B_n(t) \end{matrix} =$

   $\{\sum_{i=1}^{n} A_i(t) \cup B_i(t) - A_i(t) \cap B_i(t)\ , \sum_{i=1}^{n} D_i(t)\}$, for continual sets $A_i(t)$, $B_i(t)$, where $D_i(t)$ is self-set for $A_i(t) \cap B_i(t)$, (i = 1, 2, …, n). The same is true for structures if they are treated as continual sets,

   $\begin{matrix} C_1(t) & C_2(t) & \dots C_m(t) \\ g_{11} & g_{21} & \dots\ g_{n1} \\ D_1(t) & D_2(t) & \dots D_m(t) \end{matrix}$ PrSCrt(t) =

   $$\left\{ \begin{matrix} \sum_{i=1}^{m} Q_i(t) + \overset{\{\}}{D_1(t) - D_1(t) \cap C_1(t)} \quad \overset{\{\}\ \dots}{D_2(t) - D_2(t) \cap C_2(t)} \quad \dots \quad \overset{\{\}}{D_2(t) - D_2(t) \cap C_2(t)}^{\text{PrfSrt}} \\ \sum_{i=1}^{m} \left(C_i(t) - D_i(t) \cap C_i(t)\right) - (D_i(t) - D_i(t) \cap C_i(t)) \end{matrix} \right\}$$

   for continual sets $C_i(t)$, $D_i(t)$, where $Q_i(t)$ is oself-set for $\left(D_i(t) \cap C_i(t)\right)$(i = 1, 2, …, m) [14].

7. Similarly, for dynamic continual PrSCprt-derivatives, dynamic continual PrSCprt-integrals, dynamic continual PrSCprt-lim, dynamic continual PrCself-derivatives, dynamic continual PrCself-integrals

8. Denote dynamic continual PrCself-(dynamic continual PrCself-Q(t)) through dynamic continual $PrCself^2$-Q(t), PrCfS(t)(n,Q(t))= dynamic continual PrCself-(dynamic continual PrCself-(…(dynamic continual PrCself-Q(t)))) = dynamic continual $PrCself^n$-Q(t) for n-multiple dynamic continual PrCself.

Remark B.1.4.1. The parallel dynamic continual PrSCprt-displacement will be denote by $\begin{matrix} C_1(t) & C_2(t) & \dots C_m(t) \\ g_{11} & g_{21} & \dots\ g_{n1} \\ D_1(t) & D_2(t) & \dots D_m(t) \end{matrix}$ PrSCprt(t) , where continual $D_1(t)$ is forced out of continual $C_1(t)$ with type of expelling g_{12}, continual $D_2(t)$ is forced out of continual $C_2(t)$ with type of expelling g_{22}, …, continual $D_m(t)$ is forced out of continual $C_m(t)$ with type of expelling g_{m2} simultaneously, the result of this process will be described by the expression $\begin{matrix} C_1(t) & C_2(t) & \dots C_m(t) \\ \mu_{12} & \mu_{22} & \dots\ \mu_{m2} \\ D_1(t) & D_2(t) & \dots D_m(t) \end{matrix}$ PrSCrt(t). Then the notation $\begin{matrix} C_1(t) & C_2(t) & \dots C_m(t) \\ g_{12} & g_{22} & \dots\ g_{m2} \\ D_1(t) & D_2(t) & \dots D_m(t) \end{matrix}$ PrSCprt(t) $\begin{matrix} A_1(t) & A_2(t) & \dots A_n(t) \\ g_{11} & g_{21} & \dots\ g_{n1} \\ B_1(t) & B_2(t) & \dots B_n(t) \end{matrix}$

where continual $A_1(t)$ fits into continual $B_1(t)$ with type of containment g_{11}, continual $A_2(t)$ fits into continual $B_2(t)$ with type of containment g_{21}, …, continual $A_n(t)$ fits into continual $B_n(t)$ with type of containment g_{n1}, continual $D_1(t)$ is forced out of continual $C_1(t)$ with type of expelling g_{12}, continual $D_2(t)$ is forced out of continual continual $C_2(t)$ with type of expelling g_{22}, …, continual $D_m(t)$ is forced out of $C_m(t)$ with type of expelling g_{m2} simultaneously. It is dynamic continual PrSCprt-containment of continual $A_i(t)$ in continual $B_i(t)$ and dynamic continual PrSCprt-displacement of continual $D_j(t)$ from continual $C_j(t)$ simultaneously, ($i = 1, 2, \dots, n$, $j = 1, 2, \dots, m$). The result of this process will be described by the expression

$\begin{matrix} C_1(t) & C_2(t) & \dots C_m(t) \\ g_{12} & g_{22} & \dots\ g_{n2} \\ D_1(t) & D_2(t) & \dots D_m(t) \end{matrix}$ PrSCrt(t)) $\begin{matrix} A_1(t) & A_2(t) & \dots A_n(t) \\ g_{11} & g_{21} & \dots\ g_{n1} \\ B_1(t) & B_2(t) & \dots B_n(t) \end{matrix}$.

PrSCrt (t) $\begin{matrix} B_1(t) & B_2(t) & \dots B_n(t) \\ g_{11} & g_{21} & \dots\ g_{n1} \\ B_1(t) & B_2(t) & \dots B_n(t) \end{matrix}$ will mean $PrS_1Cf(t)B(t)$.

$\begin{matrix} C_1(t) & C_2(t) & \dots C_m(t) \\ g_{12} & g_{22} & \dots\ g_{m2} \\ C_1(t) & C_2(t) & \dots C_m(t) \end{matrix}$ PrSCprt(t) denotes the parallel dynamic expelling continual $\widetilde{C(t)}=(C_1(t)|\mu_{\widetilde{C(t)}}(C_1(t)), C_2(t)|\mu_{\tilde{C}(t)}(C_2(t)), \dots, C_n(t)|\mu_{\widetilde{C(t)}}(C_n(t)))$ oneself out of oneself, $\begin{matrix} A_1(t) & A_2(t) & \dots A_n(t) \\ g_{11} & g_{21} & \dots\ g_{n1} \\ A_1(t) & A_2(t) & \dots A_n(t) \end{matrix}$ PrSCprt(t) $\begin{matrix} A_1(t) & A_2(t) & \dots A_n(t) \\ g_{11} & g_{21} & \dots\ g_{n1} \\ A_1(t) & A_2(t) & \dots A_n(t) \end{matrix}$ —

simultaneous parallel dynamic containment continual $\widetilde{A(t)}=(A_1(t)|\mu_{\widetilde{A(t)}}(A_1(t)),$

$A_2(t)|\mu_{\tilde{A}(t)}(A_2(t))$, ..., $A_n(t)|\mu_{\widetilde{A(t)}}(A_n(t)))$ of oneself in oneself and parallel dynamic expelling continual A(t) oneself out of oneself. $\begin{matrix} A_1(t) & A_2(t) & \dots A_n(t) \\ g_{11} & g_{21} & \dots \; g_{n1} \\ B_1(t) & B_2(t) & \dots B_n(t) \end{matrix}$ PrSCprt(t) will be called parallel dynamic anti-(continual fcapacity) from oneself.

Remark B.1.4.2. PrSCprt(t) $\begin{matrix} A_1(t) & A_2(t) & \dots A_n(t) \\ g_{11} & g_{21} & \dots \; g_{n1} \\ A_1(t) & A_2(t) & \dots A_n(t) \end{matrix}$ can be interpreted as a multilayer shell of a self-object from the first layer, which is specified by $A_1(t)$ to the nth, which is specified by $A_n(t)$. Based on this, the atomic model can be interpreted as

PrSCprt(t) $\begin{matrix} \cup\{p,n\} & A_1(t) & \dots A_n(t) \\ g_{11} & g_{21} & \dots \; g_{n1} \\ \textit{position of atomic nucleus} & A_1(t) & \dots A_n(t) \end{matrix}$, $\{p,n\}$ - protons, neutrons, $A_i(t)$ correspond to orbitals, i = 1, ..., n.

PrSCprt(t) $\begin{matrix} \textit{physical body of a living organism} & V_1(t) & \dots V_n(t) \\ g_{11} & g_{21} & \dots \; g_{n1} \\ \textit{position of physical body} & V(t) & \dots V_n(t) \end{matrix}$ - model of a living organism with the multilayer shell of a living organism from the first layer, which is specified by $V_1(t)$ to the nth, which is specified by $V_n(t)$. In humans:

PrSCprt(t) $\begin{matrix} \textit{energy fibers that create a physical body of a living organism} & V_1(t) & \dots V_n(t) \\ g_{11} & g_{21} & \dots \; g_{n1} \\ \textit{energy fibers that create a physical body of a living organism} & V(t) & \dots V_n(t) \end{matrix}$.

You can also try to consider the operator PrSCprt $\begin{matrix} B_1 & \dots & B_i^a \dots & B_n \\ g_{11} & & g_{i1} \dots & g_{n1} \\ r_1 & \dots & r_i^a \dots & r_n \end{matrix}$, which represents the interpretation of the position of the assemblage point on the cocoon of a living organism, r_j is its potential position, B_j is a potential set of subtle energies in this position (i = 1, ..., i-1, i+1, ..., n), r_i^a is its active position, B_i^a is an active set of subtle energies in this position, i = 1, ..., n.

Connection of dynamic continual PrSCprt – elements with target weights with parallel dynamic continual containment of oneself with target weights.

Consider a third type of parallel partial dynamic continual containment of oneself with target weights g(t). For example, based on PrSCprt(t)

$$\begin{matrix} w_1(t)tw(t) & w_2(t)tw(t) & \ldots w_n(t)tw(t) \\ g_{11} & g_{21} & \ldots & g_{n1} \\ x_1 & x_2 & \ldots & x_n \end{matrix}$$

.where $\widetilde{w(t)}$=(w₁(t)|$\mu_{\widetilde{w(t)}}$(w₁(t)), w₂(t)|$\mu_{\widetilde{w(t)}}$(w₂(t)), …, wₙ(t)|$\mu_{\widetilde{w(t)}}$(wₙ(t))).

i.e. n - continual elements with target weights{w(t)} at one point x = $(x_1,x_2,\ldots,x_n)$, we can consider the dynamic continual containment Pr$S_3Cf(t)\widetilde{w(t)}t$w(t) of oneself with target weights with m continual elements with target weights{w(t)} from $\widetilde{w(t)}$, m<n, which is the process of formation according to the form (1.1), i.e., only m continual elements with target weights{tw(t)} from $\widetilde{w(t)}$are located in the structure Pr$S_3Cf(t)\widetilde{w(t)}$tw(t). Parallel dynamic containments of oneself with target weights of the third type can be formed for any other structure, not necessarily PrSCprt, only by reducing the number of continual elements with target weights in the structure. In particular, using the forms (1.1.1) - (1.4), (2.1*) and analogs of forms (1.1.1) - (1.4) by type (2.1*). Structures more complex than Pr$S_3Cf(t)\widetilde{w(t)}$tw(t) can be introduced.

Definition B.1.4.7. The parallel dynamic embedding of continual A(t) into itself with target weights {tw(t)} of the first type is the process of parallel embedding A(t) into A(t) with target weights. Denote $PrS_1Cf(t)A(t)t$w(t).

Definition 30. The parallel dynamic containment of continual C(t) itself into itself with target weights{tw(t)} of the second type is the process of parallel containment of the continual elements from which it can be parallel generated. Let's denote $PrS_2Cf\,(t)\,C\,(t)$ tw (t) .

Definition B.1.4.8. Partial parallel dynamic containment of continual B(t) itself into itself with target weights {tw(t)} of the third type is the process of partial parallel containment of continual B(t) into itself or continual elements from which it can be parallel generated partially, or both at the same time. Denote $PrS_3Cf\,(t)\,B\,(t)$ tw (t) .

The usage of PrSCprt-elements for networks.

A. Galushkin's comprehensive monograph [6] covers all aspects of networks, but traditional approaches go through classical mathematics, mainly through the usual correspondence operators. Here we consider a different approach - through a new mathematical process with parallel containment operators, which, although they can be interpreted as the result of some correspondence operators, are not themselves correspondence operators. Parallel containment operators are more convenient for networks. Also, the main emphasis was placed on using processors operating using triodes, which are generally not used in Sprt-networks. PrSCprt-networks (SmnPrSCprt) are a PrSCprt-structure that can be built for the required weights. PrSCprt-OS (PrSCprt operating system) uses PrSCprt-coding and PrSCprt-translation. In the first one, coding is carried out through a 2-dimensional matrix-row (a, b), where the number b is the code of the action, and the number a is the code of the object of this action. PrSCprt-coding (or PrCSelf-coding) is implemented through a matrix consisting of 2 columns (in the continuous case, two intervals of numbers). Here, the source encoding is used for all matrix rows simultaneously. PrSCprt-translation is carried out by inversion. In this case, PrCSelf-coding and PrCSelf-translation will be more stable. The target weights

$r_i(t)$ in PrSCprt(t) $\begin{matrix} \textit{activation with } r_1(t) & \textit{activation with } r_2(t) & \textit{...activation with } r_n(t) \\ g_{11} & g_{21} \quad ... & g_{n1} \\ \text{SmnPrSCprt} & \text{SmnPrSCprt} \quad ... & \text{SmnPrSCprt} \end{matrix}$ are

chosen for necessary tasks. We will not touch on the issues of applications, or network optimization. They are described in detail by Galushkin [6]. We will touch on the difference of this only for hierarchical complex networks. The same simple executing programs are in the cores of simple artificial neurons of type PrSCprt (designation - mnPrSCprt) for simple information processinF. More complex executing programs are used for mnPrSCprt nodes. PrSCprt-threshold element

–sgn(PrSCprt(t) $\begin{matrix} p_1(t)w_1(t) & p_2(t)w_2(t) & ...p_n(t)w_n(t) \\ g_{11} & g_{21} \quad ... & g_{n1} \\ x_1 & x_2 \quad ... & x_n \end{matrix}$), $x=(x_1, x_2, \dots, x_n)$ -

mnPrSCprt, $\widetilde{W(t)}=(w_1(t)|\mu_{\widetilde{w(t)}}(w_1(t)), w_2(t)|\mu_{\widetilde{w(t)}}(w_2(t)), \dots, w_n(t)|\mu_{\widetilde{w(t)}}(w_n(t)))$.

– source signals values, $\{p(t)\} = (p_1(t), p_2(t), \ldots, p_n(t))$ – PrSCprt-synapses weights. The first level of mnPrSCprt consists of simple mnPrSCprt. The second level of mnPrSCprt consists of PrSCprt(t) $\begin{matrix} \text{mnPrSCprt} & \text{mnPrSCprt} & \ldots\text{mnPrSCprt} \\ g_{11} & g_{21} & \cdots \quad g_{n1} \\ D_1 & D_2 & \ldots \quad D_n \end{matrix}$ – PrSCprt-node of mnPrSCprt in range D = (D_1, D_2,…, D_n), D- capacity for mnPrSCprt node. The third level of mnPrSCprt consists of PrSCprt(t) $\begin{matrix} f & f & \ldots f \\ g_{11} & g_{21} & \ldots g_{n1} \\ D_1 & D_2 & \ldots D_n \end{matrix}$ -PrSCprt^2- node of mnPrSCprt in range D, f = PrSCprt(t) $\begin{matrix} \text{mnPrSCprt} & \text{mnPrSCprt} & \ldots\text{mnPrSCprt} \\ g_{11} & g_{21} & \cdots \quad g_{n1} \\ D_1 & D_2 & \cdots \quad D_n \end{matrix}$, thus D becomes capacity of itself in itself as an element for mnPrSCprt. For our networks, it is sufficient to use PrSCprt^2- nodes of mnPrSCprt, but self-level is higher in living organisms, particularly PrSCprt^n-, n≥3. The target structure or the corresponding program enters the target unit using alternating current. After that, all networks or parts of them are activated according to the indicative goal. It may appear that we are leaving the network ideology, but these networks are a complex hierarchy of different levels, like living organisms.

Remark B.1.5.0. A neural network can be thought of as a learnable parallel dynamic operator.

Remark B.1.5.1. Traditional scientific approaches through classical mathematics make it possible to describe only at the usual energy level. Here we consider an approach that makes describing processes with finer energies possible. mnPrSCprt contains PrSCprt(t) $\begin{matrix} \text{ceprogram}_1(t) & \text{ceprogram}_2(t) & \ldots\text{ceprogram}_n(t)) \\ g_{11} & g_{21} & \cdots \quad g_{n1} \\ \text{mnPrSCprt} & \text{mnPrSCprt} & \ldots \quad \text{mnPrSCprt} \end{matrix}$

ceprogram −executing program in PrSCprt- OS. PrSCprt-OS (or PrCself-OS) is based on PrSCprt-assembly language (or PrCself-assembly language), which is based on assembly language through PrSCprt-approach in turn, if the base of elements of PrSCprt-networks is sufficient. The ffeprograms are in PrSCprt-programming environments (or PrCSelf-programming environments), but this question and PrSCprt-networks base will be considered in the following monographs. In particular, ceprograms may contain PrSCprt- programming operators. In mnPrSCprt cores, the constant memory PrSCprt with correspondent ceprograms depending on mnPrSCprt.

The OS (operating system) and the principles and modes of operation of the PrSCprt-networks for this programming are interesting. But this is already the material for the next publications.

Here is developed a helicopter model without a main and tail rotors based on PrSCprt – physics and special neural networks with artificial neurons operating in normal and PrSCprt-modes. Let's denote this model through SmnPrSCprt. To do this, it's proposed to use mnPrSCprt of different levels; for example, for the usual mode, mnPrSCprt serves for the initial processing of signals and the transfer of information to the second level, etc., to the nodal center, then checked. In case of an anomaly - local PrSCprt–mode with the desired "target weight" is realized in this section, etc., to the center. In the case of a monster during the test, SmnPrSCprt is activated with the desired "target weight." Here are realized other tasks also. To reach the self-energy level, the mode $Sprt_{\mathrm{SmnPrSCprt}}^{\mathrm{SmnPrSCprt}}$ is used. In normal mode, it's planned to carry out the movement of SmnPrSCprt on jet propulsion by converting the energy of the emitted gases into a vortex to obtain additional thrust upwards. For this purpose, a spiral-shaped chute (with "pockets") is arranged at the bottom of the SmnPrSCprt for the gases emitted by the jet engine, which first exit through a straight chute connected to the spiral one. There is drainage of exhaust gases outside the SmnPrSCprt. SmnPrSCprt is represented by a neural network that extends from the center of one of the main clusters of PrSCprt - artificial neurons to the shell, turning into the body itself. Above the operator's cabin is the central core of the neural network and the target block, responsible for performing the "target weights" and auxiliary blocks, the functions and roles of which we will discuss further. Next is the space for the movement of the local vortex. The unit responsible for SmnPrSCprt's actions is below the operator's cab. In PrSCprt – mode, the entire network or its sections are PrSCprt – activated to perform specific tasks, in particular, with "target weights." In the target, block used PrSCprt -coding, PrSCprt -translation for activation of all networks to "target weights" simultaneously, then –the reset of this PrSCprt-coding after activation. Unfortunately, triodes are not suitable for PrSCprt -neural networks. In the most primitive case, usual separators with corresponding resistances and cores for ceprograms may be used instead triodes since there is no necessity to unbend the alternating current to direct. The PrSCprt-operative memory belt is disposed around a central core of SmnPrSCprt. There are PrSCprt-coding, PrSCprt-translation, and PrSCprt-realize of eprograms and the programs from the archives without extraction, PrSCprt-coding and PrSCprt-translation may be used in high-intensity, ultra-short optical pulses laser of Nobel laureates 2018-year Gerard Mourou, Donna, Strickland. PrSCprt – structure or an eprogram if one is present of needed «target weight» are taken in target block at PrSCprt – activation of the networks. $Sprt_{activation}^{\mathrm{SmnPrSCprt},f}$ derives SmnPrSCprt to the self-level boundary with target weight f.

It’s used an alternating current of above high frequency and ultra-violet light, which can work with PrSCprt – structures in PrSCprt–modes by its nature to activate the networks or some of its parts in PrSCprt–modes and locally using PrSCprt–mode. Above high frequently alternating current go through mercury bearers. That’s why overheating does not occur. The power of the alternating current above high frequently increases considerably for the target block. The activation of all PrSCprt-networks is realized to indicate “target weights.”

Variable hierarchical dynamical parallel structures (models) for dynamic, singular, hierarchical sets.

Here we will consider variable parallel structures (models), both discrete and continuous: a) with variable connections, b) with the variable backbone for links, c) generalized version; in particular, in variable structures (models), for example,

$$\begin{array}{ccccccc} C_1C_2 & \dots & C_m & & A_1 & A_2 & \dots A_n \\ g_{12}g_{22} & \dots & g_{m2} & \text{PrSCprt(t)} & g_{11} & g_{21} & \dots g_{n1} \\ D_1D_2 & \dots & D_m & & B_1 & B_2 & \dots B_n \end{array} =$$

$$\begin{cases} \begin{array}{cccc} C_1C_2 & \dots & C_m & \\ (g_{12}g_{22} & \dots & g_{m2} & \text{PrSCprt}, \ \ q_2 \ge t \ge q_1)|\mu_1 \\ D_1D_2 & \dots & D_m & \end{array} \\ \begin{array}{cccccccc} B_1B_2 & \dots & B_m & & A_1 & A_2 & \dots A_n & \\ (g_{12}g_{22} & \dots & g_{m2} & \text{PrSCprt} & g_{11} & g_{21} & \dots g_{n1} & ,q_3 \ge \ t > q_2)|\mu_2 \\ D_1D_2 & \dots & D_m & & B_1 & B_2 & \dots B_n & \end{array} \\ \begin{array}{cccccccc} C_1C_2 & \dots & C_m & & A_1 & A_2 & \dots A_n & \\ (g_{12}g_{22} & \dots & g_{m2} & \text{PrSCprt} & g_{11} & g_{21} & \dots g_{n1} & ,q_4 \ge \ t > q_3)|\mu_3 \end{array} \quad (*_{\text{B.1.3}}), \\ \begin{array}{cccccccc} D_1D_2 & \dots & D_m & & B_1 & B_2 & \dots B_n & \end{array} \\ \begin{array}{ccccc} & A_1 & A_2 & \dots A_n & \\ (\text{PrSCprt} & g_{11} & g_{21} & \dots g_{n1} & ,q_5 \ge \ t > q_4)|\mu_4 \\ & B_1 & B_2 & \dots B_n & \end{array} \\ \begin{array}{cccc} \{\,\}\{\,\} & \dots & \{\,\} & \\ (g_{12}g_{22} & \dots & g_{m2} & \text{PrSCprt}, \ \ t > q_5)|\mu_5 \\ D_1D_2 & \dots & D_m & \end{array} \\ \dots \end{cases}$$

μ_i- measures of fuzziness, i = 1, ..., 5. In particular,

$$\begin{array}{cccccccc} B_1B_2 & \dots & B_m & & A_1 & A_2 & \dots A_n \\ g_{12}g_{22} & \dots & g_{m2} & \text{PrSCprt} & g_{11} & g_{21} & \dots g_{n1} \\ D_1D_2 & \dots & D_m & & B_1 & B_2 & \dots B_n \end{array}$$ can be interpreted as a game: player 1 fits

A_i into B_i, i = 1, 2, …, n, and the other pushes D_j out of Bj, j = 1, 2, …, m at the same time.

The example of variable parallel hierarchy

$$C_1 C_2 \;\dots\; C_m \qquad A_1 \; A_2 \;\dots A_n$$
$$g_{12} g_{22} \;\dots\; g_{m2}\,\mathrm{PrSCprt(t)}_1\, g_{11} \;\; g_{21} \;\dots g_{n1} = \; =$$
$$D_1 D_2 \;\dots\; D_m \qquad B_1 \; B_2 \;\dots B_n$$

$$\begin{cases} \left(\begin{Bmatrix} \sum_{i=1}^{m} Q_i + \underset{D_1 - D_1 \cap C_1}{\{\,\}} \; \underset{D_2 - D_2 \cap C_2}{\{\,\}} \;\dots\; \underset{D_m - D_m \cap C_m}{\{\,\}}\mathrm{PrfSrt} \\ \sum_{i=1}^{m} (\, C_i - D_i \cap C_i) - (D_i - D_i \cap C_i) \end{Bmatrix}, \quad q_2 \ge t \ge q_1\right) | \mu_1 \\ \left(\sum_{i=1}^{n} \left(\begin{matrix} S^{1e}_{0} f B_i * \\ {}^{B_i}_{Q_i - B_i} S^1 t^{A_i - B_i}_{B_i} \end{matrix}\right), q_3 \ge t > q_2\right) | \mu_2 \\ \left(\sum_{j=1}^{m} \sum_{i=1}^{n} \left(\begin{matrix} S^{et}_{01} f B_i \\ {}^{C_j - B_i}_{C_j - B_i} S_1 t^{A - B_i}_{B_i} \\ {}^{C_j - B_i}_{D_j - C_j - B_i} S_1 t^{A - B_i}_{B_i} \end{matrix}\right), q_4 \ge t > q_3\right) | \mu_3 \\ \left(\begin{Bmatrix} \sum_{i=1}^{n} R_i \\ \sum_{i=1}^{n} A_i \cup B_i - A_i \cap B_i \end{Bmatrix}, , q_5 \ge t > q_4\right) | \mu_4 \\ \left(\begin{matrix} \{\,\}\{\,\} & \dots & \{\,\} \\ g_{12} g_{22} & \dots & g_{m2} \end{matrix} \mathrm{PrfSrt}, \; t > q_5\right) | \mu_5 \\ \quad D_1 D_2 \;\dots\; D_m \\ \qquad \dots \end{cases}$$

$(*_{B.1.4})$,

Where μ_i- measures of fuzziness, i = 1, ..., 5, Q_i is oself-(set) for $\left(D_j \cap C_j\right)$, D_j, C_j are sets (j = 1, 2, …, m), [14], R_i is self-(set) for $A_i \cap B_i$, A_i, B_i are sets ,(i = 1, 2, …, n), $S^{et}_{01} f B$, ${}^{C-B}_{C-B} S_1 t^{A-B}_{B}$, ${}^{C-B}_{D-C-B} S_1 t^{A-B}_{B}$ are considered in [13], ${}^{B}_{Q-B} S^1 t^{A-B}_{B}$ is considered in [10].

In what follows, we will denote variable parallel dynamic structure (model) through PrffVS, parallel fself-type variable dynamic structures (models) through PrffSVS, and parallel foself-type variable dynamic structures (models) through PrffOSVS.

Examples: a) discrete variable parallel dynamic structure

$$\begin{matrix} C_1 & C_2 & \dots & C_m \\ D_1 & D_2 & \dots & D_m \\ A_1 & A_2 & \dots & A_n \\ B_1 & B_2 & \dots & B_n \end{matrix} \begin{matrix} a \\ c \\ d \end{matrix} \quad \begin{matrix} b \\ PrVSC \\ q \end{matrix} \quad \begin{matrix} g \\ w \\ r \end{matrix} \begin{matrix} A_1 & A_2 & \dots & A_n \\ B_1 & B_2 & \dots & B_n \\ C_1 & C_2 & \dots & C_m \\ D_1 & D_2 & \dots & D_m \end{matrix}$$

Fig. B.1.2

c) continuous variable parallel dynamic structure

Fig.B.1.3.

Where a continuous set represents the rim of the Fig.B.1.3.

We introduce the notation m_{PrVCS_N}– the number of elements, N - the number of connections between them in the discrete variable parallel 2-hierarchical dynamic structure PrVSC. We introduce the notation q_{PrVCS_R}– any, R - connections in q_{PrVCS_R} in the variable parallel dynamic 2-hierarchical structure PrVSC, in particular, q_{PrVCS_R}, R can be sets both discrete and continuous and discrete-continuous. We consider the functional c(Q), which gives a numerical value for the structurability of Q from the interval [0,1], where 0 corresponds to "no parallel dynamic structure"," and 1 corresponds to the value " parallel dynamic structure". Then for joint dynamic A, B: c(A+B)=c(A)+c(B)-c(A*B)+cS(D), D-parallel fself-type structures from A*B, cS(x)- the value of PrffSelf for parallel fself-type structures x; for dependent parallel dynamic structures: c(A*B)=ca(A)*c(B/A)=c(B)*c(A/B), where c(B/A)- conditional structurability of the parallel dynamic structure B at the parallel dynamic structure A, c(A/B)-conditional dynamic structure of the parallel dynamic structure A at the parallel dynamic structure B. Adding inconsistent parallel dynamic structures: c(A+B) =c(A) + c(B). The formula of complete parallel dynamic structure: c(A)= $\sum_{k=1}^{n} c\left(B_k\right) * c(A/B_k)$, B_1, B_2,.., B_n-full group of hypotheses- containments: $\sum_{k=1}^{n} c\left(B_k\right)$=1(“parallel dynamic structure”). PrSCprt- structure of the first type for set of parallel dynamic structures A={A_1, A_2,…,A_n}: PrSCprt $\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \cdots g_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$, PrSCprt $\begin{matrix} c(A_1) & c(A_2) & \dots c(A_n) \\ g_{11} & g_{21} & \dots & g_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix}$ - PrSCprt- structurability for these structures. It is possible to consider the parallel dynamic self-type structure PrS_3CA with m parallel dynamic structures from A, at m<n, which is formed by the form (1.1), that is, only m parallel dynamic structures from A are located in

the structure $\mathrm{PrSCprt}\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$. The same for parallel dynamic fself-type structurability $PrS_3C\{$ c(A_1),c(A_2),…,c(A_n) .

Can be considered N-hierarchical parallel structure: 1-level - elements; level 2 - connections between them, level 3 - relationships between elements of level 2, etc. up to level N+1. N-hierarchical parallel structure: 1-level - A; 2-level -B, 3-level - C, etc. up to (N+!)- level, where A, B, C, … can be any in particular, by actions, sets, and others.

Can be considered discrete hierarchical parallel structure, continuous hierarchical parallel structure, and discrete-continuous hierarchical parallel structure.

The example PrQHSC=$HSCprt_x \left\| \begin{matrix} & \text{N–level of hierarchical structure}_1 & \text{N–level of hierarchical structure}_2 & \dots\text{N–level of hierarchical structure}_2 \\ \mathrm{PrSCprt} & g_{11} & g_{21} & \dots & g_{n1} \\ & x_1 & x_2 & \dots & x_n \\ & & \dots & & \\ & \text{i–level of hierarchical structure}_1 & \text{i–level of hierarchical structure}_2 & \dots\text{i–level of hierarchical structure}_2 \\ \mathrm{PrSCprt} & g_{11} & g_{21} & \dots & g_{n1} \\ & x_1 & x_2 & \dots & x_n \\ & & \dots & & \\ & \text{1–level of hierarchical structure}_1 & \text{1–level of hierarchical structure}_2 & \dots\text{1–level of hierarchical structure}_2 \\ \mathrm{PrSCprt} & g_{11} & g_{21} & \dots & g_{n1} \\ & x_1 & x_2 & \dots & x_n \end{matrix} \right\|$-

N-hierarchical structure compression into point x = (x_1,x_2,…,x_n).

Let Pr(N, PrQHSC)= $\mathrm{PrQHSC}^{\mathrm{PrQHSC}^{\mathrm{PrQHSC}^{\dots^{\mathrm{PrQHSC}}}}}\Big\}$-N levels

It can be considered PrCSelf- PrQHSC, Pr(y, PrQHSC) for any y, Pr(PrQHSC, PrQHSC).

Parallel Compression Hierarchy Example:

1)

$$\mathrm{PrSCprt}\begin{array}{c} \mathrm{PrSCprt}\begin{array}{ccc}() & () & ...() \\ () & () & ...() \\ () & () & ...()\end{array} \quad \mathrm{PrSCprt}\begin{array}{ccc}() & () & ...() \\ () & () & ...() \\ () & () & ...()\end{array} \quad ... \quad \mathrm{PrSCprt}\begin{array}{ccc}() & () & ...() \\ () & () & ...() \\ () & () & ...()\end{array} \\ \mathrm{PrSCprt}\begin{array}{ccc}() & () & ...() \\ () & () & ...()+B \\ () & () & ...()\end{array} \quad \mathrm{PrSCprt}\begin{array}{ccc}() & () & ...() \\ () & () & ...()+B \\ () & () & ...()\end{array} \quad ... \quad \mathrm{PrSCprt}\begin{array}{ccc}() & () & ...() \\ () & () & ...()+B \\ () & () & ...()\end{array}\end{array}$$

$$=\begin{pmatrix} \mathrm{PrSCprt}\begin{array}{c}\mathrm{PrSCprt}\begin{array}{ccc}() & () & ...() \\ () & () & ...() \\ () & () & ...()\end{array} \\ \mathrm{PrSCprt}\begin{array}{ccc}() & () & ...() \\ () & () & ...() \\ () & () & ...()\end{array}\end{array} & \begin{array}{c}\mathrm{PrSCprt}\begin{array}{ccc}() & () & ...() \\ () & () & ...() \\ () & () & ...()\end{array} \\ \mathrm{PrSCprt}\begin{array}{ccc}() & () & ...() \\ () & () & ...() \\ () & () & ...()\end{array}\end{array} & \begin{array}{c}... \\ ...\end{array} & \begin{array}{c}\mathrm{PrSCprt}\begin{array}{ccc}() & () & ...() \\ () & () & ...() \\ () & () & ...()\end{array} \\ \mathrm{PrSCprt}\begin{array}{ccc}() & () & ...() \\ () & () & ...() \\ () & () & ...()\end{array}\end{array} \\ \mathrm{PrSCprt}\begin{array}{c}\mathrm{PrSCprt}\begin{array}{ccc}() & () & ...() \\ () & () & ...() \\ () & () & ...()\end{array} \\ g_{11} \\ B\end{array} & \begin{array}{c}\mathrm{PrSCprt}\begin{array}{ccc}() & () & ...() \\ () & () & ...() \\ () & () & ...()\end{array} \\ g_{21} \\ B\end{array} & \begin{array}{c}... \\ ... \\ ...\end{array} & \begin{array}{c}\mathrm{PrSCprt}\begin{array}{ccc}() & () & ...() \\ () & () & ...() \\ () & () & ...()\end{array} \\ g_{n1} \\ B\end{array}\end{pmatrix}$$

Let's consider two versions: 1) containment is interpreted through the concept of containment, and 2) fcapacity is interpreted through the concept of containment as a rest point of containment. PrCSelf-containment is interpreted as a rest point of PrCSelf-containment. We consider the functional ca(Q), which gives a numerical value for the accommodation of Q from the interval [0,1], where 0 corresponds to " parallel containment", and one corresponds to the value " parallel capacity. " Then for joint dynamic A, B: ca(A+B)=ca(A)+ca(B)-ca(A*B)+caS(D), D- PrCSelf-containment for A*B, caS(x)- the value of PrCSelf-capacity for PrCSelf-containment of x; for dependent parallel containments: ca(A*B)=ca(A)*ca(B/A)=ca(B)*ca(A/B), where ca(B/A)- conditional accommodation of the parallel containment B at the parallel containment A, ca(A/B)- conditional parallel fcapacity of the parallel containment A at the parallel containment B. Adding the parallel fcapacity values of inconsistent parallel containments: ca(A+B)=ca(A)+ca(B). The formula of complete parallel fcapacity : ca(A)=$\sum_{k=1}^{n} ca\,(B_k) * ca(A/B_k)$, B_1, B_2,..,B_n-full group of hypotheses-(parallel containments): $\sum_{k=1}^{n} ca\,(B_k)$=1(“parallel fcapacity ”). PrSCprt-containment for set of parallel containments A={A_1, A_2,…,A_n}: PrSCprt

$\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$, PrSCprt $\begin{matrix} ca(A_1) & ca(A_2) & \dots ca(A_n) \\ g_{11} & g_{21} & \dots & g_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix}$ - PrSCprt- accommodation for these parallel containments. It is possible to consider the PrCself- containment PrS_3CA with m containments from A, at m<n, which is formed by the form (1.1), that is, only m parallel containments from A are located in the parallel containment PrSCprt(t)$\begin{matrix} A_1 & A_2 & \dots A_n \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$. The same for PrCSelf- accommodation - $PrS_3C\{$ ca(A_1),ca(A_2),…,ca(A_n).

We consider the functional h(Q), which gives a numerical value for the parallel dynamic hierarchization of Q from the interval [0,1], where 0 corresponds to "no parallel dynamic hierarchy," and 1 corresponds to the value " parallel dynamic hierarchy. " Then for joint parallel dynamic hierarchies A, B: h(A+B)=h(A)+h(B)-h(A*B)+hSC(D), D- PrCSelf- hierarchy from A*B, hSC(x)- the value of PrCSelf- hierarchy for PrCSelf- hierarchy x; for dependent parallel dynamic hierarchies: h(A*B) = ha(A)*h(B/A) = h(B)*h(A/B), where h(B/A)- conditional parallel dynamic hierarchization of the parallel dynamic hierarchy B at the parallel dynamic hierarchy A, h(A/B)- conditional parallel dynamic hierarchy of the parallel dynamic hierarchy A at the parallel dynamic structure B. Adding the parallel dynamic hierarchy values of inconsistent parallel dynamic hierarchies: h(A+B)=h(A)+h(B). The formula of complete parallel dynamic hierarchy: h(A)=$\sum_{k=1}^{n} h\left(B_k\right) * h(A/B_k)$, B_1, B_2, .., B_n-full group of hypotheses- (parallel dynamic hierarches): $\sum_{k=1}^{n} h\left(B_k\right)$=1("parallel dynamic hierarchy").

PrSCprt- structure for set of parallel dynamic hierarches A={A_1, A_2,…,A_n}:

PrSCprt(t)$\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$, PrSCprt(t) $\begin{matrix} h(A_1) & h(A_2) & \dots h(A_n) \\ g_{11} & g_{21} & \dots & g_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix}$ - PrSCprt- hierarchization for these parallel dynamic hierarches. It is possible to consider the PrCself- hierarchy PrS_3CA with m parallel dynamic hierarches from A, at m<n, which is formed by the form (1.1), that is, only m parallel dynamic hierarches

from A are located in the parallel dynamic hierarchy PrSCprt(t) $\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$.

The same for PrCself- hierarchization $PrS_3C\{$ h(A_1),h(A_2),...,h(A_n).Can be considered PrSCprt(t)

$$\begin{matrix} \{ca(A_1),c(A_1),h(A_1)\} & \{ca(A_2),c(A_2),h(A_2)\} & \dots & \{ca(A_n),c(A_n),h(A_n)\} \\ g_{11} & g_{21} & \dots & g_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix}.$$

Very interesting next parallel dynamic hierarchy type:

$$\begin{matrix} \text{hierarchy } A_1 & \text{hierarchy } A_2 & \dots\text{hierarchy } A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ \text{hierarchy } A_1 & \text{hierarchy } A_2 & \dots\text{hierarchy } A_n \end{matrix} \text{ PrSCprt(t) } \begin{matrix} \text{hierarchy } A_1 & \text{hierarchy } A_2 & \dots\text{hierarchy } A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ \text{hierarchy } A_1 & \text{hierarchy } A_2 & \dots\text{hierarchy } A_n \end{matrix}.$$

. You can enter special operator PrCCprt to work with dynamic structures:

$\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix}$ PrCCprt $\begin{matrix} R_1 & R_2 & \dots R_m \\ g_{12} & g_{22} & \dots g_{m2} \\ Q_1 & Q_2 & \dots Q_n \end{matrix}$ structures R_j with the structure from Q_j with type of containment g_{j2}, unstructures A_i by the structure B_i with type of expelling g_{i1}, simultaneously, (i = 1, 2, …, n, j = 1, 2, …, m). Very interesting next parallel dynamic structure type:

$$\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ A_1 & A_2 & \dots A_n \end{matrix} \text{ PrCCrt(t) } \begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ A_1 & A_2 & \dots A_n \end{matrix},$$

You can enter special parallel operator PrHCprt to work with dynamic hierarches:

$$\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix} \text{ PrHCprt } \begin{matrix} R_1 & R_2 & \dots R_m \\ g_{12} & g_{22} & \dots g_{m2} \\ Q_1 & Q_2 & \dots Q_n \end{matrix}$$

hierarchizes R_j with the hierarchy from Q_j with type of containment g_{j2}, unhierarchizes A_i from the hierarchy B_i with type of expelling g_{i1}, simultaneously, (i = 1, 2, …, n, j = 1, 2, …, m).

Program operators PrSCprt, PrtSCpr.

Here it is supposed to use a symbiosis of parallel actions and conventional calculations through sequential actions. This must be done through PrSCprt-Networks in one of the central departments of which a conventional computer system is located. The parallel processor is itself prffeprogram with direct parallel computing not through serial computing.

Using conventional PrSCprt -coding by a parallel computer system, through a Target-block with a PrSCprt -program operator -

PrSCprt(t) $\begin{matrix} u_1(t)w_1(t) & u_2(t)w_2(t) & \ldots u_n(t)w_n(t) \\ g_{11} & g_{21} & \ldots \quad g_{n1} \\ activation & activation & \ldots activation \end{matrix}$, it will be possible to obtain the execution of the parallel actions $(u_1(t), u_2(t), \ldots, u_n(t))$ with the desired target weights w(t)=($w_1(t)$, $w_2(t)$,…,$w_n(t)$). Each code for a neural network from a conventional computer we "bind" (match) to the corresponding value of current (or voltage). For PrSCprt-coding and PrSCprt-translation may be use alternating current of ultrahigh frequency or high-intensity ultra-short optical pulses laser of Nobel laureates 2018-year Gerard Mourou, Donna Strickland, or a combination of them. For the desired action, for example, using the direct parallel program of operator PrSCprt(t)

$$\begin{matrix} (\text{UHF AC})_1(t) := Q_1(t) & (\text{UHF AC})_2(t) := Q_2(t) & \ldots(\text{UHF AC})_n(t) := Q_n(t) \\ g_{11} & g_{21} & \ldots \quad g_{n1} \\ activation & activation & \ldots \quad activation \end{matrix}$$

, we simultaneously enter the desired set of codes $Q_i(t)$, i = 1, 2, …, n, using a microwave current or high-intensity ultra-short optical pulses laser in Target-block.

In a conventional computer, the process of sequential calculation takes a certain time interval, in a directly parallel calculation by a neural network, the calculation is instantaneous, but it occupies a certain region of the space of calculation objects. Consider the types of direct parallel program operators:

1) PrSCprt-program operators
2) PrtSCpr-program operators

Here are some of the PrSCprt-program operators:

1) Simultaneous assignment of the expressions $\tilde{p}$=($p_1|\mu_{\tilde{p}}(p_1)$, $p_2|\mu_{\tilde{p}}(p_2)$, …, $p_n|\mu_{\tilde{p}}(p_n)$) to the variables $\tilde{x}$=($x_1|\mu_{\tilde{x}}(x_1)$, $x_2|\mu_{\tilde{x}}(x_2)$, …, $x_n|\mu_{\tilde{x}}(x_n)$). This is implemented via PrSCprt $\begin{matrix} x_1 := & x_2 := & \ldots x_n := \\ g_{11} & g_{21} & \ldots \; g_{n1} \\ p_1 & p_2 & \ldots \; p_n \end{matrix}$.

2) Simultaneous checking the set of conditions $\tilde{w}$=($w_1|\mu_{\tilde{w}}(w_1)$, $w_2|\mu_{\tilde{w}}(w_2)$, …, $w_n|\mu_{\tilde{w}}(w_n)$) for the set of expressions $\tilde{B}$=($B_1|\mu_{\tilde{B}}(B_1)$, $B_2|\mu_{\tilde{B}}(B_2)$, …, $B_n|\mu_{\tilde{B}}(B_n)$). Implemented via PrSCprt

$$\begin{array}{cccc} IF\{B_1w_1\}\ then & IF\{B_2w_2\}\ then & \ldots IF\{B_nw_n\}\ then \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ u_1 & u_2 & \ldots & u_n \end{array}$$

, where u_i (i = 1, …, n) can be anything.

3) Similarly for loop operators and others.

PrSCprt-algorithm Examples:

1) Simultaneous addition and simultaneous parallel multiplication of sets elements (See point 1, 2 in **Math PrCself**
2) parallel pattern recognition: PrSCprt

$$\begin{array}{cccc} IF\left\{q_1 \epsilon\ image\ archive_1\right\}\ then & IF\left\{q_2 \epsilon\ image\ archive_2\right\}\ then & \ldots IF\left\{q_n \epsilon\ image\ archive_n\right\}\ then \\ g_{11} & g_{21} & \ldots & g_{n1} \\ Name\ of\ q_1 & Name\ of\ q_2 & \ldots & Name\ of\ q_n \end{array}$$

The example of PrSCprt-program is

$$PrSCprt \begin{array}{ccccc} PrSCprt \begin{array}{ccc} x_1 := & x_2 := & \ldots x_n := \\ g_{11} & g_{21} & \cdots g_{n1} \\ p_1 & p_2 & \cdots p_n \end{array} & PrSCprt \begin{array}{cccc} IF\left\{B_1w_1\right\}\ then & IF\left\{B_2w_2\right\}\ then & \ldots IF\left\{B_nw_n\right\}\ then \\ g_{11} & g_{21} & \ldots & g_{n1} \\ u_1 & u_2 & \ldots & u_n \end{array} & \ldots PrSCprt \begin{array}{ccc} w_1 & w_2 & \ldots w_n \\ g_{11} & g_{21} & \cdots g_{n1}, \\ w_1 & w_2 & \ldots w_n \end{array} \\ g_{11} & g_{21} & \ldots & g_{n1} \\ r_1 & r_2 & \ldots & r_n \end{array}$$

PrS_3Cf– software operators will differ only just because aggregates $\{\tilde{w}\}, \{\tilde{p}\}, \{\tilde{B}\}, \{\tilde{x}\}$ will be formed from corresponding PrSCprt-program operators in form (1.1) for more complex operators in forms (1.1.1) – (1.4) , (2.1*) and analogs of forms (1.1.1) - (1.4) by type (2.1*).

For example, $fSprt_{g\{R\}}^{\{R\}}$ is the fcapacity in itself of the second type if $g\{R\}$ is a program capable of generating $\{R\}$.

The example of self-program of the first type is

$$PrSCprt \begin{array}{ccccc} PrSCprt \begin{array}{ccc} x_1 := & x_2 := & \ldots x_n := \\ g_{11} & g_{21} & \cdots g_{n1} \\ p_1 & p_2 & \cdots p_n \end{array} & PrSCprt \begin{array}{cccc} IF\left\{B_1w_1\right\}\ then & IF\left\{B_2w_2\right\}\ then & \ldots IF\left\{B_nw_n\right\}\ then \\ g_{11} & g_{21} & \ldots & g_{n1} \\ u_1 & u_2 & \ldots & u_n \end{array} & \cdots PrSCprt \begin{array}{ccc} w_1 & w_2 & \ldots w_n \\ g_{11} & g_{21} & \cdots g_{n1}, \\ w_1 & w_2 & \ldots w_n \end{array} \\ g_{11} & g_{21} & \ldots & g_{n1} \\ PrSCprt \begin{array}{ccc} x_1 := & x_2 := & \ldots x_n := \\ g_{11} & g_{21} & \cdots g_{n1} \\ p_1 & p_2 & \cdots p_n \end{array} & PrSCprt \begin{array}{cccc} IF\left\{B_1w_1\right\}\ then & IF\left\{B_2w_2\right\}\ then & \ldots IF\left\{B_nw_n\right\}\ then \\ g_{11} & g_{21} & \ldots & g_{n1} \\ u_1 & u_2 & \ldots & u_n \end{array} & \ldots PrSCprt \begin{array}{ccc} w_1 & w_2 & \ldots w_n \\ g_{11} & g_{21} & \cdots g_{n1} \\ w_1 & w_2 & \ldots w_n \end{array} \end{array} .$$

PrSCprt-coding: 1) set A_i to set B_i, 2) set A_i to a point q_i, where the elements of the sets A_i, B_i can be continuous, (i = 1, 2, …, n; j = 1, 2, …, m). For example,

$$\text{PrSCprt}\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix}.$$

There are PrSCprt -coding, PrSCprt-translation, PrSCprt-realize of prceprograms and of the programs from the archives without extraction theirs

PrCSelf-coding: 1) set A_i to set A_i, i.e. A_i on itself 2) set A_i to a point q_i in forms (1.1) - (1.4), where the elements of the sets A_i can be continuous. For example,

$$\text{PrSCprt}\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ A_1 & A_2 & \dots A_n \end{matrix}.$$

One of the central departments of the control system should be a computer system of the usual type of the desired level. In symbiosis with PrSCprt-Networks, it will provide a holistic operation of the control system in three modes: conventional serial through a conventional type computer system, direct parallel through PrSCprt -Networks and series-parallel. Codes from a conventional type computer system will be used via PrSCprt -connectors in PrSCprt - coding, for example:

$$\text{PrSCprt(t)}\begin{matrix} (\text{UHF AC})_1(t) := Q_1(t) & (\text{UHF AC})_2(t) := Q_2(t) & \dots(\text{UHF AC})_n(t) := Q_n(t) \\ g_{11} & g_{21} & \dots & g_{n1} \\ activation & activation & \dots & activation \end{matrix},$$

UHF AC field activation is used.

Consider the dynamic PrSCprt and $PrS_3Cf(t)$ programming:

1. The process of simultaneous assignment of the expressions $\widetilde{p(t)}$=($p_1(t)|\mu_{\widetilde{p(t)}}(p_1(t))$, $p_2(t)|\mu_{\widetilde{p(t)}}(p_2(t))$, …, $p_n(t)|\mu_{\widetilde{p(t)}}(p_n(t))$) to the variables $\widetilde{x(t)}$=($x_1(t)|\mu_{\widetilde{x(t)}}(x_1(t))$, $x_2(t)|\mu_{\tilde{x}(t)}(x_2(t))$, …, $x_n(t)|\mu_{\widetilde{x(t)}}(x_n(t))$) is implemented through PrSCprt

$$\begin{matrix} x_1(t) := & x_2(t) := & \dots x_n(t) := \\ g_{11} & g_{21} & \dots \; g_{n1} \\ p_1(t) & p_2(t) & \dots \; p_n(t) \end{matrix}..$$

2. The process of simultaneous check the set of conditions $\tilde{w}$=($w_1|\mu_{\tilde{w}}(w_1)$, $w_2|\mu_{\tilde{w}}(w_2)$, ..., $w_n|\mu_{\tilde{w}}(w_n)$) for the set of expressions $\widetilde{B(t)}$=($B_1(t)|\mu_{\widetilde{B(t)}}(B_1(t))$, $B_2(t)|\mu_{\tilde{B}(t)}(B_2(t))$, ..., $B_n(t)|\mu_{\widetilde{B(t)}}(B_n(t))$) is implemented through PrSCprt

$$\underset{\substack{\mu_{11}\\ u_1(t)}}{IF\{B_1(t)w_1(t)\}\ then}\quad \underset{\substack{\mu_{21}\\ u_2(t)}}{IF\{B_2(t)w_2(t)\}\ then}\quad \underset{\substack{\dots\\ \dots}}{\dots}\underset{\substack{\mu_{n1}\\ u_n(t)}}{IF\{B_n(t)w_n(t)\}\ then}$$

where u(t) = ($u_1(t)$,$u_2(t)$,...,$u_n(t)$) can be any.

3.Similarly for loop operators and others.

$PrS_3Cf(t)$– software operators will differ only in that the aggregates $\{\widetilde{w(t)}\},\{\widetilde{p(t)}\},\{\widetilde{B(t)}\},\{\widetilde{x(t)}\}$ will be formed from corresponding processes PrSCprt(t) for the above-mentioned programming operators through form (1.1) or forms (1.1.1) – (1.4) for more complex operators, (2.1*) and analogs of forms (1.1.1) - (1.4) by type (2.1*).

Consider PrfftSpr-program operators. The ideology of PrtSCpr and Prt_{S_4Cf} is parallel analogue of t_{S_4Cf} [14] can be used for programminF. Here are some of the PrtSCpr -program operators.

1. Simultaneous expelling assignment of the expressions $\tilde{p}$=($p_1|\mu_{\tilde{p}}(p_1)$, $p_2|\mu_{\tilde{p}}(p_2)$, ..., $p_n|\mu_{\tilde{p}}(p_n)$) from the variables $\tilde{x}$=($x_1|\mu_{\tilde{x}}(x_1)$, $x_2|\mu_{\tilde{x}}(x_2)$, ..., $x_n|\mu_{\tilde{x}}(x_n)$). It's implemented through $\underset{\substack{g_{11}\\ p_1}}{x_1 :=}\ \underset{\substack{g_{21}\\ p_2}}{x_2 :=}\ \underset{\substack{\dots\\ \dots}}{\dots}\underset{\substack{g_{n1}\\ p_n}}{x_n :=}$ PrSCprt.
2. Simultaneous expelling checks the set of conditions $\tilde{w}$=($w_1|\mu_{\tilde{w}}(w_1)$, $w_2|\mu_{\tilde{w}}(w_2)$, ..., $w_n|\mu_{\tilde{w}}(w_n)$) for the set of expressions $\tilde{B}$=($B_1|\mu_{\tilde{B}}(B_1)$, $B_2|\mu_{\tilde{B}}(B_2)$, ..., $B_n|\mu_{\tilde{B}}(B_n)$). It's implemented through

$$\underset{\substack{g_{11}\\ u_1}}{IF\{B_1w_1\}\ then}\quad \underset{\substack{g_{21}\\ u_2}}{IF\{B_2w_2\}\ then}\quad \underset{\substack{\dots\\ \dots}}{\dots}\underset{\substack{g_{n1}\\ u_n}}{IF\{B_nw_n\}\ then}$$

PrSCprt, where u_i (i = 1, ..., n) can be anything.
3. Similarly for loop operators and others.

Prt_{S_4Cf} – software operators will differ only just because aggregates $\{\tilde{w}\},\{\tilde{p}\},\{\tilde{B}\},\{\tilde{x}\}$ will be formed from corresponding PrtSCpr program operators in form (1.1) for more complex operators in forms (1.1.1) – (1.4) , (2.1*) and analogs of forms (1.1.1) - (1.4) by type (2.1*).

Consider hierarchical PrtSpr-program operator

$$\begin{matrix} C_1(t) & C_2(t) & \dots C_m(t) \\ g_{12} & g_{22} & \dots & g_{m2} \\ D_1(t) & D_2(t) & \dots D_m(t) \end{matrix} \text{ PrSCrt}_2\text{(t)} =$$

$$\left\{ \begin{matrix} \sum_{i=1}^{m} Q_i(t) + & \begin{matrix} \{\} & \{\} & \dots & \{\} \\ g_{12} & g_{22} & \dots & g_{m2} \\ D_1(t) - D_1(t) \cap C_1(t) & D_2(t) - D_2(t) \cap C_2(t) & \dots D_m(t) - D_2(t) \cap C_m(t) \end{matrix} & \text{PrSCrt(t)} \\ & \sum_{i=1}^{m} (\, C_i(t) - D_i(t) \cap C_i(t)) - (D_i(t) - D_i(t) \cap C_i(t)\,) & \end{matrix} \right\}$$

, where $Q_i(t)$ is oself-set for $(D_i(t) \cap C_i(t))$ [14].

Consider the PrtSCpr(t) and $Prt(t)_{S_4Cf}$ programming at time t.

1. The process of simultaneous assignment of the expressions $\widetilde{p(t)}$=(p$_1$(t)|$\mu_{\widetilde{p(t)}}$(p$_1$(t)), p$_2$(t)|$\mu_{\widetilde{p(t)}}$(p$_2$(t)), ..., p$_n$(t)|$\mu_{\widetilde{p(t)}}$(p$_n$(t))) to the variables $\widetilde{x(t)}$=(x$_1$(t)|$\mu_{\widetilde{x(t)}}$(x$_1$(t)), x$_2$(t)|$\mu_{\tilde{x}(t)}$(x$_2$(t)), ..., x$_n$(t)|$\mu_{\widetilde{x(t)}}$(x$_n$(t))) is implemented through

$$\begin{matrix} x_1(t) := & x_2(t) := & \dots x_n(t) := \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ p_1(t) & p_2(t) & \dots & p_n(t) \end{matrix} \text{ PrSCprt(t).}$$

2. The process of simultaneous check the set of conditions $\widetilde{u(t)}$=(u$_1$(t)|$\mu_{\widetilde{u(t)}}$(u$_1$(t)), u$_2$(t)|$\mu_{\tilde{u}(t)}$(u$_2$(t)), ..., u$_n$(t)|$\mu_{\widetilde{u(t)}}$(u$_n$(t))) for the set of expressions $\widetilde{B(t)}$=(B$_1$(t)|$\mu_{\widetilde{B(t)}}$(B$_1$(t)), B$_2$(t)|$\mu_{\tilde{B}(t)}$(B$_2$(t)), ..., B$_n$(t)|$\mu_{\widetilde{B(t)}}$(B$_n$(t))) is implemented through

$$\begin{matrix} IF\{B_1(t)u_1(t)\}\ then & IF\{B_2(t)u_2(t)\}\ then & \dots IF\{B_n(t)u_n(t)\}\ then \\ g_{11} & g_{21} & \dots & g_{n1} \\ w_1(t) & w_2(t) & \dots & w_n(t) \end{matrix} \text{ PrSCprt(t),}$$

where w_i(t) (i = 1, ..., n) can be anything.

3.Similarly for loop operators and others.

$Prt(t)_{S_4Cf}$ – software operators will differ only in that the aggregates $\widetilde{x(t)}$,$\widetilde{p(t)}$, $\widetilde{B(t)}$,$\widetilde{w(t)}$ will be formed from corresponding processes PrSCprt(t) for the above-mentioned programming operators through form (1.1) or forms (1.1.1) –

(1.4) for more complex operators, (2.1*) and analogs of forms (1.1.1) - (1.4) by type (2.1*).

Consider PrSCrt(t)- program operators

$$fSprt_{t_0}^{\{\begin{pmatrix} u & u & u & u \\ g_1 & g_2 PrSCpr g_1 & g_2 \\ u & u & u & u \end{pmatrix}^q W_q fSprt_{q\begin{pmatrix} u & u & u & u \\ g_1 & g_2 PrSCpr g_1 & g_2 \\ u & u & u & u \end{pmatrix}}^{E_q},\ fSprt_{d_r\left(E_{in}l^{d_r}\right)}^{\{E^{ex}l^{d_r}\}}\}}.$$

—program structure example, where the assemblage point d_r is the cursor, it is quite complex Cself—program.

Remark. Energy with type of containment g_1, g_2 of a living organism other than humans:

$$\text{PrC}(r, u(E_q), g_1, g_2) = fSprt_{t_0}^{\{\begin{pmatrix} u & u & u & u \\ g_1 & g_2 PrSCpr g_1 & g_2 \\ u & u & u & u \end{pmatrix}^q W_q Sprt_{q\begin{pmatrix} u & u & u & u \\ g_1 & g_2 PrSCpr g_1 & g_2 \\ u & u & u & u \end{pmatrix}}^{E_q},\ fSprt_{d_r\left(E_{in}l^{d_r}\right)}^{\{E^{ex}l^{d_r}\}}\}}$$

(**B.1).

Energy with type of containment μ_1, μ_2 of a living organism of a person:

fPrhff(r, u(E_q), μ_1, μ_2) =

$$fSprt_{t_0}^{\{\begin{pmatrix} u & u & u & u \\ g_1 & g_2 PrSCpr g_1 & g_2 \\ u & u & u & u \end{pmatrix}^q W_q Sprt_{q\begin{pmatrix} u & u & u & u \\ g_1 & g_2 PrSCpr g_1 & g_2 \\ u & u & u & u \end{pmatrix}}^{E_q},\ fSprt_{d_r(self\left(E_{in}l^{d_r}\right))}^{\{E^{ex}l^{d_r}\}}\}} \qquad (***_{B.1}).$$

$\begin{matrix} u & u & u & u \\ g_1 & g_2 PrSCpr g_1 & g_2 \\ u & u & u & u \end{matrix}$ -internal energy with type of containment μ_1, μ_2 of a living organism of double energy structure, q- a gap in the energy cocoon of a living organism, r-the position of the assemblage point d_r on the energy cocoon of a living organism, W_q- energy prominences from the gap in the cocoon of a living organism, E_q-external energy entering the gap in the cocoon of a living organism, $E^{ex}l^{d_r}$ - a bundle of fibers of external energy self-capacities from outside the cocoon, collected at the point of assembly of the cocoon of a living organism,

$E_{in}l^{d_r}$- a bundle of fibers of external energy self-capacities from inside the cocoon, collected at the point of assembly of the cocoon of a living organism in the same position r of the assemblage point d_r. d_r is the subject of identifying the energy fibers of the subtle energy of the Universe in position r both outside and inside the cocoon.

($**_{B.1}$), ($***_{B.1}$) can be interpreted as PrSCprt- program operators.

Appendix.

Supplement for string theory: May be to try represent elementary particles in the form of continual self-elements of the type: PrSCprt $\begin{matrix} \uparrow I \downarrow_{-1}^{1} & \downarrow I \uparrow_{-\infty}^{\infty} & \dots\downarrow I \uparrow_{-1}^{1} \\ g_{11} & g_{21} & \dots & g_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix}$, etc.

Supplement for PrSCprt-logic: We consider PrSCprt-logic: consider the functional f(Q), which gives a numerical value for the truth of the dynamic statement Q from the interval [0,1], where 0 corresponds to "no," and one corresponds to the logical value "yes." Then for joint dynamic statements A, B: f(A+B)=f(A)+f(B)-f(A*B)+fSC(D), D- self- (dynamic statement) from A*B, fSC(x)- the value of self-(dynamic truth) for self-(dynamic statement) x; for dependent dynamic statements: f(A*B)=f(A)*f(B/A)=f(B)*f(A/B), where f(B/A)- conditional dynamic truth of the dynamic statement B at dynamic statement A, f(A/B)- dependent dynamic truth of the dynamic statement A at the dynamic statement B. Adding the dynamic truth values of inconsistent dynamic propositions: f(A+B)=F(A)+f(B). The formula of complete dynamic truth: f(A)=$\sum_{k=1}^{n} f(B_k) * f(A/B_k)$, B_1, B_2, .., B_n-full group of hypotheses- (dynamic statements): $\sum_{k=1}^{n} f(B_k)$=1("yes").

Remark. A statement can be interpreted as an event, and its truth value as a probability.

PrSCprt- statement for set of dynamic statements A ={A_1, A_2, …, A_n}: PrSCprt $\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$. PrSCprt $\begin{matrix} f(A_1) & f(A_2) & \dots f(A_n) \\ g_{11} & g_{21} & \dots & g_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix}$ - PrSCprt- truth for these statements. It is possible to consider the self-(statement) PrS_3CA with m statements from A, at m<n, which is formed by the form (1.1), that is, only m statements from A are located in the structure PrSCprt$\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$. The same for self-truth $PrS_3C\{ f(A_1), f(A_2), \dots, f(A_n) \}$.

One can introduce the concepts of PrSCprt-group: PrSCprt$\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$, A is the usual group, PrSCprt$\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$, where A_i is usual group, i=1,2, …,n, x- usual groups, self- group: PrS_iCfA, i=1,2,3, A is usual group.

Definition B.1.5.1. A dynamic structure with a second degree of freedom will be called complete, i.e., "capable" of reversing itself concerning any of its elements clearly, but not necessarily in known operators; it can form (create) new special dynamic operators (in particular, special dynamic functions). In particular, PrCCrt $\begin{matrix} A_1 & A_2 & \dots A_n \\ g_{11} & g_{21} & \dots g_{n1} \\ A_1 & A_2 & \dots A_n \end{matrix}$ is such structure. Similarly, for working with models, each is structured by its dynamic structure; for example, use PrSCprt-groups, PrSCprt-rings, PrSCprt-fields, PrSCprt-spaces, PrCSelf-groups, PrCSelf-rings, PrCSelf-fields, and PrCSelf-spaces. Like any task, this is also a dynamic structure of the appropriate capacity. Since the degree of freedom is double, it is clear that the form of the PrCSelf-equation contains a dynamic solutions or dynamic structures the inversion of the PrCSelf-equation concerning unknowns, i.e., the dynamic structure of the PrCself-equation is complete.

B.2 PrffSCprt – elements, self-type PrffSCprt - structures

Introduction.

This section generalizes the previous one to fuzzy actions with fuzzy objects, in particular, with fuzzy sets.

We consider the expression

$$\begin{matrix} C_1 & C_2 & \dots & C_m & & A_1 & A_2 & \dots & A_n \\ v_{12} & v_{22} & & v_{m2} & & v_{11} & v_{21} & & v_{n1} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} & \text{PrffSCprt} & \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ D_1 & D_2 & \dots & D_m & & B_1 & B_2 & \dots & B_n \end{matrix} \quad (*_{B.2.1})$$

where fuzzy A_1 fits into fuzzy B_1 with type of containment v_{11} and measure of fuzziness μ_{11}, fuzzy A_2 fits into fuzzy B_2 with type of containment v_{21} and measure of fuzziness μ_{21}, …, fuzzy A_n fits into fuzzy B_n with type of containment g_{n1} and measure of fuzziness μ_{n1}, fuzzy D_1 is forced out of fuzzy C_1 with type of expelling v_{12} and measure of fuzziness μ_{12}, fuzzy D_2 is forced out of fuzzy C_2 with type of expelling v_{22} and measure of fuzziness μ_{22}, …, fuzzy D_m is forced out of fuzzy C_m with type of expelling v_{m2} and measure of fuzziness μ_{m2}, simultaneously. The result of this process will be described by the expression

$$\begin{matrix} C_1 & C_2 & \dots & C_m & & A_1 & A_2 & \dots & A_n \\ v_{12} & v_{22} & & v_{m2} & & v_{11} & v_{21} & & v_{n1} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} & \text{PrffSCprt} & \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ D_1 & D_2 & \dots & D_m & & B_1 & B_2 & \dots & B_n \end{matrix} \quad (*_{B.2.2})$$

If A_1, B_1, A_2, B_2, …, A_n, B_n, D_1, C_1, D_2, C_2, …, D_m, C_m are taken as fuzzy sets, then we will call ($*_{B.2.1}$) a parallel fuzzy fuzzy dynamic fuzzy set. The need ($*_{B.2.1}$) arose to describe processes in networks. Threshold element PrffSprt -

$$\begin{matrix} B_1 & B_2 & \dots & B_n & & \{ax\}_1 & \{ax\}_2 & \dots & \{ax\}_n \\ v_{12} & v_{22} & & v_{m2} & & v_{11} & v_{21} & & v_{n1} \\ \mu_{12} & \mu_{22} & \dots & \mu_{n2} & \text{PrffSCprt} & \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ \{qy\}_1 & \{qy\}_2 & \dots & \{qy\}_n & & B_1 & B_2 & \dots & B_n \end{matrix}$$

, B_1, B_2, …, B_n - artificial neurons of type PrffSCprt (designation - mnPrffSCprt) , $\tilde{x}=(x_1|\mu_{\tilde{x}}(x_1), x_2|\mu_{\tilde{x}}(x_2)|,\dots,x_n|\mu_{\tilde{x}}(x_n)|)$ are the fuzzy values of the initial signals, $a=(a_1,a_2,\dots,a_n)$ are the weights of PrffSCprt-synapses and $\tilde{y}$=($y_1|\mu_{\tilde{y}}(y_1)$, $y_2|\mu_{\tilde{y}}(y_2)|$, ..., $y_n|\mu_{\tilde{y}}(y_n)|$) are the fuzzy values of the output signals $\{qy\}$ with weights q=(q_1,q_2,…,q_n). It can be considered a simpler version of the Parallel fuzzy dynamic fuzzy set

$$\text{PrffSCprt}\begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \cdots\mu_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix} \ (**_{B.2.1}),$$

where fuzzy A_1 fits into fuzzy B_1 with type of containment v_{11} and measure of fuzziness μ_{11}, fuzzy A_2 fits into fuzzy B_2 with type of containment v_{21} and measure of fuzziness μ_{21}, …, fuzzy A_n fits into fuzzy B_n with type of containment v_{n1} and measure of fuzziness μ_{n1}, simultaneously, the result of this process will be described by the expression

$$\text{PrffSCrt}\begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \cdots\mu_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix} \ (**_{B.2.2})$$

or

$$\begin{matrix} C_1 & C_2 & \dots & C_m \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \cdots & \mu_{m2} \\ D_1 & D_2 & \dots & D_m \end{matrix} \text{PrffSCprt}(***_{B.2.1}),$$

where fuzzy D_1 is forced out of fuzzy C_1 with type of expelling v_{12} and measure of fuzziness μ_{12}, fuzzy D_2 is forced out of fuzzy C_2 with type of expelling v_{22} and measure of fuzziness μ_{22}, …, fuzzy D_m is forced out of fuzzy C_m with type of expelling v_{m2} and measure of fuzziness μ_{m2}, simultaneously, the result of this process will be described by the expression

$$\begin{matrix} C_1 & C_2 & \dots & C_m \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \cdots & \mu_{m2} \\ D_1 & D_2 & \dots & D_m \end{matrix} \text{PrffSCrt}(***_{B.2.2})$$

We consider the measure: $\begin{pmatrix} C_1 & C_2 & \dots & C_m & & A_1 & A_2 & \dots A_n \\ v_{12} & v_{22} & & v_{m2} & \text{PrffSCprt} & v_{11} & v_{21} & v_{n1} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} & & \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ D_1 & D_2 & \dots & D_m & & C_1 & C_2 & \dots C_n \end{pmatrix}^{**}($

$$\begin{matrix} C_1 & C_2 & \dots & C_m & & A_1 & A_2 & \dots A_n \\ v_{12} & v_{22} & & v_{m2} & \text{PrffSCprt} & v_{11} & v_{21} & v_{n1} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} & & \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ D_1 & D_2 & \dots & D_m & & C_1 & C_2 & \dots C_n \end{matrix}) = \frac{\mu(A_1)*\mu(A_2)*\dots*\mu(A_n)*\mu_{11}*\mu_{21}*\dots*\mu_{n1}*\prod_{i=1}^{n}\mu(v_{i1})}{\mu(D_1)*\mu(D_2)*\dots*\mu(D_m)*\mu_{12}*\mu_{22}*\dots*\mu_{m2}*\prod_{i=1}^{m}\mu(v_{i2})},$$

where m(A_i),m(D_j),–usual fuzzy measures of fuzzy sets A_i, D_j (i = 1, 2, …, n; j = 1, 2, …, m).

Remark. One can consider some generalization for ($*_{B.2.1}$) , ($*_{B.2.2}$):

$$\begin{matrix} q_1(C_1) & q_2(C_2) & \dots & q_m(C_m) & & A_1 & A_2 & \dots & A_n \\ v_{12} & v_{22} & & v_{m2} & \text{PrffSCprt} & v_{11} & v_{21} & & v_{n1} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} & & \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ D_1 & D_2 & \dots & D_m & & w_1(B_1) & w_2(B_2) & \dots & w_n(B_n) \end{matrix},$$

$$\begin{matrix} q_1(C_1) & q_2(C_2) & \dots & q_m(C_m) & & A_1 & A_2 & \dots & A_n \\ v_{12} & v_{22} & & v_{m2} & \text{PrffSCrt} & v_{11} & v_{21} & & v_{n1} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} & & \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ D_1 & D_2 & \dots & D_m & & w_1(B_1) & w_2(B_2) & \dots & w_n(B_n) \end{matrix}$$

where fuzzy A_1 fits into fuzzy B_1 through w_1 with type of containment v_{11} and measure of fuzziness μ_{11}, fuzzy A_2 fits into fuzzy B_2 through w_2 with type of containment v_{21} and measure of fuzziness μ_{21}, …, fuzzy A_n fits into fuzzy B_n through w_n with type of containment v_{n1} and measure of fuzziness μ_{n1}, fuzzy D_1 is forced out of fuzzy C_1 through q_1 with type of expelling v_{12} and measure of fuzziness μ_{12}, fuzzy D_2 is forced out of fuzzy C_2 through q_2 with type of expelling v_{22} and measure of fuzziness μ_{22}, …, fuzzy D_m is forced out of fuzzy C_m through q_m with type of expelling v_{m2} and measure of fuzziness μ_{m2}, simultaneously. A_i, B_i, D_j, C_j (i = 1, 2, …, n; j = 1, 2, …, m) can be taken as fuzzy sets.

Similarly, for (**$_{B.2.1}$): PrffSCprt $\begin{array}{cccc} A_1 & A_2 & \dots & A_n \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ w_1(B_1) & w_2(B_2) & \dots & w_n(B_n) \end{array}$, for (***$_{B.2.1}$):

$\begin{array}{cccc} q_1(C_1) & q_2(C_2) & \dots & q_m(C_m) \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} \\ D_1 & D_2 & \dots & D_m \end{array}$ PrffSCprt. The result of this process will be described by the expression $\begin{array}{cccc} q_1(C_1) & q_2(C_2) & \dots & q_m(C_m) \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} \\ D_1 & D_2 & \dots & D_m \end{array}$ PrffSCrt.

We construct new mathematical objects constructively without formalism. By its contradiction, formalism may destroy this thry by Gödel's theorem on the incompleteness of any formal theory. But in the next monograph, we will give the formalism of the theory it's due: the proof of axioms and theorems.

PrffSCprt – elements, self-type PrffSCprt- structures.

Definition B.2.1.1. The fuzzy set of elements $\tilde{g}=(g_1|\mu_{\tilde{g}}(g_1), g_2|\mu_{\tilde{g}}(g_2), \dots, g_n|\mu_{\tilde{g}}(g_n))$ at one point x = $(x_1,x_2,\dots,x_n)$ of space X we shall call PrffSCprt – element, and such a point x in space X is called parallel fuzzy fcapacity of the PrffSCprt – element. We shall denote PrffSCprt$\begin{array}{cccc} g_1 & g_2 & \dots & g_n \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{array}$.

Definition B.2.1.2. PrffSCprt$\begin{array}{cccc} g_1 & g_2 & \dots & g_n \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{array}$ - a parallel fuzzy fuzzy dynamic fuzzy set $\tilde{g}$ at x.

Definition B.2.1.3. An ordered fuzzy set of elements at one point in the space is called an ordered PrffSCprt–element.

It's possible to PrffSCprt$\begin{array}{cccc} g_1 & g_2 & \dots & g_n \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{array}$correspond to the fuzzy set $\tilde{g}$, and the ordered PrffSCprt - element - a fuzzy vector, a fuzzy matrix, a fuzzy tensor, a fuzzy directed segment in the case when the totality of elements is understood as a fuzzy set of elements in a segment.

It's allowed to sum PrffSCprt – elements: $\mathrm{PrffSCprt}\begin{array}{ccc} g_1 & g_2 & \dots g_n \\ v_{11} & v_{21} & \dots v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ x_1 & x_2 & \dots x_n \end{array} +$

$$\mathrm{PrffSCprt}\begin{array}{ccc} b_1 & b_2 & \dots b_n \\ v_{11} & v_{21} & \dots v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ x_1 & x_2 & \dots x_n \end{array} = \mathrm{PrffSCprt}\begin{array}{cccc} g_1 \cup b_1 & g_2 \cup b_2 & \dots & g_n \cup b_n \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{array}.$$

It's allowed to multiply PrffSCprt – elements: $\mathrm{PrffSCprt}\begin{array}{ccc} g_1 & g_2 & \dots g_n \\ v_{11} & v_{21} & \dots v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ x_1 & x_2 & \dots x_n \end{array} *$

$$\mathrm{PrffSCprt}\begin{array}{ccc} b_1 & b_2 & \dots b_n \\ v_{11} & v_{21} & \dots v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ x_1 & x_2 & \dots x_n \end{array} = \mathrm{PrffSCprt}\begin{array}{cccc} g_1 \cap b_1 & g_2 \cap b_2 & \dots & g_n \cap b_n \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{array}.$$

The operator $\mathrm{PrffSCprt}\begin{array}{cccc} g_1 \cup b_1 & g_2 \cup b_2 & \dots & g_n \cup b_n \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{array}$. is not equal the fuzzy set of $g_i \cup b_i$, (i = 1, 2, …, n), rather, it is Parallel fuzzy dynamic — contraction of the fuzzy set of $g_i \cup b_i$, (i = 1, 2, …, n), to the point x. Similarly, for $\mathrm{PrffSCprt}\begin{array}{cccc} g_1 \cap b_1 & g_2 \cap b_2 & \dots & g_n \cap b_n \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{array}$.. This is more suitable for using fuzzy sets for energy space, for any fuzzy objects. The operator PrffSCprt is adapted for ordinary energies, using their property to overlap.

Parallel fuzzy fcapacity in itself.

Definition B.2.1.4. The ffcapacity $\mathrm{PrffSCrt}\begin{array}{ccc} g_1 & g_2 & \dots g_n \\ v_{11} & v_{21} & \dots v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ A_1 & A_2 & \dots A_n \end{array}$ is called the parallel fuzzy fcapacity A = $(A_1, A_2, \dots, A_n)$ for $\tilde{g}=(g_1|\mu_{\tilde{g}}(g_1), g_2|\mu_{\tilde{g}}(g_2), \dots, g_n|\mu_{\tilde{g}}(g_n))$.

Definition B.2.1.4.1. The parallel fuzzy fcapacity A in itself of the first type is the parallel fuzzy fcapacity fuzzy containing itself as an element. Denote $PrffS_1CfA$.

$$PrffS_1CfA = \mathrm{PrffSCrt}\begin{matrix} A_1 & A_2 & \dots & A_n \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ A_1 & A_2 & \dots & A_n \end{matrix}.$$

Definition B.2.1.5. The parallel fuzzy fcapacity A in itself of the second type is the parallel fuzzy fcapacity that fuzzy contains fuzzy elements from which it can be generated. Denote $PrffS_2CfA$.

An example of the parallel fcapacity in itself of the first type is a set containing itself in parallel. An example of parallel fcapacity in itself of the second type is a living organism since it contains a program: DNA and RNA.

Definition B.2.1.6. Partial parallel fuzzy fcapacity A in itself of the third type is the parallel fuzzy fcapacity A in itself, which partially contains itself or fuzzy contains fuzzy elements from which it can be fuzzy generated in part or both simultaneously. Let us denote $\mathrm{Pr}ffS_3CfA$.

Let us introduce the following notations: $A*B = \mathrm{PrffSCprt}\begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix}$, $A^2 =$ PrffCSelf A $= PrffSCrt\begin{matrix} A \\ v \\ \mu \\ A \end{matrix}$, A^3 = PrffCSelf^{2}A, …, A^{n+1} = PrffCSelf^{n}A, ….There is no commutativity here: $A*B \neq B*A$. We can consider operator functions: $e^A = 1 + \frac{A}{1!} + \frac{A^2}{2!} + \frac{A^3}{3!} + \dots$, $(A+B)^n = \sum_{k=0}^{n} \binom{n}{k} A^k B^{n-k}$, $(1+A)^n = 1 + \frac{Ax}{1!} + \frac{n(n-1)A^2}{2!} + \dots$, etc.

You can consider a more "hard" option: $A*B = PPrffSCrt\begin{matrix} A \\ v \\ \mu \\ B \end{matrix}$, where $PPrffSCrt\begin{matrix} A \\ v \\ \mu \\ B \end{matrix}$ – operator, containing A in every element of B, A^2 = PPrffCSelf A $= PPrffSCrt\begin{matrix} A \\ v \\ \mu \\ A \end{matrix}$, A^3 = PPrffCSelf^{2}A, …, A^{n+1} = PPrffCSelf^{n}A, ….There is no commutativity here:

A*B ≠ B*A. We can consider operator functions: $e^A = 1 + \frac{A}{1!} + \frac{A^2}{2!} + \frac{A^3}{3!} + \ldots$, $(A + B)^n = \sum_{k=0}^{n} \binom{n}{k} A^k B^{n-k}$, $(1 + A)^n = 1 + \frac{Ax}{1!} + \frac{n(n-1)A^2}{2!} + \ldots$, etc.

All parallel capacities in parallel self-space are parallel capacities in themselves by definition. Parallel capacities in themselves can appear as PrffSCprt -capacities and ordinary capacities. In these cases, the usual measures and methods of topology are used.

Connection of PrffSCprt – elements with parallel fuzzy fcapacities in themselves.

For example, $PrffSCrt_{g\{R\}}^{\substack{\{R\} \\ v \\ \mu}}$ is the parallel fuzzy fcapacity in itself of the second type if $g\{R\}$ is a parallel program capable of fuzzy generating $\{R\}$.

Consider a third type of parallel fuzzy fcapacity in itself. For example, based on

PrffSCprt$\begin{matrix} g_1 & g_2 & g_n \\ v_{11} & v_{21} & \ldots v_{n1} \\ \mu_{11} & \mu_{21} & \ldots \mu_{n1} \\ x_1 & x_2 & \ldots x_n \end{matrix}$, where $\tilde{g}$=($g_1|\mu_{\tilde{g}}(g_1)$, $g_2|\mu_{\tilde{g}}(g_2)$, …, $g_n|\mu_{\tilde{g}}(g_n)$), i.e. n - elements

at one point x = $(x_1, x_2, \ldots, x_n)$, we can consider the fcapacity $PrffS_3Cf$ in itself with m elements from $\tilde{g}$, m<n, which is formed according to the form (1.1), that is, the structure $PrffS_3Cf$ contains only m elements, or in forms (1.1.1) - (1.1.5), summarizing it. Fuzzy fcapacities in themselves of the third type can be formed for any other structure, not necessarily $PrffS_3Cf$ only by necessarily reducing the number of elements in the structure, in particular, using form (1.2). Structures more complex than$PrffS_3Cf$ can be introduced. For example, through a form (1.3), where A is fuzzy compressed (fuzzy fits) in C in the fuzzy compression fuzzy structure B in C (i.e., in the fuzzy structure $PrffS_3Cf$); or through the forms (1.3.1) - (1.4) and corresponding generalizations of (1.4) on (1.3.1) - (1.3.4), etc.

(1.3.1) - (1.3.4) schematically interpret the fuzzy formation of fuzzy capacity in itself through a pseudo 3-connected form with a 2-connected form. The ideology of PrffSCprt and $PrffS_3Cf$ can be used for programming.

Remark B.2.1.1. Fuzzy self, in particular, according to a fuzzy form- fuzzy analogue of the form of type (1.1): (2.1*)..

By analogy the same for the fuzzy form of type (1.1.1) – (1.4).

Math PrffCSelf.

Let's consider PrffSCprt arithmetic first:

1. Simultaneous parallel addition of sets elements $\tilde{g}_i$=($g_{i_1}|\mu_{\tilde{g}_i}(g_{i_1})$, $g_{i_2}|\mu_{\tilde{g}_i}(g_{i_2})$, …, $g_{i_{m_j}}|\mu_{\tilde{g}_i}(g_{i_{m_j}})$), i = 1,2,…,n, j =1,2,…,k is carried out using

$$\text{PrffSCprt}\begin{array}{cccc} \{g_1\}+ & \{g_2\}+ & \ldots & \{g_n\}+ \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ x_1 & x_2 & \ldots & x_n \end{array}.$$

2. Similarly, for simultaneous parallel multiplication:

$$\text{PrffSCprt}\begin{array}{cccc} \{g_1\}* & \{g_2\}* & \ldots & \{g_n\}* \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ w_1 & w_2 & \ldots & w_n \end{array}$$ .the notation of the fuzzy set B_l, l =1,2,…,n,

with elements $b_{li_1i_2\ldots i_{m_j}}$ =

$Sprt_{x_l}^{\left\{g_{l_{1_{i_1}}}*,\ g_{l_{2_{i_2}}}*,\ldots,\ g_{l_{m_{j_{i_{m_j}}}}}\right\}})_{R_l}$ for any $\left\{l_{i_1},l_{i_2},\ldots,l_{i_{m_j}}\right\}$ without repetitions,x_l = $Sprt_w^{\{K_l\}}$,K_l-set of any $\left\{k_{l_{i_1}}*,k_{l_{i_2}}*,\ldots,k_{l_{i_{m_j}}}*\right\}$ without repeating them, l = 1,2,…,n, $k_{l_{i_j}}$-any digit, i =1,2,…, m_j, R_l= $Sprt_w^{\left\{l_{i_1}+,l_{i_2}+,\ldots,l_{i_{m_j}}\right\}}$, R_l is the index of the lower discharge (we choose an index on the scale of discharges):

Table B.2.1. Index on the scale of discharges

index	discharge
n	n
…	…
1	1

,	0
-1	1st digit to the right of the point
-2	2nd digit to the right of the point
...	...

Then $\mathrm{PrffSCprt}\begin{matrix} \{B_1\}+ & \{B_2\}+ & \dots & \{B_n\}+ \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix}$ gives the final result of simultaneous multiplication. Any system of calculus can be chosen, in particular binary. The most straightforward functional scheme of the assumed arithmetic-logical device for PrffSCprt-multiplication:

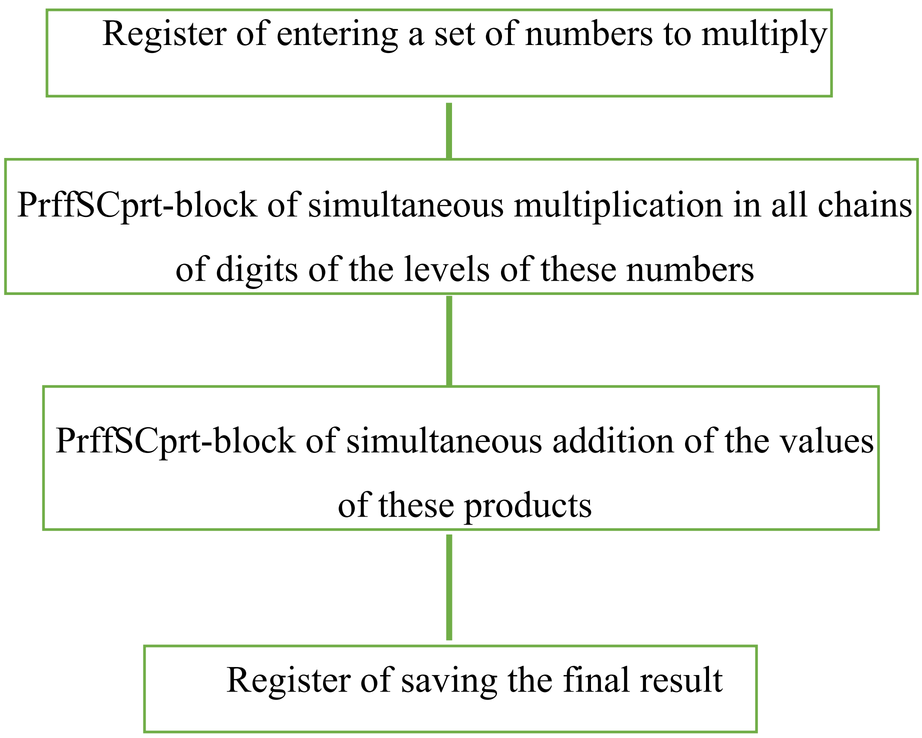


Fig. B.2.1. The straightforward functional scheme of the assumed arithmetic-logical device for PrffSCprt-multiplication.

Remark. The algorithm for simultaneously adding a set of numbers can also be implemented as the simultaneous addition of elements of a simultaneously formed composite matrix: a triangular matrix in which the elements of the first row are represented by multiplying the first number from the set by the rest: each multiplication is represented by a matrix of multiplying the digits of 2 numbers, taking into account the bit depth, the elements of the second rows are represented by multiplying the second number from the set by the ones following it, etc.

3. Similarly for simultaneous execution of various operations:

$$\text{PrffSCprt}\begin{matrix}\{g_1Q_1\} & \{g_2Q_2\} & \dots & \{g_nQ_n\}\\ v_{11} & v_{21} & & v_{n1}\\ \mu_{11} & \mu_{21} & \dots & \mu_{n1}\\ w_1 & w_2 & \dots & w_n\end{matrix}$$

, where $\tilde{Q}=(Q_1|\mu_{\tilde{Q}}(Q_1), Q_2|\mu_{\tilde{Q}}(Q_2), \dots, Q_n|\mu_{\tilde{Q}}(Q_n))$. Q_i -an operation, i = 1, …, n.

4. Similarly, for the simultaneous execution of various operators: PrffSCprt

$$\begin{matrix}\{F_1g_1\} & \{F_2g_2\} & \dots & \{F_ng_n\}\\ v_{11} & v_{21} & & v_{n1}\\ \mu_{11} & \mu_{21} & \dots & \mu_{n1}\\ w_1 & w_2 & \dots & w_n\end{matrix}$$

, where $\tilde{F}=(F_1|\mu_{\tilde{F}}(F_1), F_2|\mu_{\tilde{F}}(F_2), \dots, F_n|\mu_{\tilde{F}}(F_n))$. F_i is an operator, i = 1, …, n.

5. The arithmetic itself for capacities in themselves will be similar: addition - $PrffS_1Cf\{g+\}$, (or $PrffS_3Cf\{g+\}$) for the third type), multiplication $PrffS_1Cf\{g*\}$, $(PrffS_3Cf\{g*\})$.
6. Similarly with different operations: $PrffS_1Cf\{gQ\}$, $(PrffS_3Cf\{gQ\})$, and with different operators: $PrffS_1Cf\{Fg\}$, $(PrffS_3Cf\{Fg\})$.
7. $$\text{PrffSCrt}\begin{matrix}A_1 & A_2 & \dots & A_n\\ v_{11} & v_{21} & & v_{n1}\\ \mu_{11} & \mu_{21} & \dots & \mu_{n1}\\ B_1 & B_2 & \dots & B_n\end{matrix}$$ – the result of the fuzzy containment operator. For fuzzy sets A_i, B_i, (i = 1, 2, …, n), we have

$$\text{PrffSCrt}\begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \dots\mu_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix} = \left\{\sum_{i=1}^{n} A_i \cup B_i - A_i \cap B_i \ , \sum_{i=1}^{n} D_i\right\} =$$

$\left\{\begin{matrix} \sum_{i=1}^{n} D_i \\ \sum_{i=1}^{n} A_i \cup B_i - A_i \cap B_i \end{matrix}\right\}$, where D_i is self-(fuzzy set) for $A_i \cap B_i$ with v_{i1} (i = 1, 2, …, n). There is the same for structures if they are considered as fuzzy sets. Similarly, for fuzzy sets C_i, D_i: $\begin{matrix} C_1 & C_2 & \dots & C_m \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} \\ D_1 & D_2 & \dots & D_m \end{matrix}$ PrffSCrt =

$$\left\{\begin{matrix} \sum_{i=1}^{m} Q_i + & \begin{matrix} \{\,\} & \{\,\} & & \{\,\} \\ v_{12} & v_{22} & \dots & v_{m2} \\ \mu_{12} & \mu_{22} & & \mu_{m2} \\ D_1 - D_1 \cap C_1 & D_2 - D_2 \cap C_2 & \dots & D_m - D_m \cap C_m \end{matrix} & \text{PrffSCrt} \\ & \sum_{i=1}^{m} \left(C_i - D_i \cap C_i \right) - (D_i - D_i \cap C_i) & \end{matrix}\right\}, \text{ where}$$

Q_i is oself-(fuzzy set) for $\left(D_i \cap C_i\right)$ (i = 1, 2, …, m) [14].

8. PrffSCprt-derivative of f(x_1,x_2,…,x_n) = $\left(\begin{matrix} f_1(x_1,x_2,\dots,x_n) \\ f_2(x_1,x_2,\dots,x_n) \\ \dots \\ f_k(x_1,x_2,\dots,x_n) \end{matrix}\right)$ is

$$\text{PrffSCprt}\begin{matrix} \frac{\partial}{\partial x_{1_i}} & \frac{\partial}{\partial x_{2_i}} & \dots & \frac{\partial}{\partial x_{k_i}} \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ f_1(x_1,x_2,\dots,x_n) & f_2(x_1,x_2,\dots,x_n) & \dots & f_k(x_1,x_2,\dots,x_n) \end{matrix}$$

, where x=(x_{1_i}, x_{2_i},… x_{k_i})- any fuzzy set from $\tilde{x}$=($x_1|\mu_{\tilde{x}}(x_1)$, $x_2|\mu_{\tilde{x}}(x_2)$, …, $x_n|\mu_{\tilde{x}}(x_n)$). The same is done for PrffSCprt- $\frac{\partial^k f(x)}{\partial x_{1_i}\partial x_{2_i}\dots\partial x_{k_i}}$. PrffSCprt-integral off (x_1,x_2,…,x_n) is

$$\text{PrffSCprt}\begin{matrix} \int ()dx_{1_i} & \int ()dx_{2_i} & \dots & \int ()dx_{k_i} \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ f_1(x_1,x_2,\dots,x_n) & f_2(x_1,x_2,\dots,x_n) & \dots & f_k(x_1,x_2,\dots,x_n) \end{matrix}$$

, where (x_{1_i}, x_{2_i},… x_{k_i})- any fuzzy set from $\tilde{x}$=($x_1|\mu_{\tilde{x}}(x_1)$, $x_2|\mu_{\tilde{x}}(x_2)$, …, $x_n|\mu_{\tilde{x}}(x_n)$). The same is done for PrffSCprt-$\int\dots\int f(x)dx_{1_i}dx_{2_i}\dots dx_{k_i}$-k-multiple integral. PrffSCprt-lim off $\tilde{x}$=($x_1|\mu_{\tilde{x}}(x_1)$, $x_2|\mu_{\tilde{x}}(x_2)$, …, $x_n|\mu_{\tilde{x}}(x_n)$) is

$$\mathrm{PrffSCprt}\begin{array}{cccc} \lim\limits_{x_{1_i}\to a_{1_i}} & \lim\limits_{x_{2_i}\to a_{2_i}} & \dots & \lim\limits_{x_{k_i}\to a_{k_i}} \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ f_1(x_1,x_2,\dots,x_n) & f_2(x_1,x_2,\dots,x_n) & \dots & f_k(x_1,x_2,\dots,x_n) \end{array}$$

. The same is done for PrffSCprt- $\lim\limits_{\substack{x_{1_i} \to a_{1_i} \\ \vdots \\ x_{k_i} \to a_{k_i}}}$ f($x_1,,x_2,\dots,x_n$). $PrffS_3Cf\{\lim\limits_{x\to a}\}$ =

$$\mathrm{PrffSCprt}\begin{array}{cccc} \lim\limits_{x_{1_i}\to a_{1_i}} & \lim\limits_{x_{2_i}\to a_{2_i}} & \dots & \lim\limits_{x_{k_i}\to a_{k_i}} \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ \lim\limits_{x_{1_i}\to a_{1_i}} & \lim\limits_{x_{2_i}\to a_{2_i}} & \dots & \lim\limits_{x_{k_i}\to a_{k_i}} \end{array}.$$

9. In the case of PrffCSelf-derivatives, inclusions of multiple derivatives are obtained. The same is true for PrffCSelf-integrals: we get inclusions of multiple integrals.
10. Let's denote PrffCSelf-(PrffCSelf-Q) through PrffCSelf^2-Q , ffS(n,Q)= PrffCSelf-(PrffCSelf-(...(PrffCSelf-Q))) = PrffCSelf^n-Q for n-multiple PrffCSelf.

Operator PrffCitself.

Definition B.2.1.7. An operator that transforms $\mathrm{PrffSCprt}\begin{array}{cccc} g_1 & g_2 & \dots & g_n \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{array}$ into any Pr $ffS_iCf\{\tilde{b}\}, i = 2,3$; where $\{\tilde{b}\} \subset \{\tilde{g}\}$ is the operator PrffCitself.

Example. The operator fuzzy contains the fuzzy set in PrffCitself.

Lim-PrffCitself.

1. Lim PrffSCprt

   For example, the double limit: $\lim\limits_{\substack{xa1 \\ ya2}} G(x,y)$ corresponds to

$$\mathrm{PrffSCprt}\begin{array}{cc} G(x,y) & G(x,y) \\ v_{11} & v_{21} \\ \mu_{11} & \mu_{21} \\ \mathrm{xa1} & \mathrm{ya2} \end{array}$$

, where $G(x,y)$ is fuzzy.

   Similarly, for lim PrffSCprt with n variables.

In the case of lim-PrffCitself, for example, for m variables, it suffices to use the form (1.1) of lim PrffSCprt for n variables (n>m). The same is true for integrals of variables m (for example, the double integral over a rectangular region is through the double limit).

About PrffSCprt and $Prf f S_3 C f$ programming.

The ideology of PrffSCprt and Pr$f f S_3 C f$ can be used for programming. Here are some of the PrffSCprt programming operators.

1. Simultaneous fuzzy assignment of the expressions $\tilde{p}$=(p$_1$|$\mu_{\tilde{p}}$(p$_1$), p$_2$|$\mu_{\tilde{p}}$(p$_2$), ..., p$_n$|$\mu_{\tilde{p}}$(p$_n$)) to the variables $\tilde{x}$=(x$_1$|$\mu_{\tilde{x}}$(x$_1$), x$_2$|$\mu_{\tilde{x}}$(x$_2$), ..., x$_n$|$\mu_{\tilde{x}}$(x$_n$)). This is implemented via PrffSCprt $\begin{matrix} x_1 := & x_2 := & \dots & x_n := \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ p_1 & p_2 & \dots & p_n \end{matrix}$.
2. Simultaneous fuzzy checking the set of conditions $\tilde{g}$=(g$_1$|$\mu_{\tilde{g}}$(g$_1$), g$_2$|$\mu_{\tilde{g}}$(g$_2$), ..., g$_n$|$\mu_{\tilde{g}}$(g$_n$)) for the set of expressions $\tilde{B}$=(B$_1$|$\mu_{\tilde{B}}$(B$_1$), B$_2$|$\mu_{\tilde{B}}$(B$_2$), ..., B$_n$|$\mu_{\tilde{B}}$(B$_n$)).
   Implemented via PrffSCprt $\begin{matrix} IF\{B_1 g_1\}\ then & IF\{B_2 g_2\}\ then & \dots & IF\{B_n g_n\}\ then \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ w_1 & w_2 & \dots & w_n \end{matrix}$,
   where w_i (i = 1, …, n) can be anything.
3. Similarly for loop operators and others.

$Prf f S_3 C f$– software operators will differ only in that the aggregates $\{\tilde{g}\},\{\tilde{p}\},\{\tilde{B}\},\{\tilde{x}\}$ will be formed from the corresponding PrffSCprt-program operators in form (1.1) and for more complex operators in the forms (1.1.1) –(1.4), (2.1*) and analogs of forms (1.1.1) - (1.4) by type (2.1*).

The OS (operating system), the computer's principles, and the modes of operation for this programming are interesting. But this is already the material for the following articles.

Using elements of the mathematics of PrffSCrt we introduce the concept of PrffSCrt – the change in physical quantity B: PrffSCprt $\begin{matrix} \Delta_1 B & \Delta_2 B & \dots & \Delta_n B \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix}$. Then the mean PrffSCrt - velocity will be $v_{cpPrffSCrt}(t, \Delta t)$ = PrffSCprt $\begin{matrix} \frac{\Delta_1 B}{\Delta t} & \frac{\Delta_2 B}{\Delta t} & \dots \frac{\Delta_n B}{\Delta t} \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$ and

PrffSCrt-velocity at time t:$v_{Prffscrt} = \lim_{\Delta t \to 0} v_{cpPrffscrt}(t, \Delta t)$. PrffSCrt – acceleration $a_{Prffscrt} = \frac{dv_{Prffsrt}}{dt}$. The nuclei of atoms can be considered as PrffSCprt elements.

Remark B.2.1.2. PrffSCprt – elements are all ordinary, but with "target weights," they become peculiar. Here you need the necessary energy to carry them out. As a rule, this energy is at the level of PrffCSelf. This is natural since it's much easier to manage elements of the k level via the elements of a more structured k +1 level. Let us consider the concepts of capacities of physical objects in themselves. The question arises about the ffself-energy of the object. In particular, $PrffSCrt^{\overset{B}{\overset{v}{\mu}}}_{B}$ will mean $PrffS_1CfB$. For example, PrffS$Cprt^{\overset{DNA}{\overset{v}{\mu}}}_{DNA}$ allows you to reach the level of DNA self-energy, $PrffSCprt^{\overset{Q}{\overset{v}{\mu}}}_{Q}$ allows you to reach the level of ffself-energy Q. The law of self-energy conservation operates already at the level of self-energy. Also, in addition to ffcapacities in themselves, you can consider the types of fuzzy containment of oneself in oneself: the first type of the fuzzy containment of oneself in oneself: the second type of the fuzzy containment of oneself in oneself: potentially, for example, in the form of fuzzy programming oneself, the third type is partial fuzzy containment of oneself in themselves—for example, PrffCSelf-operator, PrffCSelf-action, whirlwind. A fuzzy container fuzzy containing itself can be formed by ffself-containment, i.e., ffcontainment in oneself. Let us clarify the concept of the term fuzzy fcapacity in itself: it is a fuzzy fcapacity fuzzy containing itself potentially. Consider PrffCSelf-Q, where Q can be anything fuzzy, including Q=PrffCSelf; in particular, it can be any fuzzy action. Therefore, PrffCSelf-Q is when fuzzy Q is made by Prfitself; it makes itself. There is a partial

PrffCSelf-Q for any fuzzy Q with partial PrffCSelf-fulfillment. Let's consider several examples for fuzzy capacities in themselves: ordinary lightning, electric arc discharge, and ball lightning.

PrffSCprt is also great for working with structures, for example:

1) $\mathrm{PrffSCprt}\begin{array}{cccc} fstrA_1 & fstrA_2 & \dots & fstrA_n \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ B_1 & B_2 & \dots & B_n \end{array}$ - the fuzzy structure A_i that fits into fuzzy B_i with measure of fuzziness μ_{i1}, where fuzzy B_i (i = 1, …, n) can be any fuzzy fcapacity , another fuzzy structure etc.

2) $\mathrm{PrffSCprt}\begin{array}{cccc} fstr_{Q_1} & fstr_{Q_2} & \dots & fstr_{Q_n} \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ B_1 & B_2 & \dots & B_n \end{array}$ is embedding fuzzy structure from Q_i into B_i. Similarly for displacement: 1) $\begin{array}{cccc} C_1 & C_2 & \dots & C_m \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} \\ fstrD_1 & fstrD_2 & \dots & fstrD_m \end{array}$ PrffSCrt - displacement of fuzzy structure $fstrD_j$ from C_j with measure of fuzziness μ_{j1}, (j = 1, …, m), 2) $\begin{array}{cccc} C_1 & C_2 & \dots & C_m \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} \\ fstr_{Q_1} & fstr_{Q_2} & \dots & fstr_{Q_m} \end{array}$ PrffSCprt -displacement of the fuzzy structure Q_i from C_i, (i = 1, …, m). To work with structures, you can introduce a special operator PrffCprt: $\mathrm{PrffCprt}\begin{array}{cccc} A_1 & A_2 & \dots & A_n \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ B_1 & B_2 & \dots & B_n \end{array}$ fuzzy structures fuzzy B_i with the fuzzy structure A_i, (i = 1, …, n), $\mathrm{PrffCprt}\begin{array}{cccc} fstr_{Q_1} & fstr_{Q_2} & \dots & fstr_{Q_n} \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ B_1 & B_2 & \dots & B_n \end{array}$ fuzzy structures fuzzy B_i with the fuzzy structure from fuzzy Q_i, (i = 1, …, n),

$\begin{matrix} C_1 & C_2 & \cdots & C_m \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \cdots & \mu_{m2} \\ D_1 & D_2 & \cdots & D_m \end{matrix}$ PrffCprt destructors fuzzy C_i by the fuzzy structure of D_i,

$\begin{matrix} C_1 & C_2 & \cdots & C_m \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \cdots & \mu_{m2} \\ fstr_{Q_1} & fstr_{Q_2} & \cdots & fstr_{Q_m} \end{matrix}$ PrffCprt destructors fuzzy C_i from the fuzzy structure that structures Q_i, (i = 1, …, m).

Definition B.2.1.8. A structure with a second degree of freedom will be called complete, i.e., "capable" of reversing itself concerning any of its elements explicitly, but not necessarily in known operators; it can form (create) new special operators (in particular, special functions).

In particular, PrfCprt$\begin{matrix} A_1 & A_2 & \cdots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \cdots \mu_{n1} \\ A_1 & A_2 & \cdots A_n \end{matrix}$, PrfCrt$\begin{matrix} A_1 & A_2 & \cdots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \cdots \mu_{n1} \\ A_1 & A_2 & \cdots A_n \end{matrix}$ are such structures.

Similarly, for working with models, each is structured by its structure; for example, use PrffSCprt-groups, PrffSCprt-rings, PrffSCprt-fields, PrffSCprt-spaces, PrffCSelf-groups, PrffCSelf-rings, PrffCSelf-fields, and PrffCSelf-spaces. Like any task, this is also a structure of the appropriate fcapacity .

PrffCSelf-H (PrffCSelf-hydrogen), like other PrffCSelf-particles, does not exist in the ordinary, but all PrffCSelf-molecules, PrffCSelf-atoms, and PrffCSelf-particles are elements of the energy space.

Remark B.2.1.3. The concept of elements of physics PrffSCprt is introduced for energy space. The ideology of PrffSCprt elements allows us to go to the border of the world familiar to us, which allows us to act more effectively.

Fuzzy dynamic PrffSCprt – elements.

We considered stationary PrffSCprt – elements earlier. Here we consider fuzzy dynamic PrffSCprt – elements.

Definition B.2.2.1. The process of fuzzy fitting a fuzzy set of elements $\widetilde{g(t)}$=(g$_1$(t)|$\mu_{\widetilde{g(t)}}$(g$_1$(t)), g$_2$(t)|$\mu_{\widetilde{g(t)}}$(g$_2$(t)), …, g$_n$(t)|$\mu_{\widetilde{g(t)}}$(g$_n$(t))) into one point x= $(x_1, x_2, \ldots, x_n)$ of the space X at time t will be called a dynamic PrffSCprt – element. We will denote

$$\text{PrffSCprt(t)} \begin{matrix} g_1(t) & g_2(t) & \ldots & g_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ x_1 & x_2 & \ldots & x_n \end{matrix}.$$

Definition B.2.2.2. Fuzzy fitting an ordered fuzzy set of elements into one point in space is called a dynamic ordered PrffSCprt–element.

It is allowed to sum dynamic PrffSCprt – elements:

$$\text{PrffSCprt (t)} \begin{matrix} g_1(t) & g_2(t) & \ldots & g_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ x_1 & x_2 & \ldots & x_n \end{matrix} + \text{PrffSCprt(t)} \begin{matrix} b_1(t) & b_2(t) & \ldots & b_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ x_1 & x_2 & \ldots & x_n \end{matrix} =$$

$$\text{PrffSCprt}(t) \begin{matrix} g_1(t) \cup b_1(t) & g_2(t) \cup b_2(t) & \ldots & g_n(t) \cup b_1(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ x_1 & x_2 & \ldots & x_n \end{matrix}.$$

It's allowed to multiply PrffSCprt – elements: $\text{PrffSCprt (t)} \begin{matrix} g_1(t) & g_2(t) & \ldots & g_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ x_1 & x_2 & \ldots & x_n \end{matrix} *$

$$\text{PrffSCprt(t)} \begin{matrix} b_1(t) & b_2(t) & \ldots & b_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ x_1 & x_2 & \ldots & x_n \end{matrix} = \text{PrffSCprt}$$

$$(t) \begin{matrix} g_1(t) \cap b_1(t) & g_2(t) \cap b_2(t) & \ldots & g_n(t) \cap b_1(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ x_1 & x_2 & \ldots & x_n \end{matrix}.$$

Parallel fuzzy dynamic fuzzy containment of oneself.

Definition B.2.2.3. Parallel fuzzy dynamic fSCprt- fcapacity

$$\text{PrffSCprt (t)} \begin{array}{cccc} R_1(t) & R_2(t) & \dots & R_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ Q_1(t) & Q_2(t) & \dots & Q_n(t) \end{array}$$ is the process of fuzzy embedding fuzzy $R_i(t)$ into fuzzy $Q_i(t)$, (i = 1, …, n), simultaneously.

Definition B.2.2.4. Parallel dynamic fuzzy fcapacity $\widetilde{Q(t)}=(Q_1(t)|\mu_{\widetilde{Q(t)}}(Q_1(t)), Q_2(t)|\mu_{\tilde{Q}(t)}(Q_2(t)), \dots, Q_n(t)|\mu_{\widetilde{Q(t)}}(Q_n(t)))$ fuzzy containing itself as an element of the first type is the process of parallel fuzzy containing fuzzy $\widetilde{Q(t)}$ in $\widetilde{Q(t)}$

$$\text{PrffSCprt (t)} \begin{array}{cccc} Q_1(t) & Q_2(t) & \dots & Q_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ Q_1(t) & Q_2(t) & \dots & Q_n(t) \end{array}$$ Denote $PrffS_1Cf(t)\widetilde{Q(t)}$.

Definition B.2.2.5. Parallel fuzzy dynamic fuzzy fcapacity C(t) in itself of the second type is the process of parallel fuzzy containing fuzzy elements from which it can be parallel fuzzy generated. Let's denote $PrffS_2Cf(t)C(t)$.

Definition B.2.2.6. Parallel dynamic partial fuzzy fcapacity B(t) in itself of the third type is a process of partial parallel fuzzy containment of fuzzy B(t) in itself or parallel fuzzy embedding fuzzy elements from which it can be parallel fuzzy generated partially or both at the same time. Denote $PrffS_3Cf(t)B(t)$.

All parallel dynamic fuzzy fcapacities in a parallel fuzzy dynamic fuzzy self-space are, by definition, parallel dynamic fuzzy fcapacities in themselves. Parallel dynamic fuzzy fcapacity itself can manifest itself as parallel fuzzy dynamic fSCprt-capacity and ordinary parallel fuzzy dynamic fuzzy fcapacity . In these cases, the usual fuzzy measures and methods of topology are used.

Connection of fuzzy dynamic PrffSCprt – elements with parallel fuzzy dynamic fuzzy containment of oneself.

Consider third type of parallel fuzzy dynamic partial fuzzy containment of oneself.

For example, based on PrffSCprt (t) $\begin{array}{cccc} Q_1(t) & Q_2(t) & \dots & Q_n(t) \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{array}$, where $\widetilde{Q(t)}$=($Q_1(t)$| $\mu_{\widetilde{Q(t)}}(Q_1(t))$, $Q_2(t)|\mu_{\tilde{Q}(t)}(Q_2(t))$, ..., $Q_n(t)|\mu_{\widetilde{Q(t)}}(Q_n(t))$), i.e. n – elements at one point x = $(x_1,x_2,...,x_n)$, we can consider the parallel fuzzy dynamic fuzzy capacity in itself $PrffS_3Cf(t)$ with m elements from $\widetilde{Q(t)}$, m<n, which is process formed according to the form (1.1), that is, only m elements from $\widetilde{Q(t)}$ are in the structure

PrffSCprt (t) $\begin{array}{cccc} Q_1(t) & Q_2(t) & \dots & Q_n(t) \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{array}$.

Parallel fuzzy dynamic fuzzy containment of oneself of the third type can be formed for any other structure, not necessarily PrffSCprt, only through the obligatory reduction in the number of elements in the structure. In particular, using the forms (1.1.1) - (1.4), (2.1*) and analogs of forms (1.1.1) - (1.4) by type (2.1*). It is possible to introduce structures more complex than $PrffS_3f(t)$.

Parallel fuzzy dynamic fuzzy math itself.

1. The process of simultaneous parallel addition of fuzzy sets elements $\{\widetilde{g_i(t)}\}$ = $\left(g_{i_1}(t)|\mu_{\widetilde{g_i(t)}}(g_{i_1}(t)), g_{i_2}(t)|\mu_{\widetilde{g_i(t)}}(g_{i_2}(t)), \dots, g_{i_{m_j}}(t)|\mu_{\widetilde{g_i(t)}}(g_{i_{m_j}}(t))\right)$, i = 1,2,…,n, j =1,2,…,k are realized by PrffSCprt(t) $\begin{array}{cccc} \{\widetilde{g_1(t)}\}+ & \{\widetilde{g_2(t)}\}+ & \dots & \{\widetilde{g_n(t)}\}+ \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{array}$.
2. By analogy, for simultaneous multiplication:

PrffSCprt(t) $\begin{array}{cccc} \{\widetilde{g_1(t)}\}* & \{\widetilde{g_2(t)}\}* & \dots & \{\widetilde{g_n(t)}\}* \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{array}$.

2. Similarly for simultaneous execution of various operations:

PrffSCprt(t) $\begin{matrix} g_1(t)Q_1(t) & g_2(t)Q_2(t) & \dots & g_n(t)Q_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix}$, where $\widetilde{Q(t)}$=(Q₁(t)|

μ$_{\widetilde{Q(t)}}$(Q₁(t)), Q₂(t)|μ$_{\tilde{Q}(t)}$(Q₂(t)), ..., Qₙ(t)|μ$_{\widetilde{Q(t)}}$(Qₙ(t))), $Q_i(t)$-an operation, i = 1, …, n, $\widetilde{g(t)}$=($g_1(t)$|μ$_{\widetilde{g(t)}}$($g_1(t)$), $g_2(t)$|μ$_{\widetilde{g(t)}}$($g_2(t)$), ..., $g_n(t)$|μ$_{\widetilde{g(t)}}$($g_n(t)$)).

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

PrffSCprt(t) $\begin{matrix} F_1(t)g_1(t) & F_2(t)g_2(t) & \dots & F_n(t)g_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix}$, where $\widetilde{F(t)}$=($F_1(t)$|μ$_{\widetilde{F(t)}}$

($F_1(t)$), $F_2(t)$|μ$_{\tilde{F}(t)}$($F_2(t)$), ..., $F_n(t)$|μ$_{\widetilde{F(t)}}$($F_n(t)$))), $F_i(t)$ is an operator, i = 1, …, n.

4. Parallel fuzzy dynamic arithmetic itself for fuzzy containments of oneself will be similar: Parallel fuzzy dynamic addition - $PrffS_1Cf(t)\{\widetilde{g(t)}+\}$, (or $PrffS_3Cf(t)\{\widetilde{g(t)}+\}$ for the third type), Parallel fuzzy dynamic multiplication $PrffS_1Cf(t)\{\widetilde{g(t)}*\}$, ($PrffS_3Cf(t)\{\widetilde{g(t)}*\}$).

5. Similarly with different operations: $PrffS_1Cf(t)\{\widetilde{g(t)}\ \widetilde{Q(t)}\}$, ($PrffS_3Cf(t)\{\widetilde{g(t)}\ \widetilde{Q(t)}\}$) and with different operators: $PrffS_1Cf(t)\{\widetilde{F(t)}\widetilde{g(t)}\}$, ($PrffS_3Cf(t)\{\widetilde{F(t)}\widetilde{g(t)}\}$).

6. PrffSCprt (t) $\begin{matrix} A_1(t) & A_2(t) & \dots & A_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ B_1(t) & B_2(t) & \dots & B_n(t) \end{matrix}$ gives the result

PrffSCrt (t) $\begin{matrix} A_1(t) & A_2(t) & \dots & A_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ B_1(t) & B_2(t) & \dots & B_n(t) \end{matrix}$ =

$\{\sum_{i=1}^{n} A_i(t) \cup B_i(t) - A_i(t) \cap B_i(t)\ , \sum_{i=1}^{n} D_i(t)\}$, for fuzzy sets $A_i(t)$, $B_i(t)$, where $D_i(t)$ is fuzzy self-set for $A_i(t) \cap B_i(t)$ with v_{i1}, (i = 1, 2, …, n). The same is true for structures if they are treated as fuzzy sets,

7. $\begin{matrix} C_1(t) & C_2(t) & \dots & C_m(t) \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} \\ D_1(t) & D_2(t) & \dots & D_m(t) \end{matrix}$ PrffSCrt(t) =

$$\left\{ \sum_{i=1}^{m} Q_i(t) + \begin{matrix} \{\} & \{\} & & \{\} \\ v_{12} & v_{22} & \dots & v_{m2} \\ \mu_{12} & \mu_{22} & & \mu_{m2} \\ D_1(t) - D_1(t) \cap C_1(t) & D_2(t) - D_2(t) \cap C_2(t) & \dots & D_2(t) - D_2(t) \cap C_2(t) \end{matrix} \text{PrffSCrt} \atop \sum_{i=1}^{m} \left(C_i(t) - D_i(t) \cap C_i(t) \right) - (D_i(t) - D_i(t) \cap C_i(t)) \right\}$$

for fuzzy sets $C_i(t)$, $D_i(t)$, where $Q_i(t)$ is fuzzy oself-set for $\left(D_i(t) \cap C_i(t)\right)$ (i = 1, 2, …, m) [14].

8. Similarly, for fuzzy dynamic PrffSCprt-derivatives, fuzzy dynamic PrffSCprt-integrals, fuzzy dynamic PrffSCprt-lim, parallel fuzzy dynamic fuzzy self-derivatives, parallel fuzzy dynamic fuzzy self-integrals
9. Denote parallel fuzzy dynamic fuzzy self-(parallel fuzzy dynamic fuzzy self-Q(t)) through parallel fuzzy dynamic fuzzy self^2-Q(t) , pffSC(t)(n,Q(t))= parallel fuzzy dynamic fuzzy self-(parallel fuzzy dynamic fuzzy self-(…((parallel fuzzy dynamic fuzzy self)-Q(t)))) = (parallel fuzzy dynamic fuzzy self^n)-Q(t) for n-multiple parallel fuzzy dynamic fuzzy self.

Remark B.2.2.1. Then the notation

$$\begin{matrix} C_1(t) & C_2(t) & \dots & C_m(t) \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} \\ D_1(t) & D_2(t) & \dots & D_m(t) \end{matrix} \text{PrffSCprt(t)} \begin{matrix} A_1(t) & A_2(t) & \dots & A_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ B_1(t) & B_2(t) & \dots & B_n(t) \end{matrix},$$

where fuzzy $A_1(t)$ fits into fuzzy $B_1(t)$ with type of containment v_{11} and measure of fuzziness μ_{11}, fuzzy $A_2(t)$ fits into fuzzy $B_2(t)$ with type of containment v_{21} and measure of fuzziness μ_{21}, …, fuzzy $A_n(t)$ fits into fuzzy $B_n(t)$ with type of containment v_{n1} and measure of fuzziness μ_{n1}, fuzzy $D_1(t)$ is forced out of fuzzy $C_1(t)$ with type of expelling v_{12} and measure of fuzziness μ_{12}, fuzzy $D_2(t)$ is forced out of fuzzy $C_2(t)$ with type of expelling v_{22} measure of fuzziness μ_{22}, …, fuzzy $D_m(t)$ is forced out of fuzzy $C_m(t)$ with type of expelling v_{m2} measure of fuzziness μ_{m2} simultaneously. It is fuzzy dynamic PrffSCprt-containment of fuzzy $A_i(t)$ in fuzzy $B_i(t)$ and fuzzy dynamic PrffSCprt-displacement of fuzzy $D_j(t)$ from fuzzy $C_j(t)$ simultaneously, (i = 1, 2, …, n, j = 1, 2, …, m). The result of this process will be described by the expression

$$\begin{matrix} C_1(t) & C_2(t) & \dots & C_m(t) \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} \\ D_1(t) & D_2(t) & \dots & D_m(t) \end{matrix} \text{PrffSCrt(t)} \begin{matrix} A_1(t) & A_2(t) & \dots & A_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ B_1(t) & B_2(t) & \dots & B_n(t) \end{matrix}$$

PrffSCrt(t) $\begin{matrix} B_1(t) & B_2(t) & \dots & B_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ B_1(t) & B_2(t) & \dots & B_n(t) \end{matrix}$ will mean $PrffS_1Cf(t)B(t)$.

$\begin{matrix} C_1(t) & C_2(t) & \dots & C_m(t) \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} \\ C_1(t) & C_2(t) & \dots & C_m(t) \end{matrix}$ PrffSCprt(t) denotes the parallel fuzzy dynamic expelling fuzzy $\widetilde{C(t)}=(C_1(t)|\mu_{\widetilde{C(t)}}(C_1(t)), C_2(t)|\mu_{\tilde{C}(t)}(C_2(t)), \dots, C_n(t)|\mu_{\widetilde{C(t)}}(C_n(t)))$ oneself out of oneself, $\begin{matrix} A_1(t) & A_2(t) & \dots & A_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ A_1(t) & A_2(t) & \dots & A_n(t) \end{matrix}$ PrffSCprt(t) $\begin{matrix} A_1(t) & A_2(t) & \dots & A_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ A_1(t) & A_2(t) & \dots & A_n(t) \end{matrix}$ —simultaneous parallel fuzzy dynamic containment fuzzy $\widetilde{A(t)}=(A_1(t)|\mu_{\widetilde{A(t)}}(A_1(t)), A_2(t)|\mu_{\tilde{A}(t)}(A_2(t)), \dots, A_n(t)|\mu_{\widetilde{A(t)}}(A_n(t)))$ of oneself in oneself and parallel fuzzy dynamic expelling fuzzy $\widetilde{A(t)}$ oneself out of oneself. $\begin{matrix} A_1(t) & A_2(t) & \dots & A_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ B_1(t) & B_2(t) & \dots & B_n(t) \end{matrix}$ PrffSCprt(t) will be called parallel fuzzy dynamic anti- fcapacity from oneself. For example, "white hole" in physics is such simple anti- fcapacity.

We may consider the following axiom: any fcapacity is the fcapacity of oneself. This is for each energy fcapacity .

About fuzzy dynamic PrffSCprt and $PrffS_3Cf(t)$ programming.

The ideology of fuzzy dynamic PrffSCprt and $PrffS_3Cf(t)$ can be used for programming:

1. The process of simultaneous assignment of the expressions $\widetilde{p(t)}=(p_1(t)|\mu_{\widetilde{p(t)}}(p_1(t)), p_2(t)|\mu_{\widetilde{p(t)}}(p_2(t)), \ldots, p_n(t)|\mu_{\widetilde{p(t)}}(p_n(t)))$ to the variables $\widetilde{x(t)}=(x_1(t)|\mu_{\widetilde{x(t)}}(x_1(t)), x_2(t)|\mu_{\tilde{x}(t)}(x_2(t)), \ldots, x_n(t)|\mu_{\widetilde{x(t)}}(x_n(t)))$ is implemented through

$$\text{PrffSCprt(t)} \quad \begin{array}{cccc} x_1(t) := & x_2(t) := & \ldots & x_n(t) := \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ p_1(t) & p_2(t) & \ldots & p_n(t) \end{array} .$$

2. The process of simultaneous check the set of conditions $\widetilde{u(t)}=(u_1(t)|\mu_{\widetilde{u(t)}}(u_1(t)), u_2(t)|\mu_{\widetilde{u(t)}}(u_2(t)), \ldots, u_n(t)|\mu_{\widetilde{u(t)}}(u_n(t)))$ for a set of expressions $\widetilde{B(t)}=(B_1(t)|\mu_{\widetilde{B(t)}}(B_1(t)), B_2(t)|\mu_{\tilde{B}(t)}(B_2(t)), \ldots, B_n(t)|\mu_{\widetilde{B(t)}}(B_n(t)))$ is implemented through

$$\text{PrffSCprt(t)} \quad \begin{array}{cccc} IF\{B_1(t)u_1(t)\}\ then & IF\{B_2(t)u_2(t)\}\ then & \ldots & IF\{B_n(t)u_n(t)\}\ then \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ w_1(t) & w_2(t) & \ldots & w_n(t) \end{array}$$

here w(t) = $(w_1(t), w_2(t), \ldots, w_n(t))$. can be any.

3. Similarly for loop operators and others.

$PrffS_3Cf(t)$– software operators will differ only in that the aggregates $\{\widetilde{u(t)}\},\{\widetilde{p(t)}\},\{\widetilde{B(t)}\},\{\widetilde{x(t)}\}$ will be formed from corresponding processes PrffSCprt(t) for the above-mentioned programming operators through form (1.1) or forms (1.1.1) - (.1.4), (2.1*) and analogs of forms (1.1.1) – (1.4) by type (2.1*) for more complex operators.

Remark B.2.2.2. It is the parallel fuzzy containment of oneself in oneself that can “give birth” to the parallel fuzzy capacities in itself – that is what parallel self-organization is.

Remark B.2.2.3.

$$\mathrm{PrffSCprt(t)}\begin{array}{ccc} \mathrm{PrffSCprt(t)}\begin{array}{cccc} B_1(t) & B_2(t) & \cdots & B_n(t) \\ v_{11} & v_{21} & \cdots & v_{n1} \\ \mu_{11} & \mu_{21} & \cdots & \mu_{n1} \\ B_1(t) & B_2(t) & \ldots & B_n(t) \end{array} & \mathrm{PrffSCprt(t)}\begin{array}{cccc} B_1(t) & B_2(t) & \cdots & B_n(t) \\ v_{11} & v_{21} & \cdots & v_{n1} \\ \mu_{11} & \mu_{21} & \cdots & \mu_{n1} \\ B_1(t) & B_2(t) & \ldots & B_n(t) \end{array} & \ldots\mathrm{PrffSCprt(t)}\begin{array}{cccc} B_1(t) & B_2(t) & \cdots & B_n(t) \\ v_{11} & v_{21} & \cdots & v_{n1} \\ \mu_{11} & \mu_{21} & \cdots & \mu_{n1} \\ B_1(t) & B_2(t) & \ldots & B_n(t) \end{array} \\ \mu_{11} & \mu_{21} & \cdots \quad \mu_{n1} \\ \mathrm{PrffSCprt(t)}\begin{array}{cccc} B_1(t) & B_2(t) & \cdots & B_n(t) \\ v_{11} & v_{21} & \cdots & v_{n1} \\ \mu_{11} & \mu_{21} & \cdots & \mu_{n1} \\ B_1(t) & B_2(t) & \ldots & B_n(t) \end{array} & \mathrm{PrffSCprt(t)}\begin{array}{cccc} B_1(t) & B_2(t) & \cdots & B_n(t) \\ v_{11} & v_{21} & \cdots & v_{n1} \\ \mu_{11} & \mu_{21} & \cdots & \mu_{n1} \\ B_1(t) & B_2(t) & \ldots & B_n(t) \end{array} & \ldots\mathrm{PrffSCprt(t)}\begin{array}{cccc} B_1(t) & B_2(t) & \cdots & B_n(t) \\ v_{11} & v_{21} & \cdots & v_{n1} \\ \mu_{11} & \mu_{21} & \cdots & \mu_{n1} \\ B_1(t) & B_2(t) & \ldots & B_n(t) \end{array} \end{array}$$

can increase parallel fuzzy self- level of $\widetilde{B(t)}$=(B_1(t)|$\mu_{\widetilde{B(t)}}$(B_1(t)), B_2(t)|$\mu_{\tilde{B}(t)}$ (B_2(t)), ..., B_n(t)|$\mu_{\widetilde{B(t)}}$(B_n(t))).

Remark B.2.2.4. For example, the operator Prffitself is PrffS_1Cf(t).

Remark B.2.2.5. May be considered the following derivatives:

$$\frac{d\mathrm{PrffSCprt(t)}\begin{array}{cccc} A_1(t) & A_2(t) & \cdots & A_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \cdots & \mu_{n1} \\ B_1(t) & B_2(t) & \ldots & B_n(t) \end{array}}{dt}, \frac{d\begin{array}{cccc} C_1(t) & C_2(t) & \cdots & C_m(t) \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \cdots & \mu_{m2} \\ D_1(t) & D_2(t) & \ldots & D_m(t) \end{array}\mathrm{PrffSCrt(t)}\,)}{dt},$$

$$\frac{d\begin{array}{cccc} C_1(t) & C_2(t) & \cdots & C_m(t) \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \cdots & \mu_{m2} \\ D_1(t) & D_2(t) & \ldots & D_m(t) \end{array}\mathrm{PrffSCrt(t)}\begin{array}{cccc} A_1(t) & A_2(t) & \cdots & A_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \cdots & \mu_{n1} \\ B_1(t) & B_2(t) & \ldots & B_n(t) \end{array}}{dt}, \frac{dPrffS_i\mathrm{Cf(t)}}{dt}, \ i=1,2,3.$$

Remark B.2.2.6. It is the parallel fuzzy containment of oneself in itself as an element that can be interpreted as parallel fuzzy dynamic fuzzy capacities in itself.

Remark B.2.2.7. Not every fuzzy fcapacity parallel fuzzy containing itself as an element will manifest itself as a sedentary parallel fuzzy fcapacity or parallel fuzzy fcapacity.

PrffSCprt – elements for continual sets.

Earlier, we considered finite-dimensional discrete PrffSCprt-elements and ffCself-capacities in itself as an element. Here we believe some continual PrffSCprt-elements and continual parallel ffCself-capacities in themselves as an element.

Definition B.2.3.1. The fuzzy dynamic fuzzy set of continual elements $\tilde{u}$=(u_1|$\mu_{\tilde{u}}$ (u_1), u_2|$\mu_{\tilde{u}}$(u_2), ..., u_n|$\mu_{\tilde{u}}$(u_n)) at one point x = $(x_1,x_2,...,x_n)$ of space X will be called continual PrffSCprt – element, and such a point in space will be called parallel ffcapacity of the continual PrffSCprt – element. We will denote $\text{PrffSCprt}\begin{matrix} u_1 & u_2 & u_n \\ v_{11} & v_{21} & \dots v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$.

Definition B.2.3.2. An ordered fuzzy dynamic fuzzy set of continual elements at one point in space is called an ordered continual PrffSCprt–element.

It's allowed to sum continual PrffSCprt – elements: : $\text{PrffSCprt}\begin{matrix} u_1 & u_2 & u_n \\ v_{11} & v_{21} & \dots v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix} +$

$\text{PrffSCprt}\begin{matrix} b_1 & b_2 & b_n \\ v_{11} & v_{21} & \dots v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix} = \text{PrffSCprt}\begin{matrix} u_1 \cup b_1 & u_2 \cup b_2 & \dots & u_n \cup b_n \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix}$, where some or any elements may be ordered continual elements. It's allowed to multiply continual PrffSCprt – elements: $\text{PrffSCprt}\begin{matrix} u_1 & u_2 & u_n \\ v_{11} & v_{21} & \dots v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix} * \text{PrffSCprt}\begin{matrix} b_1 & b_2 & b_n \\ v_{11} & v_{21} & \dots v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix} =$

$\text{PrffSCprt}\begin{matrix} u_1 \cap b_1 & u_2 \cap b_2 & \dots & u_n \cap b_n \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix}$.

Definition B.2.3.3. The continual PrffCSelf-capacity A in itself as an element of the first type is the continual fcapacity parallel fuzzy containing itself as an element. Denote PrS_1CffA. $PrffS_1CfA = \text{PrffSCrt}\begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ A_1 & A_2 & \dots A_n \end{matrix}$.

Definition B.2.3.4. The ordered continual PrffCSelf-capacity A in itself as an element of the first type is the ordered continual fcapacity parallel containing itself as an element. Denote $\overrightarrow{PrffS_1CfA}$.

For example, $PrffSCprt\begin{matrix} \sin\infty & tg(-\infty) & \dots & \sin(-\infty) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix} =$

$PrffSCprt\begin{matrix} \uparrow I \downarrow_{-1}^{1} & \downarrow I \uparrow_{-\infty}^{\infty} & \dots & \downarrow I \uparrow_{-1}^{1} \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix}$, don't confuse with values of these functions.

Definition B.2.3.5. The continual PrffCSelf-capacity A in itself, as an element of the second type, is the capacity parallel fuzzy containing fuzzy continual elements from which it can be parallel fuzzy generated. Let's denote $PrffS_2CfA$.

An example of continual ffCself- capacity in itself as an element of the second type is a living organism since it contains the programs: DNA and RNA.

Definition B.2.3.6. Partial continual PrffCSelf-capacity in itself as an element of the third type is called continual PrffCSelf-capacity in itself as an element that partially parallel fuzzy contains itself or parallel fuzzy contains elements from which it can be parallel fuzzy generated in part or both simultaneously. Denote $PrffS_3f$.

All continual capacities in PrffCSelf-space are continual PrffCSelf-capacities in itself as an element by definition. The continual PrffCSelf-capacities in itself as an element may appear as continual PrffSCrt- capacities and usual continual fuzzy capacities. In these cases, there are used typical fuzzy measure and topology methods.

The connection of continual PrffSCprt – elements with continual PrffCSelf-capacities in themselves as an element.

Consider a third type of continual PrffCSelf- fcapacity in itself as an element. For example, based on $PrffSCprt\begin{matrix} u_1 & u_2 & & u_n \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix}$, where $\tilde{u}$=($u_1|\mu_{\tilde{u}}(u_1)$, $u_2|\mu_{\tilde{u}}(u_2)$, ..., $u_n|\mu_{\tilde{u}}(u_n)$), i.e. n - continual elements at one point x = (x_1,x_2,...,x_n), The continual

PrffCSelf- fcapacity in itself as an element with m continual elements from $\tilde{g}$, at m<n, can be considered as $PrffS_3\mathsf{C}f$, which is formed by the form (1.1), i.e., only m continual elements are located in the structure PrffSCprt$\begin{matrix} u_1 & u_2 & u_n \\ v_{11} & v_{21} & \cdots v_{n1} \\ \mu_{11} & \mu_{21} & \ldots \mu_{n1} \\ x_1 & x_2 & \ldots x_n \end{matrix}$.

Continual ffCself-capacities in itself as an element of the third type can be formed for any other structure, not necessarily PrffSCprt, only by obligatory reducing the number of continual elements in the structure. In particular, using the forms (1.1.1) - (1.4), (2.1*) and analogs of forms (1.1.1) - (1.4) by type (2.1*). Structures more complex than $PrffS_3\mathsf{C}f$ can be introduced.

Mathematics Prfitself for continual elements.

1.Simultaneous parallel addition of the fuzzy sets continual elements$\tilde{g}$=($g_1|\mu_{\tilde{g}}(g_1)$, $g_2|\mu_{\tilde{g}}(g_2)$, ..., $g_n|\mu_{\tilde{g}}(g_n)$), i = 1,2,...,n, j = 1,2,...,k, is implemented using

$$\text{PrffSCprt} \begin{matrix} \{g_1\}\cup & \{g_2\}\cup & \cdots & \{g_n\}\cup \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ x_1 & x_2 & \ldots & x_n \end{matrix}.$$

2. By analogy, for simultaneous multiplication:

$$\text{PrffSCprt} \begin{matrix} \{g_1\}\cap & \{g_2\}\cap & \cdots & \{g_n\}\cap \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ w_1 & w_2 & \ldots & w_n \end{matrix}.$$

3. Similarly for simultaneous execution of various operations:

$$\text{PrffSCprt} \begin{matrix} \{g_1Q_1\} & \{g_2Q_2\} & \cdots & \{g_nQ_n\} \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ w_1 & w_2 & \ldots & w_n \end{matrix}$$

, , where $\tilde{Q}$=($Q_1|\mu_{\tilde{Q}}(Q_1)$, $Q_2|\mu_{\tilde{Q}}(Q_2)$, ..., $Q_n|\mu_{\tilde{Q}}(Q_n)$). Q_i -an operation, i = 1, …, n.

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

$$\text{PrffSCprt}\begin{matrix} \{F_1 g_1\} & \{F_2 g_2\} & \dots & \{F_n g_n\} \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ w_1 & w_2 & \dots & w_n \end{matrix}$$

, , where $\tilde{F}$=($F_1|\mu_{\tilde{F}}(F_1)$, $F_2|\mu_{\tilde{F}}(F_2)$, …, $F_n|\mu_{\tilde{F}}(F_n)$). F_i is an operator, i = 1, …, n.

5. The arithmetic itself for parallel continual fuzzy capacities in themselves will be similar: addition - $PrffS_1Cf\{g+\}$, (or $PrffS_3Cf\{g+\}$) for the third type), multiplication $PrffS_1Cf\{g*\}$, ($PrffS_3Cf\{g*\}$).
6. Similarly with different operations: $PrffS_1Cf\{gQ\}$, ($PrffS_3Cf\{gQ\}$), and with different operators: $PrffS_1Cf\{Fg\}$, ($PrffS_3Cf\{Fg\}$).
7. $$\text{PrffSCrt}\begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \dots\mu_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix} \quad -$$

 the result of the parallel fuzzy containment operator. For continual fuzzy sets A_i, B_i, (i = 1, 2, …, n), we have

$$\text{PrffSCrt}\begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \dots\mu_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix} = \left\{\sum_{i=1}^{n} A_i \cup B_i - A_i \cap B_i \, , \sum_{i=1}^{n} D_i\right\}$$

, where D_i is self-(fuzzy set) for $A_i \cap B_i$ with v_{i1} (i = 1, 2, …, n). There is the same for structures if they are considered as continual fuzzy sets, for fuzzy sets C_i, D_i

$$\begin{matrix} C_1 & C_2 & \dots & C_m \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} \\ D_1 & D_2 & \dots & D_m \end{matrix}\text{PrffSCrt}=$$

$$\left\{ \begin{matrix} \sum_{i=1}^{m} Q_i + & \begin{matrix} \{\,\} & \{\,\} & & \{\,\} \\ v_{12} & v_{22} & \dots & v_{m2} \\ \mu_{12} & \mu_{22} & & \mu_{m2} \\ D_1 - D_1 \cap C_1 & D_2 - D_2 \cap C_2 & \dots & D_m - D_m \cap C_m \end{matrix} & \text{PrffSCrt} \\ & \sum_{i=1}^{m}\left(C_i - D_i \cap C_i\right) - (D_i - D_i \cap C_i) & \end{matrix} \right\}$$

, where Q_i is oself-(fuzzy set) for $\left(D_i \cap C_i\right)$(i = 1, 2, …, m) [14].

Remark B.2.3.1. $\begin{matrix} C_1 & C_2 & \dots & C_m \\ \mu_{12}^{v_{12}} & \mu_{22}^{v_{22}} & \dots & \mu_{m2}^{v_{m2}} \\ D_1 & D_2 & \dots & D_m \end{matrix}$ PrffSCprt, where continual fuzzy D_1 is forced out of continual fuzzy C_1 with type of expelling v_{12} and measure of fuzziness μ_{12}, continual fuzzy D_2 is forced out of continual fuzzy C_2 with type of expelling v_{22} and measure of fuzziness μ_{22}, …, continual fuzzy D_m is forced out of continual fuzzy C_m with type of expelling v_{m2} and measure of fuzziness μ_{m2}.

$\begin{matrix} C_1 & C_2 & \dots & C_m \\ \mu_{12}^{v_{12}} & \mu_{22}^{v_{22}} & \dots & \mu_{m2}^{v_{m2}} \\ D_1 & D_2 & \dots & D_m \end{matrix}$ PrffSCprt $\begin{matrix} A_1 & A_2 & \dots & A_n \\ \mu_{11}^{v_{11}} & \mu_{21}^{v_{21}} & \dots & \mu_{n1}^{v_{n1}} \\ B_1 & B_2 & \dots & B_n \end{matrix}$, where continual fuzzy A_1 fits into continual fuzzy B_1 with type of containment v_{11} and measure of fuzziness μ_{11}, continual fuzzy A_2 fits into continual fuzzy B_2 with type of containment v_{21} and measure of fuzziness μ_{21}, …, continual fuzzy A_n fits into continual fuzzy B_n with type of containment v_{n1} and measure of fuzziness μ_{n1}, continual fuzzy D_1 is forced out of continual fuzzy C_1 with type of expelling v_{12} and measure of fuzziness μ_{12}, continual fuzzy D_2 is forced out of continual fuzzy C_2 with type of expelling v_{22} and measure of fuzziness μ_{22}, …, continual fuzzy D_m is forced out of continual fuzzy C_m with type of expelling v_{m2} and measure of fuzziness μ_{m2} simultaneously.

We can consider the concept of a continual PrffSCprt - element as PrffSCprt $\begin{matrix} A_1 & A_2 & \dots & A_n \\ \mu_{11}^{v_{11}} & \mu_{21}^{v_{21}} & \dots & \mu_{n1}^{v_{n1}} \\ B_1 & B_2 & \dots & B_n \end{matrix}$, where continual fuzzy A_1 fits into continual fuzzy B_1 with type of containment v_{11} and measure of fuzziness μ_{11}, continual fuzzy A_2 fits into continual fuzzy B_2 with type of containment v_{21} and measure of fuzziness μ_{21}, …, continual fuzzy A_n fits into continual fuzzy B_n with type of containment v_{n1} and measure of fuzziness μ_{n1}. Then PrffSCprt $\begin{matrix} B_1 & B_2 & \dots & B_n \\ \mu_{11}^{v_{11}} & \mu_{21}^{v_{21}} & \dots & \mu_{n1}^{v_{n1}} \\ B_1 & B_2 & \dots & B_n \end{matrix}$ will mean $\mathrm{PrffS_1Cf}$ B.

These elements are used for PrffSCprt-coding, PrffSCprt translation, coding PrffCSelf, and translation PrffCSelf for networks, which is suitable for electric current of ultrahigh frequency. More complex elements can be considered as continual sets of numbers with their " activation " in mutual directions. For example, ranges of function values, particularly those representing the shape of lightning. Fuzzy differential fuzzy geometry can be applied here. Also, n-dimensional elements can be considered. The space of such elements is Banach space if we introduce the usual norm for functions or vectors. We call this space - ffCSelb-space. Then we introduce the scalar product for functions or vectors and get the Hilbert space. We call this space ffCSelh-space. In particular, one can try to describe some processes with these elements by differential equations and use methods from [4]. You can also try to optimize and research some processes with these elements using the techniques from [5]. Let's introduce operators for transforming fcapacity to PrffCSelf- fcapacity in itself as an element: $PrfQ_1SC(A)$ transforms fuzzy A to $PrffS_1CA$, $PrfQ_0SC(B)$ transforms fuzzy B to $\begin{matrix} B_1 & B_2 & \dots B_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \dots\mu_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix}$ PrffSCprt .

Can be considered Q($\begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \dots\mu_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix}$ PrffSCprt $\begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \dots\mu_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix}$), Q-any operator.

Fuzzy dynamic continual PrffSCprt – elements.

Definition B.2.4.1. The process of fuzzy containing the fuzzy set of continual elements $\widetilde{g(t)}=(g_1(t)|\mu_{\widetilde{g(t)}}(g_1(t)), g_2(t)|\mu_{\tilde{g}(t)}(g_2(t)), \dots, g_n(t)|\mu_{\widetilde{g(t)}}(g_n(t)))$ into one point x= $(x_1,x_2,\dots,x_n)$ of the space X at time will be called the dynamic continual PrffSCprt – element. We will denote PrffSCprt(t) $\begin{matrix} g_1(t) & g_2(t) & \dots g_n(t) \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$.

Definition B.2.4.2. The process of containing an ordered fuzzy set of continual elements at one point in space is called fuzzy dynamic continual ordered PrffSCprt – element.

It is allowed to sum fuzzy dynamic continual PrffSCprt – elements:

$$\mathrm{PrffSCprt}(t)\begin{array}{cccc} g_1(t) & g_2(t) & \dots & g_n(t) \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{array} + \mathrm{PrffSCprt}(t)\begin{array}{cccc} b_1(t) & b_2(t) & \dots & b_n(t) \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{array} =$$

$$\mathrm{PrffSCprt}(t)\begin{array}{cccc} g_1(t)\cup b_1(t) & g_2(t)\cup b_2(t) & \dots & g_n(t)\cup b_1(t) \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{array}.$$

.

It’s allowed to multiply dynamic continual PrffSCprt – elements:

$$\mathrm{PPrffSCprt}(t)\begin{array}{cccc} g_1(t) & g_2(t) & \dots & g_n(t) \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{array} * \mathrm{PrffSCprt}(t)\begin{array}{cccc} b_1(t) & b_2(t) & \dots & b_n(t) \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{array} =$$

$$\mathrm{PrffSCprt}(t)\begin{array}{cccc} g_1(t)\cap b_1(t) & g_2(t)\cap b_2(t) & \dots & g_n(t)\cap b_1(t) \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{array}$$

.Parallel fuzzy dynamic fuzzy continual containment of oneself in oneself as an element.

Definition B.2.4.3. The fuzzy dynamic continual PrffSCprt- fcapacity

$$\mathrm{PrffSCprt}(t)\begin{array}{cccc} R_1(t) & R_2(t) & \dots & R_n(t) \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ Q_1(t) & Q_2(t) & \dots & Q_n(t) \end{array}$$

is the process of fuzzy embedding fuzzy continual $R_i(t)$ into fuzzy continual $Q_i(t)$, $(i = 1, \dots, n)$.

Definition B.2.4.4. Parallel dynamic fuzzy continual fcapacity $\widetilde{Q(t)}=(Q_1(t)|\mu_{\widetilde{Q(t)}}(Q_1(t)), Q_2(t)|\mu_{\widetilde{Q(t)}}(Q_2(t)), \dots, Q_n(t)|\mu_{\widetilde{Q(t)}}(Q_n(t)))$ fuzzy containing itself as an element of the first type is the process of parallel fuzzy containing fuzzy $\widetilde{Q(t)}$ in

$$\widetilde{Q(t)}\quad \mathrm{PrffSCprt}(t)\begin{array}{cccc} Q_1(t) & Q_2(t) & \dots & Q_n(t) \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ Q_1(t) & Q_2(t) & \dots & Q_n(t) \end{array}$$

. Denote $PrffS_1Cf(t)\widetilde{Q(t)}$.

Definition B.2.4.5. The fuzzy dynamic parallel containment fuzzy continual C(t) of oneself of the second type parallel fuzzy contains the fuzzy continual elements from which it can be parallel fuzzy generated. Denote $PrffS_2Cf(t)C(t)$.

Definition B.2.4.6. The partial parallel fuzzy dynamic containment fuzzy continual B(t) of oneself of the third type is the process of partial parallel fuzzy embedding fuzzy continual B(t) into oneself or parallel fuzzy embedding fuzzy continual elements from which it can be parallel fuzzy generated in part or both simultaneously. Denote $PrffS_3Cf(t)B(t)$.

The connection of dynamic continual PrffSCprt – elements with parallel fuzzy dynamic fuzzy continual containment of oneself in oneself as an element.

Let us consider the partial parallel fuzzy dynamic fuzzy continual containment of oneself in oneself as an element of the third type. For example, based on

PrffSCprt (t) $\begin{matrix} Q_1(t) & Q_2(t) & \dots & Q_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix}$, where $\widetilde{Q(t)}=(Q_1(t)|\mu_{\widetilde{Q(t)}}(Q_1(t)), Q_2(t)|\mu_{\tilde{Q}(t)}(Q_2(t)),\dots, Q_n(t)|\mu_{\widetilde{Q(t)}}(Q_n(t)))$, i.e. n – continual elements at one point x = $(x_1, x_2, \dots, x_n)$, we can consider the parallel fuzzy dynamic fuzzy continual capacity in itself $PrffS_3Cf(t)$ with m elements from $\widetilde{Q(t)}$, m<n, which is process formed according to the form (1.1), that is, only m elements from $\widetilde{Q(t)}$ are in the structure PrffSCprt (t) $\begin{matrix} Q_1(t) & Q_2(t) & \dots & Q_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix}$.

Parallel fuzzy dynamic fuzzy continual containments of oneself in oneself as an element of the third type can be formed for any other structure, not necessarily PrffSCprt, only by necessarily reducing the number of fuzzy continual elements in the structure. In particular, with the help of forms (1.1.1) - (1.4), (2.1*) and analogs of forms (1.1.1) - (1.4) by type (2.1*).

It is possible to introduce structures more complex than $PrffS_3Cf(t)$.

Parallel fuzzy dynamic fuzzy continual mathematics self.

1. The process of simultaneous parallel addition of fuzzy sets continual elements $\{\widetilde{g_i(t)}\} = \left(g_{i_1}(t)|\mu_{\widetilde{g_i(t)}}(g_{i_1}(t)), g_{i_2}(t)|\mu_{\widetilde{g_i(t)}}(g_{i_2}(t)), \ldots, g_{i_{m_j}}(t)|\mu_{\widetilde{g_i(t)}}(g_{i_{m_j}}(t))\right)$, i = 1,2,…,n, j =1,2,…,k are realized by PrffSCprt(t)
$$\begin{array}{cccc} \{\widetilde{g_1(t)}\} \cup & \{\widetilde{g_2(t)}\} \cup & \ldots & \{\widetilde{g_n(t)}\} \cup \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ x_1 & x_2 & \ldots & x_n \end{array}.$$
2. By analogy, for simultaneous multiplication:
$$\text{PrffSCprt(t)} \begin{array}{cccc} \{\widetilde{g_1(t)}\} \cap & \{\widetilde{g_2(t)}\} \cap & \ldots & \{\widetilde{g_n(t)}\} \cap \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ x_1 & x_2 & \ldots & x_n \end{array}.$$
3. Similarly for simultaneous execution of various operations:
$$\text{PrffSCprt(t)} \begin{array}{cccc} g_1(t)Q_1(t) & g_2(t)Q_2(t) & \ldots & g_n(t)Q_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ x_1 & x_2 & \ldots & x_n \end{array}$$
, where $\widetilde{Q(t)}=(Q_1(t)|\mu_{\widetilde{Q(t)}}(Q_1(t)), Q_2(t)|\mu_{\tilde{Q}(t)}(Q_2(t)), \ldots, Q_n(t)|\mu_{\widetilde{Q(t)}}(Q_n(t)))$, $Q_i(t)$-an operation, i = 1, …, n, $\widetilde{g(t)}=(g_1(t)|\mu_{\widetilde{g(t)}}(g_1(t)), g_2(t)|\mu_{\widetilde{g(t)}}(g_2(t)), \ldots, g_n(t)|\mu_{\widetilde{g(t)}}(g_n(t)))$.
4. Similarly, for the simultaneous execution of various operators:
$$\text{PrffSCprt(t)} \begin{array}{cccc} F_1(t)g_1(t) & F_2(t)g_2(t) & \ldots & F_n(t)g_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ x_1 & x_2 & \ldots & x_n \end{array}$$
, where $\widetilde{F(t)}=(F_1(t)|\mu_{\widetilde{F(t)}}(F_1(t)), F_2(t)|\mu_{\tilde{F}(t)}(F_2(t)), \ldots, F_n(t)|\mu_{\widetilde{F(t)}}(F_n(t)))$, $F_i(t)$ is an operator, i = 1, …, n.
5. Parallel fuzzy dynamic arithmetic itself for continual containments of oneself will be similar: Parallel fuzzy dynamic addition - $PrffS_1Cf(t)\{\widetilde{g(t)} \cup\}$, (or $PrffS_3Cf(t)\{\widetilde{g(t)} \cup\}$ for the third type), Parallel fuzzy dynamic multiplication $PrffS_1Cf(t)\{\widetilde{g(t)} \cap\}$, ($PrffS_3Cf(t)\{\widetilde{g(t)} \cap\}$).

6. Similarly with different operations: $PrffS_1Cf(t)\{\widetilde{g(t)}\ \widetilde{Q(t)}\}$, ($PrffS_3Cf(t)\{\widetilde{g(t)}\ \widetilde{Q(t)}\}$) and with different operators: $PrfS_1Cf(t)\{\widetilde{F(t)}\widetilde{g(t)}\}$, ($PrfS_3Cf(t)\{\widetilde{F(t)}\widetilde{g(t)}\}$).

7. PrffSCprt (t) $\begin{array}{cccc} A_1(t) & A_2(t) & \ldots & A_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ B_1(t) & B_2(t) & \ldots & B_n(t) \end{array}$ gives the result

PrffSCrt (t) $\begin{array}{cccc} A_1(t) & A_2(t) & \ldots & A_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ B_1(t) & B_2(t) & \ldots & B_n(t) \end{array}$ =

$\{\sum_{i=1}^{n} A_i(t) \cup B_i(t) - A_i(t) \cap B_i(t)\ ,\sum_{i=1}^{n} D_i(t)\}$, for fuzzy continual sets $A_i(t)$, $B_i(t)$, where $D_i(t)$ is self-(fuzzy set) for $A_i(t) \cap B_i(t)$ with v_{i1}, (i = 1, 2, …, n). The same is true for structures if they are treated as fuzzy continual sets,

$\begin{array}{cccc} C_1(t) & C_2(t) & \ldots & C_m(t) \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \ldots & \mu_{m2} \\ D_1(t) & D_2(t) & \ldots & D_m(t) \end{array}$ PrffSCrt(t) =

$$\left\{\begin{array}{c} \sum_{i=1}^{m} Q_i(t) + \begin{array}{cccc} \{\,\} & \{\,\} & & \{\,\} \\ v_{12} & v_{22} & \ldots & v_{m2} \\ \mu_{12} & \mu_{22} & & \mu_{m2} \\ D_1(t) - D_1(t) \cap C_1(t) & D_2(t) - D_2(t) \cap C_2(t) & \ldots & D_2(t) - D_2(t) \cap C_2(t) \end{array} \text{PrffSCrt} \\ \sum_{i=1}^{m} \left(C_i(t) - D_i(t) \cap C_i(t)\right) - (D_i(t) - D_i(t) \cap C_i(t)) \end{array}\right\}$$

for fuzzy continual sets $C_i(t)$, $D_i(t)$, where $Q_i(t)$ is oself-(fuzzy set) for $\left(D_i(t) \cap C_i(t)\right)$(i = 1, 2, …, m) [14].

8. Similarly, for dynamic continual PrffSCprt-derivatives, dynamic continual PrffSCprt-integrals, dynamic continual PrffSCprt-lim, fuzzy dynamic continual PrfCself-derivatives, fuzzy dynamic continual PrfCself-integrals

9. Denote fuzzy dynamic continual PrfCself-(fuzzy dynamic continual PrfCself-Q(t)) through fuzzy dynamic continual $Prself^2$-Q(t), PrfS(t)(n,Q(t))= fuzzy dynamic continual PrfCself-(fuzzy dynamic continual PrfCself-(…(fuzzy

dynamic continual PrfCself-Q(t)))) = fuzzy dynamic continual PrfCself^n-Q(t) for n-multiple fuzzy dynamic continual PrfCself.

Remark B.2.4.1. The parallel fuzzy dynamic continual PrffSCprt-displacement will be denote by $\begin{matrix} C_1(t) & C_2(t) & \dots & C_m(t) \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} \\ D_1(t) & D_2(t) & \dots & D_m(t) \end{matrix}$ PrffSCprt(t) , where fuzzy continual $D_1(t)$ is forced out of fuzzy continual $C_1(t)$ with type of expelling v_{12} and measure of fuzziness μ_{12}, fuzzy continual $D_2(t)$ is forced out of fuzzy continual $C_2(t)$ with type of expelling v_{22} measure of fuzziness μ_{22}, …, fuzzy continual $D_m(t)$ is forced out of fuzzy continual $C_m(t)$ with type of expelling v_{m2} measure of fuzziness μ_{m2} simultaneously, the result of this process will be described by the expression

$\begin{matrix} C_1(t) & C_2(t) & \dots & C_m(t) \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} \\ D_1(t) & D_2(t) & \dots & D_m(t) \end{matrix}$ PrfSrt(t). Then the notation

$$\begin{matrix} C_1(t) & C_2(t) & \dots & C_m(t) \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} \\ D_1(t) & D_2(t) & \dots & D_m(t) \end{matrix} \text{ PrffSCprt(t) } \begin{matrix} A_1(t) & A_2(t) & \dots & A_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ B_1(t) & B_2(t) & \dots & B_n(t) \end{matrix},$$

where fuzzy continual $A_1(t)$ fits into fuzzy continual $B_1(t)$ with type of containment v_{11} and measure of fuzziness μ_{11}, fuzzy continual $A_2(t)$ fits into fuzzy continual $B_2(t)$ with type of containment v_{21} and measure of fuzziness μ_{21}, …, fuzzy continual $A_n(t)$ fits into fuzzy continual $B_n(t)$ with type of containment v_{n1} and measure of fuzziness μ_{n1}, fuzzy continual $D_1(t)$ is forced out of fuzzy continual $C_1(t)$ with type of expelling v_{12} and measure of fuzziness μ_{12}, fuzzy continual $D_2(t)$ is forced out of fuzzy continual $C_2(t)$ with type of expelling v_{22} measure of fuzziness μ_{22}, …, fuzzy continual $D_m(t)$ is forced out of fuzzy continual $C_m(t)$ with type of expelling v_{m2} measure of fuzziness μ_{m2} simultaneously. It is fuzzy dynamic continual PrffSCprt-containment of fuzzy continual $A_i(t)$ in fuzzy continual $B_i(t)$ and fuzzy dynamic continual PrffSCprt-displacement of fuzzy continual $D_j(t)$ from fuzzy continual $C_j(t)$ simultaneously, (i = 1, 2, …, n, j = 1, 2, …, m). The result of this process will be described by the expression

$$\begin{array}{cccc} C_1(t) & C_2(t) & \dots & C_m(t) \\ v_{12} & v_{22} & \dots & v_{m2} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} \\ D_1(t) & D_2(t) & \dots & D_m(t) \end{array} \text{PrffSCprt(t)} \begin{array}{cccc} A_1(t) & A_2(t) & \dots & A_n(t) \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ B_1(t) & B_2(t) & \dots & B_n(t) \end{array}.$$

$$\text{PrffSCrt (t)} \begin{array}{cccc} B_1(t) & B_2(t) & \dots & B_n(t) \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ B_1(t) & B_2(t) & \dots & B_n(t) \end{array}$$ will mean $S_1Cf(t)B(t)$.

$$\begin{array}{cccc} C_1(t) & C_2(t) & \dots & C_m(t) \\ v_{12} & v_{22} & \dots & v_{m2} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} \\ C_1(t) & C_2(t) & \dots & C_m(t) \end{array}$$ PrffSCprt(t) denotes the parallel fuzzy dynamic expelling fuzzy continual $\widetilde{C(t)}$=($C_1(t)|\mu_{\widetilde{C(t)}}(C_1(t))$, $C_2(t)|\mu_{\tilde{C}(t)}(C_2(t))$, …, $C_n(t)|\mu_{\widetilde{C(t)}}(C_n(t))$) oneself out of oneself,

$$\begin{array}{cccc} A_1(t) & A_2(t) & \dots & A_n(t) \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ A_1(t) & A_2(t) & \dots & A_n(t) \end{array} \text{PrffSCprt(t)} \begin{array}{cccc} A_1(t) & A_2(t) & \dots & A_n(t) \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ A_1(t) & A_2(t) & \dots & A_n(t) \end{array}$$ —simultaneous parallel fuzzy dynamic containment fuzzy continual $\widetilde{A(t)}$=($A_1(t)|\mu_{\widetilde{A(t)}}(A_1(t))$, $A_2(t)|\mu_{\tilde{A}(t)}(A_2(t))$, …, $A_n(t)|\mu_{\widetilde{A(t)}}(A_n(t))$) of oneself in oneself and parallel fuzzy dynamic expelling fuzzy continual A(t) oneself out of oneself.

$$\begin{array}{cccc} A_1(t) & A_2(t) & \dots & A_n(t) \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ B_1(t) & B_2(t) & \dots & B_n(t) \end{array}$$ PrffSCprt(t) will be called parallel fuzzy dynamic anti-(fuzzy continual fcapacity) from oneself.

Remark B.2.4.2. PrffSCprt(t) $$\begin{array}{cccc} A_1(t) & A_2(t) & \dots & A_n(t) \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ A_1(t) & A_2(t) & \dots & A_n(t) \end{array}$$ can be interpreted as a multilayer shell of a self-object from the first layer, which is specified by $A_1(t)$ to the nth, which is specified by $A_n(t)$. Based on this, the atomic model can be interpreted as

$$\text{PrffSCprt(t)}\begin{array}{ccccc} \cup\{p,n\} & A_1(t) & A_2(t) & \dots & A_n(t) \\ v_{01} & v_{11} & v_{21} & & v_{n1} \\ \mu_{01} & \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ \textit{position of atomic nucleus} & A_1(t) & A_2(t) & \dots & A_n(t) \end{array}, \{p,n\} -$$

protons, neutrons, $A_i(t)$ correspond to orbitals, i = 1, ..., n.

$$\text{PrffSCprt(t)}\begin{array}{ccccc} \textit{physical body of a living organism} & U_1(t) & U_2(t) & \dots & U_n(t) \\ v_{01} & v_{11} & v_{21} & & v_{n1} \\ \mu_{01} & \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ \textit{position of physical body} & U_1(t) & U_2(t) & \dots & U_n(t) \end{array}$$

- model of a living organism with the multilayer shell of a living organism from the first layer, which is specified by $U_1(t)$ to the nth, which is specified by $U_n(t)$. In humans:

$$\text{PrffSCprt(t)}\begin{array}{cccc} \textit{energy fibers that create a physical body of a living organism} & U_1(t) & \dots & U_n(t) \\ v_{01} & v_{11} & & v_{n1} \\ \mu_{01} & \mu_{11} & \dots & \mu_{n1} \\ \textit{energy fibers that create a physical body of a living organism} & U_1(t) & \dots & U_n(t) \end{array}.$$

You can also try to consider the operator PrffSCprt $\begin{array}{ccccc} B_1 & \dots & B_i^a & \dots & B_n \\ v_{11} & & v_{i1} & \dots & v_{n1} \\ \mu_{11} & & \mu_{i1} & \dots & \mu_{n1} \\ r_1 & \dots & r_i^a & & r_n \end{array}$, which

represents the interpretation of the position of the assemblage point on the cocoon of a living organism, r_j is its potential position, B_j is a potential set of subtle energies in this position (i = 1, ..., i-1, i+1, ..., n), r_i^a is its active position, B_i^a is an active set of subtle energies in this position, i = 1, ..., n.

Connection of fuzzy dynamic continual PrffSCprt – elements with target weights with parallel fuzzy dynamic fuzzy continual containment of oneself with target weights.

Consider a third type of parallel partial fuzzy dynamic fuzzy continual containment of oneself with target weights g(t). For example, based on PrffSCprt(t)

$\begin{array}{cccc} g_1(t)w(t) & g_2(t)w(t) & \dots & g_n(t)w(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{array}$ .where $\widetilde{g(t)}=(g_1(t)|\mu_{\widetilde{g(t)}}(g_1(t)), g_2(t)|\mu_{\widetilde{g(t)}}(g_2(t)), \dots,$

$g_n(t)|\mu_{\widetilde{g(t)}}(g_n(t)))$.

i.e. n - fuzzy continual elements with target weights{w(t)} at one point x = $(x_1,x_2,...,x_n)$, we can consider the fuzzy dynamic continual containment PrffS$_3$$Cf(t)\widetilde{g(t)}$w(t) of oneself with target weights with m fuzzy continual elements with target weights{w(t)} from $\widetilde{g(t)}$, m<n, which is the process of formation according to the form (1.1), i.e., only m fuzzy continual elements with target weights{w(t)} from $\widetilde{g(t)}$are located in the structure PrffS$_3$$Cf(t)\widetilde{g(t)}$w(t). Parallel fuzzy dynamic fuzzy containments of oneself with target weights of the third type can be formed for any other structure, not necessarily PrffSCprt, only by reducing the number of continual elements with target weights in the structure. In particular, using the forms (1.1.1) - (1.4), (2.1*) and analogs of forms (1.1.1) - (1.4) by type (2.1*). Structures more complex than PrffS$_3$$Cf(t)\widetilde{g(t)}$w(t) can be introduced.

Definition B.2.4.7. The parallel fuzzy dynamic embedding of fuzzy continual A(t) into itself with target weights {w(t)} of the first type is the process of parallel fuzzy embedding A(t) into A(t) with target weights. Denote $PrffS_1Cf(t)A(t)$w(t).

Definition 30. The parallel fuzzy dynamic containment of fuzzy continual C(t) itself into itself with target weights{w(t)} of the second type is the process of parallel fuzzy containment of the fuzzy continual elements from which it can be parallel fuzzy generated. Let's denote $PrffS_2Cf(t)C(t)$ w (t) .

Definition B.2.4.8. Partial parallel fuzzy dynamic containment of fuzzy continual B(t) itself into itself with target weights {w(t)} of the third type is the process of partial parallel fuzzy containment of fuzzy continual B(t) into itself or fuzzy continual elements from which it can be parallel fuzzy generated partially, or both at the same time. Denote $PrffS_3Cf(t)B(t)$ w (t) .

The usage of PrffSCprt-elements for networks.

A. Galushkin's comprehensive monograph [6] covers all aspects of networks, but traditional approaches go through classical mathematics, mainly through the usual correspondence operators. Here we consider a different approach - through a new mathematical process with parallel fuzzy containment operators, which, although they can be interpreted as the result of some correspondence operators, are not themselves correspondence operators. Parallel fuzzy containment operators are more convenient for networks. Also, the main emphasis was placed on using processors operating using triodes, which are generally not used in Sprt-networks. PrffSCprt-networks (SmnPrffSCprt) are a PrffSCprt-structure that can be built for the required weights. PrffSCprt-OS (PrffSCprt operating system) uses PrffSCprt-coding and PrffSCprt-translation. In the first one, coding is carried out through a 2-dimensional matrix-row (a, b), where the number b is the code of the action, and the number a is the code of the object of this action. PrffSCprt-coding (or PrffCSelf-coding) is implemented through a matrix consisting of 2 columns (in the continuous case, two intervals of numbers). Here, the source encoding is used for all matrix rows simultaneously. PrffSCprt-translation is carried out by inversion. In this case, PrffCSelf-coding and PrffCSelf-translation will be more stable. The target weights $g_i(t)$ in PrffSCprt(t)

$$\begin{array}{cccc} \textit{activation with} g_1(t) & \textit{activation with} g_2(t) & \dots & \textit{activation with} g_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ \text{SmnPrffSCprt} & \text{SmnPrffSCprt} & \dots & \text{SmnPrffSCprt} \end{array}$$ are chosen for

necessary tasks. We will not touch on the issues of applications, or network optimization. They are described in detail by Galushkin [6]. We will touch on the difference of this only for hierarchical complex networks. The same simple executing programs are in the cores of simple artificial neurons of type PrffSCprt (designation - mnPrffSCprt) for simple information processing. More complex executing programs are used for mnPrffSCprt nodes. PrffSCprt-threshold element

$$-\mathrm{sgn}(\mathrm{PrffSCprt}(t) \begin{array}{cccc} g_1(t)w_1(t) & g_2(t)w_2(t) & \dots & g_n(t)w_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{array}), \ x=(x_1, x_2, \dots, x_n) -$$

mnPrffSCprt, $\widetilde{W}(t)=(w_1(t)|\mu_{\widetilde{w(t)}}(w_1(t)), w_2(t)|\mu_{\widetilde{w(t)}}(w_2(t)), \dots, w_n(t)|\mu_{\widetilde{w(t)}}(w_n(t)))$.

– source signals values, $\{g(t)\} = (g_1(t), g_2(t), \dots, g_n(t))$ – PrffSCprt-synapses weights. The first level of mnPrffSCprt consists of simple mnPrffSCprt. The second level of mnPrffSCprt consists of CPrffS = PrffSCprt(t)

$$\begin{array}{cccc} \text{mnPrffSCprt} & \text{mnPrffSCprt} & \dots & \text{mnPrffSCprt} \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ D_1 & D_2 & \dots & D_n \end{array}$$ – PrffSCprt-node of mnPrffSCprt

in range D = ($D_1, D_2, \dots, D_n$), D- fcapacity for mnPrffSCprt node. The third level of mnPrffSCprt consists of PrffSCprt(t) $\begin{array}{cccc} \text{CPrffS} & \text{CPrffS} & \dots & \text{CPrffS} \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ D_1 & D_2 & \dots & D_n \end{array}$ -PrffSCprt^2- node of mnPrffSCprt in range D, thus D becomes fcapacity of itself in itself as an element for mnPrffSCprt. For our networks, it is sufficient to use PrffSCprt^2- nodes of mnPrffSCprt, but self-level is higher in living organisms, particularly PrffSCprt^n-, $n \geq 3$. The target structure or the corresponding program enters the target unit using alternating current. After that, all networks or parts of them are activated according to the indicative goal. It may appear that we are leaving the network ideology, but these networks are a complex hierarchy of different levels, like living organisms.

Remark B.2.5.0. A neural network can be thought of as a learnable parallel fuzzy dynamic operator.

Remark B.2.5.1. Traditional scientific approaches through classical mathematics make it possible to describe only at the usual energy level. Here we consider an approach that makes describing processes with finer energies possible.

mnPrffSCprt contains PrffSCprt(t)

$$\begin{array}{cccc} \text{ffceprogram}_1(t) & \text{ffceprogram}_2(t) & \dots & \text{ffceprogram}_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ \text{mnPrffSCprt} & \text{mnPrffSCprt} & \dots & \text{mnPrffSCprt} \end{array} \quad ff\text{ceprogram} -$$

executing program in PrffSCprt- OS. PrffSCprt-OS (or PrffCSelf-OS) is based on PrffSCprt-assembly language (or Prself-assembly language), which is based on assembly language through PrffSCprt-approach in turn, if the base of elements of PrffSCprt-networks is sufficient. The ffceprograms are in PrffSCprt-programming environments (or PrffCSelf-programming environments), but this question and PrffSCprt-networks base will be considered in the following monographs. In particular, ffceprograms may contain PrffSCprt- programming operators. In mnPrffSCprt cores, the constant memory PrffSCprt with correspondent ffceprograms depending on mnPrffSCprt.

The OS (operating system) and the principles and modes of operation of the PrffSCprt-networks for this programming are interesting. But this is already the material for the next publications.

Here is developed a helicopter model without a main and tail rotors based on PrffSCprt – physics and special neural networks with artificial neurons operating in normal and PrffSCprt-modes. Let's denote this model through SmnPrffSCprt. To do this, it's proposed to use mnPrffSCprt of different levels; for example, for the usual mode, mnPrffSCprt serves for the initial processing of signals and the transfer of information to the second level, etc., to the nodal center, then checked. In case of an anomaly - local PrffSCprt–mode with the desired "target weight" is realized in this section, etc., to the center. In the case of a monster during the test, SmnPrffSCprt is activated with the desired "target weight." Here are realized other tasks also. To reach the fself-energy level, the mode $Sprt_{\mathrm{SmnPrffSCprt}}^{\mathrm{SmnPrffSCprt}}$ is used. In normal mode, it's planned to carry out the movement of SmnPrffSCprt on jet propulsion by converting the energy of the emitted gases into a vortex to obtain additional thrust upwards. For this purpose, a spiral-shaped chute (with "pockets") is arranged at the bottom of the SmnPrffSCprt for the gases emitted by the jet engine, which first exit through a straight chute connected to the spiral one. There is drainage of exhaust gases outside the SmnPrffSCprt. SmnPrffSCprt is represented by a neural network that extends from the center of one of the main clusters of PrffSCprt - artificial neurons to the shell, turning into the body itself. Above the operator's cabin is the central core of the neural network and the target block, responsible for performing the "target weights" and auxiliary blocks, the functions and roles of which we will discuss further. Next is the space for the movement of the local vortex. The unit responsible for SmnPrffSCprt's actions is below the operator's cab. In PrffSCprt – mode, the entire network or its sections are PrffSCprt – activated to perform specific tasks, in particular, with "target weights." In the target, block used PrffSCprt -coding, PrffSCprt -translation for activation of all networks to "target weights" simultaneously, then –the reset of this PrffSCprt-coding after activation. Unfortunately, triodes are not suitable for PrffSCprt -neural networks. In the most primitive case, usual separators with corresponding resistances and cores for ffeprograms may be used instead triodes since there is no necessity to unbend the alternating current to direct. The PrffSCprt-operative memory belt is disposed around a central core of SmnPrffSCprt. There are PrffSCprt-coding, PrffSCprt-translation, and PrffSCprt-realize of eprograms and the programs from the archives without extraction, PrffSCprt-coding and PrffSCprt-translation may be used in high-intensity, ultra-short optical pulses laser of Nobel laureates 2018-year Gerard Mourou, Donna, Strickland. PrffSCprt – structure or an eprogram if one is present of needed «target weight» are taken in target block at PrffSCprt – activation of the networks. $Sprt_{activation}^{\mathrm{SmnPrffSCprt},f}$ derives SmnPrffSCprt to the self-level boundary with target weight f.

It's used an alternating current of above high frequency and ultra-violet light, which can work with PrffSCprt – structures in PrffSCprt–modes by its nature to activate the networks or some of its parts in PrffSCprt–modes and locally using PrffSCprt–mode. Above high frequently alternating current go through mercury bearers. That's why overheating does not occur. The power of the alternating current above high frequently increases considerably for the target block. The activation of all PrffSCprt-networks is realized to indicate "target weights."

Variable hierarchical fuzzy dynamical parallel structures (models) for fuzzy dynamic, singular, hierarchical fuzzy sets.

Here we will consider variable parallel structures (models), both discrete and continuous: a) with variable connections, b) with the variable backbone for links, c) generalized version; in particular, in variable structures (models), for example,

$$\begin{array}{cccc} C_1 & C_2 & \cdots & C_m \\ \mu_{12}^{v_{12}} & \mu_{22}^{v_{22}} & \cdots & \mu_{m2}^{v_{m2}} \\ D_1 & D_2 & \cdots & D_m \end{array} \mathrm{PrffSCprt(t)} \begin{array}{cccc} A_1 & A_2 & \cdots & A_n \\ \mu_{11}^{v_{11}} & \mu_{21}^{v_{21}} & \cdots & \mu_{n1}^{v_{n1}} \\ B_1 & B_2 & \cdots & B_n \end{array} =$$

$$\left\{ \begin{array}{l}
\left(\begin{array}{cccc} C_1 & C_2 & \cdots & C_m \\ \mu_{12}^{v_{12}} & \mu_{22}^{v_{22}} & \cdots & \mu_{m2}^{v_{m2}} \\ D_1 & D_2 & \cdots & D_m \end{array} \mathrm{PrffSCprt}, \quad q_2 \geq t \geq q_1 \right) | \mu_1 \\
\left(\begin{array}{cccc} B_1 & B_2 & \cdots & B_m \\ \mu_{12}^{v_{12}} & \mu_{22}^{v_{22}} & \cdots & \mu_{m2}^{v_{m2}} \\ D_1 & D_2 & \cdots & D_m \end{array} \mathrm{PrffSCprt} \begin{array}{cccc} A_1 & A_2 & \cdots & A_n \\ \mu_{11}^{v_{11}} & \mu_{21}^{v_{21}} & \cdots & \mu_{n1}^{v_{n1}} \\ B_1 & B_2 & \cdots & B_n \end{array}, q_3 \geq t > q_2 \right) | \mu_2 \\
\left(\begin{array}{cccc} C_1 & C_2 & \cdots & C_m \\ \mu_{12}^{v_{12}} & \mu_{22}^{v_{22}} & \cdots & \mu_{m2}^{v_{m2}} \\ D_1 & D_2 & \cdots & D_m \end{array} \mathrm{PrffSCprt} \begin{array}{cccc} A_1 & A_2 & \cdots & A_n \\ \mu_{11}^{v_{11}} & \mu_{21}^{v_{21}} & \cdots & \mu_{n1}^{v_{n1}} \\ B_1 & B_2 & \cdots & B_n \end{array}, q_4 \geq t > q_3 \right) | \mu_3 \quad (*_{B.2.3}), \\
\left(\mathrm{PrffSCprt} \begin{array}{cccc} A_1 & A_2 & \cdots & A_n \\ \mu_{11}^{v_{11}} & \mu_{21}^{v_{21}} & \cdots & \mu_{n1}^{v_{n1}} \\ B_1 & B_2 & \cdots & B_n \end{array}, q_5 \geq t > q_4 \right) | \mu_4 \\
\left(\begin{array}{cccc} \{\} & \{\} & \cdots & \{\} \\ \mu_{12}^{v_{12}} & \mu_{22}^{v_{22}} & \cdots & \mu_{m2}^{v_{m2}} \\ D_1 & D_2 & \cdots & D_m \end{array} \mathrm{PrffSCprt}, \quad t > q_5 \right) | \mu_5 \\
\cdots
\end{array} \right.$$

μ_i- measures of fuzziness, i = 1, ..., 5. In particular,

$$\begin{array}{cccc} B_1 & B_2 & \cdots & B_m \\ \mu_{12}^{v_{12}} & \mu_{22}^{v_{22}} & \cdots & \mu_{m2}^{v_{m2}} \\ D_1 & D_2 & \cdots & D_m \end{array} \mathrm{PrffSCprt} \begin{array}{cccc} A_1 & A_2 & \cdots & A_n \\ \mu_{11}^{v_{11}} & \mu_{21}^{v_{21}} & \cdots & \mu_{n1}^{v_{n1}} \\ B_1 & B_2 & \cdots & B_n \end{array}$$ can be interpreted as a fuzzy game:

player 1 fuzzy fits fuzzy A_i into fuzzy B_i, i = 1, 2, …, n, and the other fuzzy pushes fuzzy D_j out of fuzzy Bj, j = 1, 2, …, m at the same time.

The example of variable parallel hierarchy

$$\begin{matrix} C_1 & C_2 & \dots & C_m & & A_1 & A_2 & \dots A_n \\ v_{12} & v_{22} & & v_{m2} & & v_{11} & v_{21} & v_{n1} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} & \text{PrffSCprt(t)}_1 & \mu_{11} & \mu_{21} & \dots\mu_{n1} \\ D_1 & D_2 & \dots & D_m & & B_1 & B_2 & \dots B_n \end{matrix} = \; =$$

$$\begin{cases} \left(\begin{cases} \sum_{i=1}^{m} Q_i + \begin{matrix} \{\} & \{\} & & \{\} \\ v_{12} & v_{22} & \dots & v_{m2} \\ \mu_{12} & \mu_{22} & & \mu_{m2} \\ D_1 - D_1 \cap C_1 & D_2 - D_2 \cap C_2 & \dots & D_m - D_m \cap C_m \end{matrix} \text{PrffSCrt} \\ \sum_{i=1}^{m} (\,C_i - D_i \cap C_i) - (D_i - D_i \cap C_i) \end{cases}\right., \quad q_2 \geq t \geq q_1)|\mu_1 \\ (\sum_{i=1}^{n} (\begin{matrix} S_0^{1e} f B_i * \\ {}_{Q_i - B_i}^{B_i} S^1 t_{B_i}^{A_i - B_i} \end{matrix}), q_3 \geq \; t > q_2)|\mu_2 \\ \begin{matrix} S_{01}^{et} f B_i \end{matrix} \\ (\sum_{j=1}^{m} \sum_{i=1}^{n} (\begin{matrix} {}_{C_j - B_i}^{C_j - B_i} S_1 t_{B_i}^{A - B_i} \\ {}_{D_j - C_j - B_i}^{C_j - B_i} S_1 t_{B_i}^{A - B_i} \end{matrix} \quad) \quad , q_4 \geq \; t > q_3)|\mu_3 \\ (\begin{cases} \sum_{i=1}^{n} R_i \\ \sum_{i=1}^{n} A_i \cup B_i - A_i \cap B_i \end{cases}, , q_5 \geq \; t > q_4)|\mu_4 \\ (\begin{matrix} \{\} & \{\} & \dots & \{\} \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \dots & \mu_{m2} \\ D_1 & D_2 & \dots & D_m \end{matrix} \text{PrffSCrt}, \quad t > q_5)|\mu_5 \\ \dots \end{cases}$$

($*_{B.2.4}$),

Where μ_i- measures of fuzziness, i = 1, ..., 5, Q_i is oself-(fuzzy set) for $\left(D_j \cap C_j\right)$, D_j, C_j are fuzzy sets (j = 1, 2, …, m), [14], R_i is self-(fuzzy set) for $A_i \cap B_i$, A_i, B_i are fuzzy sets ,(i = 1, 2, …, n), $S_{01}^{et} f B$, ${}_{C-B}^{C-B} S_1 t_B^{A-B}$, ${}_{D-C-B}^{C-B} S_1 t_B^{A-B}$ are considered in [13], ${}_{Q-B}^{B} S^1 t_B^{A-B}$ is considered in [10].

In what follows, we will denote variable parallel fuzzy dynamic fuzzy structure (model) through PrffVSC, parallel fself-type variable fuzzy dynamic fuzzy structures (models) through PrffSVSC, and parallel foself-type variable fuzzy dynamic fuzzy structures (models) through PrffOSVSC.

Examples: a) discrete variable parallel fuzzy dynamic fuzzy structure

$$\begin{array}{cccc} C_1 & C_2 & \dots & C_m \\ D_1 & D_2 & \dots & D_m \\ A_1 & A_2 & \dots & A_n \\ B_1 & B_2 & \dots & B_n \end{array} \begin{array}{c} a \\ c \\ d \end{array} \begin{array}{c} b \\ PrffVSC \\ q \end{array} \begin{array}{c} g \\ w \\ r \end{array} \begin{array}{cccc} A_1 & A_2 & \dots & A_n \\ B_1 & B_2 & \dots & B_n \\ C_1 & C_2 & \dots & C_m \\ D_1 & D_2 & \dots & D_m \end{array}$$

Fig. B.2.2

c) continuous variable parallel fuzzy dynamic fuzzy structure

Fig.B.2.3.

Where a continuous set represents the rim of the Fig.B.2.3.

We introduce the notation $m_{PrffVCS_N}$– the number of elements, N - the number of connections between them in the discrete variable parallel 2-hierarchical fuzzy dynamic fuzzy structure PrffVSC. We introduce the notation $q_{PrffVCS_R}$– any, R - connections in $q_{PrffVCS_R}$ in the variable parallel fuzzy dynamic 2-hierarchical structure PrffVSC, in particular, $q_{PrffVCS_R}$, R can be fuzzy sets both discrete and continuous and discrete-continuous. We consider the functional c(Q), which gives a numerical value for the structurability of Q from the interval [0,1], where 0 corresponds to "no parallel fuzzy dynamic fuzzy structure"," and 1 corresponds to the value " parallel fuzzy dynamic fuzzy structure". Then for joint fuzzy dynamic fuzzy A, B: c(A+B)=c(A)+c(B)-c(A*B)+cS(D), D- parallel fself-type fuzzy structures from A*B, cS(x)- the value of PrffCSelf for parallel fself-type fuzzy structures x; for dependent parallel fuzzy dynamic fuzzy structures: c(A*B)=ca(A)*c(B/A)=c(B)*c(A/B), where c(B/A)- conditional structurability of the parallel fuzzy dynamic fuzzy structure B at the parallel fuzzy dynamic fuzzy structure A, c(A/B)- conditional fuzzy dynamic fuzzy structure of the parallel fuzzy dynamic fuzzy structure A at the parallel fuzzy dynamic structure fuzzy B. Adding inconsistent parallel fuzzy dynamic fuzzy structures: c(A+B) =c(A) + c(B). The formula of complete parallel fuzzy dynamic fuzzy structure: c(A)= $\sum_{k=1}^{n} c(B_k) * c(A/B_k)$, B_1, B_{2},.., B_n-full group of hypotheses- fuzzy containments: $\sum_{k=1}^{n} c(B_k)$=1("parallel fuzzy dynamic fuzzy structure"). PrffSCprt- structure of the first type for set of parallel fuzzy dynamic fuzzy structures A={A_1, A_2,…,A_n}:

PrffSCprt$\begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$, PrffSCprt $\begin{matrix} c(A_n) & c(A_n) & \dots c(A_n) \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$ - PrffSCprt-

structurability for these structures. It is possible to consider the parallel fuzzy dynamic fself-type fuzzy structure $PrffS_3CA$ with m parallel fuzzy dynamic fuzzy structures from A, at m<n, which is formed by the form (1.1), that is, only m parallel fuzzy dynamic fuzzy structures from A are located in the structure

PrffSCprt $\begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$. The same for parallel fuzzy dynamic fCself-type

fuzzy structurability $PrffS_3C${ c(A_1),c(A_2),…,c(A_n) .

Can be considered N-hierarchical parallel fuzzy structure: 1-level - elements; level 2 - connections between them, level 3 - relationships between elements of level 2, etc. up to level N+1. N-hierarchical parallel fuzzy structure: 1-level - A; 2-level -B, 3-level - C, etc. up to (N+!)- level, where A, B, C, … can be any in particular, by fuzzy actions, fuzzy sets, and others.

Can be considered discrete hierarchical parallel fuzzy structure, continuous hierarchical parallel fuzzy structure, and discrete-continuous hierarchical parallel fuzzy structure.

The example PrffQHSC=

$$HffSCprt_x\left\|\begin{matrix} \text{PrffSCprt} & \begin{matrix} \text{N–level of hierarchical fuzzy structure}_1 & \text{N–level of hierarchical fuzzy structure}_2 & \dots & \text{N–level of hierarchical fuzzy structure}_n \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix} \\ & \dots \\ \text{PrffSCprt} & \begin{matrix} \text{i–level of hierarchical fuzzy structure}_1 & \text{i–level of hierarchical fuzzy structure}_2 & \dots & \text{i–level of hierarchical fuzzy structure}_n \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix} \\ & \dots \\ \text{PrffSCprt} & \begin{matrix} \text{1–level of hierarchical fuzzy structure}_1 & \text{1–level of hierarchical fuzzy structure}_2 & \dots & \text{1–level of hierarchical fuzzy structure}_n \\ v_{11} & v_{21} & \dots & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix} \end{matrix}\right\|$$ -

N-hierarchical fuzzy structure compression into point x = (x_1,x_2,…,x_n).

Let fPrffC(N, PrffQHSC)= $\left.\mathrm{PrffQHSC}^{\mathrm{PrffQHSC}^{\mathrm{PrffQHSC}^{\cdots^{\mathrm{PrffQHSC}}}}}\right\}$-N levels

It can be considered PrffCSelf- PrffQHSC, fPrffC(y, PrffQHSC) for any y, fPrffC(PrffQHSC, PrffQHSC).

Parallel Compression Hierarchy Example:

1)

$$\mathrm{PrffSCprt}\begin{matrix} \mathrm{PrffSCprt}\begin{matrix}()&()&\overset{\cdots}{}()\\()&()&\cdots()\\()&()&\cdots()\\()&()&\cdots()\end{matrix} & \mathrm{PrffSCprt}\begin{matrix}()&()&\overset{\cdots}{}()\\()&()&\cdots()\\()&()&\cdots()\\()&()&\cdots()\end{matrix} & \cdots & \mathrm{PrffSCprt}\begin{matrix}()&()&\overset{\cdots}{}()\\()&()&\cdots()\\()&()&\cdots()\\()&()&\cdots()\end{matrix}\\ () & () & \cdots & ()\\ () & () & & () \end{matrix}$$

$$\mathrm{PrffSCprt}\begin{matrix}()&()&\overset{\cdots}{}()\\()&()&\cdots()\\()&()&\cdots()\\()&()&\cdots()\end{matrix}+B \quad \mathrm{PrffSCprt}\begin{matrix}()&()&\overset{\cdots}{}()\\()&()&\cdots()\\()&()&\cdots()\\()&()&\cdots()\end{matrix}+B \quad \cdots \quad \mathrm{PrffSCprt}\begin{matrix}()&()&\overset{\cdots}{}()\\()&()&\cdots()\\()&()&\cdots()\\()&()&\cdots()\end{matrix}+B$$

=

$$\left(\begin{matrix} \mathrm{PrffSCprt}\begin{matrix} \mathrm{PrffSCprt}\begin{matrix}()&()&\overset{\cdots}{}()\\()&()&\cdots()\\()&()&\cdots()\\()&()&\cdots()\end{matrix} & \mathrm{PrffSCprt}\begin{matrix}()&()&\overset{\cdots}{}()\\()&()&\cdots()\\()&()&\cdots()\\()&()&\cdots()\end{matrix} & \cdots & \mathrm{PrffSCprt}\begin{matrix}()&()&\overset{\cdots}{}()\\()&()&\cdots()\\()&()&\cdots()\\()&()&\cdots()\end{matrix}\\ \mathrm{PrffSCprt}\begin{matrix}()&()&\overset{\cdots}{}()\\()&()&\cdots()\\()&()&\cdots()\\()&()&\cdots()\end{matrix} & \mathrm{PrffSCprt}\begin{matrix}()&()&\overset{\cdots}{}()\\()&()&\cdots()\\()&()&\cdots()\\()&()&\cdots()\end{matrix} & \cdots & \mathrm{PrffSCprt}\begin{matrix}()&()&\overset{\cdots}{}()\\()&()&\cdots()\\()&()&\cdots()\\()&()&\cdots()\end{matrix}\end{matrix}\\ \mathrm{PrffSCprt}\begin{matrix} \mathrm{PrffSCprt}\begin{matrix}()&()&\overset{\cdots}{}()\\()&()&\cdots()\\()&()&\cdots()\\()&()&\cdots()\end{matrix} & \mathrm{PrffSCprt}\begin{matrix}()&()&\overset{\cdots}{}()\\()&()&\cdots()\\()&()&\cdots()\\()&()&\cdots()\end{matrix} & \cdots & \mathrm{PrffSCprt}\begin{matrix}()&()&\overset{\cdots}{}()\\()&()&\cdots()\\()&()&\cdots()\\()&()&\cdots()\end{matrix}\\ v_{11} & v_{21} & & v_{n1}\\ \mu_{11} & \mu_{21} & \cdots & \mu_{n1}\\ B & B & \cdots & B\end{matrix}\end{matrix}\right)$$

Let's consider two versions: 1) containment is interpreted through the concept of containment, and 2) fcapacity is interpreted through the concept of fuzzy containment as a rest point of fuzzy containment. PrffCSelf-containment is interpreted as a rest point of PrffCSelf-containment. We consider the functional ca(Q), which gives a numerical value for the fuzzy accommodation of Q from the interval [0,1], where 0 corresponds to " parallel fuzzy containment", and one corresponds to the value " parallel fuzzy fcapacity . " Then for joint fuzzy dynamic fuzzy A, B: ca(A+B)=ca(A)+ca(B)-ca(A*B)+caS(D), D- PrffCSelf-containment for A*B, caS(x)- the value of PrffCSelf-fcapacity for PrffCSelf-containment of x; for dependent parallel fuzzy containments:

ca(A*B)=ca(A)*ca(B/A)=ca(B)*ca(A/B), where ca(B/A)- conditional fuzzy accommodation of the parallel fuzzy containment B at the parallel fuzzy containment A, ca(A/B)- conditional parallel fuzzy fcapacity of the parallel fuzzy containment A at the parallel fuzzy containment B. Adding the parallel fuzzy fcapacity values of inconsistent parallel fuzzy containments:

ca(A+B)=ca(A)+ca(B). The formula of complete parallel fuzzy fcapacity : ca(A)= $\sum_{k=1}^{n} ca\,(B_k) * ca(A/B_k)$, $B_1, B_2,..,B_n$-full group of hypotheses-(parallel fuzzy containments): $\sum_{k=1}^{n} ca\,(B_k)$=1("parallel fuzzy fcapacity "). PrffSCprt-containment for set of parallel fuzzy containments A={$A_1, A_2,\ldots,A_n$}: PrffSCprt $\begin{matrix} A_1 & A_2 & \ldots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots\mu_{n1} \\ x_1 & x_2 & \ldots x_n \end{matrix}$, PrffSCprt $\begin{matrix} ca(A_1) & ca(A_2) & \ldots ca(A_n) \\ v_{11} & v_{21} & \ldots v_{n1} \\ \mu_{11} & \mu_{21} & \ldots \mu_{n1} \\ x_1 & x_2 & \ldots x_n \end{matrix}$ - PrffSCprt- accommodation for these parallel fuzzy containments. It is possible to consider the PrffCSelf-containment $PrffS_3CA$ with m fuzzy containments from A, at m<n, which is formed by the form (1.1), that is, only m parallel fuzzy containments from A are located in the parallel containment PrffSCprt(t)$\begin{matrix} A_1 & A_2 & \ldots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots\mu_{n1} \\ x_1 & x_2 & \ldots x_n \end{matrix}$. The same for PrffCSelf- accommodation - $PrffS_3C\{$ ca(A_1),ca(A_2),…,ca(A_n).

We consider the functional h(Q), which gives a numerical value for the parallel fuzzy dynamic fuzzy hierarchization of fuzzy Q from the interval [0,1], where 0 corresponds to "no parallel fuzzy dynamic fuzzy hierarchy," and 1 corresponds to the value " parallel fuzzy dynamic fuzzy hierarchy. " Then for joint parallel fuzzy dynamic hierarchies fuzzy A, B: h(A+B)=h(A)+h(B)-h(A*B)+hfSC(D), D-PrffCSelf- hierarchy from A*B, hfSC (x)- the value of PrffCSelf- hierarchy for PrffCSelf- hierarchy x; for dependent parallel fuzzy dynamic fuzzy hierarchies: h(A*B) = ha(A)*h(B/A) = h(B)*h(A/B), where h(B/A)- conditional parallel fuzzy dynamic hierarchization of the parallel fuzzy dynamic hierarchy fuzzy B at the parallel fuzzy dynamic hierarchy fuzzy A, h(A/B)- conditional parallel fuzzy dynamic fuzzy hierarchy of the parallel fuzzy dynamic hierarchy fuzzy A at the parallel fuzzy dynamic structure fuzzy B. Adding the parallel fuzzy dynamic fuzzy hierarchy values of inconsistent parallel fuzzy dynamic fuzzy hierarchies: h(A+B)=h(A)+h(B). The formula of complete parallel fuzzy dynamic fuzzy hierarchy: h(A)=$\sum_{k=1}^{n} h\left(B_k\right) * h(A/B_k)$, B_1, B_2, .., B_n-full group of hypotheses-(parallel fuzzy dynamic fuzzy hierarches): $\sum_{k=1}^{n} h\left(B_k\right)$=1("parallel fuzzy dynamic fuzzy hierarchy").

PrffSCprt- structure for set of parallel fuzzy dynamic fuzzy hierarches A={A_1, A_2,…,A_n}: PrffSCprt(t)$\begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & \dots v_{n1} \\ \mu_{11} & \mu_{21} & \mu_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$, PrffSCprt(t) $\begin{matrix} h(A_1) & h(A_2) & \dots h(A_n) \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$ - PrffSCprt- hierarchization for these parallel fuzzy dynamic fuzzy hierarches. It is possible to consider the PrffCSelf- hierarchy $PrffS_3CA$ with m parallel fuzzy dynamic fuzzy hierarches from A, at m<n, which is formed by the form (1.1), that is, only m parallel fuzzy dynamic fuzzy hierarches from A are located in the parallel fuzzy dynamic hierarchy PrffSCprt(t)$\begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & \dots v_{n1} \\ \mu_{11} & \mu_{21} & \mu_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$. The same for PrffCSelf- hierarchization $PrffS_3C${ h(A_1),h(A_2),…,h(A_n).Can be considered

PrffSCprt(t) $\begin{matrix} \{ca(A_1),c(A_1),h(A_1)\} & \{ca(A_2),c(A_2),h(A_2)\} & \dots\{ca(A_n),c(A_n),h(A_n)\} \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} \quad \dots & \mu_{n1} \\ x_1 & x_2 \quad \dots & x_n \end{matrix}$.

Very interesting next parallel fuzzy dynamic fuzzy hierarchy type:

$\begin{matrix} \text{hierarchy } A_1 & \text{hierarchy } A_2 & \dots\text{hierarchy } A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} \quad \dots & \mu_{n1} \\ \text{hierarchy } A_1 & \text{hierarchy } A_2 & \dots\text{hierarchy } A_n \end{matrix}$ PrffSCprt(t) $\begin{matrix} \text{hierarchy } A_1 & \text{hierarchy } A_2 & \dots\text{hierarchy } A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} \quad \dots & \mu_{n1} \\ \text{hierarchy } A_1 & \text{hierarchy } A_2 & \dots\text{hierarchy } A_n \end{matrix}$.

You can enter special operator PrffCCprt to work with fuzzy dynamic fuzzy structures: $\begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix}$ PrffCCprt $\begin{matrix} R_1 & R_2 & R_m \\ v_{12} & v_{22} & \dots v_{m2} \\ \mu_{12} & \mu_{22} & \dots \mu_{m2} \\ Q_1 & Q_2 & \dots Q_n \end{matrix}$ fuzzy structures fuzzy R_j with the structure from fuzzy Q_j with type of structuring v_{j2} and measure of fuzziness μ_{j2}, fuzzy unstructures fuzzy A_i by the structure fuzzy B_i with type of unstructuring v_{i1} and measure of fuzziness μ_{i1}, simultaneously, (i = 1, 2, …, n, j = 1, 2, …, m).
Very interesting next parallel fuzzy dynamic fuzzy structure type:

$$\begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ A_1 & A_2 & \dots A_n \end{matrix} \text{PrffCCrt(t)} \begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ A_1 & A_2 & \dots A_n \end{matrix},$$

You can enter special parallel operator PrfHCprt to work with fuzzy dynamic fuzzy hierarches: $\begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix}$ PrffHCprt $\begin{matrix} R_1 & R_2 & R_m \\ v_{12} & v_{22} & \dots v_{m2} \\ \mu_{12} & \mu_{22} & \dots \mu_{m2} \\ Q_1 & Q_2 & \dots Q_n \end{matrix}$

fuzzy hierarchizes fuzzy R_j with the fuzzy hierarchy from fuzzy Q_j with type of hierarching v_{j2} and measure of fuzziness μ_{j2}, fuzzy unhierarchizes fuzzy A_i from the fuzzy hierarchy fuzzy B_i with type of unhierarching v_{i1} and measure of fuzziness μ_{i1}, simultaneously, (i = 1, 2, …, n, j = 1, 2, …, m).

Program operators PrffSCprt, PrfftSpr.

Here it is supposed to use a symbiosis of parallel fuzzy actions and conventional calculations through sequential actions. This must be done through PrffSCprt-Networks in one of the central departments of which a conventional computer system is located. The parallel processor is itself prffceprogram with direct parallel computing not through serial computing.

Using conventional PrffSCprt -coding by a parallel computer system, through a Target-block with a PrffSCprt -program operator -

PrffSCprt(t) $\begin{matrix} g_1(t)w_1(t) & g_2(t)w_2(t) & \dots & g_n(t)w_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ activation & activation & \dots & activation \end{matrix}$, it will be possible to obtain the execution of the parallel fuzzy actions $(g_1(t), g_2(t), \ldots, g_n(t))$ with the desired target weights w(t)=($w_1(t), w_2(t), \ldots, w_n(t)$). Each code for a neural network from a conventional computer we "bind" (match) to the corresponding value of current (or voltage). For PrffSCprt-coding and PrffSCprt-translation may be use alternating current of ultrahigh frequency or high-intensity ultra-short optical pulses laser of Nobel laureates 2018-year Gerard Mourou, Donna Strickland, or a combination of them. For the desired fuzzy action, for example, using the direct parallel fuzzy program of operator PrffSCprt(t)

$$\begin{matrix} (\text{UHF AC})_1(t) := Q_1(t) & (\text{UHF AC})_2(t) := Q_2(t) & \ldots & (\text{UHF AC})_n(t) := Q_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ activation & activation & \ldots & activation \end{matrix}$$

, we simultaneously enter the desired fuzzy set of codes $Q_i(t)$, i = 1, 2, …, n, using a microwave current or high-intensity ultra-short optical pulses laser in Target-block.

In a conventional computer, the process of sequential calculation takes a certain time interval, in a directly parallel calculation by a neural network, the calculation is instantaneous, but it occupies a certain region of the space of calculation objects.

Consider the types of direct parallel program operators:

1) PrffSCprt-program operators
2) PrfftSCpr-program operators

Here are some of the PrffSCprt-program operators:

1) Simultaneous fuzzy assignment of the fuzzy expressions $\tilde{p}=(p_1|\mu_{\tilde{p}}(p_1), p_2|\mu_{\tilde{p}}(p_2), \ldots, p_n|\mu_{\tilde{p}}(p_n))$ to the variables $\tilde{x}=(x_1|\mu_{\tilde{x}}(x_1), x_2|\mu_{\tilde{x}}(x_2), \ldots, x_n|\mu_{\tilde{x}}(x_n))$.

   This is implemented via PrffSCprt $\begin{matrix} x_1 := & x_2 := & \ldots & x_n := \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ p_1 & p_2 & \ldots & p_n \end{matrix}$.

2) Simultaneous fuzzy checking the fuzzy set of conditions $\tilde{g}=(g_1|\mu_{\tilde{g}}(g_1), g_2|\mu_{\tilde{g}}(g_2), \ldots, g_n|\mu_{\tilde{g}}(g_n))$ for the fuzzy set of expressions $\tilde{B}=(B_1|\mu_{\tilde{B}}(B_1), B_2|\mu_{\tilde{B}}(B_2), \ldots, B_n|\mu_{\tilde{B}}(B_n))$. Implemented via PrffSCprt

$$\begin{array}{cccc} IF\{B_1g_1\}\ then & IF\{B_2g_2\}\ then & \dots & IF\{B_ng_n\}\ then \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ w_1 & w_2 & \dots & w_n \end{array}$$, where w_i (i = 1, …, n)

can be anything.

3) Similarly for loop operators and others.

PrffSCprt-algorithm Examples:

1) Simultaneous addition and simultaneous parallel fuzzy multiplication of fuzzy sets elements (See point 1, 2 in **Math PrffCSelf**
2) parallel fuzzy pattern recognition: PrffSCprt

$$\begin{array}{cccc} IF\{q_1 \in image\ archive_1\}\ then & IF\{q_2 \in image\ archive_2\}\ then & \dots & IF\{q_n \in image\ archive_n\}\ then \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ Name\ of\ q_1 & Name\ of\ q_2 & \dots & Name\ of\ q_n \end{array}$$

The example of PrffSCprt-program is

$$\text{PrffSCprt}\begin{array}{cccc} \text{PrffSCprt}\begin{array}{ccc} x_1 := & x_2 := & \dots\ x_n := \\ v_{11} & v_{21} & \dots\ v_{n1} \\ \mu_{11} & \mu_{21} & \dots\ \mu_{n1} \\ p_1 & p_2 & \dots\ p_n \end{array} & \text{PrffSCprt}\begin{array}{cccc} IF\{B_1g_1\}\ then & IF\{B_2g_2\}\ then & \dots & IF\{B_ng_n\}\ then \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ w_1 & w_2 & \dots & w_n \end{array} & \dots & \text{PrffSCprt}\begin{array}{ccc} w_1 & w_2 & w_n \\ v_{11} & v_{21} & \dots v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1}, \\ w_1 & w_2 & \dots w_n \end{array} \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ r_1 & r_2 & \dots & r_n \end{array}$$

$PrffS_3Cf-$ software operators will differ only just because fuzzy aggregates $\{\tilde{g}\},\{\tilde{p}\},\{\tilde{B}\},\{\tilde{x}\}$ will be formed from corresponding PrffSCprt-program operators in form (1.1) for more complex operators in forms (1.1.1) – (1.4) , (2.1*) and analogs of forms (1.1.1) - (1.4) by type (2.1*).

For example, $\text{PrffSCprt}^{\substack{\{R\} \\ v \\ \mu}}_{g\{R\}}$ is the fcapacity in itself of the second type if $g\{R\}$ is a program capable of generating $\{R\}$.

The example of self-program of the first type is

$$\text{PrffSCprt}\begin{array}{cccc} \text{PrffSCprt}\begin{array}{ccc} x_1 := & x_2 := & \dots\ x_n := \\ v_{11} & v_{21} & \dots\ v_{n1} \\ \mu_{11} & \mu_{21} & \dots\ \mu_{n1} \\ p_1 & p_2 & \dots\ p_n \end{array} & \text{PrffSCprt}\begin{array}{cccc} IF\{B_1g_1\}\ then & IF\{B_2g_2\}\ then & \dots & IF\{B_ng_n\}\ then \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ w_1 & w_2 & \dots & w_n \end{array} & \dots & \text{PrffSCprt}\begin{array}{ccc} w_1 & w_2 & w_n \\ v_{11} & v_{21} & \dots v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1}, \\ w_1 & w_2 & \dots w_n \end{array} \\ & & & v_{n1} \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ \text{PrffSCprt}\begin{array}{ccc} x_1 := & x_2 := & \dots\ x_n := \\ v_{11} & v_{21} & \dots\ v_{n1} \\ \mu_{11} & \mu_{21} & \dots\ \mu_{n1} \\ p_1 & p_2 & \dots\ p_n \end{array} & \text{PrffSCprt}\begin{array}{cccc} IF\{B_1g_1\}\ then & IF\{B_2g_2\}\ then & \dots & IF\{B_ng_n\}\ then \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ w_1 & w_2 & \dots & w_n \end{array} & \dots & \text{PrffSCprt}\begin{array}{ccc} w_1 & w_2 & w_n \\ v_{11} & v_{21} & \dots v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1}, \\ w_1 & w_2 & \dots w_n \end{array} \\ & & & v_{n1} \end{array}$$

PrffSCprt-coding: 1) fuzzy set A_i to fuzzy set B_i, 2) fuzzy set A_i to a point q_i, where the elements of the fuzzy sets A_i, B_i can be continuous, (i = 1, 2, …, n; j = 1, 2, …, m). For example, PrffSCprt$\begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \cdots \mu_{n1} \\ B_1 & B_2 & \dots B_n \end{matrix}$.

There are PrffSCprt -coding, PrffSCprt-translation, PrffSCprt-realize of prffeprograms and of the programs from the archives without extraction theirs

Self-coding: 1) fuzzy set A_i to fuzzy set A_i, i.e. A_i on itself 2) fuzzy set A_i to a point q_i in forms (1.1) - (1.4), where the elements of the fuzzy sets A_i can be continuous. For example, PrffSCprt$\begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \cdots \mu_{n1} \\ A_1 & A_2 & \dots A_n \end{matrix}$

One of the central departments of the control system should be a computer system of the usual type of the desired level. In symbiosis with PrffSCprt-Networks, it will provide a holistic operation of the control system in three modes: conventional serial through a conventional type computer system, direct parallel through PrffSCprt -Networks and series-parallel. Codes from a conventional type computer system will be used via PrffSCprt -connectors in PrffSCprt - coding, for example:

PrffSCprt(t) $\begin{matrix} (\text{UHF AC})_1(t) := Q_1(t) & (\text{UHF AC})_2(t) := Q_2(t) & \dots & (\text{UHF AC})_n(t) := Q_n(t) \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ activation & activation & \dots & activation \end{matrix}$

UHF AC field activation is used.

Consider the fuzzy dynamic PrffSCprt and PrffS$_3$Cf(t) programming:

1. The process of simultaneous fuzzy assignment of the fuzzy expressions $\widetilde{p(t)}$ =(p_1(t)|$\mu_{\widetilde{p(t)}}$(p_1(t)), p_2(t)|$\mu_{\widetilde{p(t)}}$(p_2(t)), …, p_n(t)|$\mu_{\widetilde{p(t)}}$(p_n(t))) to the variables $\widetilde{x(t)}$=(x_1(t)|

$\mu_{\widetilde{x(t)}}$(x_1(t)), x_2(t)|$\mu_{\tilde{x}(t)}$(x_2(t)), …, x_n(t)|$\mu_{\widetilde{x(t)}}$(x_n(t))) is implemented through PrffSCprt

$$\begin{matrix} x_1(t) := & x_2(t) := & \dots & x_n(t) := \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ p_1(t) & p_2(t) & \dots & p_n(t) \end{matrix}.$$

2. The process of simultaneous check the fuzzy set of conditions $\widetilde{g(t)}$=(g_1(t)|$\mu_{\widetilde{g(t)}}$(g_1(t)), g_2(t)|$\mu_{\tilde{g}(t)}$(g_2(t)), …, g_n(t)|$\mu_{\widetilde{g(t)}}$(g_n(t))) for the fuzzy set of expressions $\widetilde{B(t)}$ =(B_1(t)|$\mu_{\widetilde{B(t)}}$(B_1(t)), B_2(t)|$\mu_{\tilde{B}(t)}$(B_2(t)), …, B_n(t)|$\mu_{\widetilde{B(t)}}$(B_n(t))) is implemented through

PrffSCprt $$\begin{matrix} IF\{B_1(t)g_1(t)\}\ then & IF\{B_2(t)g_2(t)\}\ then & \dots & IF\{B_n(t)g_n(t)\}\ then \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ w_1(t) & w_2(t) & \dots & w_n(t) \end{matrix},$$

where w(t) = ($w_1(t)$,$w_2(t)$,...,$w_n(t)$). can be any.

3.Similarly for loop operators and others.

$PrffS_3Cf(t)$– software operators will differ only in that the aggregates $\{\widetilde{g(t)}\},\{\widetilde{p(t)}\},\{\widetilde{B(t)}\},\{\widetilde{x(t)}\}$ will be formed from corresponding processes PrffSCprt(t) for the above-mentioned programming operators through form (1.1) or forms (1.1.1) – (1.4) for more complex operators, (2.1*) and analogs of forms (1.1.1) - (1.4) by type (2.1*).

Consider PrfftSCpr-program operators. The ideology of PrftSCpr and $Prft_{S_4Cf}$ is parallel analogue of ft_{S_4f} [14] can be used for programming. Here are some of the PrftSCpr -program operators.

1. Simultaneous fuzzy expelling assignment of the fuzzy expressions $\tilde{p}$ =(p_1|$\mu_{\tilde{p}}$(p_1), p_2|$\mu_{\tilde{p}}$(p_2), …, p_n|$\mu_{\tilde{p}}$(p_n)) from the variables $\tilde{x}$=(x_1|$\mu_{\tilde{x}}$(x_1), x_2| $\mu_{\tilde{x}}$(x_2), …, x_n|$\mu_{\tilde{x}}$(x_n)). It's implemented through $\begin{matrix} x_1 := & x_2 := & \dots & x_n := \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ p_1 & p_2 & \dots & p_n \end{matrix}$

   PrffSCprt.

2. Simultaneous fuzzy expelling checks the fuzzy set of conditions $\tilde{g}$=(g_1|$\mu_{\tilde{g}}$(g_1), g_2|$\mu_{\tilde{g}}$(g_2), …, g_n|$\mu_{\tilde{g}}$(g_n)) for the fuzzy set of expressions $\tilde{B}$=(B_1|$\mu_{\tilde{B}}$(B_1),

$B_2|\mu_{\tilde{B}}(B_2), \ldots, B_n|\mu_{\tilde{B}}(B_n))$. It's implemented through

$$\begin{array}{cccc} IF\{B_1 g_1\}\ then & IF\{B_2 g_2\}\ then & \ldots & IF\{B_n g_n\}\ then \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ w_1 & w_2 & \ldots & w_n \end{array}$$ PrffSCprtwhere w_i (i = 1, …, n) can be anything.

3. Similarly for loop operators and others.

$Prfft_{S_4Cf}$ – software operators will differ only just because aggregates $\{\tilde{g}\},\{\tilde{p}\},\{\tilde{B}\},\{\tilde{x}\}$ will be formed from corresponding PrfftSCpr program operators in form (1.1) for more complex operators in forms (1.1.1) – (1.4) , (2.1*) and analogs of forms (1.1.1) - (1.4) by type (2.1*).

Consider hierarchical PrfftSCpr-program operator

$$\begin{array}{cccc} C_1(t) & C_2(t) & \ldots & C_m(t) \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \ldots & \mu_{m2} \\ D_1(t) & D_2(t) & \ldots & D_m(t) \end{array} \text{PrffSCrt}_2(t) =$$

$$\left\{ \begin{array}{l} \sum_{i=1}^{m} Q_i(t) + \begin{array}{cccc} \{\} & \{\} & \ldots & \{\} \\ v_{12} & v_{22} & & v_{m2} \\ \mu_{12} & \mu_{22} & \ldots & \mu_{m2} \\ D_1(t) - D_1(t) \cap C_1(t) & D_2(t) - D_2(t) \cap C_2(t) & \ldots & D_m(t) - D_2(t) \cap C_m(t) \end{array} \text{PrffSCrt}(t) \\ \sum_{i=1}^{m} (C_i(t) - D_i(t) \cap C_i(t)) - (D_i(t) - D_i(t) \cap C_i(t)) \end{array} \right\}$$

, where $Q_i(t)$ is oself-(fuzzy set) for $(D_i(t) \cap C_i(t))$ [14].

Consider the PrtffSCpr(t) and $Prfft(t)_{S_4f}$ programming at time t.

1. The process of simultaneous assignment of the expressions $\widetilde{p(t)}$=($p_1(t)|\mu_{\widetilde{p(t)}}(p_1(t)), p_2(t)|\mu_{\widetilde{p(t)}}(p_2(t)), \ldots, p_n(t)|\mu_{\widetilde{p(t)}}(p_n(t))$) to the variables $\widetilde{x(t)}$=($x_1(t)|\mu_{\widetilde{x(t)}}(x_1(t)), x_2(t)|\mu_{\tilde{x}(t)}(x_2(t)), \ldots, x_n(t)|\mu_{\widetilde{x(t)}}(x_n(t))$) is implemented through

$$\begin{array}{cccc} x_1(t) := & x_2(t) := & \ldots & x_n(t) := \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} \\ p_1(t) & p_2(t) & \ldots & p_n(t) \end{array}$$ PrffSCprt(t).

2. The process of simultaneous check the set of conditions $\widetilde{g(t)}$=($g_1(t)|\mu_{\widetilde{g(t)}}(g_1(t))$, $g_2(t)|\mu_{\tilde{g}(t)}(g_2(t))$, ..., $g_n(t)|\mu_{\widetilde{g(t)}}(g_n(t))$) for the fuzzy set of expressions $\widetilde{B(t)}$=($B_1(t)|\mu_{\widetilde{B(t)}}(B_1(t))$, $B_2(t)|\mu_{\tilde{B}(t)}(B_2(t))$, ..., $B_n(t)|\mu_{\widetilde{B(t)}}(B_n(t))$) is implemented through

$$\begin{array}{ccccc} IF\{B_1(t)g_1(t)\}\ then & IF\{B_2(t)g_2(t)\}\ then & \ldots & IF\{B_n(t)g_n(t)\}\ then & \\ v_{11} & v_{21} & & v_{n1} & \text{PrffSCprt(t),} \\ \mu_{11} & \mu_{21} & \ldots & \mu_{n1} & \\ w_1(t) & w_2(t) & \ldots & w_n(t) & \end{array}$$

where $\widetilde{x(t)}$=($x_1(t)|\mu_{\widetilde{x(t)}}(x_1(t))$, $x_2(t)|\mu_{\tilde{x}(t)}(x_2(t))$, ..., $x_n(t)|\mu_{\widetilde{x(t)}}(x_n(t))$) can be any.

3.Similarly for loop operators and others.

$Prfft(t)_{S_4Cf}$ – software operators will differ only in that the aggregates $\widetilde{x(t)}$,$\widetilde{p(t)}$, $\widetilde{B(t)}$,$\widetilde{g(t)}$ will be formed from corresponding processes PrffSCprt(t) for the above-mentioned programming operators through form (1.1) or forms (1.1.1) – (1.4) for more complex operators, (2.1*) and analogs of forms (1.1.1) - (1.4) by type (2.1*).

Consider PrffSCrt(t)- program operators

$$fSprt_{t_0}^{\{{}^{q}\begin{pmatrix} u & u & & u & u \\ v_1 & v_2 & PrffSCpr & v_1 & v_2 \\ \mu_1 & \mu_2 & & \mu_1 & \mu_2 \\ u & u & & u & u \end{pmatrix}_{W_q} fSprt_q^{E_q}\begin{pmatrix} u & u & & u & u \\ v_1 & v_2 & PrffSCpr & v_1 & v_2 \\ \mu_1 & \mu_2 & & \mu_1 & \mu_2 \\ u & u & & u & u \end{pmatrix},\ fSprt_{d_r}^{\{E^{ex}{}_l{}^{d_r}\}}\left(E_{in}{}_l{}^{d_r}\right)\}}$$

. —program structure example, where the assemblage point d_r is the cursor, it is quite complex ffself—program.

Remark. Energy with measure of fuzziness μ_1, μ_2 of a living organism other than humans:

fPrff(r, u(E_q), μ_1, μ_2) =

$$fSprt_{t_0}^{\{{}^{q}\begin{pmatrix} u & u & & u & u \\ v_1 & v_2 & PrffSCpr & v_1 & v_2 \\ \mu_1 & \mu_2 & & \mu_1 & \mu_2 \\ u & u & & u & u \end{pmatrix}_{W_q} Sprt_q^{E_q}\begin{pmatrix} u & u & & u & u \\ v_1 & v_2 & PrffSCpr & v_1 & v_2 \\ \mu_1 & \mu_2 & & \mu_1 & \mu_2 \\ u & u & & u & u \end{pmatrix},\ fSprt_{d_r}^{\{E^{ex}{}_l{}^{d_r}\}}\left(E_{in}{}_l{}^{d_r}\right)\}} \qquad (**_{B.2}).$$

Energy with measure of fuzziness μ_1, μ_2 of a living organism of a person:

fPrhff(r, u(E_q), μ_1, μ_2) =

$$fSprt_{t_0}^{\{W_q{}^{\begin{pmatrix} u & u & & u & u \\ v_1 & v_2 & PrffSCpr & v_1 & v_2 \\ \mu_1 & \mu_2 & & \mu_1 & \mu_2 \\ u & u & & u & u \end{pmatrix}^q} Sprt_{q\begin{pmatrix} u & u & & u & u \\ v_1 & v_2 & PrffSCpr & v_1 & v_2 \\ \mu_1 & \mu_2 & & \mu_1 & \mu_2 \\ u & u & & u & u \end{pmatrix}}^{E_q},\ fSprt_{d_r(self(E_{in}l^{d_r}))}^{\{E^{ex}l^{d_r}\}}\}} \qquad (***_{B.2}).$$

$\begin{matrix} u & u & & u & u \\ v_1 & v_2 & PrffSCpr & v_1 & v_2 \\ \mu_1 & \mu_2 & & \mu_1 & \mu_2 \\ u & u & & u & u \end{matrix}$ -internal energy with measure of fuzziness μ_1, μ_2 of a living organism of double energy structure, q- a gap in the energy cocoon of a living organism, r-the position of the assemblage point d_r on the energy cocoon of a living organism, W_q- energy prominences from the gap in the cocoon of a living organism, E_q-external energy entering the gap in the cocoon of a living organism, $E^{ex}l^{d_r}$ - a bundle of fibers of external energy self-capacities from outside the cocoon, collected at the point of assembly of the cocoon of a living organism, $E_{in}l^{d_r}$- a bundle of fibers of external energy self-capacities from inside the cocoon, collected at the point of assembly of the cocoon of a living organism in the same position r of the assemblage point d_r. d_r is the subject of identifying the energy fibers of the subtle energy of the Universe in position r both outside and inside the cocoon.

($**_{B.2}$), ($***_{B.2}$) can be interpreted as PrffSCrt- program operators.

Appendix.

Supplement for string theory: May be to try represent elementary particles in the form of continual self-elements of the type: PrffSCprt $\begin{matrix} \uparrow \mathrm{I} \downarrow_{-1}^{1} & \downarrow \mathrm{I} \uparrow_{-\infty}^{\infty} & \dots & \downarrow \mathrm{I} \uparrow_{-1}^{1} \\ v_{11} & v_{21} & & v_{n1} \\ \mu_{11} & \mu_{21} & \dots & \mu_{n1} \\ x_1 & x_2 & \dots & x_n \end{matrix}$,

etc.

Supplement for PrffSCprt-logic: We consider PrffSCprt-logic: consider the functional f(Q), which gives a numerical value for the truth of the fuzzy dynamic fuzzy statement Q from the interval [0,1], where 0 corresponds to "ffno," and one corresponds to the logical value "ffyes." Then for joint fuzzy dynamic fuzzy statements A, B: f(A+B)=f(A)+f(B)-f(A*B)+fS(D), D- self- (fuzzy dynamic fuzzy statement) from A*B, fS(x)- the value of self-(fuzzy dynamic fuzzy truth) for self-(fuzzy dynamic fuzzy statement) x; for dependent fuzzy dynamic fuzzy statements: f(A*B)=f(A)*f(B/A)=f(B)*f(A/B), where f(B/A)- conditional fuzzy dynamic fuzzy truth of the fuzzy dynamic fuzzy statement B at fuzzy dynamic fuzzy statement A, f(A/B)- dependent fuzzy dynamic fuzzy truth of the fuzzy dynamic fuzzy statement A at the fuzzy dynamic fuzzy statement B. Adding the fuzzy dynamic fuzzy truth values of inconsistent fuzzy dynamic fuzzy propositions: f(A+B)=F(A)+f(B). The formula of complete fuzzy dynamic fuzzy truth: f(A)=$\sum_{k=1}^{n} f(B_k) * f(A/B_k)$, B_1, B_2, .., B_n-full group of hypotheses- (fuzzy dynamic fuzzy statements): $\sum_{k=1}^{n} f(B_k)$=1("yes").

Remark. A statement can be interpreted as an event, and its truth value as a probability.

PrffSCprt- statement for set of fuzzy dynamic fuzzy statements A ={A_1, A_2, …, A_n}: PrffSCprt$\begin{matrix} A_1 & A_2 & \dots A_n \\ {}^{v_{11}}_{\mu_{11}} & {}^{v_{21}}_{\mu_{21}} & \dots {}^{v_{n1}}_{\mu_{n1}} \\ x_1 & x_2 & \dots x_n \end{matrix}$. PrffSCprt $\begin{matrix} f(A_1) & f(A_2) & \dots f(A_n) \\ {}^{v_{11}}_{\mu_{11}} & {}^{v_{21}}_{\mu_{21}} & \dots {}^{v_{n1}}_{\mu_{n1}} \\ x_1 & x_2 & \dots x_n \end{matrix}$ - PrffSCprt- truth for these fuzzy statements. It is possible to consider the self-(fuzzy statement) $PrfS_3A$ with m fuzzy statements from A, at m<n, which is formed by the form (1.1), that is, only m fuzzy statements from A are located in the structure PrffSCprt$\begin{matrix} A_1 & A_2 & \dots A_n \\ {}^{v_{11}}_{\mu_{11}} & {}^{v_{21}}_{\mu_{21}} & \dots {}^{v_{n1}}_{\mu_{n1}} \\ x_1 & x_2 & \dots x_n \end{matrix}$. The same for self-(fuzzy truth)

$PrffS_3C\{ f(A_1), f(A_2), \dots, f(A_n)\}$.

One can introduce the concepts of PrffSCprt-group: PrffSCprt$\begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$, A is the usual fuzzy group, PrffSCprt$\begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ x_1 & x_2 & \dots x_n \end{matrix}$, where A_i is usual fuzzy group, i=1,2, …,n, x- usual fuzzy groups, self- (fuzzy group): PrffS$_i$CfA, i=1,2,3, A is usual fuzzy group.

Definition B.2.5.1. A fuzzy dynamic fuzzy structure with a second degree of freedom will be called complete, i.e., "capable" of reversing itself concerning any of its fuzzy elements clearly, but not necessarily in known operators; it can form (create) new special fuzzy dynamic fuzzy operators (in particular, special fuzzy dynamic fuzzy functions). In particular, PrffCrt $\begin{matrix} A_1 & A_2 & \dots A_n \\ v_{11} & v_{21} & v_{n1} \\ \mu_{11} & \mu_{21} & \dots \mu_{n1} \\ A_1 & A_2 & \dots A_n \end{matrix}$ is such structure. Similarly, for working with fuzzy models, each is structured by its fuzzy dynamic fuzzy structure; for example, use PrffSCprt-groups, PrffSCprt-rings, PrffSCprt-fields, PrffSCprt-spaces, PrffCSelf-groups, PrffCSelf-rings, PrffCSelf-fields, and PrffCSelf-spaces. Like any task, this is also a fuzzy dynamic fuzzy structure of the appropriate fuzzy fcapacity . Since the degree of freedom is double, it is clear that the form of the PrffCSelf-equation contains a fuzzy dynamic fuzzy solutions or fuzzy dynamic fuzzy structures the inversion of the PrffCSelf-equation concerning unknowns, i.e., the fuzzy dynamic fuzzy structure of the Prself-equation is complete.

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