

Exploration

The Nervous System Part 1: Spinal Cord

Robert Campbell *

ABSTRACT

The rudiments of System 4 are reviewed in brief by first reviewing the Universal Hierarchy that is specified by the Primary Universal Term UT9. This specifies the meaning implicit in each of the four active interfaces or Centers that constitute all of the nine Terms of System 4. There are only nine possible ways that these four interfaces can mutually relate with respect to a common inside and outside, each way delineating a Term. There are nevertheless expressive and regenerative modes to most of the Terms that allow System 4 to span and integrate events in space and time. The Primary and Secondary Universal Sets have transform sequences that span four Particular Steps and that regulate the six Step Transform sequences of both modes of the Particular Terms into three four Step Cycles. Three Particular Sets transform through the six term sequence one Step apart. Since there are seven expressive terms and five regenerative terms in the transform sequence of each Particular Set it takes twelve Steps in three four Step Cycles to complete all sequences. These transform Steps correspond precisely synapse by synapse to how the human nervous system has evolved to meaningfully integrate experience. This is powerful confirmation of System 4 as an accurate representation of the Cosmic Order as it applies in living biological systems. It specifies the structural pattern implicit in the evolutionary process of the biosphere. It also applies to biological evolution as it may occur anywhere in the universe.

Key Words: Cosmic Order, human nervous system, spinal nervous system, space and time, evolution, proprioception, muscle spindles.

Introduction

The illustrations below show how the human nervous system meaningfully integrates experience synapse by synapse at the spinal level. Meaning and learning evolve throughout our life, according to how our nervous system is structured. Elements of experience are learned piecemeal and are gradually assimilated into more coherent complex actions and thoughts. Each element of experience can be considered a unit memory. For a baby, grasping with the fingers is one of the first things we learn. We are born much more helpless than other animals and must learn nearly everything through conscious effort even before we have language to assist us.

As we shall see below, proprioceptive simulation, in the regenerative mode of System 4, is indispensable to this learning process. The proprioceptive nervous system tells us how the body is positioned in space, even for a baby grasping with its fingers. Proprioceptive neuromuscular spindles, the tiny sensory organs located throughout the muscles of the body, are structured to allow simulation of anticipated actions before they are carried out. Simplified illustrations show

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E-Mail: bob@cosmic-mindreach.com Note: This article is based on author's work of 2006 (see http://www.cosmic-mindreach.com/System4_Sequence_Steps.html)

that they are structured to allow simulation independent of the parent muscle. The regenerative mode simulation that anticipates a future response alternates with the expressive mode that is a conditioned response from the past.

So learning is more than just a causal process of conditioned responses to external stimuli, although this plays a part. Learning also involves anticipation of a future desired result and a process of simulation to achieve it. Input from both a causal past and an anticipated future must find mutual reconciliation in current action sequences. We are biologically structured to span space and time and integrate history. As we learn and assimilate behavior piecemeal it tends to become automated as habitual at the spinal level. The spinal cord is an unconscious brain that is nevertheless invested with an intuitive (or instinctive) capacity to make adjustments according to proprioceptive sensory input.

As we mature, language greatly enhances our cerebral abilities to consciously simulate experience in abstraction and formulate far reaching plans that nevertheless require continual adjustment according to the ever changing flux of circumstance.

Note: A review of the article System 4 Terms is recommended. The meaning implicit within each of the nine Terms is given here in brief, along with a brief outline of the transform sequences of Particular and Universal Sets. A more complete explanation of the meaning implicit within each Term is given at <http://www.cosmic-mindreach.com/System4Terms.html>.

A Simplified Outline of System 4:

The following simplifies and condenses the essentials of System 4 as the various term transformations mutually interact. Keep in mind that language is limited in the degree to which it can describe how the System works, so that meanings must be interpreted contextually. Meaning is implicitly defined by the way the System works in each specific circumstance. The methodology of the System both requires and facilitates direct intuitive insight into the dynamics of phenomenal experience as it is presented to us. It delineates the structure and process of phenomenal experience, and the human nervous system at the spinal level has structurally evolved to work in precise accord with System 4. Since System 4 is structural rather than behavioral it embraces all possible varieties of behavior.

The Universal Hierarchy:

As explained more elsewhere there is a System 4 hierarchy involving 4 active Centers(C) that implicitly give direction to one another as follows:

(C1)IDEA → (C2)KNOWLEDGE → (C3)ROUTINE → (C4)FORM

The words associated with each Center are very general indications of meaning associated with the structural development of meaning within each of the nine System 4 Terms as they may apply in any circumstance. It is noteworthy, even remarkable, that these four words structurally define coherent meaning within each Term as they dynamically relate to one another in the evolving matrix of interactions through the 12 Step Sequence outlined below. We can easily see that the hierarchy applies to any human activity. There is always an Idea that gives direction to our learned Knowledge that in turn directs a Routine of visceral and muscular activity that results in an altered Form of the body in concert with the Form of the environment. The hierarchy is

universal and is designated by Term 9 of System 4. If we focus on the neurological and muscular processes that animate us we can see that the four words in the universal hierarchy have biological correlates as follows:

C1 – Host (Idea):

The Host human being is an archetypal energy pattern that is clothed in molecules in common with the whole universe. We have evolved in the biosphere over hundreds of millions of years as real people housed within a physical body. We are the proprietors of our body, responsible for its care and maintenance, but we are also more than the physical molecules that make it up. We animate our bodies according to subsumed ideas that we entertain and may commit our actions to. The subsumed ideas are generated by electronic processes going on in our central nervous system. There is a specific pattern of electrochemical activity associated with the generation of every creative idea that we Host. We continue to evolve accordingly.

C2 – Organs (Knowledge):

Knowledge is invested in our body's infrastructure. It is implicit in the complement of Organs that make us up and that have evolved over a history of learning, including our evolutionary history as a species and the species that historically preceded us. The vertebrate lineage from reptiles to humans has a similar quadruped body plan of similar Organs that is archetypal in character. This allows us to benefit from an evolutionary history of learning to which we are indebted. Knowledge is especially implicit in the neurological Organs of our bodies, in our central and peripheral nervous systems that allow us to integrate our experience meaningfully. This includes our personal history of learning and the synaptic connections that have developed in our nervous system as a result. Knowledge in this biological respect thus embraces how Organs are organized to meaningfully interrelate.

C3 – Cells (Routine):

Cells are the factories that constitute Organs and that manufacture our molecular forms through highly recursive biochemical Routines that are catalyzed by complex legions of protein enzymes that catalyze even themselves. They increase reaction rates by millions of times and so are indispensable to every cell's living function. Cells sustain our biological bodies and its complex interdependent array of processes, from blood cells that transport energy to muscle cells and to the nerve cells that animate our muscle organs. Because enzymes remain chemically unaltered and employ phosphate ions as the energy of exchange, each Cell is a highly organized energy pattern that clothes itself in molecules according to its needs. The archetypal energy patterns of Cells that have evolved over eons direct molecular Forms not vice versa. Molecules are not street smart.

C4 – Molecular Form:

The physical universe is constructed of 92 naturally occurring atomic elements that chemically combine into inorganic and organic molecules of potentially endless variety in biological systems. Atoms and molecules have closed surfaces generated by System 3. They have opaque surfaces that allow us to see, feel, and interact with physical Forms through the Form of our body which we have an archetypal capacity to animate as we wish in response to our physical

circumstance. We have evolved biologically through the agency of System 4 which is subsumed by System 3 such that we live in the context of the physical universe with a physical Form.

We can thus reinterpret the universal hierarchy as it biologically relates to human behavior as follows:

Host (C1) → Organs(C2) → Cells(C3) → Molecular Form(C4)
Idea(1) → Knowledge(2) → Routine(3) → Form(4)

The above four Centers define the meaning implicit within each of the nine Terms. Six of the Terms are particular and three Sets of Particular Centers follow through a repeating Six Step Term Sequence I, 4, 2, 8, 5, 7 one Step apart in the following order:

- Step 1.-T1 - Perception of need in relation to response capacity.
- Step 2.-T4 - Ordered sensory input alternately from the environment or simulated.
- Step 3.-T2 - Creation of idea as a potential action response or creative concept.
- Step 4.-T8 - Balanced response to sensory input stimuli as a motor output to muscles.
- Step 5.-T5 - Action sequence of muscular activity with proprioceptive feedback.
- Step 6.-T7 - Sequence encoded as a unit memory for recall to T1 and another sequence.

Because the three Sets follow one Step apart Terms 8, 7, and 4 alternate with Terms 1, 2 and 5. Term 7 is a memory term since the inverse of the number 7 is 1, 4, 2, 8, 5, 7 repeating.

There are Expressive and Regenerative modes for most of the Terms. In the Regenerative mode Centers 1 and 2 exchange places.

All of the Particular Terms except T8 have a Regenerative Mode that simulates an anticipated action and an Expressive Mode that is conditioned from past experience. The Particular T8E is always Expressive and acts as a pivot for transformations between Expressive and Regenerative sequences. A total of 12 Steps are thus required for all three Sets to complete 7 expressive and 5 regenerative Term transformations in their respective sequences. In each Step, Expressive and Regenerative Particular Terms from the three Sets interact to span past and future. They thus span and integrate space and time. The 12 Steps are divided into three 4 Step Cycles by the Universal Sets that each have transform sequences that span 4 Particular Steps.

Each such Particular Set term Sequence follows a 12 Step path through the nervous system, synapse by synapse. There can be many parallel Particular Sequences active at once through parallel neural pathways since the nervous system is structured with the same number of synaptic junctions in each pathway. The Universal Sets integrate all Particular pathways into a coherently organized and meaningful activity.

The Primary Universal Set and Its Transform Sequence:

Term 9 is the Universal Hierarchy specified by the Primary Universal Set. It begins each Cycle in the Term 9 position where it stays for Steps 1 and 2. The four active interfaces (centers) of UT9 prescribe the 4 Step Cycles. UT9 has universal access to relevant T7 Host memories of the

Quantum Sensorium called the Void. It identifies them as relevant Ideas(1) for recall in Step 1. In Step 2 the recall is Known(2). Then it transforms mid Cycle to a Regenerative UT8R term concerned with universally balancing available energy resources to fuel a priority of action needs in all the various Particular pathways. It budgets energy expenditures. Each Cycle ends after four Steps when the Primary Universal Set transforms from UT8R back to T9 to begin the next Cycle. The Term 8 Regenerative mode UT8R always belongs to the Primary Universal Set because it implicitly specifies the context as the Host species. The Primary and Secondary Universal Terms cohere together. The Primary Set relates to the Host species. The Secondary Set relates to specific Host human beings.

The Secondary Universal Set and Its Transform Sequence:

The Secondary Universal Set begins each Cycle as Term 3. UT3 is concerned with the Transference of Idea into Form, via the coalescence of Knowledge with Routine. As T9 identifies relevant Host Ideas(1) as memories in the Void in Step 1, UT3 integrates then as a coherent action plan that can translate Idea(1) into Form(4). In Step 2 of each Cycle UT3 transforms to UT6 which is the Corporeal Body of a specific Host human being. UT6 does not transform in Step 3, but the Primary Universal Set transforms to UT8R which coheres with it.

This works like the coherence in the Space Frame side of System 3. In this case it budgets energy resources to an integrated proposed action plan implicit in the UT6 Host. In Step 4 the UT6 Term transforms to a universal T2E expressive idea term, where UT8R coheres with it again. This explicitly commits resources to an integrated planned idea entertained by the Host. At the end of each Cycle both Universal Sets transform back to their original positions to begin a new Cycle. Because there are three synchronous Particular Sets all twelve Particular Terms are represented in each Cycle in different Sets.

Summary of Term Transformations Step by Step:

A review of the article System 4 Terms will be very helpful. System 4 may be summarized in chart form as follows. Expressive and Regenerative particular terms, as well as universal terms, are shown for each sequential Step. Particular Regenerative Terms are shown in bold.

New sensory input from the environment comes via T4E in Set 3 in Step 1. Sensory input T4E in one Set of Step 1 of each Cycle is always coupled to memory recall T7R to begin a related simulation sequence. Memory recall must always be linked directly to sensory input in order for our thoughts, feelings, and actions to be relevant to ongoing circumstantial input.

This must also be reconciled with the previous action sequence T8E (simultaneous motor instructions to muscles) in order for there to be a smooth transition from sequence to sequence.

The following chart will be a helpful reference in the sequence illustrations that follow. The regenerative Terms at the spinal level are accommodated by gamma motor neurons that project to muscle spindles. A gamma motor simulation in T1R is followed by a muscle spindle simulation in T4R that generates proprioceptive feedback about body position in space.

Step	Set 1	Set 2	Set 3	Set U1	Set U2	Cycle
1	T8E	T7R	T4E	UT9	UT3	1
2	T5E	T1R	T2E	UT9	UT6	
3	T7E	T4R	T8E	UT8R	UT6	
4	T1E	T2R	T5R	UT8R	UT2E	
5	T4E	T8E	T7R	UT9	UT3	2
6	T2E	T5E	T1R	UT9	UT6	
7	T8E	T7E	T4R	UT8R	UT6	
8	T5R	T1E	T2R	UT8R	UT2E	
9	T7R	T4E	T8E	UT9	UT3	3
10	T1R	T2E	T5E	UT9	UT6	
11	T4R	T8E	T7E	UT8R	UT6	
12	T2R	T5R	T1E	UT8R	UT2E	

A Note on the Void:

The Void is the timeless, formless and thus boundless conjugate reciprocal of the physical universe of form. It is a spatially indeterminate quantum energy field also called the Quantum Sensorium. It is a master memory bank. The System 3 diagram illustrates how the universe is discontinuous. It oscillates very rapidly back and forth between still atomic space frames and timeless and formless quantum frames in a cosmic holographic movie.

Each recurrence of a space frame defines a Primary Interval of Time in the successive of the cosmic movie. The only action in each atomic space frame is light or electromagnetic radiation. EM radiation comes from atomic processes and thus can only transmit a certain distance in each space frame relative to each individual atom. Light is thus quantized into synchronous pulses consistent with the Planck universal quantum of action. That is why the speed of light is universal with respect to each atom.

Relative motions introduce relative space frame skipping in the integrated fabric of space and time which accounts for the Lorentz Transformations of Relativity Theory. Because the Void is timeless the space frames close ranks to present the illusion of continuous space and time. Atomic particles are both waves and particles at the same time.

In System 3 the Void is generated in the quantum frame the Particular Terms 3 since the Routine and Form coalesce within the photon Idea interface. Routine and Form project inside each other thence timelessly out through the photon which constitutes a quantum energy equivalent of an atom. The electron and proton are coalesced as a photon quantum of energy. The simultaneous reconciliation of internal and external invests the quantum of energy with timeless or eternal characteristics that are nevertheless subject to synchronous recall. Term 7 of System 4 has similar characteristics and constitutes a biologically structured element of the Void that is subject to recall as a memory that may be tailored to current circumstances in the synchronous projection

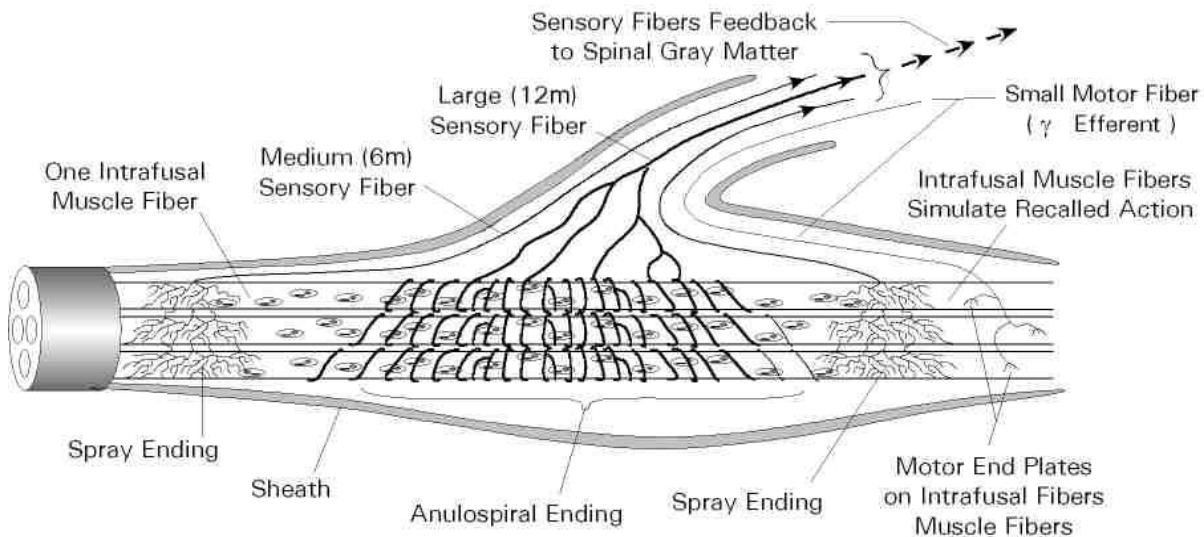
of physical form. In unusual circumstances the Void is accessible in human experience. All form vanishes without trace, including the form of one's own body but without loss of identity. It is an awesome experience of union with all without specific content. Refer to Endnote 9 at <http://www.landesbioscience.com/journals/cib/2012CIB0052R.pdf>. Cosmic experiences that transcend and subsume the Void and with it the whole of history, space and time are also possible. See <http://scigod.com/index.php/sgj/article/view/225/260>.

Simulation in Neuromuscular Spindles

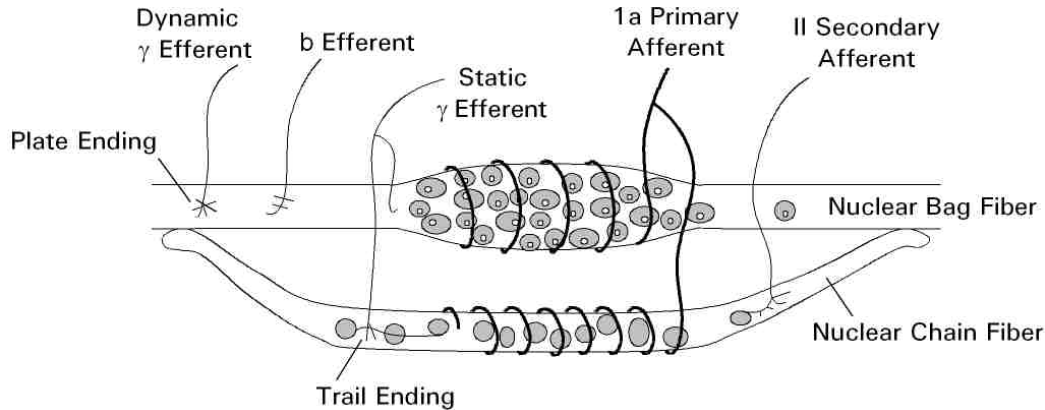
The Regenerative Mode requires the simulation of an anticipated act before it is actually enacted. The top simplified diagram below does not distinguish between nuclear bag and nuclear chain fibers, nor between different sources of motor innervation. The second simplified diagram does but does not show the sheath.

These tiny short bundles of a few short muscle fibers are enclosed in a sheath and connected to parent muscles throughout the body. They can be independently activated by gamma motor neurons that constitute about 30% of the motor neurons in the ventral horns of the spinal cord. The muscle spindle simulation in T4R follows a gamma motor simulation in the T1R Step that precedes it.

Muscle spindles are thus situated throughout the body to simulate activity independently of the parent muscles of the body. In doing so they generate proprioceptive feedback about the body's anticipated changes in position in any given action sequence, before it is carried out. We sense this sensory feedback when we feel an urge to dance to a tune with a rhythm that moves us.



Redrawn from Cunningham's Textbook of Anatomy



Redrawn from Ganong, W. F., *Review of Medical Physiology*

The muscle spindles monitor the relative state of parent muscle contraction and muscle tone as well as being structured to enact simulations independently of the parent muscles and generate proprioceptive sensory feedback about the simulated position of body muscles and thus the anticipated relative position of body parts in space.

The Sequence Illustrations:

The above twelve Steps in the table are illustrated below one Step at a time, showing how the three Particular Sets and two Universal Sets interact in each synchronous Step.

Each Term is illustrated with a brief description of how it works in relation to the nervous system of a human being who has just suffered a scalding burn to the forearm. This involves more than a reflex jerk away from the burn. The person may be carrying a pot of scalding tea and stumbles into a running child causing the tea to spill on the forearm. The response must do more than jerk the arm away from the scald which could spill more perhaps on the child. Rapid inhibition of an excessive movement is possible via brain stem centers such as the raphe nucleus. This can provide time for a rapid simulation of a better corrective movement. The whole body is involved as the person must also avoid falling from the collision. Simulations alternate with direct sensory input at lightening speed in a case like this. Proprioceptive sensory neurons are much larger than pain neurons and transmit rapidly from throughout the body.

It takes considerable concentration to follow and fully understand the sequence. Understanding each Term requires a lot of intuitive reflection that must be interpreted in context. Because there are so many things happening both synchronously and sequentially it takes a great deal of concentration as well as breadth of mental grasp. Once understood however, it can be applied to understand how the whole nervous system integrates experience meaningfully. Each cycle is a repeat of Cycle 1 but with Terms of different Particular Sets in each position.

There are also sensory neurons for pressure and vibration and the other sensory systems such as vision, hearing, balance, taste and smell that all work in a self-similar way. This will be explored more in the article on the Cerebellum which plays a crucial role in integrating various sensory inputs with cerebral functions.

CYCLE 1- STEP 1

UNIVERSAL TERMS

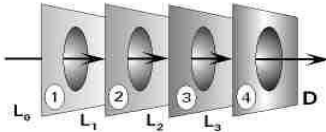
Primary Universal Term UT9

Universal Hierarchy - Discretion
 Idea → Knowledge → Routine → Form

It is Primary for all humanity.
 In context this translates as follows:

Host → Organs → Cells → molecular Form

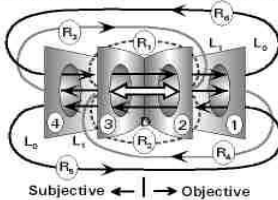
Term 9: Universal Discretion



The 4 successive open centers of UT9 are a time-like progression in 4 Steps that predefine a Cycle. The Host(1) is Step 1 of UT9. It identifies T7R as particular quanta of technique coupled to new burn stimuli in T4E consistent with a current motor sequence T8E. UT9 does not transform between Step 1 & Step 2, while the Secondary Set does.

Secondary Universal Term UT3

Term 3: Transfer of Idea into Form



Note that the coalescences C1 = C2 in T4E and C3 = C4 in T7R are reciprocals. The coalescence C2 = C3 (Organs = Cells) in UT3 thus links current sensory input T4E to recall T7R in each human Host.

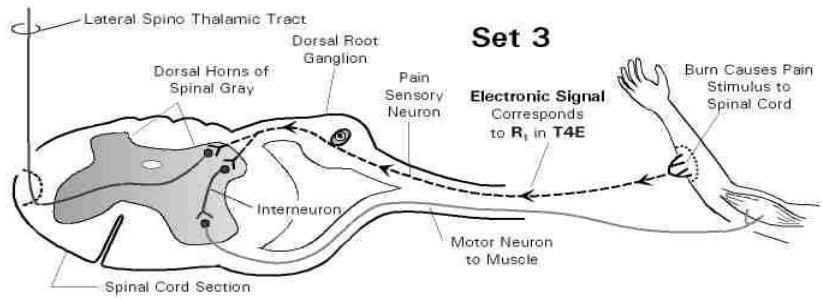
The coalesced C3 = C2 facilitates R_{3,4,5,6}. Cells(3) relate through Organs(2) to the Host(1) idea. In countercurrent direction Organs(2) relate through Cells(3) to the body's Form(4). The UT3 Term thus has eternal characteristics. It accesses memories T7R of the Void that reconcile external needs of the Host(1) with the internally directed Form of body behavior. This ensures that recall from experience T7R relates to current sensory input T4E. T8R is current motor output to muscles.

UT9 and UT3 work together. UT9 is the primary pattern common to humanity. UT3 concerns transferring an objective Idea(1) that meaningfully relates to the current external circumstances of a specific human Host to their subjective behavioral Form(4) in concert with the Form of the whole physical environment.

The central C2 = C3 coalescence of UT3 defines an axis between the objective Idea of the human Host(1) with respect to the potential physical Form(4) of a particular human Host's body on the subjective side of the axis. External and internal coalesce as eternal or timeless in the Void. The Idea(1) and Form(4) are potential in the formless Void, not actual. The transfer of Idea into actualized Form in UT6 of Step 2 inverts this relationship.

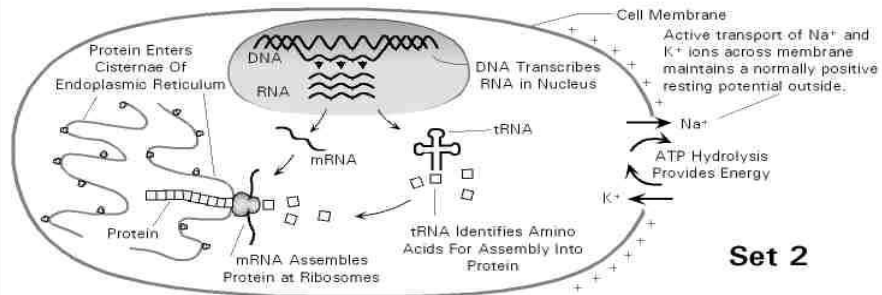
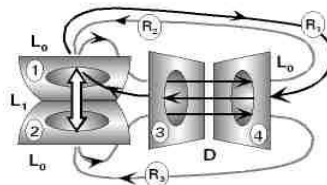
PARTICULAR TERMS

Set 3



T4E - Sensory Input from a Burn:

- The archetypal energy patterns of the Host(1) as coalesced with Organs(2) relate as one through Cells(3) to represent the molecular Form (C4) of the body in common with the environment, as shown together by R₂ and R₃. This represents the sensory apparatus of the Host's body.
- The countercurrent pain stimulus of the burn from environmental Form(4), is transmitted to the Host(1) by the electronic processes of Cells(3) via R₁.

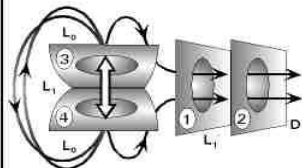


Set 2

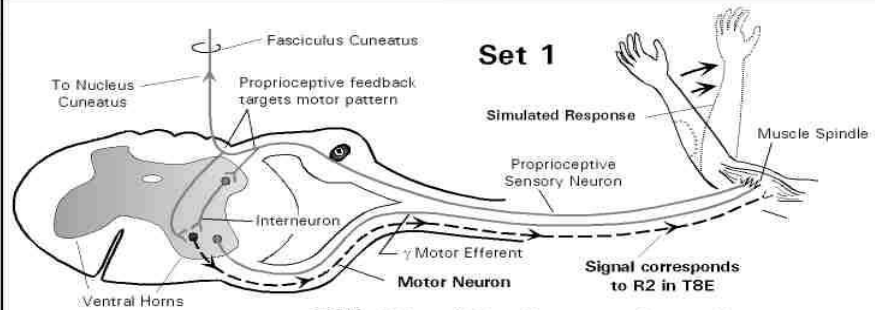
SCHEMATIC REPRESENTATION OF COMMON CHEMICAL PROCESSES INSIDE CELLS

T7R - Memory Element of the Void (Quantum Sensorium):

- The coalesced core of memory C3 = C4 (Cells = Form) relate how Cells(3) alter Form(4) of the Host(1) as technique that projects timelessly from the Void through Organs(2). This links capability of the Host to patterned energy demands of Organs.
- T7R thus budgets organic chemical energy demands involved in simulating a later action as a quantum element of technique.
- A chemical memory referent for recall is linked to sustaining resources associated with specific action sequences.

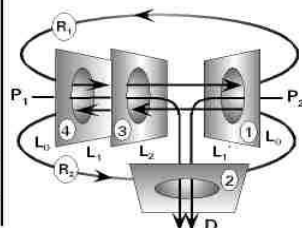


Set 1



T8E - Balanced Motor Response to Sensory Input:

- R₁ is proprioceptive sensory feedback from a prior simulated Form(4) of action transmitted via Cells(3) to the topological representation of the Host(1) in the context of the spinal cord Organ(2). It targeted a motor pattern in the previous Step. R₂ is the motor response of the Host(1) to Form(4) via Cells(3).
- The R₂ response is balanced with R₁ across the Cell(3) interface so that it suits the sensory pattern of simulated Form.
- Projection P₁ is the Form(4) of molecular energy supply in Cells(3) as it projects through Organs(2). This must balance energy demands of the Host(1) expended through Organs(2) in P₂. This is double-entry book keeping for all parallel pathways.



CYCLE 1- STEP 2

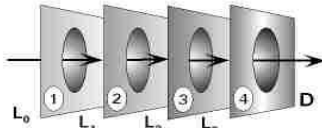
UNIVERSAL TERMS

Primary Universal Term UT9

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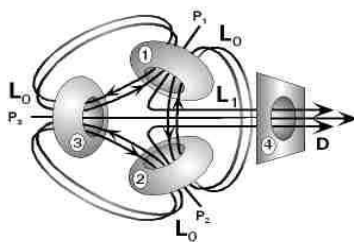


The Primary Step 2 progression to Knowledge(2) is synchronous with the superimposed R_1 idea in T2E where the Host(1) knows of the burn's Form (4) via Cells(3) as this relates to Organs(2) in the triad. A related γ motor simulation in T1R is consistent with the T5E action for continuity with a prior sequence.

Secondary Universal Term UT6

Term UT3 transforms to UT6 which represents the body of the Host(1) in a mutually closed relationship with Cells(3) and Organs(2) as archetypal patterned energy specific to each human being. The triad operates behind the open molecular Form(4) interface common to the whole universe. Each human is clothed in molecular Form(4). The transference of Idea into Form of UT3 results in the Host corporeal body UT6.

Term UT6: Corporeal Body

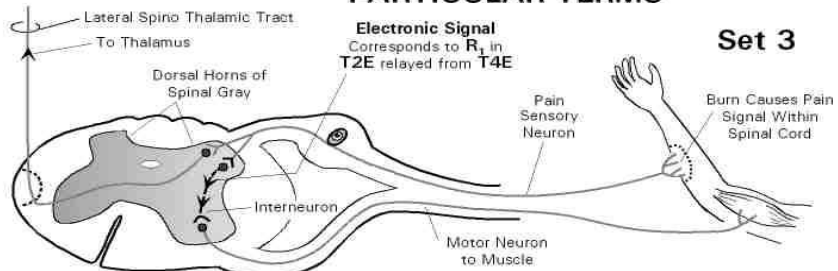


Consistent with Step 2 in UT9, we have Primary Universal Knowledge(2) of our Host bodies(1) Organs(2) and Cells(3) as these relate to the open Form(4) of the physical environment including other humans. Each human Host(1) has a closed physical surface that is interdependent with their Organs(2) and Cells(3).

The R_1 sensory input from the Form(4) of the environmental is transposed to within the Cell(3) interface as this relates to the Host(1) in T2E. In conjunction with UT9 in Step 2 the Host corporeal body UT6 can thus have Knowledge of the burn as it relates to Organs and Cells.

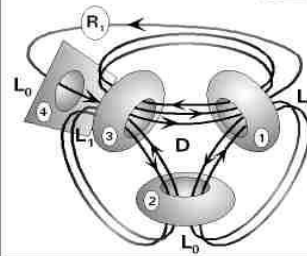
This facilitates an appropriate γ motor simulation in T1R that can also allow for a transition to an altered action pattern consistent with the current T5E action pattern of the Set 1 sequence.

PARTICULAR TERMS



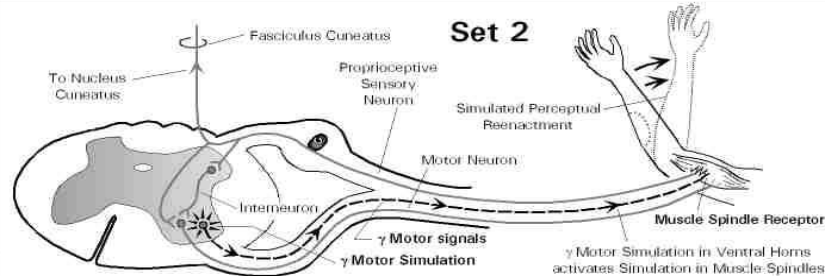
Electronic Signal
 Corresponds to R_1 in T2E relayed from T4E

Set 3

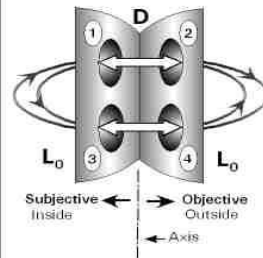


T2E - Creation of Idea, Identifying Patterns:

- In the triad Cells C3 relate independently to the Host Idea(1) as an archetypal pattern and also to the spinal cord Organ(2). The triad is a closed archetypal order that has historically evolved. Interneuron Cell(3) connections are specific to the spinal cord Organ(2) of each Host(1).
- The initial R_1 pain stimulus of T4E transmitted from external Form(4), inverts via a synapse to within Cells(3), to relate to the archetypal energy pattern of the Host(1). In T2E it becomes a specific electronic Idea R_1 in the cord. It is superimposed on the interdependent triad of mutually closed interfaces between Host(1), Organs(2) and Cells(3).

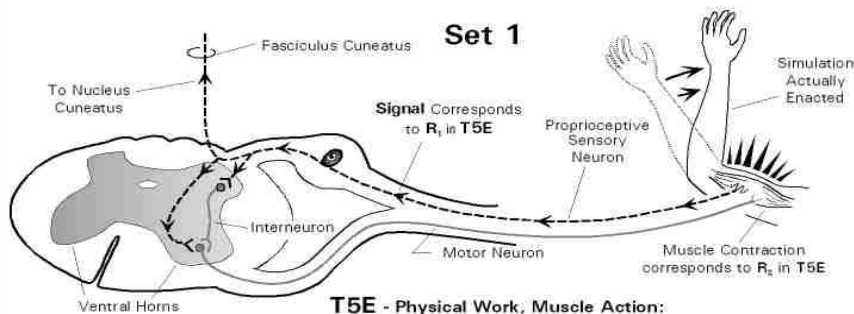


Set 2

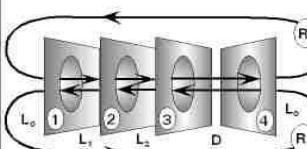


T1R - Perception of the Field, Identifying a Response to Need:

- The archetypal pattern of the Host(1) is organized in the spinal cord Organ(2) topologically by the coalescence $C1 = C2$. Cells(3) as gamma (γ) motor neurons and the Host(1) are aligned subjectively to allow a simulated pattern of coherent Host action.
- $C3 = C4$ (Cells=Form) are cores of memories related to a needed response recalled from T7R in Step1 to initiate an electronic simulation in γ motor Cell(3) activity. This projects to muscle spindles to simulate a change in the body's molecular Form(4).
- The muscle spindle simulation in the next Step generates proprioceptive feedback about relative body Form(4) in space.



Set 1



T5E - Physical Work, Muscle Action:

- R_2 results from a prior simulation in muscle spindles as a coherent action of the Host(1) to direct muscle Organs (2) that direct muscle Cells(3) to move the Form(4) of the arm away from the burn. The body Form act is a creative expression of the Host anticipating the best move consistent with T2E in Set 3 and T1R in Set 2. It is thus expressive as distinct from a learned regenerative reflex.
- R_1 feeds back proprioception of body Form(4) allowing the Host(1) to monitor movement. This also influences the pattern of reflex motor selection by T2E in Set3 and a new pattern of γ motor simulation by T1R in Set 2.

CYCLE 1- STEP 3

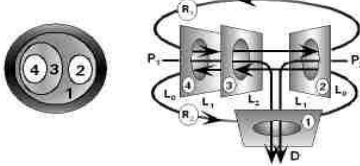
UNIVERSAL TERMS

Primary Universal Term UT8R

UT9 transforms to UT8R in Step 3. The regenerative mode of Term 8 is always universal. It applies to the whole body.

Remember the Hierarchy as follows:
Host(1) → Organs(2) → Cells(3) → Form(4)

Term 8R: Balanced Feedback

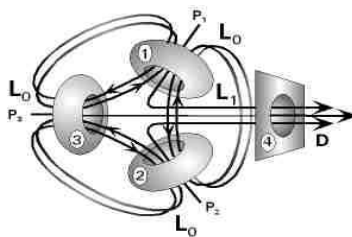


R₁ and R₂ mirror Organs(2) with internal Form(4) across the open Cell(3) interface within the context of the Host(1). This includes all Cells and Organs of all Hosts. It is archetypal for species. UT8R coheres with UT6 such that R₁ and R₂ link up C1, 2, & 3 in pairs in UT6 across the C2-C3 interval in UT8R. Only C2 and C3 mutually align in both Sets consistent with the central C2=C3 coalescence of UT3 transfer of Idea(1) to Form(4). The open Idea(1) and Form(4) interfaces also align in the coherence of the two terms. The System 3 diagram helps to visualize how the two sets cohere together.

Secondary Universal Term UT6

In Step 2 Term UT3 transformed to UT6 which represents the body of the Host(1) in a mutually closed relationship with Cells(3) and Organs(2) as archetypal patterned energy specific to each human being. The triad operates behind the open molecular Form(4) interface common to the universe. Each human is clothed in molecular Form(4). The transference of Idea to Form of UT3 realized in UT6 of Step 2 persists in Step 3.

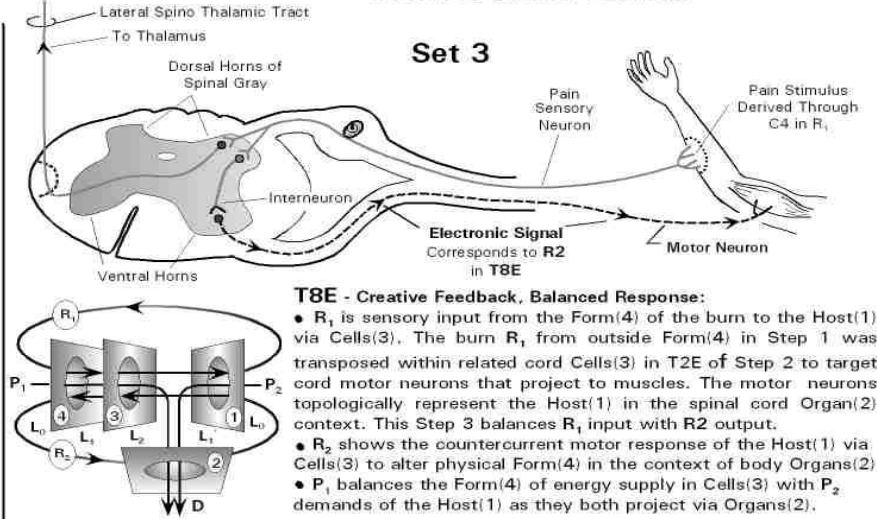
Term UT6: Corporeal Body



Projections P₁, P₂ and P₃ of UT6 balance available energy supply P₂ of UT8R with projected demand P₁ in the coherence. The P₂ and P₁ projections of UT8R span each of the three intervals of UT6. Each of the P₁, P₂ and P₃ projections around the triad of UT6 is a balance between P₂ and P₁ of UT8R as it relates to a specific Host human being's situation.

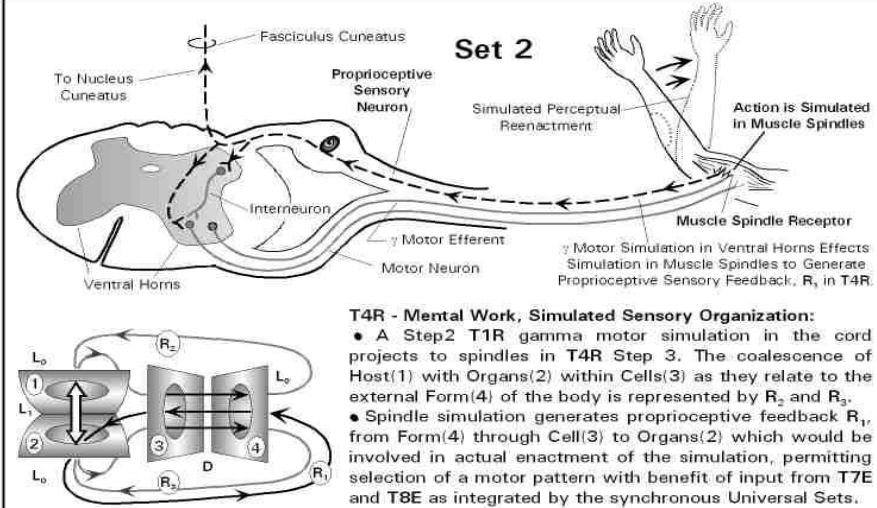
The energy supplies P₁ and demands P₂ of the Host(1) in UT8R are thus aligned with each Host Form(4) in UT6. The Host finds a balanced energy distribution to Organs and Cells according to an ongoing priority of needs.

PARTICULAR TERMS



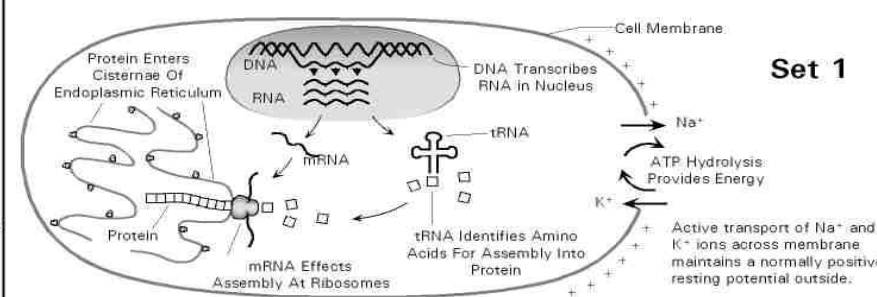
T8E - Creative Feedback, Balanced Response:

- R₁ is sensory input from the Form(4) of the burn to the Host(1) via Cells(3). The burn R₁ from outside Form(4) in Step 1 was transposed within related cord Cells(3) in T2E of Step 2 to target cord motor neurons that project to muscles. The motor neurons topologically represent the Host(1) in the spinal cord Organ(2) context. This Step 3 balances R₁ input with R₂ output.
- R₂ shows the countercurrent motor response of the Host(1) via Cells(3) to alter physical Form(4) in the context of body Organs(2)
- P₁ balances the Form(4) of energy supply in Cells(3) with P₂ demands of the Host(1) as they both project via Organs(2).

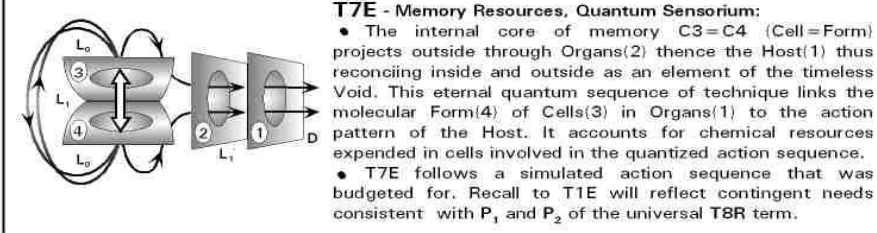


T4R - Mental Work, Simulated Sensory Organization:

- A Step2 T1R gamma motor simulation in the cord projects to spindles in T4R Step 3. The coalescence of Host(1) with Organs(2) within Cells(3) as they relate to the external Form(4) of the body is represented by R₂ and R₃.
- Spindle simulation generates proprioceptive feedback R₁ from Form(4) through Cell(3) to Organs(2) which would be involved in actual enactment of the simulation, permitting selection of a motor pattern with benefit of input from T7E and T8E as integrated by the synchronous Universal Sets.



SCHMATIC REPRESENTATION OF COMMON CHEMICAL PROCESSES INSIDE CELLS



T7E - Memory Resources, Quantum Sensorium:

- The internal core of memory C3=C4 (Cell=Form) projects outside through Organs(2) thence the Host(1) thus reconciling inside and outside as an element of the timeless Void. This eternal quantum sequence of technique links the molecular Form(4) of Cells(3) in Organs(1) to the action pattern of the Host. It accounts for chemical resources expended in cells involved in the quantized action sequence.
- T7E follows a simulated action sequence that was budgeted for. Recall to T1E will reflect contingent needs consistent with P₁ and P₂ of the universal T8R term.

CYCLE 1- STEP 4

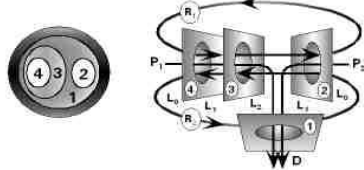
UNIVERSAL TERMS

Primary Universal Term UT8R

UT9 transforms to UT8R in Step 3. The regenerative mode of Term 8 is always a universal archetype of the Host species.

Remember the Hierarchy as follows:
 Host(1) → Organs(2) → Cells(3) → Form(4)

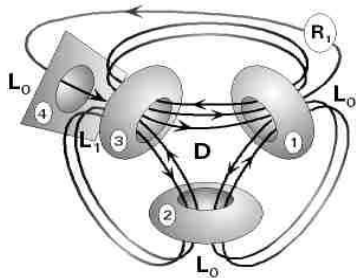
Term 8R: Balanced Feedback



UT8R does not transform from Step 3 to Step 4 where it now coheres with UT2E. The C2-C3 interval of R₁ and R₂ link up the 1, 2, 3 triad in UT2E in pairs as before but now the Host(1) is not aligned with external body Form(4). The latter has inverted within Cells(3) in UT2E to become an integrated Idea R₁ imposed on the archetypal triad specific to each person. The coherence now places this within the open primary archetype of all humanity which is the open Host(1) of the Primary Universal Term UT8R. The secondary creative Idea R₁ in UT2E of each person thus has a social context.

Secondary Universal Term UT2E Integrated Expressive Idea

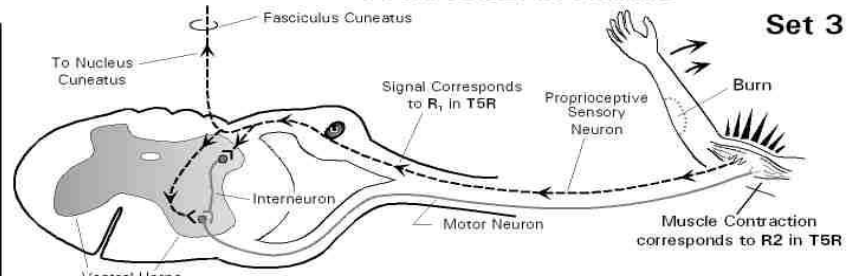
The closed corporeal body triad 1,2,3 that was behind the Form of the environment in UT6 has inverted in UT2E in Step 4. R₁ now represents all sensory input from Form(4) through Cells(3) as a coherent integrated Idea of the Host(1).



This integrated expressive UT2E idea R₁ coincides with all Particular T2R ideas simulated by muscle spindles in Step 3 and that target a motor pattern as an idea R₁ in T2R Set 2 for an anticipated act. This is influenced by proprioceptive feedback R₁ in T5R of Set 3 as to current body position to ensure that the anticipated act is viable, and also by T1E to ensure readiness to act. The P1, P2 projections of UT8R project from each member of the triad in UT2E via the coherent linking up in pairs to budget energy supply with demand between all Cells(3) and Organs(2) of the Host(1). A fully integrated action plan is thus ready to find translation into a motor pattern in UT8E of Step 1 in the next Cycle.

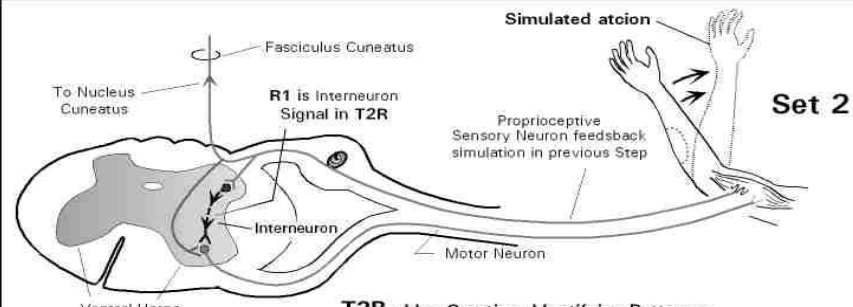
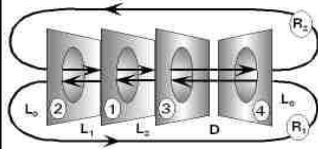
UT8R and UT2E both transform to begin the next Cycle with new sensory input.

PARTICULAR TERMS



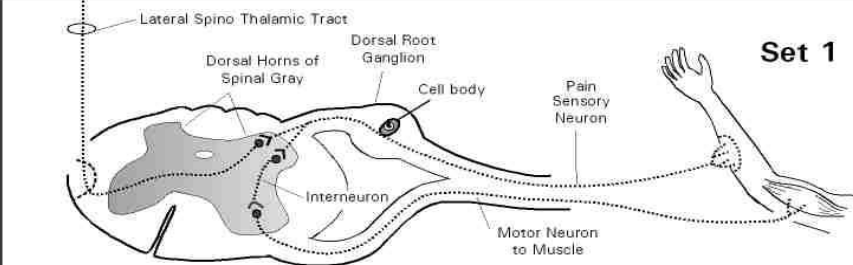
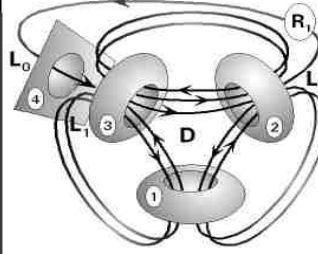
T5R - Physical Work, Muscle Activity:

- R₂ is muscle action. Muscle Organs(2) direct the Host(1) archetype to activate Cell(3) to a new Form(4) in the environment. The act is a regenerative reflex the Host has learned from experience to move quickly away from the source of the burn. The muscle Cell pattern is automated.
- R₁ feeds back proprioception of the change of body Form to monitor movement in Set 3 and influence T2R in Set 2 and T1E in Set 1.



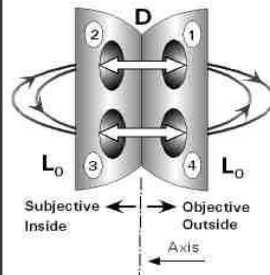
T2R - Idea Creation, Identifying Patterns:

- Host(1) Organs(2) and Cells(3) have mutually closed and interdependent surfaces such that the Host(1) is represented topologically by Cells(3) in the spinal cord Organ(2). The triad is the Host archetypal pattern.
- R₁ is the simulated Form(4) of response targeted by proprioceptive sensory feedback in the previous Step. It spans a pattern of interneuron Cells(3) in the spinal cord Organ(2) that synapse on a related pattern of motor neurons which will activate the simulated action in the next Step.
- The motor pattern selection is influenced by Set 1 T1E indicating the readiness of cells to respond, and by rapid proprioceptive feedback of body Form from T5R in Set 3.



T1E - Perception of the Field, Identify Response Capacity:

- C3=C4 is the core of related memories recalled from T7E elements of the Void. Organs(2) are subjectively aligned with Cells(2) and objectively coalesced with the Host(1) which is aligned with body Form(4). This represents the state of Host Cell and Organ preparedness to alter Form as anticipated in T2R of Set 2 consistent with the action pattern T5R in Set 3.
- The state of preparedness of nerves and muscles is reflected in electronic membrane potentials between inside and outside of Cells likely to be in following action sequences as well as expected sensory input to come via T4E in the next step. The three Sets are integrated by the synchronous Universal Sets.



CYCLE 2- STEP 1

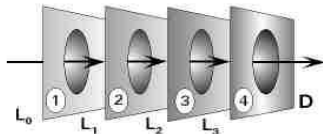
UNIVERSAL TERMS

Primary Universal Term UT9

Universal Hierarchy - Discretion
Idea → Knowledge → Routine → Form
 It is Primary for all humanity.
 In context this translates as follows:

Host → Organs → Cells → molecular Form

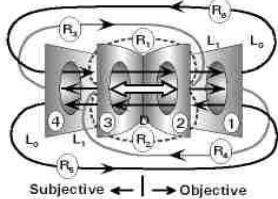
Term 9: Universal Discretion



The discontinuity between Cycles occurs because both Universal Sets transform together back to UT9 and UT3. Cycle 2 repeats Cycle 1 except that the same Particular Terms appear in different Sets. An element of Host(1) technique T7R in Set 3 is accessed in the Void consistent with new burn input T4E in Set 1 and a new motor Term T8E in Set 2.

Secondary Universal Term UT3

Term 3: Transfer of Idea into Form



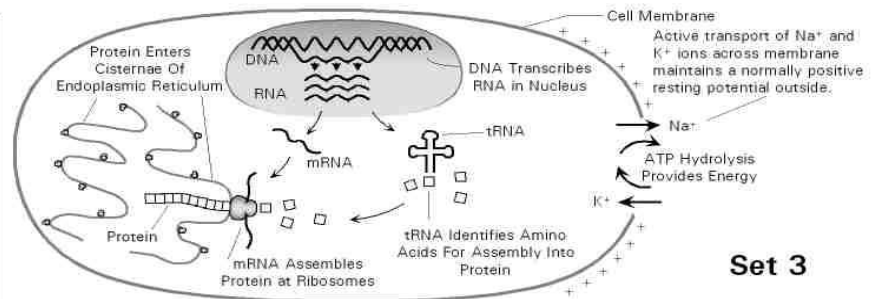
Note that the coalescences C1 = C2 in T4E and C3 = C4 in T7R are reciprocals. The coalescence C2 = C3 (Organs = Cells) in UT3 thus links current sensory input T4E to recall T7R in each human Host.

The coalesced C3=C2 facilitates R_{3,4,5,6}. Cells(3) relate through Organs(2) to the Host(1) idea. In countercurrent direction Organs(2) relate through Cells(3) to the body's Form(4). The UT3 Term thus has eternal characteristics. It accesses memories T7R of the Void that reconcile external needs of the Host(1) with the internally directed Form of body behavior. This ensures that recall from experience T7R relates to current sensory input T4E. T8R is motor output of a prior sequence.

UT9 and UT3 work together. UT9 is the primary pattern common to humanity. UT3 concerns transferring an objective Idea(1) that meaningfully relates to the current external circumstances of a specific human Host(1) to their subjective behavioral Form(4) in concert with the Form of the whole physical environment.

The central C2=C3 coalescence of UT3 defines an axis between the objective Idea of the human Host(1) with respect to the potential physical Form(4) of a particular human Host's body on the subjective side of the axis. External and internal coalesce as eternal or timeless in the Void. The Idea(1) and Form(4) are potential in the formless Void, not actual. The transfer of Idea into actualized Form in UT6 of Step 2 inverts this relationship.

PARTICULAR TERMS

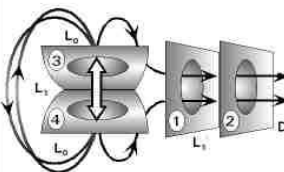


SCHMATIC REPRESENTATION OF COMMON CHEMICAL PROCESSES INSIDE CELLS

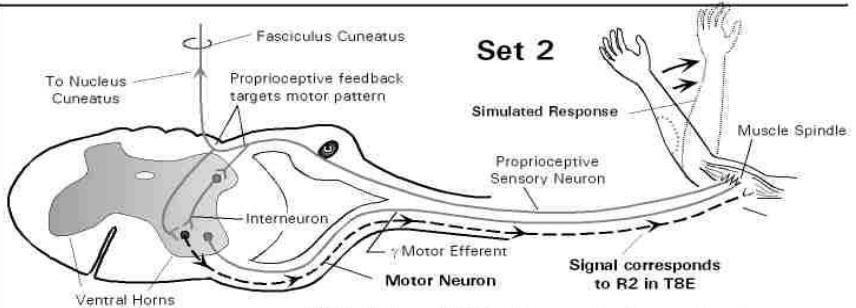
Set 3

T7R - Memory Element of the Void (Quantum Sensorium):

- The coalesced core of memory C3 = C4 (Cells = Form) relate how Cells(3) alter Form(4) of the Host(1) as technique that projects timelessly from the Void through Organs(2). This links capability of the Host to patterned energy demands of Organs.
- T7R thus budgets organic chemical energy demands involved in simulating a later action as a quantum element of technique.
- A chemical memory referent for recall is linked to sustaining resources associated with specific action sequences.

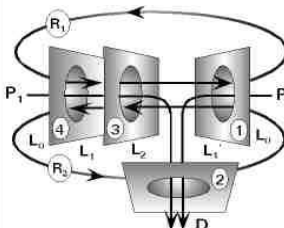


Set 2

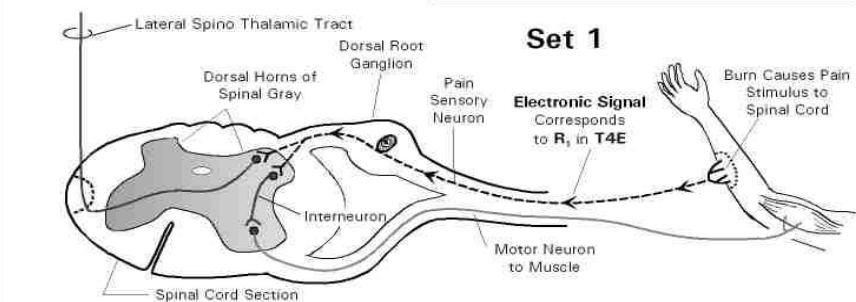


T8E - Balanced Motor Response to Sensory Input:

- R₁ is proprioceptive sensory feedback from a prior simulated Form(4) of action transmitted via Cells(3) to the topological representation of the Host(1) in the context of the spinal cord Organ(2). It targeted a motor pattern in the previous Step. R₂ is the motor response of the Host(1) to Form(4) via Cells(3).
- The R₂ response is balanced with R₁ across the Cell(3) interface so that it suits the sensory pattern of simulated Form.
- Projection P₁ is the Form(4) of molecular energy supply in Cells(3) as it projects through Organs(2). This must balance energy demands of the Host(1) expended through Organs(2) in P₂. This is double entry book keeping for all parallel pathways.

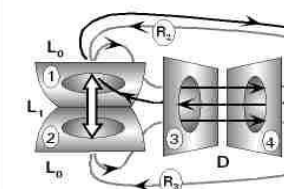


Set 1



T4E - Sensory Input from a Burn:

- The archetypal energy patterns of the Host(1) as coalesced with Organs(2) relate as one through Cells(3) to represent the body with respect to the molecular Form (C4) of the body in common with the environment, as shown together by R₂ and R₃. This represents the sensory apparatus of the Host's body.
- The countercurrent pain stimulus of the burn from environmental Form(4), is transmitted to the Host(1) by the electronic processes of Cells(3) via R₁.



CYCLE 2- STEP 2

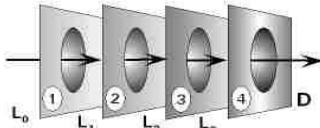
UNIVERSAL TERMS

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 In context this translates as follows:

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Term 9: Universal Discretion

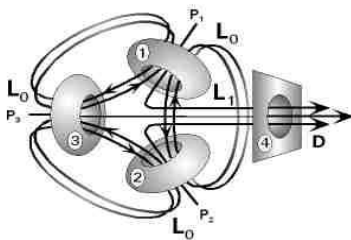


The Primary Step 2 progression to Knowledge(2) is synchronous with the superimposed R_1 idea in T2E where the Host(1) knows of the burn's Form(4) via Cells(3) as this relates to Organs(2) in the triad. A related γ motor simulation in T1R is consistent with the T5E action for continuity with a current sequence.

Secondary Universal Term UT6

Term UT3 transforms to UT6 which represents the body of the Host(1) in a mutually closed relationship with Cells(3) and Organs(2) as archetypal energy patterns specific to each human being. The triad operates behind the open molecular Form(4) interface common to the whole universe. Each human is clothed in molecular Form(4). The transference of Idea into Form of UT3 results in the Host corporeal body UT6.

Term UT6: Corporeal Body

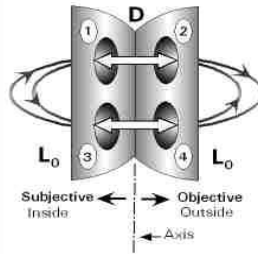
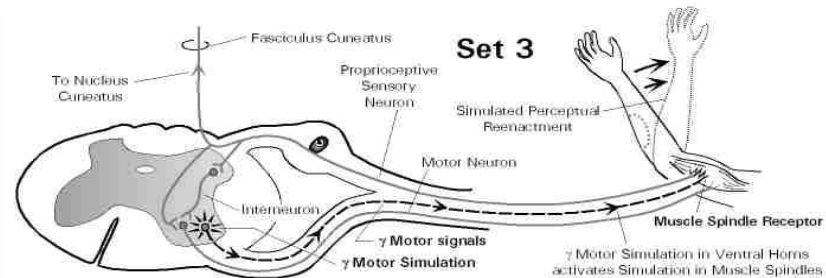


Consistent with Step 2 in UT9, we have Primary Universal Knowledge(2) of our Host bodies(1) Organs(2) and Cells(3) as these relate to the open Form (4) of the physical environment including other humans. Each human Host (1) has a closed physical surface that is interdependent with their Organs (2) and Cells (3).

The R_1 sensory input from the Form(4) of the environmental is transposed to within the Cell(3) interface as this relates to the Host(1) in T2E. In conjunction with UT9 in Step 2 the Host corporeal body UT6 can thus have Knowledge of the burn as it relates to Organs and Cells.

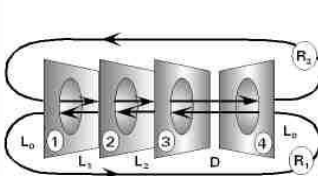
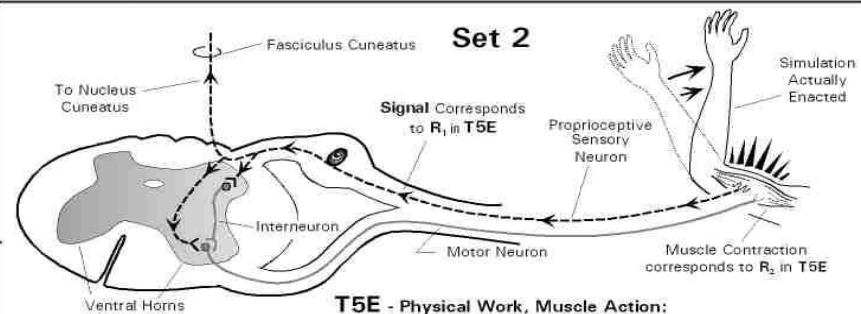
This facilitates an appropriate γ motor simulation in T1R that can also allow for a transition to an altered action pattern consistent with the current T5E action pattern of the Set 1 sequence.

PARTICULAR TERMS



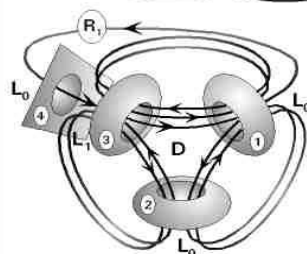
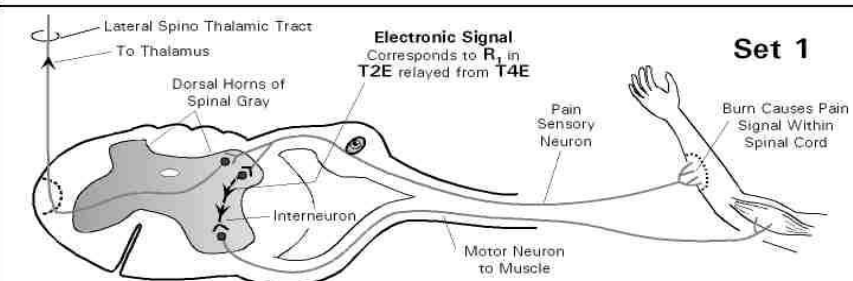
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- The archtypal pattern of the Host(1) is organized in the spinal cord Organ(2) topologically by the coalescence $C1=C2$. Cells(3) as gamma (γ) motor neurons and the Host(1) are aligned subjectively to allow a simulated pattern of coherent Host action.
- $C3=C4$ (Cells=Form) are cores of memories related to a needed response recalled from T7R in Step 1 to initiate an electronic simulation in γ motor Cell(3) activity. This projects to muscle spindles that simulate a change in the body's molecular Form(4).
- The muscle spindle simulation in the next Step generates proprioceptive feedback about relative body Form(4) in space.



T5E - Physical Work, Muscle Action:

- R_2 results from a prior simulation in muscle spindles as a coherent action of the Host(1) to direct muscle Organs (2) that direct muscle Cells(3) to move the Form(4) of the arm away from the burn. The body Form act is a creative expression of the Host anticipating the best move consistent with T2E in Set 1 and T1R in Set 3. It is thus expressive as distinct from a learned regenerative reflex.
- R_1 feeds back proprioception of body Form(4) allowing the Host(1) to monitor movement. This also influences the pattern of reflex motor selection by T2E in Set 1 and a new pattern of γ motor simulation by T1R in Set 3.



T2E - Creation of Idea, Identifying Patterns:

- In the triad Cells(C) relate independently to the Host Idea(1) as an archetypal pattern and also to the spinal cord Organ(2). The triad is a closed archetypal order that has historically evolved. Interneuron Cell(3) connections are specific to the spinal cord Organ(2) of each Host(1).
- The initial R_1 pain stimulus of T4E transmitted from external Form(4), inverts via a synapse to within Cells(3), to relate to the archetypal energy pattern of the Host(1). In T2E the R_1 becomes a specific electronic Idea R_1 in the cord. It is superimposed on the interdependent triad of mutually closed interfaces between Host(1), Organs(2) and Cells(3).

CYCLE 2- STEP 3

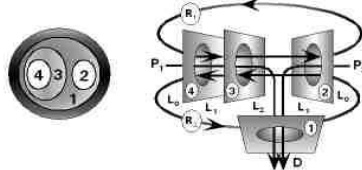
UNIVERSAL TERMS

Primary Universal Term UT8R

UT9 transforms to UT8R in Step 3. The regenerative mode of Term 8 is always universal. It applies to the whole body.

Remember the Hierarchy as follows:
 Host(1) → Organs(2) → Cells(3) → Form(4)

Term 8R: Balanced Feedback

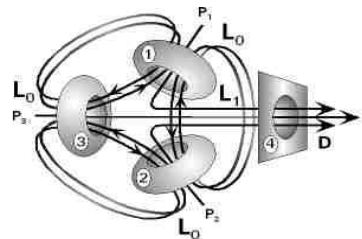


R₁ and R₂ mirror Organs(2) with internal Form(4) across the open Cell(3) interface within the context of the Host(1). This includes all Cells and Organs of all Hosts. It is archetypal for species. UT8R coheres with UT6 such that R₁ and R₂ link up C1, 2, & 3 in pairs in UT6 across the C2-C3 interval in UT8R. Only C2 and C3 mutually align in both Sets consistent with the central C2 = C3 coalescence of UT3 transfer of Idea(1) to Form(4). The open Idea(1) and Form(4) interfaces also align in the coherence of the two terms. The System 3 diagram helps to visualize how the two sets cohere together.

Secondary Universal Term UT6

In Step 2 Term UT3 transformed to UT6 which represents the body of the Host(1) in a mutually closed relationship with Cells(3) and Organs(2) as archetypal patterned energy specific to each human being. The triad operates behind the open molecular Form(4) interface common to the whole universe. Each human is clothed in molecular Form(4). The UT3 transference of Idea into Form realized in UT6 of Step 2 persists in Step 3.

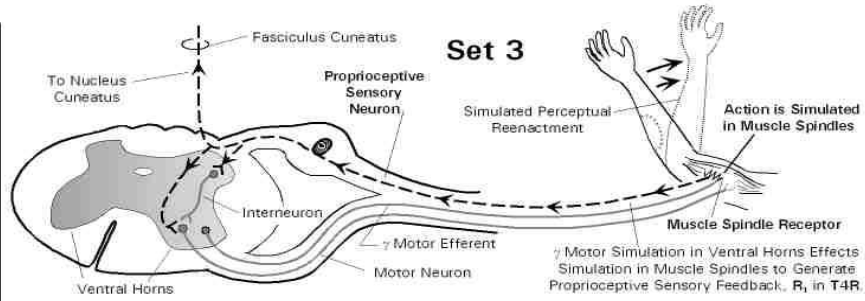
Term UT6: Corporeal Body



Projections P1, P2 and P3 of UT6 balance available energy supply P2 of UT8R with projected demand P1 in the coherence. The P2 and P1 projections of UT8R span each of the three intervals of UT6. Each of the P1, P2 and P3 projections around the triad of UT6 is a balance between P2 and P1 of UT8R as it relates to a specific Host human being's situation.

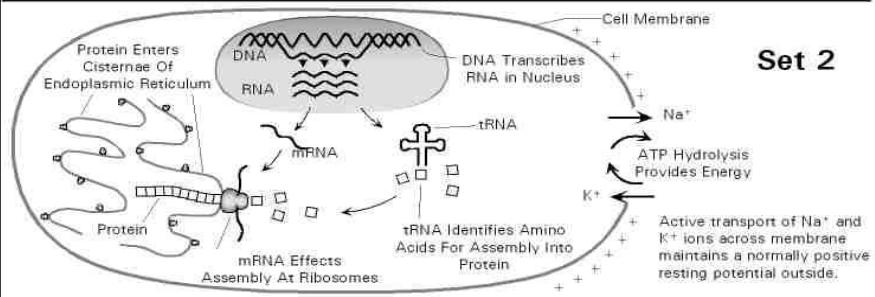
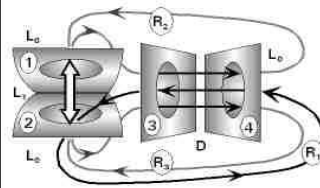
The energy supplies P1 and demands P2 of the Host(1) in UT8R are thus aligned with each Host Form(4) in UT6. The Host finds a balanced energy distribution to Organs and Cells according to an ongoing priority of needs.

PARTICULAR TERMS



T4R - Mental Work, Simulated Sensory Organization:

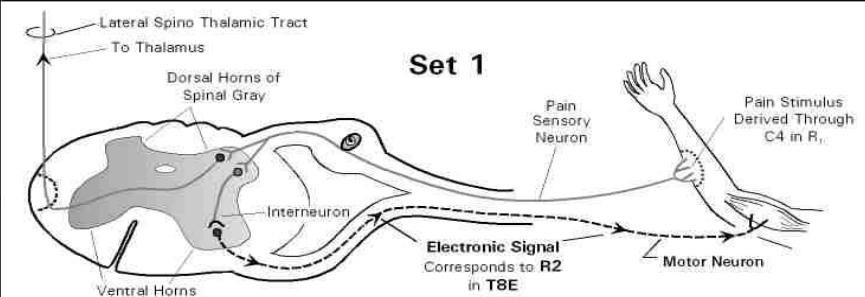
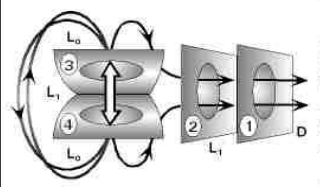
- A Step2 T1R gamma motor simulation in the cord projects to spindles in T4R Step 3. The coalescence of Host(1) with Organs(2) within Cells(3) as they relate to the external Form(4) of the body is represented by R₂ and R₃.
- Spindle simulation generates proprioceptive feedback R₁ from Form(4) through Cell(3) to Organs(2) which would be involved in actual enactment of the simulation, permitting selection of a motor pattern with benefit of input from T7E and T8E as integrated by the synchronous Universal Sets.



SCHEMATIC REPRESENTATION OF COMMON CHEMICAL PROCESSES INSIDE CELLS

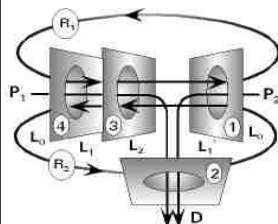
T7E - Memory Resources, Quantum Sensorium:

- The internal core of memory C3=C4 (Cell=Form) projects outside through Organs(2) thence the Host(1) thus reconciling inside and outside as an element of the timeless Void. This eternal quantum sequence of technique links the molecular Form(4) of Cells(3) in Organs(2) to the action pattern of the Host(1). It accounts for chemical resources expended in cells involved in the quantized action sequence.
- T7E follows a simulated action sequence that was budgeted for. Recall to T1E will reflect contingent needs consistent with P₁ and P₂ of the universal T8R term.



T8E - Creative Feedback, Balanced Response:

- R₁ is sensory input from the Form(4) of the burn to the Host(1) via Cells(3). The burn R₁ from outside Form(4) in Step 1 was transposed within related cord Cells(3) in T2E of Step 2 to target cord motor neurons that project to muscles. The motor neurons topologically represent the Host(1) in the spinal cord Organs(2) context. This Step 3 balances R₁ input with R₂ output.
- R₂ shows the countercurrent motor response of the Host(1) via Cells(3) to alter physical Form(4) in the context of body Organs(2)
- P₁ balances the Form(4) of energy supply in Cells(3) with P₂ demands of the Host(1) as they both project via Organs(2).



CYCLE 2- STEP 4

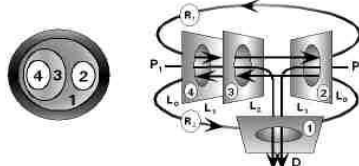
UNIVERSAL TERMS

Primary Universal Term UT8R

UT9 transforms to UT8R in Step 3. The regenerative mode of Term 8 is always a universal archetype of the Host species.

Remember the Hierarchy as follows:
 Host(1) → Organs(2) → Cells(3) → Form(4)

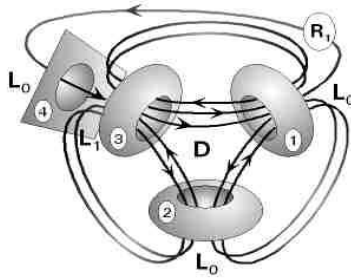
Term 8R: Balanced Feedback



UT8R does not transform from Step 3 to Step 4 where it now coheres with UT2E. The C2-C3 interval of R₁ and R₂ link up the 1, 2, 3 triad in UT2E in pairs as before but now the Host(1) is not aligned with external body Form(4). The latter has inverted within Cells(3) in UT2E to become an integrated Idea R₁ imposed on the archetypal triad specific to each person. The coherence now places this within the open primary archetype of all humanity which is the open Host(1) of the Primary Universal Term UT8R. The secondary creative Idea R₁ in UT2E of each person thus has a social context.

Secondary Universal Term UT2E Integrated Expressive Idea

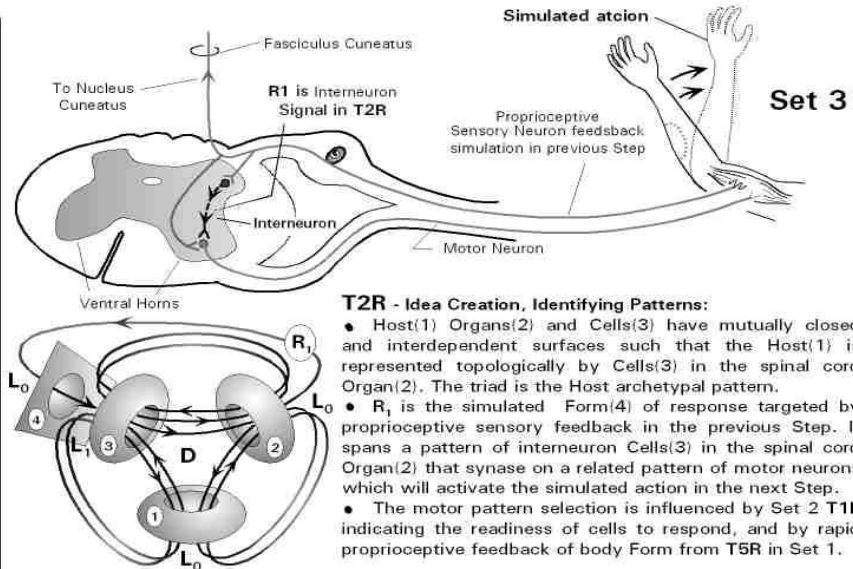
The closed corporeal body triad 1,2,3 that was behind the Form of the environment in UT6 has inverted in UT2E in Step 4. R₁ now represents all sensory input from Form(4) through Cells(3) as a coherent integrated Idea of the Host(1).



This integrated expressive UT2E idea R₁ coincides with all Particular T2R ideas simulated by muscle spindles in Step 3 and that target a motor pattern as an idea R₁ in T2R Set 3 for an anticipated act. This is influenced by proprioceptive feedback R₁ in T5R of Set 1 as to current body position to ensure that the anticipated act is viable, and also by T1E to ensure readiness to act. The P1, P2 projections of UT8R project from each member of the triad in UT2E via the coherent linking up in pairs to budget energy supply with demand between all Cells(3) and Organs(2) of the Host(1). A fully integrated action plan is thus ready to find translation into a motor pattern in UT8E of Step 1 in the next Cycle.

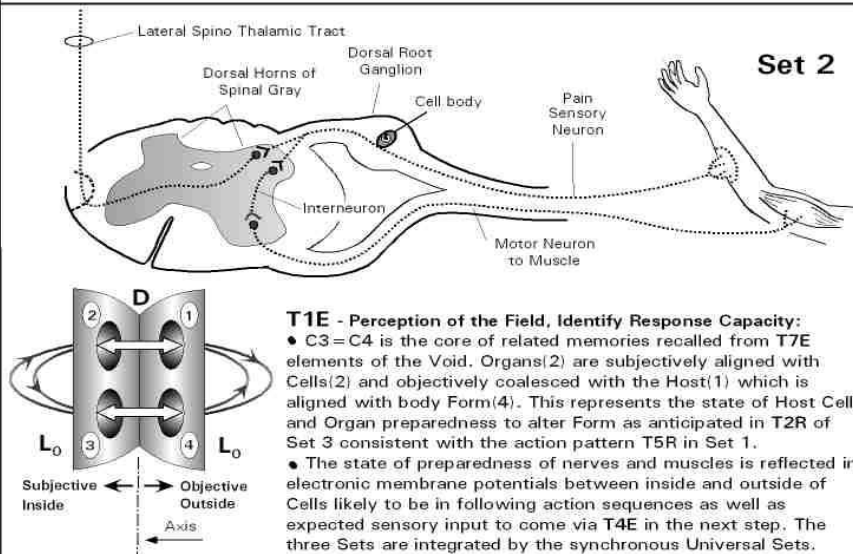
UT8R and UT2E both transform to begin the next Cycle with new sensory input.

PARTICULAR TERMS



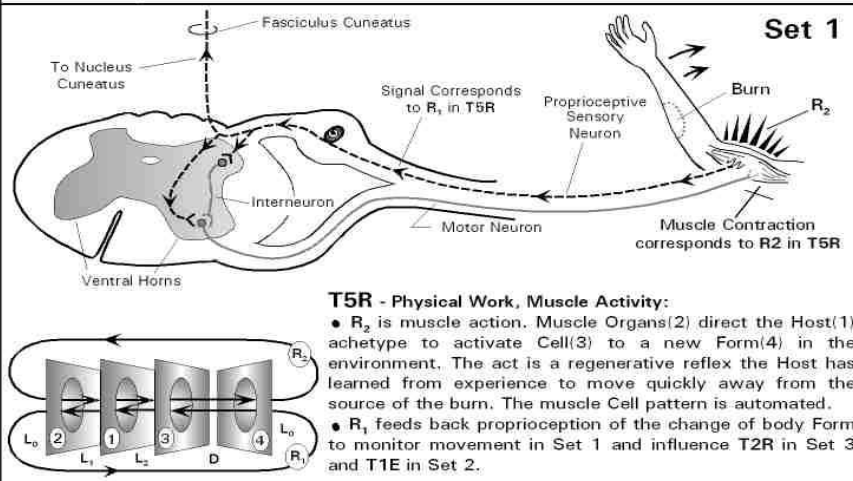
T2R - Idea Creation, Identifying Patterns:

- Host(1) Organs(2) and Cells(3) have mutually closed and interdependent surfaces such that the Host(1) is represented topologically by Cells(3) in the spinal cord Organ(2). The triad is the Host archetypal pattern.
- R₁ is the simulated Form(4) of response targeted by proprioceptive sensory feedback in the previous Step. It spans a pattern of interneuron Cells(3) in the spinal cord Organ(2) that synapse on a related pattern of motor neurons which will activate the simulated action in the next Step.
- The motor pattern selection is influenced by Set 2 T1E indicating the readiness of cells to respond, and by rapid proprioceptive feedback of body Form from T5R in Set 1.



T1E - Perception of the Field, Identify Response Capacity:

- C3=C4 is the core of related memories recalled from T7E elements of the Void. Organs(2) are subjectively aligned with Cells(2) and objectively coalesced with the Host(1) which is aligned with body Form(4). This represents the state of Host Cell and Organ preparedness to alter Form as anticipated in T2R of Set 3 consistent with the action pattern T5R in Set 1.
- The state of preparedness of nerves and muscles is reflected in electronic membrane potentials between inside and outside of Cells likely to be in following action sequences as well as expected sensory input to come via T4E in the next step. The three Sets are integrated by the synchronous Universal Sets.



T5R - Physical Work, Muscle Activity:

- R₂ is muscle action. Muscle Organs(2) direct the Host(1) archetype to activate Cell(3) to a new Form(4) in the environment. The act is a regenerative reflex the Host has learned from experience to move quickly away from the source of the burn. The muscle Cell pattern is automated.
- R₁ feeds back proprioception of the change of body Form to monitor movement in Set 1 and influence T2R in Set 3 and T1E in Set 2.

CYCLE 3- STEP 1

UNIVERSAL TERMS

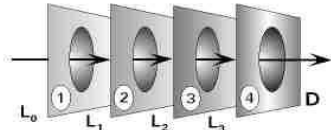
Primary Universal Term UT9

Universal Hierarchy - Discretion
 Idea → Knowledge → Routine → Form

It is Primary for all humanity.
 In context this translates as follows:

Host → Organs → Cells → molecular Form

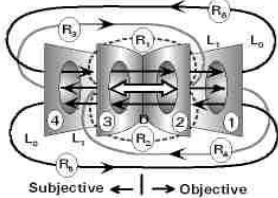
Term 9: Universal Discretion



The 4 successive open centers of UT9 are a time-like progression in 4 Steps that predefine a Cycle. The Host(1) is Step 1 of UT9. It identifies T7R as particular quanta of technique coupled to new burn stimuli in T4E consistent with a current motor sequence T8E. UT9 does not transform between Step 1 & Step 2, while the Secondary Set does.

Secondary Universal Term UT3

Term 3: Transfer of Idea into Form



Note that the coalescences C1=C2 in T4E and C3=C4 in T7R are reciprocals. The coalescence C2=C3 (Organs=Cells) in UT3 thus links current sensory input T4E to recall T7R in each human Host.

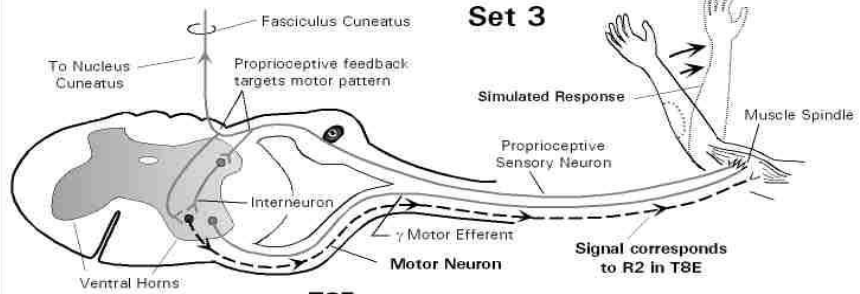
The coalesced C3=C2 facilitates R_{3,4,5,6}. Cells(3) relate through Organs(2) to the Host(1) idea. In countercurrent direction Organs(2) relate through Cells(3) to the body's Form(4). The UT3 Term thus has eternal characteristics. It accesses memories T7R of the Void that reconcile external needs of the Host(1) with the internally directed Form of body behavior. This ensures that recall from experience T7R relates to current sensory input T4E. T8R is motor output of a prior sequence.

UT9 and UT3 work together. UT9 is the primary pattern common to humanity. UT3 concerns transferring an objective Idea(1) that meaningfully relates to the current external circumstances of a specific human Host to their subjective behavioral Form(4) in concert with the Form of the whole physical environment.

The central C2=C3 coalescence of UT3 defines an axis between the objective Idea of the human Host(1) with respect to the potential physical Form(4) of a particular human Host's body on the subjective side of the axis. External and internal coalesce as eternal or timeless in the Void. The Idea(1) and Form(4) are potential in the formless Void, not actual. The transfer of Idea into actualized Form in UT6 of Step 2 inverts this relationship.

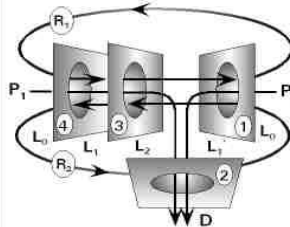
PARTICULAR TERMS

Set 3

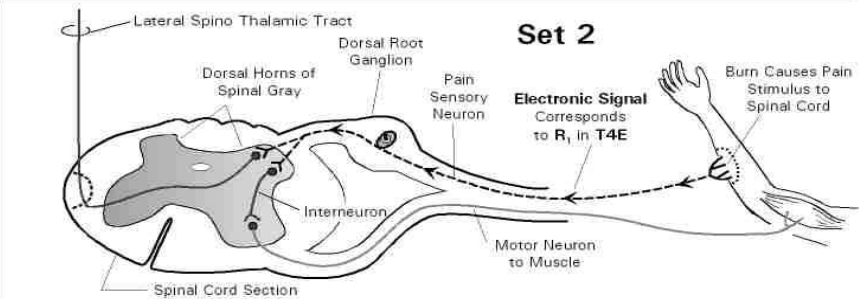


T8E - Balanced Motor Response to Sensory Input:

- R₁ is proprioceptive sensory feedback from a prior simulated Form(4) of action transmitted via Cells(3) to the topological representation of the Host(1) in the context of the spinal cord Organ(2). It targeted a motor pattern in the previous Step. R₂ is the motor response of the Host(1) to Form(4) via Cells(3).
- The R₂ response is balanced with R₁ across the Cell(3) interface so that it suits the sensory pattern of simulated Form.
- Projection P₁ is the Form(4) of molecular energy supply in Cells(3) as it projects through Organs(2). This must balance energy demands of the Host(1) expended through Organs(2) in P₂. This is double entry book keeping for all parallel pathways.

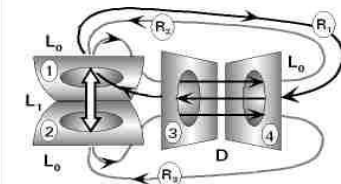


Set 2

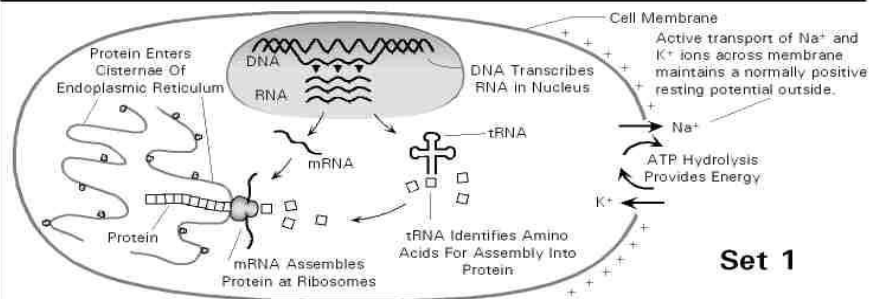


T4E - Sensory Input from a Burn:

- The archetypal energy patterns of the Host(1) as coalesced with Organs(2) relate as one through Cells(3) to represent the molecular Form (C4) of the body in common with the environment, as shown together by R₂ and R₃. This represents the sensory apparatus of the Host's body.
- The countercurrent pain stimulus of the burn from environmental Form(4), is transmitted to the Host(1) by the electronic processes of Cells(3) via R₁.



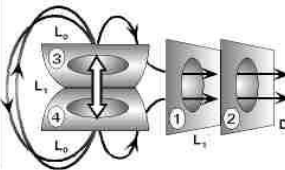
Set 1



SCHMATIC REPRESENTATION OF COMMON CHEMICAL PROCESSES INSIDE CELLS

T7R - Memory Element of the Void (Quantum Sensorium):

- The coalesced core of memory C3=C4 (Cells=Form) relate how Cells(3) alter Form(4) of the Host(1) as technique that projects timelessly from the Void through Organs(2). This links capability of the Host to patterned energy demands of Organs.
- T7R thus budgets organic chemical energy demands involved in simulating a later action as a quantum element of technique.
- A chemical memory referent for recall is linked to sustaining resources associated with specific action sequences.



CYCLE 3- STEP 2

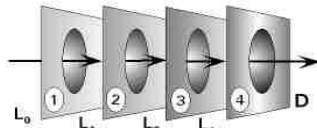
UNIVERSAL TERMS

Primary Universal Term UT9

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Term 9: Universal Discretion

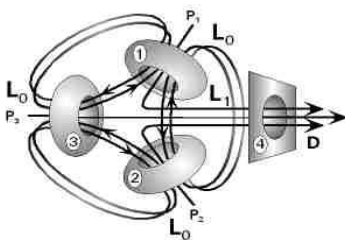


The Primary Step 2 progression to Knowledge(2) is synchronous with the superimposed R_1 idea in T2E where the Host(1) knows of the burn's Form (4) via Cells(3) as this relates to Organs(2) in the triad. A related γ motor simulation in T1R is consistent with the T5E action for continuity with a prior sequence.

Secondary Universal Term UT6

Term UT3 transforms to UT6 which represents the body of the Host(1) in a mutually closed relationship with Cells(3) and Organs(2) as archetypal energy patterns specific to each human being. The triad operates behind the open molecular Form(4) interface common to the whole universe. Each human is clothed in molecular Form(4). The transference of Idea into Form of UT3 results in the Host corporeal body UT6.

Term UT6: Corporeal Body

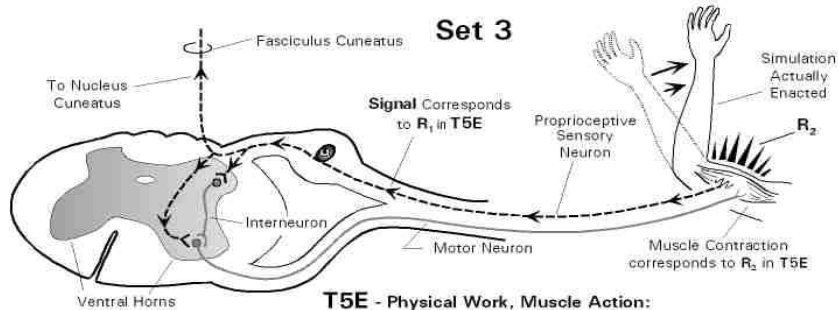


Consistent with Step 2 in UT9, we have Primary Universal Knowledge(2) of our Host bodies(1) Organs(2) and Cells(3) as these relate to the open Form (4) of the physical environment including other humans. Each human Host (1) has a closed physical surface that is interdependent with their Organs (2) and Cells (3).

The R_1 sensory input from the Form(4) of the environmental is transposed to within the Cell(3) interface as this relates to the Host(1) in T2E. In conjunction with UT9 in Step 2 the Host corporeal body UT6 can thus have Knowledge of the burn as it relates to Organs and Cells.

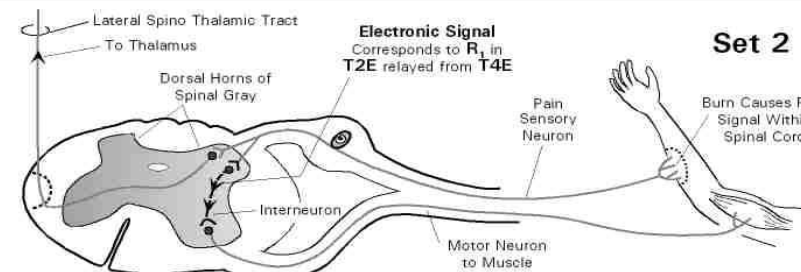
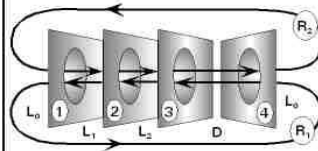
This facilitates an appropriate γ motor simulation in T1R that can also allow for a transition to an altered action pattern consistent with the current T5E action pattern of the Set 3 sequence.

PARTICULAR TERMS



T5E - Physical Work, Muscle Action:

- R_2 results from a prior simulation in muscle spindles as a coherent action of the Host(1) to direct muscle Organs (2) that direct muscle Cells(3) to move the Form(4) of the arm away from the burn. The body Form act is a creative expression of the Host anticipating the best move consistent with T2E in Set 2 and T1R in Set 1. It is thus expressive as distinct from a learned regenerative reflex.
- R_1 feeds back proprioception of body Form(4) allowing the Host(1) to monitor movement. This also influences the pattern of reflex motor selection by T2E in Set 2 and a new pattern of γ motor simulation by T1R in Set 1.

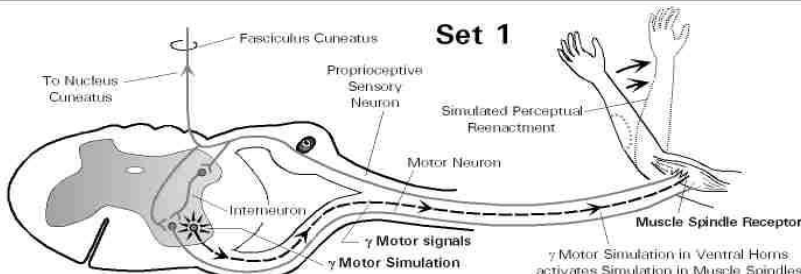
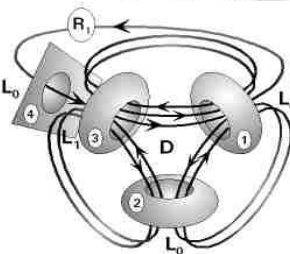


Electronic Signal Corresponds to R_1 in T2E relayed from T4E

Set 2

T2E - Creation of Idea, Identifying Patterns:

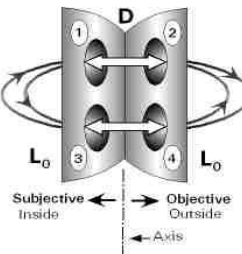
- In the triad Cells C3 relate independently to the Host Idea(1) as an archetypal pattern, and also to the spinal cord Organ(2). The triad is a closed archetypal order that has historically evolved. Interneuron Cell(3) connections are specific to the spinal cord Organ(2) of each Host(1).
- The initial R_1 pain stimulus of T4E transmitted from external Form(4), inverts via a synapse to within Cells(3), to relate to the archetypal energy pattern of the Host(1). In T2E it becomes a specific electronic Idea R_1 in the cord. It is superimposed on the interdependent triad of mutually closed interfaces between Host(1), Organs(2) and Cells(3).



Set 1

T1R - Perception of the Field, Identifying a Response to Need:

- The archetypal pattern of the Host(1) is organized in the spinal cord Organ(2) topologically by the coalescence $C1 = C2$. Cells(3) as gamma (γ) motor neurons and the Host(1) are aligned subjectively to allow a simulated pattern of coherent Host action.
- $C3 = C4$ (Cells = Form) are cores of memories related to a needed response recalled from T7R in Step1 to initiate an electronic simulation in γ motor Cell(3) activity. This projects to muscle spindles that simulate a change in the body's molecular Form(4).
- The muscle spindle simulation in the next Step generates proprioceptive feedback about relative body Form(4) in space.



CYCLE 3- STEP 3

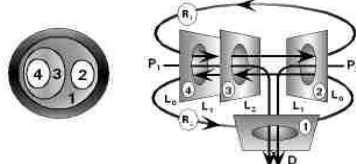
UNIVERSAL TERMS

Primary Universal Term UT8R

UT9 transforms to UT8R in Step 3. The regenerative mode of Term 8 is always universal. It applies to the whole body.

Remember the Hierarchy as follows:
 Host(1) → Organs(2) → Cells(3) → Form(4)

Term 8R: Balanced Feedback

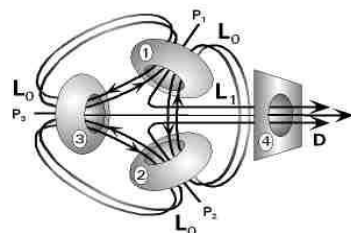


R_1 and R_2 mirror Organs(2) with internal Form(4) across the open Cell(3) interface within the context of the Host(1). This includes all Cells and Organs of all Hosts. It is archetypal for species. UT8R coheres with UT6 such that R_1 and R_2 link up C1, 2, & 3 in pairs in UT6 across the C2-C3 interval in UT8R. Only C2 and C3 mutually align in both Sets consistent with the central C2 = C3 coalescence of UT3 transfer of Idea(1) to Form(4). The open Idea(1) and Form(4) interfaces also align in the coherence of the two terms. The System 3 diagram helps to visualize how the two sets cohere together.

Secondary Universal Term UT6

Term UT3 transforms to UT6 which represents the body of the Host(1) in a mutually closed relationship with Cells(3) and Organs(2) as archetypal energy patterns specific to each human being. The triad operates behind the open molecular Form(4) interface common to the whole universe. Each human is clothed in molecular Form(4). The transference of Idea into Form of UT3 results in the Host corporeal body UT6.

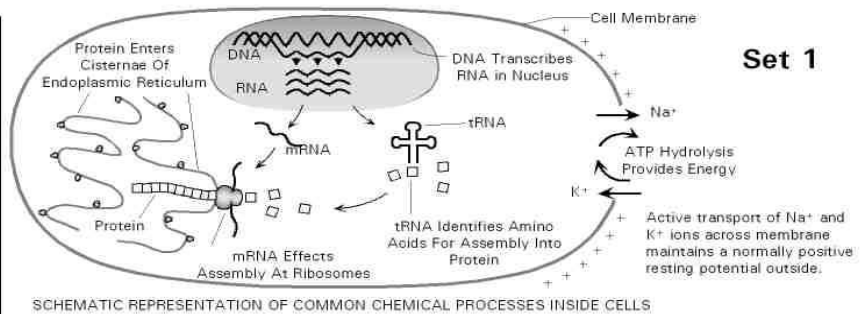
Term UT6: Corporeal Body



Projections P1, P2 and P3 of UT6 balance available energy supply P2 of UT8R with projected demand P1 in the coherence. The P2 and P1 projections of UT8R span each of the three intervals of UT6. Each of the P1, P2 and P3 projections around the triad of UT6 is a balance between P2 and P1 of UT8R as it relates to a specific Host human being's situation.

The energy supplies P1 and demands P2 of the Host(1) in UT8R are thus aligned with each Host Form(4) in UT6. The Host(1) finds a balanced energy distribution to Organs(2) and Cells(3) according to an ongoing priority of needs.

PARTICULAR TERMS

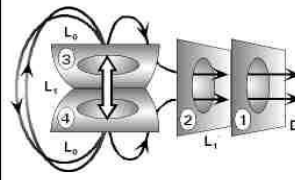


SCHEMATIC REPRESENTATION OF COMMON CHEMICAL PROCESSES INSIDE CELLS

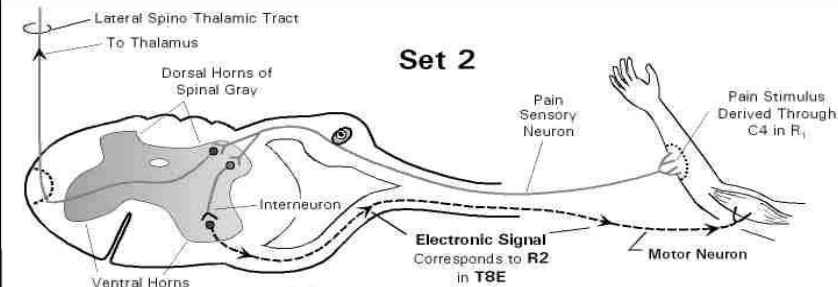
Set 1

T7E - Memory Resources, Quantum Sensorium:

- The internal core of memory C3=C4 (Cell = Form) projects outside through Organs(2) thence the Host(1) thus reconciling inside and outside as an element of the timeless Void. This eternal quantum sequence of technique links the molecular Form of Cells in Organs to the action pattern of the Host. It accounts for the chemical resources expended in all cells involved in the quantized action sequence.
- T7E follows a simulated action sequence that was budgeted for. Recall to T1E will reflect contingent needs consistent with projections P₁ and P₂ of the universal T8R

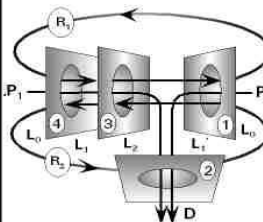


Set 2

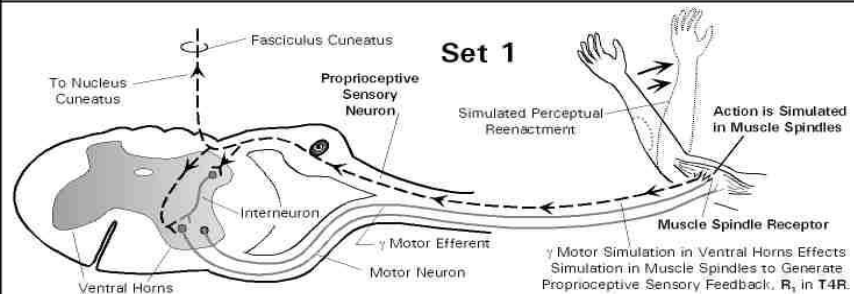


T8E - Creative Feedback, Balanced Response:

- R_1 is sensory input from the Form(4) of the burn to the Host(1) via Cells(3). The burn R_1 from outside Form(4) in Step 1 was transposed within related cord Cells(3) in T2E of Step 2 to target cord motor neurons that project to muscles. The motor neurons topologically represent the Host(1) in the spinal cord Organ(2) context. This Step 3 balances R_1 input with R_2 output.
- R_2 shows the countercurrent motor response of the Host(1) via Cells(3) to alter physical Form(4) in the context of body Organs(2).
- P₁ balances the Form(4) of energy supply in Cells(3) with P₂ demands of the Host(1) as they both project via Organs(2).

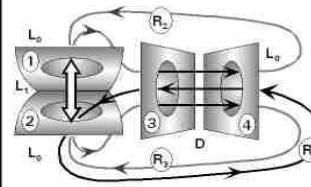


Set 1



T4R - Mental Work, Simulated Sensory Organization:

- A Step2 T1R gamma motor simulation in the cord projects to spindles in T4R Step 3. The coalescence of Host(1) with Organs(2) within Cells(3) as they relate to the external Form(4) of the body is represented by R_2 and R_3 .
- Spindle simulation generates proprioceptive feedback R_1 , from Form(4) through Cell(3) to Organs(2) which would be involved in actual enactment of the simulation, permitting selection of a motor pattern with benefit of input from T7E and T8E as integrated by the synchronous Universal Sets.



CYCLE 3- STEP 4

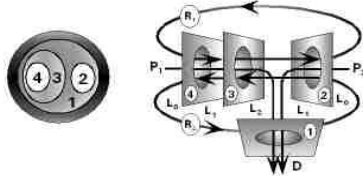
UNIVERSAL TERMS

Primary Universal Term UT8R

UT9 transforms to UT8R in Step 3. The regenerative mode of Term 8 is always a universal archetype of the Host species.

Remember the Hierarchy as follows:
 Host(1) → Organs(2) → Cells(3) → Form(4)

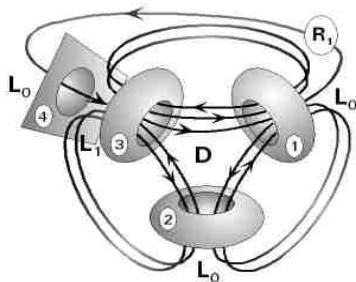
Term 8R: Balanced Feedback



UT8R does not transform from Step 3 to Step 4 where it now coheres with UT2E. The C2-C3 interval of R₁ and R₂ link up the 1, 2, 3 triad in UT2E in pairs as before but now the Host(1) is not aligned with external body Form(4). The latter has inverted within Cells(3) in UT2E to become an integrated Idea R₁ imposed on the archetypal triad specific to each person. The coherence now places this within the open primary archetype of all humanity which is the open Host(1) of the Primary Universal Term UT8R. The secondary creative Idea R₁ in UT2E of each person thus has a social context.

Secondary Universal Term UT2E Integrated Expressive Idea

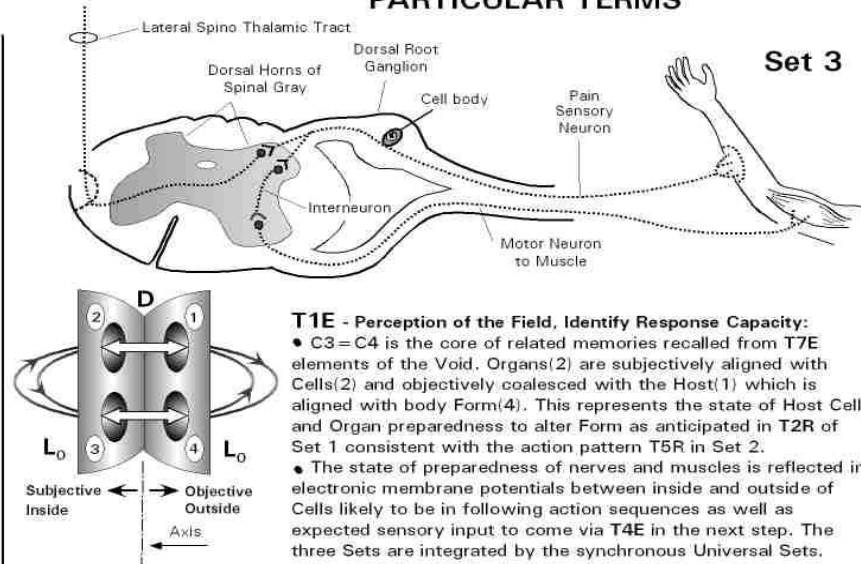
The closed corporeal body triad 1, 2, 3 that was behind the Form of the environment in UT6 has inverted in UT2E in Step 4. R₁ now represents all sensory input from Form(4) through Cells(3) as a coherent integrated Idea of the Host(1).



This integrated expressive UT2E idea R₁ coincides with all Particular T2R ideas simulated by muscle spindles in Step 3 and that target a motor pattern as an idea R₁ in T2R Set 1 for an anticipated act. This is influenced by proprioceptive feedback R₁ in T5R of Set 2 as to current body position to ensure that the anticipated act is viable, and also by T1E to ensure readiness to act. The P1, P2 projections of UT8R project from each member of the triad in UT2E via the coherent linking up in pairs to budget energy supply with demand between all Cells(3) and Organs(2) of the Host(1). A fully integrated action plan is thus ready to find translation into a motor pattern in UT8E of Step 1 in the next Cycle.

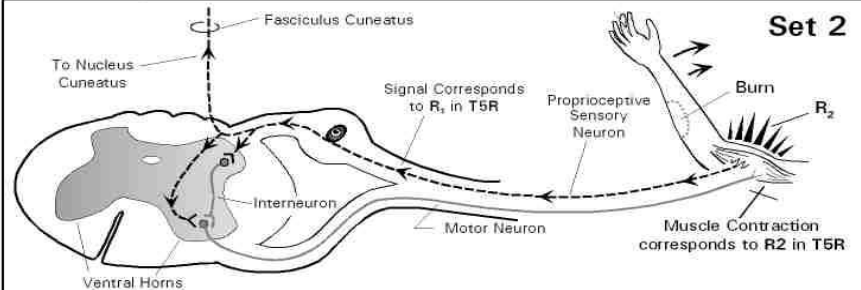
UT8R and UT2E both transform to begin the next Cycle with new sensory input.

PARTICULAR TERMS



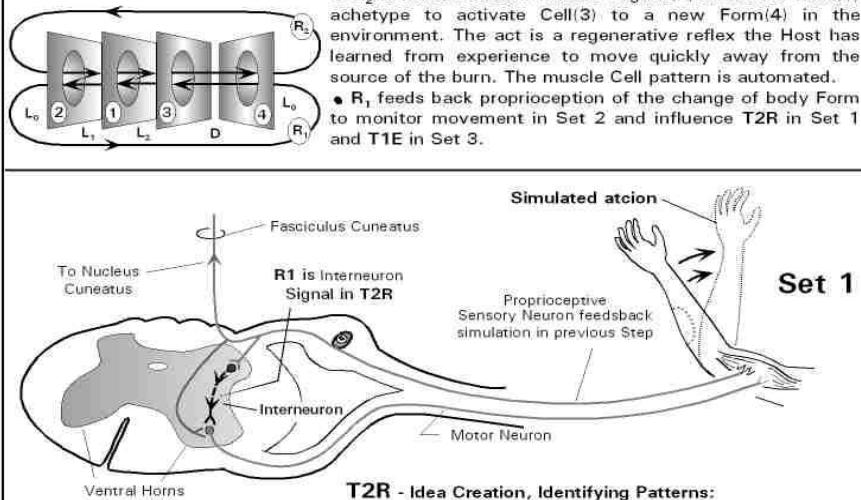
T1E - Perception of the Field, Identify Response Capacity:

- C3=C4 is the core of related memories recalled from T7E elements of the Void. Organs(2) are subjectively aligned with Cells(2) and objectively coalesced with the Host(1) which is aligned with body Form(4). This represents the state of Host Cell and Organ preparedness to alter Form as anticipated in T2R of Set 1 consistent with the action pattern T5R in Set 2.
- The state of preparedness of nerves and muscles is reflected in electronic membrane potentials between inside and outside of Cells likely to be in following action sequences as well as expected sensory input to come via T4E in the next step. The three Sets are integrated by the synchronous Universal Sets.



T5R - Physical Work, Muscle Activity:

- R₂ is muscle action. Muscle Organs(2) direct the Host(1) archetype to activate Cell(3) to a new Form(4) in the environment. The act is a regenerative reflex the Host has learned from experience to move quickly away from the source of the burn. The muscle Cell pattern is automated.
- R₁ feeds back proprioception of the change of body Form to monitor movement in Set 2 and influence T2R in Set 1 and T1E in Set 3.



T2R - Idea Creation, Identifying Patterns:

- Host(1) Organs(2) and Cells(3) have mutually closed and interdependent surfaces such that the Host(1) is represented topologically by Cells(3) in the spinal cord Organ(2). The triad is the Host archetypal pattern.
- R₁ is the simulated Form(4) of response targeted by proprioceptive sensory feedback in the previous Step. It spans a pattern of interneuron Cells(3) in the spinal cord Organ(2) that synapse on a related pattern of motor neurons which will activate the simulated action in the next Step.
- The motor pattern selection is influenced by Set 3 T1E indicating the readiness of cells to respond, and by rapid proprioceptive feedback of body Form from T5R in Set 2.

Conclusion

The above sequence illustrations demonstrate that the human nervous system at the spinal level integrates meaning synapse by synapse in precise accord with the System of delineating the Cosmic Order by which we have evolved. The associated Nervous System article Part 2 on the Cerebellum shows how other sensory inputs at the spinal and brain stem level are meaningfully integrated with conscious cerebral functions including the motor projection of consciously intended behavior patterns.

This detailed accord between the structural dynamics of System 4 and the nervous system can hardly be a coincidence. The strict structural correspondence is both sufficient and necessary to explain how the nervous system integrates experience synapse by synapse, irrespective of the immense diversity of human behavior. It embraces all possible varieties of phenomenal behavior. It concerns the ontological structural of Being that subsumes the epistemological knowledge of phenomenal behavior.

The article focuses only on the evolutionary variant of the System as a learning experience. There is also an involutory variant where Center 3 and 4 exchange places. Values become inverted. Things are done as ends in themselves rather than meaningfully relating to circumstance. This leads to fragmentation and decay. The evolutionary and involutory variants are mutually exclusive such that their expressive and regenerative modes are at cross purposes. The expressive mode of the evolutionary variant is the regenerative mode of the involutory variant and vice versa. This allows the involutory variant to feed on the evolutionary variant, while the evolutionary variant can redeem the energies of the involutory variant. We experience this as a choice implicitly presented to us in most circumstances between mutually opposed value judgments. There is a bi-polar moral dilemma at the roots of perception.

The involutory variant is introduced at the following link:

http://www.cosmic-mindreach.com/Human_Values.html