Manual Piece: Introduction.

The manual pieces are somewhat professorial. My job in these parts is to teach you the concepts you will need to participate in, or think critically about this program.

Further, throughout this book I repeat myself frequently, and I often use key terms before they have been formally explained in a Manual Piece. This is by design, and also to make the narrative arc more interesting. This book is an extremely challenging read.

Through my travels speaking with people, a resounding theme is that education will be one of the critical aspects underpinning any effective global peace system. These Manual Pieces share qualities of a text book, and me being the author, am here to teach you about this vision of a global peace system in terms of the peace-based language or common tongue of the program. Beyond just describing a vision, another reason I treat this as educational and not just quirky futurist fodder, is that I genuinely believe the contents of this text are valuable, that they have the ability to help and enhance *your* world, and they have the ability to do so *now*.

Thus, drawing from George J. Thompson's *Verbal Judo*[1]'s model for education, my educational objective is to *motivate you* enough to learn a novel way (potentially to you at least) of thinking about peace, particularly in terms of computers and process. The educational goal is to use these learnings to *expand your mind* about what our options are when it comes to the hard question of how to solve the general war and peace problem. With these learnings and resulting expanded mind, the hope is that you will have the resources you need to evolve in such a way as to bring a sense of inner peace to your world by installing a robust peace process, or, if you already have inner peace, to enhance it.

Let's begin.

[1] verbal judo: http://fop86.com/verbal%20judo/verbal%20judo_%20the%20gentle%20art%20of%20persuasion.pdf

Manual Piece: a world piece.

TM

The world piece is the basic computational object of a piece computer. World pieces are the equivalent to bits in a modern electronic computer. In terms of the optimization problem, being how best to arrange and integrate pieces in a world, the world piece is the object of attention.

Subpiece: World scope.

It helps to start with the context, or the concept that gives a world piece its fundamental meaning. In this case, that concept is *scope*, and that scope is the *world*.

What constitutes a world? In the context of the piece computer, a world is the collection of pieces that make up some significant *thing* defining the world. Additionally, the world includes the *space* that contains that collection of pieces.

For example, my desk has its own world. Significant things in the desk world are all objects that lay on the surface of the desk, and contained in its drawers. The space is the desk surface, and the inside compartments of the drawers. There are also significant things that determine the space of the desk, like the desk pieces themselves—the glass surface, the legs, the drawers and their casters. All these pieces, and the space, define my *desk world*. I could change the desk world by subtracting a piece, like subtracting a bit, maybe the pen on the surface for example. Or I could add a bit, like a book on the surface or in the drawer. I could do something extreme, like divide by two, and try to saw my desk world in half. This wouldn't work very well because my desk is glass and metal.

Subpiece: Significant things.

World is one concept, defining scope—the boundaries—of a world. We must also define the concept of *piece*, which gives the world piece its significance.

For the purpose of the universal piece computer and world piece computers, there are three general categories: there is *stuff*, there are *things*, and there are *pieces.* Stuff is what surrounds us, be it the materials and objects that surround, or the images, fleeting thoughts, fleeting feelings within. Stuff is everywhere. Often times though, stuff will take the form of a *thing*. A thing is something that a Human like me or you might notice. We look the shape of a large pile of stuff for example, and see some*thing*. That particular thing may be a mountain.

Stuff everywhere, and things are made up out of stuff. So things are everywhere too. My world has a lot mountain trails with things we call rocks and pebbles. I don't consider every little rock and pebble as part of my world though, because they simply aren't significant. This would change however, if I badly tripped on a little rock. Then that little rock thing *would* be significant. That little rock would become part of my world.

So to figure out what things to include when defining a world, we have to distinguish a *piece* from a *thing.* A *piece* is any thing *significant to the owner or inhabitant of a world*. If I tripped on the little rock, the then the rock becomes a *piece* in my world. That particular piece would compel me to curse as I fall down onto the rocky trail, possibly even compelling me to perform a addition operation later with my world piece computer, by adding new bandage pieces to my knees.

Back to my desk world, I *own* that world. It is mine. The paper on the desk is significant. These are pieces in my desk world. The dust flecks are also little things on my desk, but these are *insignificant* to me, so they are not pieces in my desk world. They are just little things made of stuff—dust flecks. Or as a whole, they are stuff forming a thing we call *dust*. Dust is still not significant to me, so my aspect of the universal piece never runs a *dusting* process. My desk world is dusty.

Subpiece: Piece bits.

Taking the concepts of the *world* and the *piece*, we can now define the *world piece*.

Again, the world piece is the combination of all the significant pieces in an owner's particular world, combined with the space itself that holds those pieces. A world piece is one complete world.

In terms of a modern electronic computer, a world piece would be the same as a collection of important bits, and the universal shift registers and memory cells that store them in the moment.

To provide a counter example, if I remove the owner as the source of significance of desk world from the equations—myself—my desk and all those things in and on it no longer have significance in the context of its owner. Perhaps I die, or no longer have any ability to interact with my desk world. My desk world ceases to be a world piece. It is just a handful of things and stuff. (Though, the things and stuff may be absorbed as pieces in some larger or different world piece in that case.)

Likewise I could take away the space and just consider myself and a list of pieces. The desk world is no longer a world or world piece. The pieces are still significant to me, but they no longer form a contiguous world. Space is what connects all the pieces together, and I need space to sit at my desk world in the first place. An exception to this is if the space is only in my head. I can very easily have an *imaginary* desk world piece that could play a significant role in my personal world piece computer.

Subpiece: Plurality.

Unlike the universal piece (the global peace process which we will cover in a later section), a world piece is not singular. Any given world piece is filled with world pieces of its own. The key though, is that the plurality of world pieces will always be with respect to a Human world owner or inhabitant. If I give my desk world piece to somebody else, they will have a different world piece than what I had, because the paper world pieces spread out across the surface have no significance to the other person. Those paper world pieces disappear and become simply things.

Probably the most important aspects of plurality is overlap and nesting. For one, world pieces may share individual pieces. For example, I might share my desk with my colleague. The desk piece itself is a significant piece in my world just like it is in hers. We have different desk world pieces however, because were have different notions of significance—one desk piece, two unique world pieces.

Nesting is a different. Nesting is where I have different levels of what I define to be significant. For example, I love to camp. Camping is an important piece within of my recreation world piece. But camping for me is its own entire world. When I treat camping as a world piece, I do not include my entire recreation world piece with my camping world piece. This is because many of the pieces within my recreation world piece are insignificant to camping. My camping brain just doesn't care.

It is also important to mention we may view entire Human worlds and all their associated world pieces contained within as a world piece in-and-of itself. This world piece by definition may be significant to some Human that inhabits the world an individual's world piece is embedded in. An easy example of this would be a mother and her child. The child is the very most significant world piece within that mother's world.

Finally, world pieces may actually be world piece computers in their entirety. When treating a world piece computer as a simple world piece, this is usually because the owner that draws significance from that particular world piece computer *isn't* connecting or otherwise interacting with that world piece as a world piece computer. We will talk more about world piece computers in a later section.

Subpiece: All types.

World pieces can be pretty much anything, as long as it is significant to a Human. At the extreme, world pieces may be both conceivable or inconceivable. For example, the concept of *unthinkable evil* is a piece in many people's world. The unthinkable evil piece plays a huge influence for many.

More mundane yet just as expansive is the category of conceivable. Any conceivable thing may also carry with it significance, by nature of its conceivability. An idea may be a world piece, with its own little idea world of significant subpieces. A thought, a world piece with its own little thought world. An abstract concept such as *red*, has its own corresponding red world, which may contain many many significant pieces if red so happens to be the owner's favorite color for

example.

This carries on all the way to the tangible, what we usually think of when we think *piece*. World pieces may be objects. A car for example, or the desk I keep talking about—my car world piece, my desk world piece.

Subpiece: Computational significance.

A world piece is like a string of bits—ones and zeros—in an electronic computer that signify something. Electronic computers use *bitwise operations*[2] to take different strings of bits and combine them, subtract them, manipulate them—do all sorts of different things according to what the computer process tells it to do.

In a piece computer, each piece is like a bit, each world piece a string of bits—or an ordered collection of pieces. In the piece computer however, pieces aren't in strings; pieces are in arrangements, or constellations. A piece computer takes different world pieces—different arranged collections of pieces—and performs *piecewise operations* on them. In terms of the universal piece—the general peace-based pieceprocess—world pieces are manipulated so to find the arrangement with the best fit, the most harmony, generating the most inner peace, whatever that is as defined by the Human inhabiting that world.

World pieces—the piece abstraction in general—make it possible to manipulate information about complex things or objects, without needing to convert these things into bits first. Many things are just too complex to express as a string of bits; it makes most sense to just let things lay as they are, and perform piecewise operations directly.

[2] bitwise operations: https://en.wikipedia.org/wiki/Bitwise_operation

Manual Piece: a world piece computer.

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A world piece computer is a piece computer at the local or individual scope. A piece computer takes pieces in a world, then does stuff with them to make the world inhabitant's state of inner piece according to their their definition. This is done by maintaining the universal piece, which is a simple set of functions. Behaving like a cellular automaton, a world piece computer optimizes the arrangement and configuration of world pieces within its world, interacting with local world piece computers on an as needed basis.

Subpiece: Composition.

A world piece computer is composed of an inhabitant (world owner) and the set of world pieces contained within that world. In the case of a world piece computer, the inhabitant is a Human with a functioning *brain*[3]. We call this inhabitant an *operator*, which we will cover more in a later section. When the computer's operator performs actions on, and manages world pieces, we call the acting operator *The Individual*. The Individual is what results when an operator assumes control of the *universal peace process* (what we call *the universal piece)* that the world piece computer is running at the time. The Individual is a Humane form, a brain, with a mind conditioned in terms of this peace process.

Subpiece: Configuration.

In any given moment, a world piece computer has a current world state that we often refer to as *the configuration*. This refers to the current arrangement and integration of all the world pieces in the operator's particular world. The configuration of a world piece computer does not tend to involve pieces that fall outside the purview of an operator's world. In other words, the configuration does not include things that are not significant to the computer's operator. (This does not however, mean that there do not exist pieces that have a significant *impact* on The Individual without their knowing the significance. The configuration is important because it defines and determines the current state of inner peace for operators at the local and individual scopes (depending of course on the computer).

Subpiece: Three components.

[3] brain: https://en.wikipedia.org/wiki/Brain

The operator and world pieces within a world piece computer—any piece computer for that matter—form *three components, by definition*. These are, the *pieceprocess*, the *piecebrain*, and the *piecespace*. When The Individual is operating a piece computer, both their physical brain and the surrounding environment contain all three components of the computer.

Piecespace is the computer's memory. Piecespace within the operator's brain is the mind space, containing memory pieces and other abstract nonphysical pieces. Outside the brain, piecespace is the physical surrounding world, containing objects and people.

Piecebrain is the computer's *processor*, responsible for managing the universal piece, peace process. Piecebrain within the operator's brain is the mindspace containing active pieces like beliefs, or habits, or preferences to name a few. Outside the brain, piecebrain might be a piece that is a person who provides advice, or a piece might be pair of dice in the case the operator needs some random input in the peace process.

The most important component is the pieceprocess. Pieceprocess is the singular object of the peace process itself. Pieceprocess is *how* pieces are *arranging*, *what* pieces are *doing*. A process piece is much harder to abstract because it involves taking *motion* and treating that as an object or a piece itself. For example, for me *hiking* is a piece that is part of my pieceprocess. When my piecebrain determines my pieceprocess is running roughly, having a hard time arranging my world pieces, then it will elect to switch my peace process to orient my *hiking piece* in the forefront of my attention span. Eventually my pieceprocess will snap onto the hiking piece, and I will find myself out in the mountains going for a hike to give my pieceprocess greater space to organize mental piecespace pieces. Pieceprocess pieces are often *states of being or doing*.

Subpiece: Plurality.

It is important to hold the greater issue at hand clearly in place: *world peace* is not a reasonable term because there are too many worlds. Thus, at the local and individual scope, we must account for a *plurality* of worlds, each irreducibly unique by virtue of the people and different combinations of people that comprise a world.

In terms of world piece computers, there exists (at least) one world piece computer per operator, and there exist additional computers, one per collection of individual operators forming a unique instance of The Individual, in addition to themselves. Each world piece computer has a different set of world piece that it manages, and each has a different version of the peace process it runs as a computer.

Subpiece: Inner peace.

The product of a world piece computer is defined as *inner peace*, which corresponds to a particular set of qualifying traits of 'peace', as defined by the individual operating the computer. One product correspondence of a world piece computer might be *inner peace is contentment*. A different world piece computer product might be *inner peace is feeling gratification helping the*

homeless. World piece computer products may have any number of corresponding properties with inner peace.

In any given moment, a world piece computer has what we call a *world state*. A world state is the current configuration of all world pieces, and this configuration maps to a definite (though subjective) state of inner peace. The peace process—the universal piece—that is the pieceprocess component of the world piece computer, exists to manipulate the current world state with the intention of finding better configurations and discovering new solutions to detractors of inner peace.

Subpiece: Scope.

A world piece computer has a *scope* in which it operates.

In general the universal piece computer and the system of world piece computers that comprise it, exists in a space with three scopes: individual, local, and global. It is helpful to think of these scopes in terms of matter. The individual scope consists of individual world piece computers. These are like the atomic units—the atoms of the universal piece computer. The local scope consists of atomic units coming together to form composite world piece computers. These are like the molecules, cells, so on. The global scope contains the universal piece computer, which is simply the collection of *all* interconnected world piece computers. The global scope is the whole—everything.

World piece computers are the plural contents of individual and local scopes. The universal piece computer that we will study next, is the singular entity within the global scope. The global scope contains all the individual and local scopes that exist, by definition.

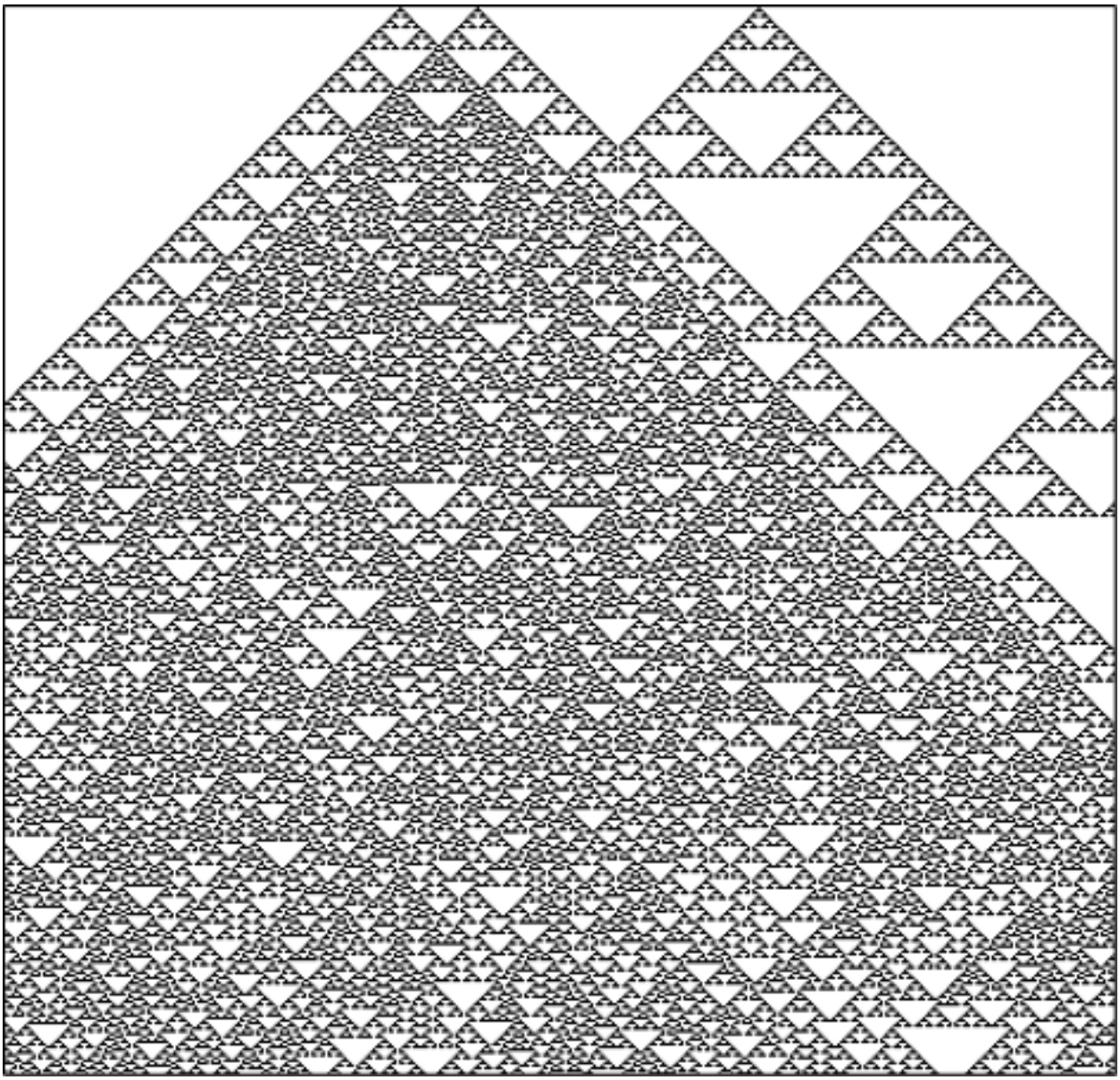
Subpiece: Cellular automata.

A world piece computer as a computational concept acts as something called a *cellular automaton*[4]. A cellular automaton is a single cell that acts like a computer, following a set of very simple rules. As an example, the simplest type of cellular automata is the one dimensional binary cell. Such a cell may only be black or white. To demonstrate the function, we take a long string of these cells, with some initial color.

For example, we my make the entire string white, except for one black cell in the center of the string. Then we impose a single simple rule. One example of a simple rule is, if either of a cell's two neighbors is black, then that cell will turn black if not already so. Thus we take that string of cells, and we apply the rule to each cell. This creates the 'next string', to which we apply the rule again, and again, and again.

The remarkable thing *about* cellular automata is that these very simple rules and atomic or cellular units end up producing extremely complex behavior. Here is an example:

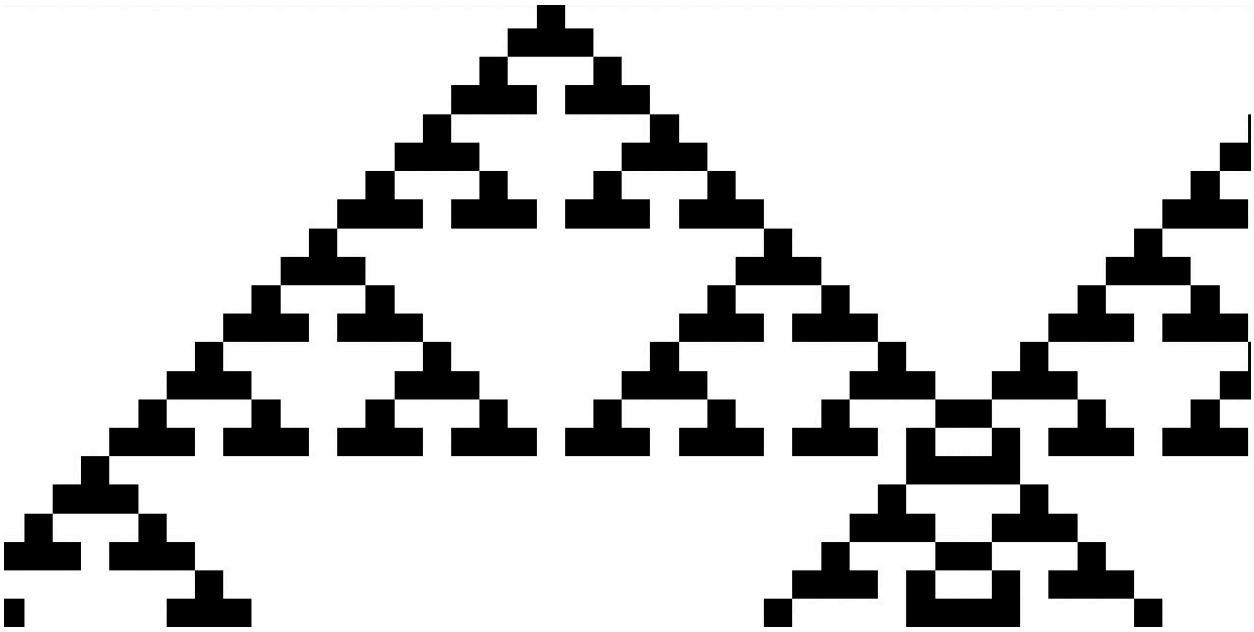
[4] cellular automaton: https://en.wikipedia.org/wiki/Cellular_automaton



In this picture, the very top row of cells (or pixels) have three black and the rest white. The rule is that if one or the other of a cell's neighboring cells to either side is the opposite color to that cell, but not both neighbors, then the cell switches color in the next row. From this very simple rule, we see complex textures and patterns *emerge* as seen above.

Below is a close up of the top cell to the left, where you can see each pixel cell (cellular automaton) and you can track the progress of any one cell as it applies that simple rule, row by row. The remarkable thing about cellular automata is that *each cell is acting as an individual*. There is no coordination between cells, rather each individual cell just follows the simple rules

and acts in terms of its local environment, or *cell community* if you will.



One dimensional cellular automata are just one example. A more complex example is the two dimensional cellular binary automata. In the two dimensional case, the the cells create behavior that is lifelike, with pixelized creatures forming and interacting with one another. These type of automata are often called *Conway's Game of Life*.

The reason this is important is that world piece computers are likewise a type of cellular automata. In this case, the cell is the *world*. The rules, are defined by the universal piece. One of the big ideas is to create rules wherein when a large number of world piece computers network to form the universal piece computer, then behavior emerges that is in whole more peaceful and effective than if those human worlds *didn't* take on the simple rules of the universal piece.

In simplest form, the computer architecture of a piece computer is a type of cellular automata. The only real difference is that the cells—the worlds—may overlap and nest (though this of course is not so in timespace). Likewise, compared to the state of a binary automaton, a world piece computer has a much more complex state in any given moment

This concept of *emergence*[5] is best thought of 'the resulting *whole* that is greater than the sum of its *parts'*. This greater whole is how we leverage a world piece computer to make more from the limited time, energy, and people that frustrates our progress toward significant improvements on our state of the Human Condition (that is, *significant* meaning improvement that is not marginal).

[5] emergence: https://en.wikipedia.org/wiki/Emergence

Manual Piece: the universal piece computer.

TM

[[upc synopsis here]]

Subpiece: Scope.

As discussed, the universal piece computer is the entity comprised of all world piece computers, considered at the global scope. The global scope in this context is much like saying *the Human universe*. It contains everything Human.

Subpiece: Singularity.

Unlike the plurality of world piece computers, there is only one universal piece computer, and this is by definition. This single computer has one product, has one process, has one purpose, etc. There is no such thing as the universal piece computer having world piece computers that don't belong to it. The furthest a world piece computer can be from the greater network piece computers is a *disconnected* part of the universal piece computer.

The easy way to remember is that *one* universe has *many* worlds.

Subpiece: Three components. [[pieceprocess:universal piece::piecespace: piecetree:: ? :piecebrain]]

In the universal piece computer, we call the pieceprocess *the universal piece*. Like the universal piece computer, there is only one. Any world pieceprocess is as facet of the universal piece.

The piecebrain of the universal piece computer consists primarily of the network of Human brains (and minds) that compose the computer. Any world piecebrain is a facet the universal piecebrain.

The piecespace is the piecewise space of combined individual world piecespaces. Any world piecespace is also the universal piecespace.

Subpiece: Composition.

At the universal piece computer level, world piece computers as a whole are the significant pieces. All world pieces are relegated to individual worlds. An exception to this is that sometimes world pieces exist that are only significant from the universal perspective, thus no world piece computers include them in their world state configuration. In these cases the universal piece computer clumps the extra world pieces into their appropriate world piece computers.

Because every Human *thing* ultimately has some significance to somebody, in principle the universal piece computer will automatically clump all things not associated with world piece computers into the appropriate worlds.

Subpiece: Configuration.

The configuration of the universal piece computer references the network connections and world piece computer overall world states. To modify the configuration of world piece computers, the universal piece will change connections between piece computers, or the orientations between piece computers. Changing a connection may mean making or breaking a connection, or it may mean adjusting *how* the connection is made between two world piece computers. Ultimately this configuration optimization is performed in the context of the ambient environment defined by pieces that do not belong to any world piece computers—or *external* forces and agents.

Subpiece: Global peace.

Global peace is an aggregation of world piece computer inner peace measures. Global peace is the *product* of the universal piece computer, and it represents a correspondence to the subjective measure of *peace* with the overall configuration of *all* pieces in the universal piece computer system as a whole. If the universal piece computer contains four world piece computers, and if each world piece computer operator defines inner peace with five characteristics, then global peace is the current state of twenty different inner peace characteristics. If a couple inner peace characteristics are similar or equivalent, then it may be appropriate to *collapse* the two inner peace measures into a single measure with a greater *weight*.

Adjusting the connections and relationship between those four world piece computers might cause two worlds to break contact. If those the operators of those two individuals were in love, then the subjective inner peace measures would be much lower, thus the new world piece computer configuration results in a suboptimal measure of global peace.

It will become necessary for piece computer operators to not only define their subjective inner piece characteristics, but also to define a threshold—or set of characteristic values—whereat an operator can declare a state of *at-peace* or *not-at-peace* (or *at-war*). This way, we will be able to differentiate between configuration changes that are mutually beneficial, or beneficial to some but at the expense of others.

Manual Piece: the universal piece.

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[[incomplete]]

The universal piece is the global pieceprocess, and is the sum of all individual pieceprocess aspects that make up world piece computers in general. This is the most important component in the universal piece computer.

Subpiece: Seven rules.

The universal piece is engineered to be self-sustaining. Its primary function is to adhere to the seven rules outlined in this section.

To achieve this, we must first establish a prerequisite rule, which we will call ***rule zero***.

Rule 0:

Never give up..

This rule is basically to say that in order to do anything, you must keep moving, you must not stop unless it is for some purpose other than giving up. It is ok to temporarily quit, just so long as you come back to work the next day. Movement is life.

1 + 7 rule pieces:

0) Follow the rules of THE UNIVERSAL PIECE by adhering to the FUNCTION PIECE while alternating between the END RULE and the rules below:

1) Adopt and maintain the universal piece process.

2) Adopt and internalize the common language.

3) Adopt and uphold the universal prosperity mission.

4) Interact voluntarily.

5) Honor commitments.

6) Make your own moves.

7) Become The Individual by operating a world piece computer to help satisfy The Human Imperative.

Rule one is what makes the universal piece self-sustaining:

Rule 1:

Adopt and maintain the universal piece process *by operating a world piece computer that adheres to the seven rules and performs the seven functions of the universal piece.*

Nine (plus one) functions of the universal piece:

0) Prevent violence that is nonconsensual, nondefensive, or unnecessary.

1) Ensure adherence to the the seven rules.

2) Optimize local world piece configuration.

3) Optimize global world piece computer configuration.

4) Favor local connections.

5) Favor core peace bias.

6) Maintain continuous iterative evolution

7) Maintain constant conversation.

8) Harness difference potentials.

9) Harness Human Nature.

Maintaining the universal piece means following the seven rules, plus adhering to the nine key functions above that we outline in this Lesson Piece. If you stop maintaining the universal piece, then you are no longer operating a world piece computer, the universal piece computer, no longer affiliated with the time machine for peace invention program, and no longer playing the role of The Individual.

Besides rule zero, rule one is the most important rule. Everything depends on the universal piece and how it functions. These functions are discussed more detail later in this Lesson Piece. The remaining sections in this Lesson Piece are devoted to rule one.

Rule two is the second most important rule, relating directly to our thesis that by speaking and

thinking explicitly in terms of peace, we may rewire our brains via neuroplasticity to be more peaceful overall.

Rule 2:

Adopt and internalize the common language *of the universal piece computer and the time machine for peace social invention project—the lingua franca—by operating a world piece computer that adheres to the seven rules and performs the seven functions of the universal piece.*

If you do not adopt the language, there is no hope in success networking with the universal piece computer at large. You may as well just do what you usually do. Further, understanding the rules and the universal piece functions depend on knowing how to use the language, internally and especially with others.

Reading this book, thinking about its contents, and speaking with others about the universal piece computer is for now the best way of going about adhering to rule two.

Rule three has to do with motivation, incentivization, and purpose; this rule provides the drive.

Rule 3:

Adopt and uphold the universal prosperity mission *by operating a world piece computer that follows rule three in the context of the prosperity mission on a local or individual scope.*

The universal prosperity mission:

Maximize the state of global peace by maximizing the state of inner peace for all individuals involved, this done by building and networking world piece computers that each have their own personalized version of the universal prosperity mission, to maximize the state of inner peace for their operator Individuals and all surrounding individuals involved.

The Individual prosperity mission:

Maximize the sense of inner peace by optimizing the arrangement and integration of world pieces in such a way that maximizes the sense of inner peace of all individuals and related parties surrounding. Optimize by using a world piece computer to manage the particular Individual operator's trifecta of time, energy, and people.

The whole point of the universal prosperity mission is to measure prosperity in a way that relates inner peace to prosperity in terms of time, energy, and people—the trifecta three scarce resources that all Human resource scarcity boils down to.

On the universal level, the piece optimization for global peace maximization refers strictly to the arrangement and integration of individual or community world piece computers. The better arranged world piece computers are, the higher the states of inner peace for all individuals operating in that world piece computer network. This is however, given the momentary

configuration of individual world piece computers and all their world pieces.

There is only so much the universal piece computer can do to optimize arrangement and integration. Past a point, individual world piece computers must *further* optimize their personal world piece arrangement and configuration. After individuals have re-optimized, then the universal piece computer may need or want to adjust the global piece computer arrangement.

All this is driven by aligned prosperity missions. Individual prosperity missions must be in alignment with the universal prosperity mission—that is, we wish to maximize that states of inner peace for all individuals and people involved.

The next two moves are to govern conduct between Individuals operating world piece computers.

Rule 4:

Interact voluntarily *by ensuring that interaction is consensual, avoiding coercion, and manipulation, in particular by programming a world piece computer such that routines, programs, and algorithms reflect this imperative.*

Rule 5:

Honor commitments *by keeping word, showing up, and communicating status, in particular by programming a world piece computer such that routines, programs, and algorithms reflect this imperative.*

Individuals and people should interact with one another in a way that avoids nonconsensual force and emotional manipulation. This is not to say that manipulation and force are disallowed, just that these things are only appropriate in prearranged or otherwise consensual scenarios.

Individuals and people should be sure to stick to their word and do what they say they will do. In an interdependent network of self-managed minds, this is obviously important to get anything done.

The final two rules dictate the means by which the universal piece computer coordinates and cooperates, *co-operate* being the more important concept.

Rule 6:

Make your own moves*, by identifying ways to contribute pieces and world piece computer expertise to common cause, in particular where those pieces relate the the time, energy, and people trifecta.*

Rule 7: [[fix this to reflect wpc and thi addition]]

Be The Individual *by continuously following the seven rules and seven functions of the*

universal piece computer, by operating a personal world piece computer, perhaps one to several world piece computers in the local scope.

The Individual is the embodiment of the universal piece computer. The Individual is the second critical component that makes the universal piece self-sustaining, the first being rule one, to adopt and maintain the universal piece. The Individual makes their own moves. If a person being The Individual strays from these guidelines, then that person and their world piece computer ceases to be so, and the connection to the universal piece computer is temporarily inactive.

Subpiece: Peace bias.

There is a popular aphorism about the relationship between Humans and our tools. ***We shape our tools and our tools shape us.*** It is natural to extend this: We shape our rules and our rules shape us. We shape our values and our values shape us. If this is so, then it would make sense for us to think more in terms of deliberate ***value design***. If our objective is to reframe our language in terms of peace, then we ought to start with redesigning our values.

The purpose of treating peace as a process is to systematically introduce values or rules that are biased in favor of peace into any space wherein the peace process permeates. The overarching thesis is that if we can more consistently—and explicitly—favor Humanistic values over non-Humanistic values, then we will more inclined to behave in peaceful and productive manners with one another. With a biased random walk[6], the walk drifts in a particular, definite direction. With an unbiased random walk, the walk drifts aimlessly, never really getting anywhere.

As mentioned throughout this book, the bias strategy is deliberately chosen to exploit the network growth phenomenon known as *explosive percolation*[7]. The underlying principle behind explosive percolation is that by *biasing* network building to favor local connections, resulting local network clusters will eventually coalesce (or 'explode') into a singular whole. This is due to the inherent properties of complex networks in general.

In this case, the strategy is to not only favor local world piece computer connections, but do so in a way that additionally favors the Humanistic peace biases below. If we can favor local connections that have a particular set of Humanistic qualities, then hopefully when an explosive percolation event does happen, these global connections should reflect the underlying local peaceful biases that guided their connection, resulting in more harmonious relationships between disparate groups.

Part of the purpose of the core peace bias is to explicitly *color* the underlying connectivity bias of local piece computers that explosive percolation relies on.

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[6] random walk: https://en.wikipedia.org/wiki/Random_walk
http://worrydream.com/refs/Hamming-TheArtOfDoingScienceAndEngineering.pdf
[7] explosive percolation: https://arxiv.org/pdf/1511.01800.pdf
https://arxiv.org/pdf/1907.09957.pdf

Underlying connectivity bias:

LOCAL	>	GLOBAL

The core peace bias:

nonviolence	>	violence
creation	>	destruction
process	>	product
compassion	>	sympathy
commitment	>	non-commitment
acceptance	>	denial
tolerance	>	intolerance
inclusion	>	exclusion
neutrality	>	polarization
trust	>	distrust
preservation	>	disruptiveness
empathy	>	indifference
difference	>	similarity
interdependence	>	independence
love	>	hate
emotion	>	intellect
thinking	>	feeling
restraint	>	release
democracy	>	autocracy

Notes:

- An operational definition of compassion is that *compassion is the presence of both sympathy for another and wanting to alleviate their suffering.*
- Disruptiveness in general, leads to destruction; it takes creativity to implement change

without disrupting the preexisting balance, but it is indeed possible with the right talent.

- Indifference in the context of empathy is just not caring to make an effort to understand the perspective of someone else.
- Difference according to the qualitative difference physics outlined in this book is postulated to possess more potential to do useful work.
- Interdependence reflects a situation where several world piece computer operators come together to form a local world piece computer. There is still only one instance of The Individual for this piece computer, so it is possible for the interdependent group to *make their own moves* as a cohesive unit.
- Emotion is favored over intellect because emotions are the basis of inner war and peace. It is important to think first in terms of emotion, especially because our emotions are the real-time feedback loop we have between our outer experience and our inner present and past experience. Emotion is crucial for integrating experience per The Human Imperative.
- In contradiction to above, action based on thinking should be favored over action based on feeling. Emotion serves to guide the thinking. How we feel determines how we think, so we must favor thinking in order to avoid reacting to feelings.

It is strongly recommended that you append to this list, a list of your own peace biases, and question any of the core biases that you disagree with.

Subpiece: Singularity.

The universal piece by definition, is singular, like the universal piece computer. There is only one. Each world piece computer running the universal piece does so for only a single aspect of the overall singular process. The singularity of the universal piece refers primarily to the consistent application of the rules and functions outlined in this section.

Subpiece: Evolution.

It works best to think of the universal piece as something that wanders around a solution space, searching for the optimal solution. The issue is, if we wander around the same point in the solution space, we end up stagnating, where circumstances change and leave us with suboptimal solutions, or piece configurations. This is where the core peace bias comes in, nudging the evolution of the universal piece over time in a direction that is hopefully more peaceful in the net sense.

Evolution must be driven however. The force that drives the universal piece evolution will—for now at least—be driven manually, by The Individual operators that run the world piece computers hosting the various aspects of the universal piece.

Subpiece: Integration.

Subpiece: Piece bits.

Manual Piece: Operation.

[[add synopsis]]

Subpiece: On by definition.

A piece computer is a computational architecture that is largely abstract. This architecture is different say, than the electronic computer in that if a component is missing, or if it is improperly programmed, is ceases to be a piece computer entirely. For an electronic computer, if I take the CPU out, I still have a computer. It just lacks the CPU. Likewise if I wipe the operating system from memory, I still have a computer.

The piece computer is different. The piece computer exists first and foremost *by definition*. That is, if one of the components of a piece computer goes missing, then *by definition* the configuration of world pieces is *no longer a piece computer*.

By definition is a mathematical principle. It basically means *because we said so, and we agree that we will honor our commitment to that definition*. If we though of a laptop for example in terms *by definition*, then we might say *by definition a computer has a CPU.* Then, if I took out the CPU from my laptop, well then I couldn't sell my laptop as a laptop, because by definition it is not a laptop anymore.

The principle of *by definition* is important in the context of the universal piece computer in that it clearly delineates between acceptable and unacceptable behavior. The only tradeoff with this approach is that it relies on *consensus*. In this case, this book is establishing a definite (defined) starting point from which to generate future versions of consensus as to what constitutes a world piece computer, the universal piece, the universal piece computer *by definition*.

If your world piece computer doesn't run an aspect of the universal piece, then you neither have a world piece computer, nor are you a part of the universal piece computer—at least in that instant.

Subpiece: Operators.

World piece computers do not have *users*. The term *users* highlights the addictive and exploitative nature of the current computer and digital media industry.

Instead, world piece computers have *operators*. An operator is The Individual who *owns* a particular world piece computer. At the lowest scope—the individual—the operator is simply The Individual's personal world piece computer for that particular person. At local scopes, a community world piece computer may have as many operators as there exist personal world piece computers connected to that larger piece computer. To clarify, it is not possible for somebody to be an operator within a local community world piece computer without themself serving as The Individual to operate a personal world piece computer.

The atomic unit of the universal piece computer is The Individual operating individual world

piece computers.

Subpiece: The Individual.

At the scope of the personal world piece computer, every operator is *simultaneously* The Individual representing that world. At local scopes however, although there may be many operators managing an overall community world piece computer, there may be only one instance of The Individual representing the computer.

In operational terms, this means that only one operator at a time may make final decisions, have final say. This is similar to within the typical Human's brain: there is only one *self* who gets to choose or not-choose to do something. There may be multiple selves overall, but the selves take turns at the helm. Even if said multiple selves are acting in unison, there is still the representative singular self that makes the final decision to act or not-act.

Put simply, individual experience is of a singular moment, and by definition a world piece computer of any size likewise has a net experience that of a singular moment. Again by definition, a world piece computer has only one Human brain in any given moment. At local levels, this brain may be the decision point for a whole network of Human brains, and that brain may switch around and take turns, or it may be permanently installed as the decision point.

Whomever the momentary brain happens to be—that operator—they are The Individual at large in that particular moment. At first glance it may seem like an operator may be The Individual for two world piece computers simultaneously: both their local *and* their personal piece computers. This is incorrect. When an operator assumes the role of The Individual for a larger world piece computer, they switch *away* from being The Individual for their personal world piece computer. Usually, an operator serving as The Individual for a larger piece computer is cycling between being The Individual for the large one, and being The Individual for any smaller ones, ultimately down to the level of the operator's personal world piece computer.

When a personal world piece computer's operator is The Individual for a larger world piece computer, their personal world piece computer is *idle*. That is, it is not actively running besides any background process that my be employed. It is common for an operator to persist as The Individual for one particular piece computer—such as their personal computer—and only jump to assuming The Individual at a higher level if triggered by some event or summoned by a presiding Individual to deliver expertise, etc.

Subpiece: Automation.

By definition, a world piece computer can only use its piecebrain to manipulate the universal piece if the Human brain of The operating Individual is present. That is, in order for a world piece computer to actually *do* anything, the computer must be *active* and The Individual present.

This means that the only automated activities permitted are repetitive and expected routines or procedures. Automated activities are *not* permitted to manage or manipulate the universal piece. For example, if a world is configured such that an artificial intelligence algorithm is assigned to

make realtime decisions about *how* to manage a particular situation, then this is strictly *not* a world piece computer. The Individual of a piece computer may temporarily *designate* a different operator to be The Individual for that particular world piece computer, and that designated Individual may operate in a way that is effectively automatic, but because it is a Human *brain* making decisions in an automated fashion, this still qualifies as an active world piece computer.

Simply, a world piece computer must have at least one operator with a Human brain. A world piece computer is only *active* when an operator's Human brain assumes the role of The Individual. Only *active* world piece computers may *interact* with the universal piece. *Idle* or *inactive* world piece computers may only maintain a static state, and must summon The Individual if it needs to do manipulate the universal piece.

Subpiece: The global scope.

The above treatment was primarily for the individual and local scopes, those of world piece computers. At the global scope, we have simply the universal piece computer—again, singular.

At the global scope, the *one instance of The Individual per computer* rule does not apply. Globally, world piece computers are individually connected forming the universal piece computer. This means, a particular world piece computer may only have one operator at The Individual at a given time, only one representative at a given time, but on the global scope, all the operators in that particular world (operating their personal world piece computers as The Individual) they may not be The Individual in that larger computer, but they maintain The Individual status in the universal piece computer at all times. Each instance of The Individual leads a world piece computer in a given moment, other instances of The Individual subservient, but *all* instances of The Individual operate the universal piece computer, and *all* instances represent the universal piece computer to the outside world.

Manual Piece: Networking.

[[add synopsis]]

Subpiece: Building the universal piece computer.

As discussed, the universal piece computer is a network of world piece computers operated by instances of The Individual. This means that all the world piece computers in operation are interconnected in some way such that an overall network emerges, creating the body of the universal piece computer. This body maintains the aggregate sum of each aspect of the universal piece maintained by each individual world piece computer. The overall resulting peace process is the universal piece.

The universal piece computer has a different topology—or shape—than the world piece computers that comprise it. The universal piece computer is what we call *flat* in computer science. That is, world piece computers on at the global scope only connect to each other laterally; they do *not* contain each other. This means that the universal piece computer is a network of *peers*. Each operator running their world piece computer on the global scale has equal status, each being an instance of The Individual.

So take for example, an individual operator connects their world piece computer to a larger world piece computer such that the operator *relinquishes* their status as The Individual at the local scope. At this point, the personal world piece computer is nested *within* the larger community world piece computer. But if we zoom out to the global scope, that personal world piece computer nested within the larger community world piece computer is actually a *peer* of that larger computer. The two world piece computers have equal status in the universal piece computer, that status being an instance of The Individual operating a world piece computer.

This approach of zooming in and out between individual, local, and global lends itself well to both representative and pure democracy.

Ultimately, this flat topology lends itself well to a singular process. The universal piece has equal status among all participating world piece computers. It is universal; there is only one universe of world piece computers, *by definition*.

Subpiece: Explosive percolation.

Given that by definition there is only one universe of piece computers, there are two types of network growth of relevance to the universal piece computer as a whole. Those are, *viral growth* and *explosive percolation*.

Viral growth is criticized at the global level in that large networks that grew virally are fragile and prone to pathological function. Viral growth has its place within the grand scheme of the universal piece computer, but this is at the world level, not the universal level.

At the universal level, and especially given our interconnectedness via the internet, we must recognize that there may not be just one origin of growth when it comes to networking world piece computers. For example, a network in Europe may form at the same time a network in the US forms. The global scope includes both of these networks as the universal piece computer, but the computer is by definition *singular* at this scope. Thus, we have two disconnected regions of the universal piece computer. How do we unify them?

This is where explosive percolation comes in. The temptation would be to start making deliberate global connections between European and American world piece computers right off the bat. Networks that result from this strategy are not very robust. As it turns out, explosive percolation demonstrates that all we need to do is maintain a *bias*, or *favor* only *local* world piece computer connections. If done so consistently, two separated networks will grow independently until an *explosive percolation event* occurs. This is when the two separate network spontaneously snap together in an uncoordinated event. Networks that unify via explosive percolation events are demonstrably more robust and capture more value than those viral networks or planned networks.

To build the universal piece computer, we must adhere to the first peace bias: favor local piece computer connections. We must rely on, and induce, explosive percolation events by avoiding global connections when possible. This is counter intuitive, but the science is there.

Subpiece: Communication.

One essential way of looking at the universal piece is that it is a language process that facilitates world piece optimization between and within worlds—world piece computers. By definition of course, the universal piece is continuous, evolving, iterative.

Ultimately the data required to make piece optimizations flows in the form of *continuous conversation*. Conversations evolve, and they are back-and-forth, or *iterative*. At the world level, conversations at local scope are generally between internal operators and The Individual. At individual scope, conversations are between The Individual and themself. World-level conversations are aspects of the universal piece devoted to arranging and manipulating world pieces within a particular world.

At the universal level, conversations are only between individuals, for all operators at the global scope are present in The Individual form. Conversations between The Individual at the global level are strictly devoted to arranging and manipulating the overall set of world piece computers, or The Individual world pieces.

Because there will be inevitable conflict between the ideal configuration of pieces within a world piece computer and the ideal configuration of the world piece computers at the global scope, there must exist a meter that counts out the push and pull between competing interests—world and universal. This meter is piecetime, or the collection of all cycles between world optimization and corresponding universal optimization. Piecetime is the pace of the universal piece.

Subpiece: Building a world piece computer.

World piece computers grow differently; they grow virally. Somebody may decide to create a larger community world piece computer, and if it catches on, it grows at a viral pace until growth inflects and begins to level off. When growth begins to level off is when global connections start to take hold, eventually resulting in an explosive percolation event due to the fact that that particular world piece computer must continue to grow in order to increase its ability to serve its prosperity mission.

Subpiece: Viral growth.

World piece computers must bank on viral growth at first, in particular because viral growth favors local connections thus lending the local network of world piece computers to explosive percolation.

Viral growth should be limited, however. This limit will be according to a world piece computer's ability to maintain the universal piece under growing pressures and strains. The way to limit viral growth is to treat growth like a virus, containment, quarantine, social distancing.

Subpiece: Games.

Finally, the continuous conversation needs to have some way of maintaining pace, or keeping time with the global piecetime. It also needs a mechanism for evolution, lest the communication stagnate and become complacent.

This is where the games come in. The universal piece must rely on games with rules—protocols—and incentives to drive conversation and piece exchange. Ultimately, another important way of looking at the universal piece is that *it is one big game*. The object of the game is to satisfy The Human Imperative.

Manual Piece: Time and The Individual.

In any computational system, timing and clock are essential. In a digital system, if the clock drifts or is out of sync with other timing implements, then information starts colliding and disintegrating. In any time-division multiplexed telecommunication circuit for example, a loss in timing disrupts the entire communication circuit. Without a stable clock, your electronic computer cannot function.

The Individual plays the most important role in the universal piece computer function, networking, and operation. Those operators acting as The Individual for a particular piece computer are serving as the *interface* or *glue* that bonds the world piece computer to the universal piece computer at large. This has to do with timing.

The two types of configuration optimizations—the world level or universal level—cannot happen simultaneously. The Individual is responsible for maintaining the universal piece, which means The Individual is responsible for maintaining timing between the two types of optimization. This timing is a flip-flop operation between the two. This flip-flop is the alternation between optimizing world piece configuration within a world piece computer, and optimizing world piece computer configuration within the universal piece computer. It is up to The Individual to shift scope between local/individual and global in time with changing configuration optimization needs. When the universal piece is shifted to be seen from local scope, then it is time to optimize configuration of world pieces. When the universal piece is shifted to be seen from global scope, net inner peace is measured and then configuration of world piece computers convenes.

The issue of course is synchronicity. The Individual is logically singular but distributed across many bodies. Depending on the size of the world piece computer The Individual commands, the timescales of the universal piece flip-flops will vary. The only way around this, to achieve a synchronized global flip-flop—synchronized iteration/evolution of the universal piece—is to employ the same strategy as with The Individual. The Individual is one entity commanding the singular universal piece computers. This singularity is logical, not actual. So to must the synchronicity be. The Individual maintains synchronization between all components of the universal piece computer by insisting that the synchronization of the flip and flop is logical, and singular. There is only on clock.

In physical space, this synchronicity is asynchronous, distributed. The space where piecetime is constant and synchronous is the construct alluded to throughout this book of *timespace*. Timespace is an alternate way of viewing reality where the tick-tocks of the universal piece evolution are interconnected, nested, in sync. Imagine, gears with different gear ratios. One large gear may rotate once, while a related gear rotates five times. As long as the gears remain connected, that ratio does not change. The two gears are synchronized 1 : 5.

In timespace, the universal piece's operation is in lockstep, a singular rate rate piecetime. In spacetime—or the surrounding reality that we are familiar with—the universal piece is asynchronous, irregular, erratic, but in a deliberate and controlled manner.

The Individual therefore is the entity responsible for implementing asynchronous iterations of the

universal piece, and translating those iterations into form in lockstep with the overall piecetime within timespace. The only thing capable of accomplishing this the timespace matter mindmachine—or in other words, a Human, containing their brain, containing their mind.

In a real sense, the universal piece computer is just a collection of Humans, who are networking their brains, to combine their minds for the purpose of coordinating global piece configuration optimization in terms of a singular construct called the *timepiece in timespace*.