Mental Relativity

by

Chris Huntley & Melanie Anne Phillips

Draft: Thursday, May 2, 1991

Preface

We all have a sense of self. We know what it is like to be us. But we cannot ever completely communicate the state of our own minds because that requires an inside perspective. No one can completely understand what it is to be us without being us.

We all know our own thoughts. But where they come from and how we change them is invisible to us, because we cannot use our own thoughts to describe their nature. No one can completely understand his own mind without stepping outside himself.

In short, we know that we are aware: we are Self-aware. But we do not understand where that awareness comes from or the mechanism by which it operates. This is because we are looking at ourselves with our own awareness. This is much like trying to see ourselves without a mirror. What we need is a mirror for the mind, an outside perspective of what is going on inside our own thoughts. Mental Relativity provides that mirror.

Mental Relativity is a method of understanding our own minds from that outside perspective. More precisely, it is a description of the four basic elements that create awareness and how they are interrelated. But to understand thinking, one must USE thinking. In other words, we need to use the process to describe itself. This is much like using a word to define itself. Essentially, to understand thinking we must view the process we have only ever experienced from the inside *from an outside perspective*. This requires an entirely new framework that is foreign and therefore unfamiliar and strange. It is much like learning a second language. When studying a new language, any similarities with the old hasten the process. Therefore, we have attempted to find common ground with the traditional

INSIDE perspective of awareness through the use of a variety of theoretical models.

However, the precise nature of Mental Relative can only be accurately expressed by an equation that shows the mathematical relationships of ***thought, knowledge, ability*** and ***desire*** from the *outside perspective.* By exploring the equation, we can better understand *how* we think, *what* we think, and even *why* we think. Best of all, we can learn how to apply this information to our own lives (and the lives of others) to achieve results and obtain fulfillment.

The Theory of Mental Relativity

$$\frac{t}{k} = d * a \quad \text{and} \quad k * t = \frac{d}{a}$$

Above are two simple equations that describe the relationship between *Thought* (t), *Knowledge* (k), *Desire* (d), and *Ability* (a). Taken as a whole, each equation describes *Mind,* which is *awareness.* Thought is the energy of the Mind, measured in direction and intensity. Knowledge is the resistance to that energy, measured in quantity and degree. Desire is a comparison between to conditions of Thought, before and after an observation. Ability is a comparison between two states of Knowledge, before and after an observation.

The equations describe Mind from the unfamiliar outside perspective. It is a functional arrangement of the four elements necessary for awareness. For reasons we will see later, Thought and Knowledge must be on one side of the equation and Ability and Desire on the other. Also, one side must divide and the other must multiply.

The two equations represent two different kinds of minds. Since either equation is functional, some people have the left equation as their inside perspective and some have the right equation as their inside perspective.

The selection is determined by biology. However, familiarity with the exact biomechanics of the human brain are not essential to understanding Mental Relativity. For clarity, then, we will describe the brain in overly simplistic terms.

THE BLACK BOX

The physical functioning of the brain is still not completely understood. Theories of the relationship and purpose of the vaious materials and structures

change as new information is discovered. The Theory of Mental Relativity is not based, nor is it dependent upon current models of the actual physical mechanism of the brain, but rather is based upon the mechanism of the mind.

In Mental Relativity, the mind rates observations and makes decisions by measuring the external universe and the sense of self in terms of QUANTITY and QUALITY [1]. Whatever the actual mechanism of the brain may turn out to be, we place that mechanism -- the smallest *physical* unit that can hold data for both Quality *and* Quantity -- in a black box. We call this black box a "*Thoughton*".

---

[1] The terms Quantity and Quality are defined later in this paper.

The Left Side of the Equation: *Thought and Knowledge*

Let's start with a brand new brain, a brain with no thought and no knowledge. There is nothing internal to begin the process of awareness, no fuel for the machine. If left completely isolated from outside stimulation, awareness would never occur. Now let us connect this new brain to nerves that monitor the environment. Information flows through the nerves and stimulates certain thoughtons. (The precise mechanism by which the nerves carry information to the brain is unimportant to an understanding of Mental Relativity so for the remainder of this book we shall simply say that the brain is stimulated by an observation.)

So an observation stimulates certain thoughtons. But these thoughtons DO NOT FIRE IMMEDIATELY. If there is a single concept that is most crucial to Mental Relativity it is this: Stimulated thoughtons do not fire immediately. Rather, each thoughton has a capacity to absorb repeated stimulation, raising it to a new level of energy, building up a charge and making it less stable. But the thoughton will not fire as it still has more potential to absorb.

Now this concept can be seen several ways. We might describe thoughtons as not firing until they reach a certain level of energy from repeated stimulation. Or we might say thoughtons won't fire until stimulated a certain number of times. We could view thoughtons as firing immediately, but only with an energy equal to the effect of repeated stimulation, or firing immediately, but affecting a number of surrounding thoughtons equal to the effect of repeated stimulation.

Each of these models has merit and each has drawbacks in describing the mechanism of the black box we call a *thoughton,* but we have found the concept that the thoughton will build up a charge before firing to have the most touch points with our traditional view and therefore is the most efficient jumping off point for a new view.

So, in our example, an observation has stimulated certain thoughtons, raising each to a higher energy level and making each slightly more unstable. A second observation, identical to the first, stimulates the same thoughtons. They are all raised to the next level of energy, building up a greater charge and becoming even more unstable or closer to firing.

Observations continue until the stimulated thoughtons have reached their maximum capacity to absorb energy. At this point, each thoughton is at its highest energy level and its greatest instability.

Another identical observation stimulates the same thoughtons. Since they can hold no more energy, each thoughton fires, shedding itself of the excess energy and stimulating the other thoughtons it is connected to. Each of these new thoughtons now absorbs the energy of this second-generation stimulation raising to the next energy level, and duplicating the pattern of the ongoing observations.

But all observations are not identical. Some thoughtons will be stimulated by every observation, some never; most will be stimulated to varying degrees as observation continues.

Return to the empty brain. As different *dissimilar* observations stimulate the immediate thoughtons, some will eventually reach the firing point before others. At this time, even a homogeneous observation will cause only those most unstable thoughtons to fire. The others will continue to absorb energy.

When the fully charged thoughtons fire, the only second-generation thoughtons to be stimulated will be those directly connected to the firing thoughtons. Effectively, the homogeneous observation has now been altered and a different pattern emerges at the second generation.
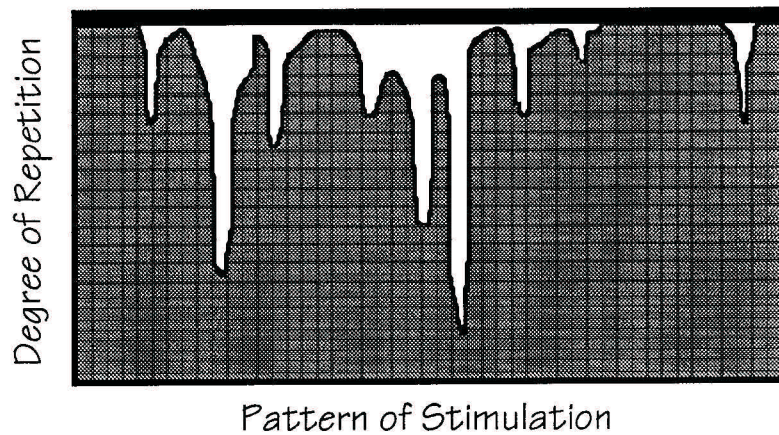
This pattern is representative of the accumulated energy levels of repeated stimulation by different observations. Effectively, this pattern is learned knowledge, and the first generation of thoughtons has acted to filter an observation based on accumulated Knowledge.

The pattern and the process of filtering can be described in several different ways. The rising energy levels of a thoughton might be seen in electrical terminology as decreasing the resistance of that thoughton to the flow of current. This casts thoughtons in the role of transistors with a very important difference: unlike transistors, each thoughton requires MANY stimulations to "open the gate". This gives added weight to repeated stimulation and much more significance to the ultimate firing.

Another perspective is to see Knowledge as a "weighted pattern" not reflecting any specific observation, but the accumulated weight of many observations. It is significant that this "weighting" is not an *average* as once a single thoughton has reached its maximum level, it will fire regardless if all the other thoughtons in the pattern are at their highest or lowest levels.

Refining the model: As progressive generations of thoughtons become stimulated, paths or channels are created along those connections from generation to generation. A single observation might have portions that are absorbed at the first generation, others that continue far through the brain, and others that continue all the way to the final generation where nerves are stimulated causing muscles to contract and altering the environment in turn.

So, Knowledge may be seen not merely as a simple cross-sectional filter, but as a three dimensional pattern of channels leading into the brain to various depths. A single observation might "lodge" at any number of levels resembling icicles of various lengths hanging from a roof.

Degree of Repetition

Pattern of Stimulation

The icicle example illustrates the pattern of repeated stimulation in its cross-section a of repetition in its depth.

"Depth" is not a truly accurate description for in the three dimensional matrix of the brain, the paths of stimulation can assume any pattern: spiral, zigzags, or even double back on itself crossing its own path. In these cases, a single thoughton may serve multiple duty as a variable at different stages of processing. This creates the opportunity for complex "processing", but still can be understood as the linear progression of observation-driven stimulation channeled by accumulated knowledge.

So far we have dealt with the brain receiving one observation at a time. But the brain receives many simultaneous stimulations in a variety of physical areas. As these paths of stimulation cross, they can add to or subtract from other paths. They might also be redirected or cut off and halted entirely. Any form of interaction is possible. The important concept to remember is that all these complexities are the result of the simple stimulation of thoughtons weighted by the pattern of stability due to repeated observation.

Obviously, if no mechanism existed for the lowering of energy levels, eventually every thoughton would be at maximum. Knowledge would be at

100%, but Thought would completely cease. Since all four components of the equation, $\frac{t}{k} = d * a$ are required for Mind, Mind or awareness could not exist.

Fortunately, a mechanism for thoughtons to return to lower energy levels functions spontaneously. That mechanism is *instability.*

As we have seen, when a thoughton's energy level raises, it eventually reaches a level at which it will fire when further stimulated. But if left alone, the thoughton will fire spontaneously, lowering its energy to a more stable level. The higher the level, the more quickly the spontaneous firing.

As unstimulated thoughtons fire, they create patterns that reflect the greatest stored degree of repeated stimulation. These internally generated patterns move through the generations as if they were caused by *observed* stimulation. And they can modify other paths in the same manner.

So, internally generated patterns could channel, alter, add to or halt a path of stimulation cause by a direct observation.

It is clear that incredibly complex paths can be created by these simple means. As these complex paths of potential resistance represent Knowledge, the flow of energy through these paths represents Thought. The subtle nuances of Thought are due to the cosmic scale of the complexity of the paths and the relationship between direct and indirect stimulation.

It is also clear that both of these components are a result of cause and effect, both with observation and with each other. An observation can flow directly thought the brain to nerve endings, triggering an immediate response such as a reflex action. Or, it might cross a path and trigger additional thought or the release of pre-existing patterns that alter thought or trigger a series of complex actions.

The Right Side of the Equation: *Ability and Desire*

The process of Thought applies an observation to existing Knowledge. Thought and Knowledge merely respond to stimulation initially created by observation. This describes a passive system that simply accepts stimulation and allows itself to be altered by that stimulation.

This works fine if the system is presented with one static observation at a time. But observations are not static, and the information they contain alters with the passage of time. Further, the environment presents a number of available observations that exceeds the capacity of the brain to assimilate.

Therefore, the brain must make a choice as to which observation it wishes to continue monitoring at the expense of others. The brain that gathers new information more efficiently has an obvious survival advantage. But new information, the unknown, also contains the greatest risk. So a process whereby the brain can estimate the potential risk versus the potential gain in Knowledge would aid in survival. The mechanism for making this selection is described by the right side of the equation, Ability and Desire.

Ability rates the potential risk, by determining how much of an observation we have experienced before. Desire rates the potential increase of Knowledge by determining how *familiar* we are with the portions we have experienced before.

ABILITY

Ability to do something can only be judged by comparing what we know to what we don't know. In that manner we can determine the risk involved in any given endeavor. But how can we determine what we don't know? That can only be done by comparing our existing knowledge to an outside observation. This observation may be a complex scenario or a simple pattern. Regardless of its

complexity, it is made up of simple parts. If we see how many of those parts match our existing Knowledge, we can compare that sum to the total parts in the observation and determine what percentage of the observation we don't know anything about. The smaller the unknown, the greater the Ability.

For example, suppose we walk into a store that sells a variety of board games. We want to rate our Ability to play all the games in the store. We look at an inventory of the store. If we have played any given game before, we can say we are able to play it. If we have not played it before, we are not able. This says nothing about our ability to LEARN to play, but simply states that as of this moment, we either know how to play a specific game or we don't. So our Ability of being able to play all the games in the store can be measured as the percentage of the total number of games in the store that we have played before.

From this perspective we can see that Ability is a sliding scale. If we were to learn how to play another game, our percentage of Ability would increase. If we were to forget how to play a game, our Ability would diminish.

DESIRE

Now in this example we were only concerned with how many games we could play, but not with how well we could play them. We were concerned with quantity, not quality.

Returning to the game store, we have played some games many times before so we can play them very well, others we have only played once and cannot play well at all. In fact, each game could be rated by how well we can play it. Obviously, the better we can play the game, the more enjoyment we can get from it. So our Desire to play a game is actually a rating of how well we can play it.

If we averaged this rating for all the games in the store, we would have a rating of how well we can play all the games in the store.

DESIRABILITY

Taken together, the percentage of games we can play multiplied by the rating of how well we play them, gives us our overall Desirability to play all the games.

So when rating an observation, Ability tells us what percentage we are at all familiar with (inferring the ability to learn and increase our Knowledge). We have no idea what the unknown parts of the observation may contain, so they pose the greatest risk. Therefore, Ability, as a percentage of the parts we have some familiarity with, compared to the total number of parts rates the risk factor of the entire observation.

Desire tells us just how familiar we are with the observation as a whole (inferring the desire to learn more and increase our Knowledge). We have a good idea of how often we have seen each part of the observation before, so we can rate the potential of the observation as a whole for increasing our knowledge.

Now these two factors can describe the number of wines in a cellar and what vintage they are, the number of coins in a collection and how rare they are, the number of people in an audience and how entertained they are; in fact, anything at all can be measured in this manner. But the essential relationship of Ability and Desire is this: one rates QUANTITY and the other QUALITY.

The relationship between these two measurements is the primary relationship of Mental Relativity.

QUANTITY & QUALITY

When you *define* something, whatever it may be, you are effectively putting limits on its extent. You may define it by what it *is* or what it is *not*, by what it *includes* or what it *excludes*. In effect, by defining something you are creating a border or enclosure that describes only *one* of the defined item. Once enclosed, this item is seen in the singular: one tree, one day, one thought.

Any singular item can be divided into many components (smaller definitions) -- a tree has leaves, a trunk, roots, bark, etc. But once the definition has been made, that group of components is seen as a singular item: one tree. An, of course, you can count the trees and determine their QUANTITY.

However, you may see big trees and small trees and many different sizes in between. You may find dead trees and live trees and trees woth some dead branches and some live. Once an item has been defined as a singular unit, that unit may then have its *qualities* compared to other similar units. As long as the aspect to be measured from one item to the next is consistent, within that aspect each unit may be measured against the others in terms of QUALITY.

Effectively, Quantity defines a unit tells us "how many", and Quality defines an aspect of the nature of each unit and tells us "to what degree".

Mathematically, quantity and quality describe two axes on a graph. Any measurements on Quantity and Quality can be graphed between these two axes. If quantity is defined as a point, quality could be the length of a line from the point. If quantity is defined as a line, quality could be the width of the line. If quantity is defined as a plane, quality could be the depth of the plane, and so on. In a sense, each measurement is a separate *dimension*.

Returning to the icicle model, Knowledge has both a quantity and a quality represented by the number of icicles and their various lengths. At any given point on the roof there is or is not an icicle (quantity). If there is, it has a variable length

(quality). Knowledge will exist if deposited by even a single observation, but becomes less resistive to the flow of observation with repeated observation.
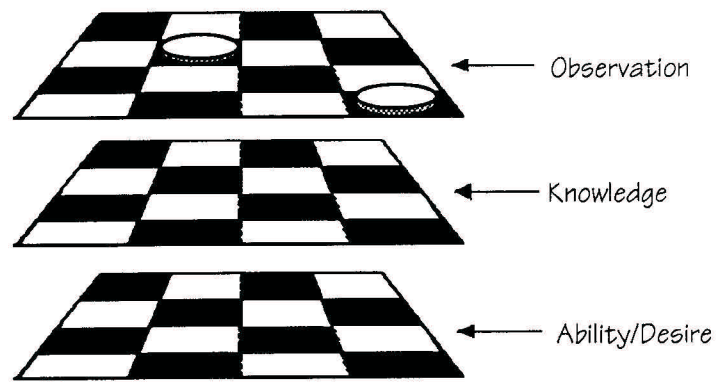
This can be described many ways: a bank of light bulbs that are either on or off, but also vary in brightness; a group of thoughtons that either fire or don't, but also require varying lengths of time observing to fire. Regardless, it is clear that Knowledge is only completely described when both its status and degree are considered.

Ability is the percentage of an observation that has been observed before. The greater the percentage match, the less is completely unknown, the less opportunity for risk and the greater the perceived Ability. If existing Knowledge matches an observation completely, Ability is seen to be 100%. If there is no match at all, Ability is zero.
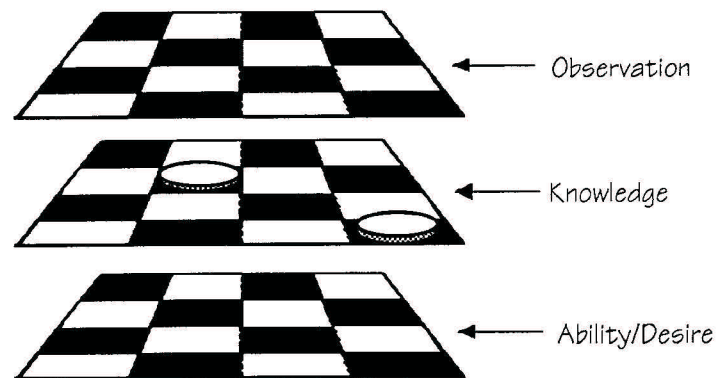
Desire is the degree to which an observation has been previously monitored. The less an observation has been seen before, the greater the opportunity to increase Knowledge and the greater the perceived Desire. If there is no existing Knowledge at all compared to an observation, the fixed value is zero and Desire is 100%. If Knowledge is 100% fixed, Desire is zero.

Notice that in this instance, Desire seems to measure a negative. It measures how tenuous Knowledge is. But it is really measuring the potential for INCREASING Knowledge, and THAT is a positive.
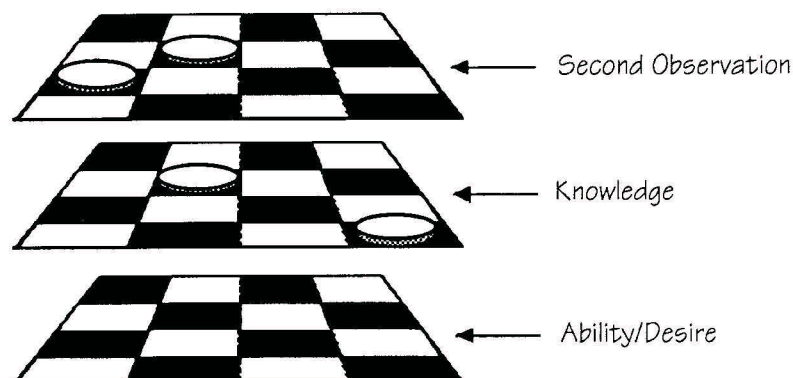
Imagine three chess boards suspended directly above each other. The squares on the boards are all little trap doors. Some squares will have a chip, others will not. The top board represents an Observation, the middle board represents Knowledge, and the bottom board is the process of measuring Desire and Ability.

Picture an observation as a pattern of white poker chips on the top of the chess board. The little trap doors open and allow the chips to fall to the board below recreating the exact pattern in Knowledge.
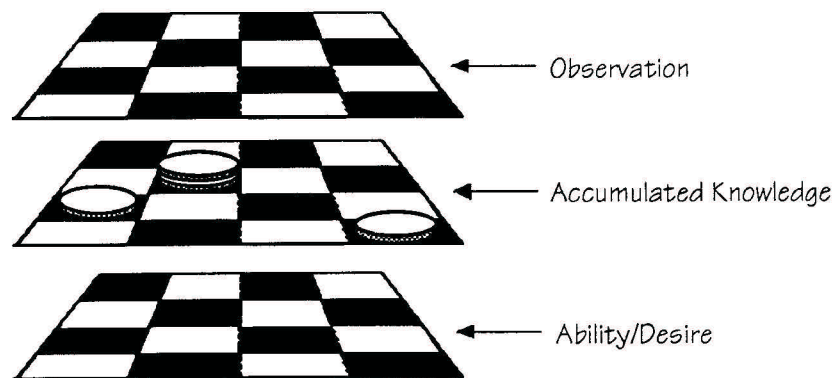

The trap doors close and this time a different pattern of observation is laid out on the top board.
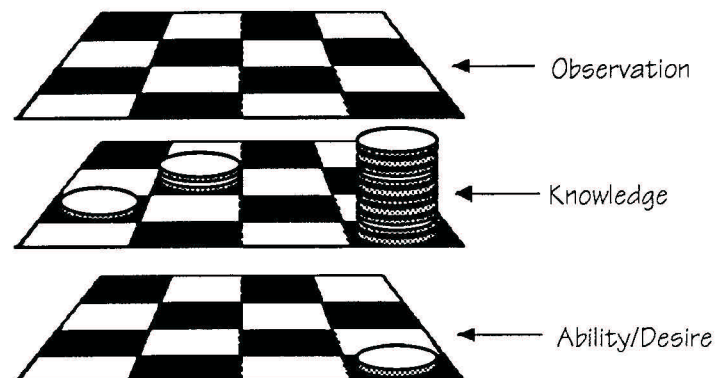

Trap doors open and THAT pattern falls through to Knowledge. THIS time, the observation is not accurately recreated in Knowledge. On squares where chips were located in both observations, there will be two chips on the

corresponding Knowledge square. If there was a chip in one observation and not in the other, only one chip will be on that square in Knowledge. And if there were no chips in either observation, there will be no Knowledge.
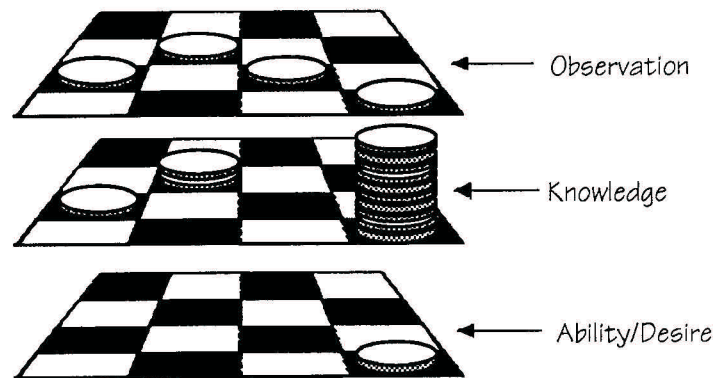

As the process of observation continues, a pattern of Knowledge emerges that shows both if a square is covered or not and also how many chips are stacked there.

Now suppose that each trap door on the Knowledge board will hold up only ten chips. If an eleventh chip lands on a stack, that trap door will open just long enough to drop one chip to the board below, then close, continuing to hold the remaining ten chips -- its maximum.

Eventually one observation will deposit on some stacks an eleventh chip and a corresponding chip from each of those stacks will fall to the board below creating a new pattern. For that specific observation, some chips will have been effectively "absorbed" or "learned" by Knowledge and others will become the eleventh chip
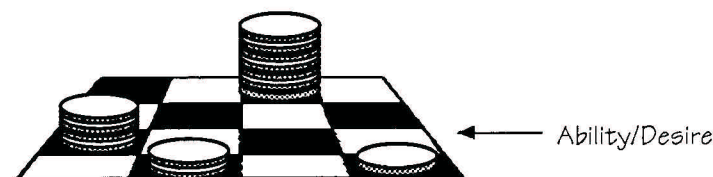
and fall through. This creates a pattern on the lowest board that reflects the effect of "filtering" or "comparing" an observation against existing knowledge.

Alter the model slightly to allow for monitoring an observation over a period of time. Think of the top board as a buffer that fills during the monitoring of observation. Assume the observation board will not dump its chips until one of the stacks reaches the eleventh chip, then all squares dump at the same time.
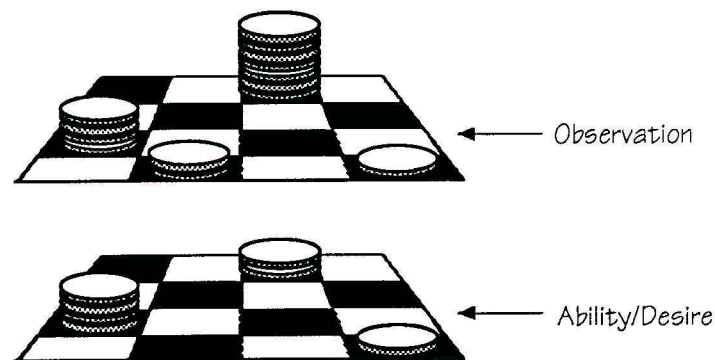
As observation continues, each square will have between zero and ten chips. When any stack reaches the eleventh chip, the observation buffer dumps the entire board to the Knowledge board below.

Looking at this model in greater detail: Suppose a given stack of observation contains ten chips. If it matches a knowledge stack of ten chips, all ten observation chips will fall through into a new stack on the Desire/Ability board. If the Knowledge stack has zero chips, all ten observation chips will be absorbed and none will fall through.

Depending on the number of chips in Knowledge and observation, one to ten chips may accumulate in the Desire/Ability stack. If there is at least one chip, it can be seen that there has been at least some degree of previous exposure to that portion of the observation. Ability for that stack will be positive, meaning simply that some previous knowledge exists about that portion of the observation.

The number of stacks on the Desire/Ability board compared to the number of stacks in the observation determines Ability. In other words, Ability is the percentage of the components of an observation that have been previously observed.

Each stack on the Desire/Ability board also has a specific height. The greater the number of chips in the stack, the more prior observation it has.

The total number chips in the stacks on the Desire/Ability board deducted from the total number of chips in the observation determines Desire. In other words, Desire is the magnitude of potential between an observation and a previous observation.

In summary, Ability measures the potential risk, Desire measures the potential increase of Knowledge.

Mental Relativity:
The Internal Perspective

From our model we have gained an introductory (albeit broadly drawn) understanding of the basic concepts of Mental Relativity from the outside perspective. Armed with this background, we can now relate these concepts in terms of our internal perspective.

$$\frac{t}{k} = d * a \quad \text{and} \quad k * t = \frac{d}{a}$$

So far we have looked at both sides of the equations in terms of the variables and what they represent. The key to Mental Relativity, however is the way in which these elements relate or interact. Relativity means that each element of the four is influenced and defined by the other three. When one changes, the other three change in response.

But what do they really represent to us, to our own minds?

Thought and Knowledge describe Reasoning and Reason.

From our internal perspective, Knowledge represents the way things are, the state of Reality as we see it. Thought then, is how that reality is changing. Remember, this is our INTERNAL view of reality. From the OUTSIDE perspective, Thought is the change in our own Knowledge caused by observation, caused by reality.

But all we know of reality is what we have already observed, in other words, our existing Knowledge. So, once again, from our internal perspective, Knowledge is our personal reality.

Of course we cannot within our finite brains hold enough Knowledge to describe the entire universe. Therefore, observation frequently conflicts with our existing Knowledge and alters it to match the new pattern through Thought. Altering Knowledge is the process of Reasoning and the result of that alteration, (new Knowledge) is Reason.

The other two variables, Desire and Ability describe Feeling and Emotion from the INTERNAL perspective. Feeling and Emotion are two different things. One is a process and the other is the result, just like Reasoning and Reason, just like Thought and Knowledge. Emotion describes our condition AT THE MOMENT and Feeling is the process of altering that condition to a new condition.

Emotion is the internal perspective of Ability. From the outside perspective Ability is determined by comparing two states of Knowledge at different moments. The RESULT of this comparison is Ability. At any given moment, the result exists. But as Knowledge is continually altered by Thought, the result, Ability will keep changing. So Emotion, the internal perspective of Ability is a momentary value that keeps changing.

If we only had one pattern of Thought, we would have only one Emotion, since Ability would be always altering in the same direction with the same intensity; the momentary value would remain unchanged because the difference between each two moments of Knowledge would have the same value. That is, Knowledge would always change in the same direction at the same rate.

But we have many patterns of Thought and so, the direction and rate of change of Knowledge is constantly shifting as the patterns of Thought shift. The

process of changing the pattern of Thought is Feeling. The result of changing that pattern is a new Emotion.

Again, from the outside perspective, Desire is the difference in direction and intensity of the pattern of Thought: the difference between two moments of Thought. From the inside perspective, Feeling is the process of changing the direction and intensity of Thought.

So as we Feel, we are altering our Thoughts and our Knowledge to achieve a new Emotion.

It is clear why Thought and Knowledge are on one side of the equation and Desire and Ability on the other. Thought is the process of altering Knowledge and Desire is the process of shifting Ability. Knowledge is the resistance that shifts Thought. Ability is the inertia that moderates Desire.

Thought and Knowledge are measured at given moments. At any one time, the nature of the brain will contain a value of Thought and a value of Knowledge. But Desire and Ability are measured OVER time and cannot be measured at all at a single moment. Therefore, we can never understand our Feeling and Emotion with our Thought or Knowledge and we can never empathize our Thought and Knowledge with our Feeling or Emotion. One set deals with the moment, the other over period of time.

The left side of the equation gives us our understanding, the right side gives us our motivation. Each side of the equation is just as strong, just as valid, and just as important to self awareness. If any one of the four variables were missing, awareness could not exist.

PERCEPTION AND REALITY

What is awareness? By analogy, awareness is a yardstick for measuring ourselves and our environment. The equation describes a system measured from the outside, as if we had removed our awareness from our own minds and were looking at what was left from the outside, measuring the functioning of the mind by an outside yardstick. But we are each INSIDE our own system. In order to measure the functioning of a system from within that system, there must be some fixed INTERNAL yardstick against which to gauge changes in the elements of that system.

As we have shown, all four elements of Mental Relativity are mutually altering by the very nature of the process. From a perspective outside the mind we can clearly see all four elements changing simultaneously. However, as we mentioned earlier, we have no way of stepping outside our own mental processes to describe our own minds. That is because in order to perceive the functioning of our own minds, in order to be aware, we must have some way of monitoring our own minds from the *inside*. To do this we must freeze one of these variables so we can observe changes in the others. In effect, we thereby create an apparently unchanging yardstick with which to measure the other three variables.

Notice that we said an APPARENTLY unchanging yardstick, for it is not truly possible to freeze any of the variables and still maintain awareness. Rather, the inner perspective we select determines which variable appears constant and therefore the other three that appear to change.

As a model, imagine yourself on a carousel. You might sit on a horse that moves up and down while the carousel spins or you might sit on a bench that goes forward and backward on the floor of the carousel. First you sit on the bench. From your perspective, the carousel does not appear to move. Rather, the scenery

appears to move past you. But due to the back and forth movement of the bench, sometimes the scenery moves ahead very quickly, sometimes it appears to stand still and sometimes it even seems to move backward. You look at the horse and see it as moving up and down. You look at the carousel and it appears to move back and forth. Finally you look at the bench where you sit and it appears to be unmoving.

Next, you mount the horse. Now the scenery appears to move past you, never stopping or backward, but seems to move up and down as well, relative to your new position. You look at the bench and it seems also to be moving up and down and forward and backward at the same time. The carousel looks as if is going up and down, but your horse seems to be unmoving.

You then stand on the floor of the carousel itself. The horse moves up and down, the bench moves forward and back, the scenery moves past you.

Finally, you step off the carousel and watch it from the ground. The horse moves up and down and around. The bench moves forward, backward and sometimes stops. The carousel goes around. For the first time the scenery appears stationary.

It becomes clear that identical minds differing only in the variable they hold constant could see an identical observation in completely different manners. Decisions of whether and how to act could be made differently even though processed through identical existing knowledge, depending upon the perspective.

The differing views created by specific selection of which variable to hold constant is the cause of the difference between Perception and Reality.

Differences in Left/Right Functioning

The way either mind makes a constant is to multiply the variables on one side of the equation. In a conceptual sense, two factors have now been combined into one, leaving room at that empty fourth place to hold awareness which can monitor the remaining three positions.

Again, conceptually, Awareness can look across the equal sign and clearly monitor the other side - the dividing side. But the multiplied variable on the same side is unclear. In effect, the side of the equation that divides defines the Conscious and the side that multiplies defines the Subconscious.

In this sense, for the left equation, both Ability and Desire have ceased to exist as independent variables and have become a new variable, Desirability, which resides in the subconscious.

From the outside perspective, we can see that as Ability and Desire change, Desirability changes, but from the internal perspective of awareness, any given Desirability cannot be separated into its component parts, there is simply nowhere to put them without displacing awareness. From this perspective, a Left Minded individual will experience Desirability, but will be unable to break that down into separate it into the proper proportions of Desire and Ability.

For example, if the Desirability variable is mid-intensity, is that a high Ability and a low Desire or a high Desire and a low Ability or a medium Ability with a medium Desire? From this perspective, it is impossible to tell.

Therefore a Left Minded individual will consciously make decisions based on Thought and Knowledge (Reasoning and Reason) which he can consider independently. Desirability (Feeling and Emotion) will influence him from his subconscious.

In contrast, a Right Mind will easily be able to separate Ability from Desire. The Right Minded individual will consciously make decisions based on Feeling and Emotion. It will be influenced through the subconscious by Logic, the unclear product of **t∗k** (Reasoning and Reason). Logic is the Right Minded equivalent of Desirability, the difference being that a Right Minded individual cannot determine what the respective Thought and Knowledge contents are within Logic.

Whichever Mind you are, one of the above examples should make perfect sense to you and the other may almost seem wrong. This simply serves to illustrate the incredible difference between the two perspectives.

How can these two approaches have any common frame of reference? Because Mental Relativity states that all four elements are mutually altering. Therefore, even if two are combined, something of their nature can be seen by their effect on the other single variables. In this manner, we all have an indication of all four elements, some more clearly than others.

Returning to the chess board model, Knowledge contains within it aspects of both Ability and Desire. A given Chess board square either has chips or not, but also contains a number of chips equal to the frequency of stimulation. As Thought moves through Knowledge, it is being altered by Ability and Desire, even as the process of Reasoning occurs. The two processes, Reasoning and Feeling happen *simultaneously.*

The process of Feeling alters the process of Reasoning and vice versa. Each one *alters* the flow and existence of the other *simultaneously.* So the *result* of either process, in a practical sense, is the *altering of the other process.*

As Thought flows through the system, it leaves new Knowledge deposited in its wake. And it leaves this new Knowledge because the existing Knowledge saps energy from Thought to create it. So they are mutually altering. Since Knowledge

when changed determines Ability and Thought when changed determines Desire, those are altered *as* Thought and Knowledge are altered and they alter Though and Knowledge *as* Thought is sapped to created new Knowledge.

In effect, *both processes and both results* are occurring *simultaneously*, and each of the four continuously alters and is altered by the other three. This is the heart of Mental Relativity and the basis for the structure of the Equation.

So the Left Minded person makes his Conscious decisions based on Reasoning and Reason. He employs Thought and Knowledge, which he can clearly see as separate factors, to alter the other. The subconscious influence for the Left Minded will come from his Feelings and Emotions which will be unclear and unfathomable as it is generated by the blurring of Ability and Desire.

The Right Minded very clearly seeing Ability and Desire as separate factors will make Conscious decisions based on Feelings and Emotion, using each to alter the other. His Subconscious influence will come from Reasoning and Reason which will be unmotivated and unempathizable as they are generated by Thought and Knowledge which are blurred together.

Since the left side of either equation deals with the vectors of change and the current state of the brain, the left side deals with frozen moments. Since the right side of the equation in either equation deals with change in the vectors of change, and the difference between two states of the brain, the right side deals with progression.

So the Left Minded individual will make Conscious decisions based on goals. The Right Minded individual will make Conscious decisions based on processes.

The Left Minded person will look at his situation and strive to better it, achieving an improved situation. The Right Minded person will look at his condition and strive to better it, creating an improved condition.

The Left Minded person will be outcome oriented, the Right Minded person will be process oriented. Both Minds are happy if an enjoyable process most efficiently achieves a specific outcome. But Left Mind will at least be content if an unpleasant process leads to a desired outcome. Right Mind would be unhappy in that scenario, but would be content if an enjoyable process led nowhere. Left Mind would be unhappy in that scenario.

For another viewpoint of Left and Right Minds we return to the model holding one variable as a constant to provide a yardstick to measure changes in the other three.

This model seems to suggest that there are four possible minds, not two, but that is not the case. Thought is already a constant - a frozen moment - as is Knowledge. So there are only two other variables we might hold constant.

Since Ability is the difference between two states of Knowledge, holding Ability as a constant will simply create another view of Knowledge. Changes in Ability will not be seen and will play no role in making decisions. The only measure of the change in the mind that is caused by observation will be Desire. So Desire will become the dominant factor in the awareness of that individual.

The other individual holding Desire as a constant will not see the changes in Thought caused by observation. His only rating of the change in his internal state is the change in Knowledge, Ability. So Ability will become the dominant factor in the awareness of that individual.

Ability differs in a crucial way from Desire. Ability measures the difference between two states of Knowledge, two situations. Desire measures the difference between two natures of Thought, two conditions.

Obviously if Ability were never to be measured, a person would make decisions in complete ignorance of the risk involved. And if Desire were never to be measured, a person would make decisions in complete ignorance of the potential gain.

The key to this dilemma is to ALTERNATE which variable is held constant. If we hold Ability constant only long enough to measure Desire, we can then hold Desire constant long enough to measure Ability. In this manner, awareness can be maintained while giving the mind its best information on the risk and potential of an observation.

When the mind alternates that view between Ability and Desire, either Ability or Desire might be measured first. The observation is either first seen as how many points match with Knowledge and then how much potential it contains for increasing Knowledge or in the reverse order.

Returning to our chess board model, suppose Ability is measured first. The very process of measuring is to deduct existing Knowledge from the observation. If we are holding Desire as a constant, only the patterns of Knowledge and observation are measured, not the intensity. So when Knowledge is deducted from observation to create the measurement of Ability, there is no simultaneous measurement of Desire. Therefore, the entire sum of Knowledge containing both pattern and intensity has been removed from the observation before Desire gets a chance to look at it.

So when the mind alternates and measures Desire, only the remainder of the observation, weakened by the subtraction of Knowledge is available. It is clear that

when Ability is measured first, it carries considerably more weight in rating an observation for risk *and* potential.

If Desire were to be measured first, existing Knowledge will be removed from the observation before Ability can be measured and Desire will carry substantially more weight in rating risk *versus* potential.

So the real difference between the two minds is not which variable is held as a constant, but which is held as a constant first. That determination is initially connected with how a Mind first sees an observation.

The Relativity of Observation

An observation, as well as a Mind, contains within it all four elements (Thought, Knowledge, Desire, and Ability) simultaneously. But as we have discussed, the Mind cannot see all four as variables simultaneously and still maintain awareness.

Since Ability and Desire are functions requiring the passage of time to measure change by comparing two frozen moments, the factors Ability and Desire are not seen by the Mind in observation. Rather, the Mind sees observation as either Thought or Knowledge.

If the Mind sees the Observation first as Thought, it will allow the observation to be filtered by internal Knowledge, creating a new Thought. In doing so, it has now established a passage of time across which to measure Desire. Of course, the Mind's Knowledge has been altered by this process, but from the internal perspective, the Mind was not monitoring Knowledge and did not perceive the change.

To understand this, let us look at the mechanism of how an observation is applied to the Mind.

In order to create a new Thought, observation increases Knowledge to a higher state of instability. This, in turn, decays into a new pattern of Thought. Only then is the Mind able to compare Thought1 to Thought2. In this instance, the Mind will be comparing Thought2 to the initial observation which was perceived as Thought. Effectively, observation (Thought1) has been divided by Knowledge equaling the difference between the two: Desire.

As an equation from the internal perspective, Thought diminished by Knowledge equals Desire: $\frac{t}{k} = d$.

From an external perspective, Knowledge has also been altered by this process, and once altered has had to decay in order to create Thought2. So from an external perspective, what the Mind perceives as Desire is really the effect of Ability applied to Desire, or: $a * d$. In other words, Knowledge1 was altered into Knowledge2 by being increased through observation before decaying into Thought2. So, although the Mind is only interested in Thought2, which it perceives as Desire, Ability has really already been determined and is contained in that internal perspective of Desire. So the Mind's internal equation of $\frac{t}{k} = d$., is seen from an outside perspective as $\frac{t}{k} = d * a$.

Once this Mind has determined Desire, Desire appears to be a constant, and that Mind will then set about determining Ability by using Thought and Knowledge. This person will either want something or not want something initially, and then use Reasoning and Reason to achieve what he wants and avoid what he doesn't want.

The other type of Mind will view observation first as Knowledge. It will allow the observation to be filtered by internal Thought creating a new Knowledge. In doing so, it has now established a passage of time across which to measure Ability. Of course, this Mind's Thought has been altered during the process, but from the internal perspective, the Mind was not monitoring Thought and did not perceive the change.

In order to create new Knowledge, observation was applied to existing Knowledge to create a higher state of instability. In other words, internal Thought was applied to observed Knowledge to create new Knowledge.

In order for the new Knowledge to be perceived, it must decay into new Thought. From the internal perspective, this Mind perceives Thought as being unchanging or constant, in order to compare Knowledge1 to Knowledge2. As an equation from the internal perspective, Knowledge applied to Thought equals Ability: $k * t = a$. But since Desire (the difference between Thought1 and Thought2) is diminished by the existence of new Knowledge (from the external perspective), $k * t = \dfrac{d}{a}$.

Once this Mind has determined an apparent Ability, that factor appears to be a constant. Because in the process of calculating Ability, new Thought has diminished new Knowledge to the point that there seems to be no difference between new Knowledge and old Knowledge. The elevated state of new Knowledge was not visible to this Mind until there was new Thought to observe it. So, as new Knowledge decays into new Thought, it is diminished in the process of observing it.

This person will either feel able or not able to do something initially, and then use feelings and emotion to motivate themselves to Desire what they can do, and not Desire what they are unable to do.

The Meaning of Mental Relativity

How do these two differing approaches to observation help our Ability to survive?

The processes of dividing and multiplying are the basis for deductive and inductive thinking.

Deductive thinking is the process of comparing experience (existing Knowledge) to observation to determine risk. The observation is matched to KNOWN cause & effect. It works well for immediate reactions, but is not at all useful for projecting new courses of action that have not been experienced.
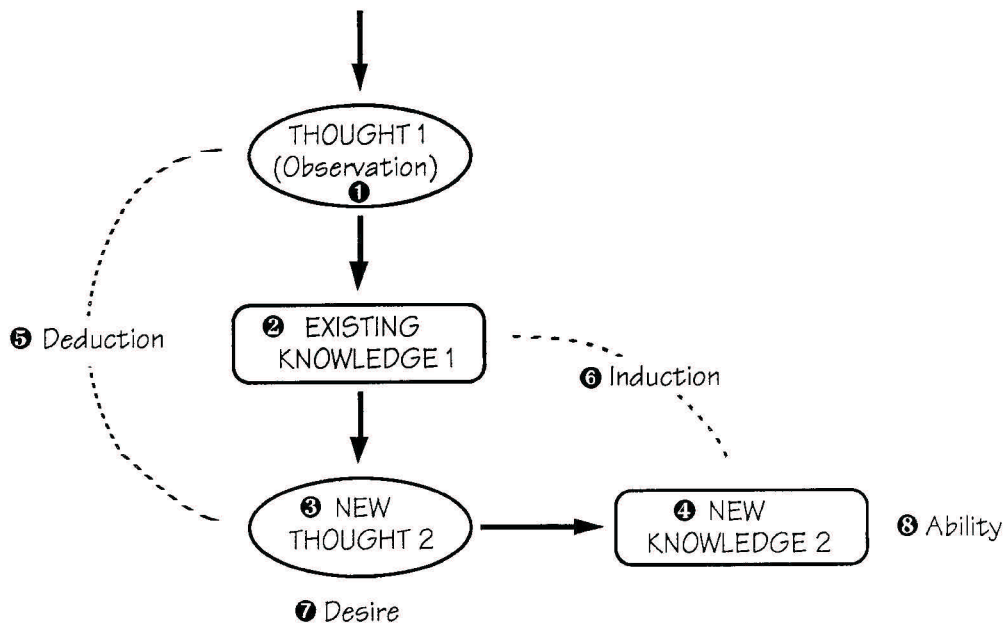
Inductive thinking is the process of taking the known quantity from an observation and then finding all of the touch points that share part or all of the known quantity. This is best suited for projecting the potential of new and unexperienced alternative paths, but has no power to determine the risk of the paths.

What we call awareness incorporates both processes, inductive and deductive thinking. One Mind will compare observation to existing Knowledge to determine Ability (deduction), and compare existing Thought to altered Thought to determine Desire (induction). The other Mind will compare the observation to existing Thought to determine Desire (deduction), and compare existing Knowledge to altered Knowledge to determine Ability (induction).

Due to the structure of the Mind, one system will create an inductive process using Reasoning and Reason, with the deductive process using Feeling and Emotion. The other Mind will create an inductive process using Feeling and Emotion with the deductive process using Reasoning and Reason.

Everything we have so far described depends upon the equity between the left and right sides of the equation. However, through the passage of time, each new observation creates an inequity on one side of the equation or the other. In addition, since each Mind reflects the other as an inverse with a twist, the interrelationships between these two Minds, compounded by new observation, leads to the complexity of *psychology* which we will discuss next.
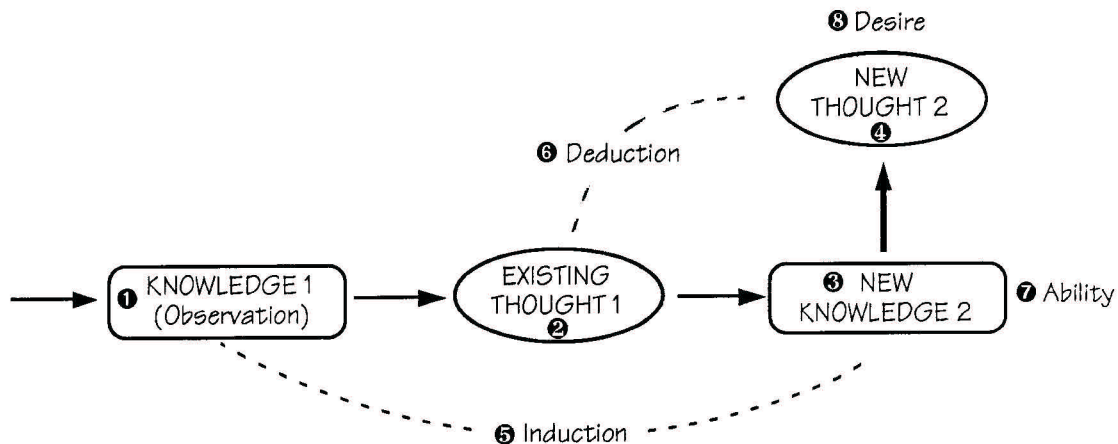
Left Minded Thinking

THOUGHT 1
(Observation)
❶

❺ Deduction

❷ EXISTING
KNOWLEDGE 1

❻ Induction

❸ NEW
THOUGHT 2

❹ NEW
KNOWLEDGE 2

❽ Ability

❼ Desire

$$\frac{t}{k} = d * a$$

❶ Observation viewed as Thought1.

❷ Knowledge1 prior to filtering of Observation (Thought1).

❸ New Thought2 the result of the decay of Knowledge1 after stimulation by Observation (Thought1).

❹ New Knowledge2 the result of Knowledge1 *after* stimulation by Observation (Thought1).

❺ Deduction as the process of reducing the unknown quantities from Thought1, resulting in filtered Thought2.

❻ Induction (after deduction) as the process of comparing the increase in known quantities between Knowledge1 and Knowledge2.

❼ Rating of Desire measured as the difference between Thought1 and Thought2.

❽ Rating of Ability measured as the difference between Knowledge1 and Knowledge2.

Right Minded Thinking

$$k * t = \frac{d}{a}$$

❶ Observation viewed as Knowledge1.

❷ Thought1 prior to stimulation by Observation (Knowledge1).

❸ New Knowledge2 as the result of the filtering of Thought1 after stimulation by Observation (Knowledge1).

❹ New Thought2 as the result of the decay of Knowledge2 after stimulation by Thought1 .

❺ Induction as the process of comparing the increase in known quantities between Knowledge1 and Knowledge2.

❻ Deduction (after induction) as the process of reducing the unknown quantities from Thought1, resulting in filtered Thought2.

❼ Rating of Ability measured as the difference between Knowledge1 and Knowledge2.

❽ Rating of Desire measured as the difference between Thought1 and Thought2.