Logic, Truth, and Fact

1.2 What is Fact?

A fact is that which "is"; that which exists in reality. A fact is also independent of whatever we might choose to think or say about it. For example, if we know there is a vehicle in the parking lot, we might "think" that it is a Honda. The fact might be different than our thought, for example if the vehicle were really a Ford truck, or not there at all.

> *So a fact is that which "is", independent of what we think or say about it*.

This basic definition is frequently abused and misused by both layman and scientist, not to mention the media. Yet it is one of the most fundamental principles of logic.

> "Facts do not cease to exist because they are ignored."
> *Aldous Huxley [Atheist] (attributed: source unknown)*

1.3 What is Truth?

If we misuse "fact", we'll never get to "truth". Yet "truth" as a concept is very simple. Truth occurs when that which we "think" or "say" about a subject corresponds correctly with the "fact" of that subject. For example if I think there is a 1996 Honda Civic parked in the parking lot, and there is, *in fact*, a 1996 Honda Civic parked there, then my thought is "true", because it correctly corresponds to (that is, accurately reflects, is congruent with) the fact.

First Principles of Truth:

The First Principles also can be stated in terms of truth as follows:

1. If it is true, then it is true (tautology; identity).

2. If it is false it cannot also be true (non-contradiction principle).

3. It cannot be somewhat true and somewhat false (excluded middle).

So, if reality exists, then truth exists…absolutely.

First Principle #3 can be a roadblock in today's relativist world. The concept of "somewhat true" will seem OK to some folks. But not in the pursuit of real truth. Here's a test for relative truth:

I say, "Truth is relative". You say, "Is that an *absolutely* true statement?"

It is immediately apparent that a violation of the principle of non-contradiction (paradox) is created by the concept of "relative" truth. It cannot exist by any stretch of Western logic. ("Eastern logic" is addressed in the "Both / And" Paradox section of the Appendix; we'll stick with Western logic for now).

Fact, Truth, and Evidence:

The path to the possession of complete truth about a given fact is through evidence. If there is no evidence of an existing fact, there is no path to truth concerning that fact. So the path to truth is dependent on the evidence, its quality: completeness, and validity. So it can be said that:

> *The truth of a statement depends on the validity and completeness (necessity and sufficiency) of evidence supporting it.*

Thus, given that a concept cannot be just "somewhat true", the validity of the evidence is actually paramount in pursuing truth.

Theory of Evidence:

Evidence can be categorized. First-hand, direct observation might be called "Primary". This includes direct personal observations, such as "that pain on the skin of my arm is due to the ant that I see which is biting me at that location." However, when someone else tells me that that pain on the skin of their arm is due to the ant that is biting them at that location, it becomes second-hand, "Secondary" evidence from my perspective.

For primary evidence, the proof is directly immediate and personally sensate. For secondary evidence, the proof is neither, and might therefore be incorrect, incomplete, a joke or hoax, a fraud, or imaginary. For our purposes, "evidence" will from here on be referring to secondary evidence, because primary evidence has no need of a logical, rational proof.

This cannot be overemphasized: ALL evidence is probabilistic. This includes empirical evidence! As will be shown later, even empirical evidence, no matter how often it is confirmed, has a probability attached to it.

So there is a continuum of evidential probability, ranging from "absolutely not true", to "probably true". Here's what that might look like:

Value of Our Knowledge:	Value of The Evidence that is Available to us[1]:
Absolutely True	No physical evidence can *prove* absolute truth.
Probably True:	Highly verified empirical evidence; non-extrapolated, highly verified forensic evidence; "Many eyewitness" corroborated evidence.
Possibly True:	First verification of empirical evidence. Minor, rational extrapolations of forensics. Several eyewitness corroborated evidence.

Possibly False	Pre-verification of empirical evidence. Major extrapolations of forensic evidence. Single eyewitness uncorroborated evidence.
Absolutely False	Extravagant forensic extrapolations that are not directly observable (Java Man, Cardiff Giant) should be considered absolutely false until secondary verification proves otherwise. Uncorroborated evidence, false science etc.

(1) Empirical evidence is created experimentally; forensic evidence is "found" evidence.

Notice that it is not possible to prove ***absolute*** truth with any amount of physical evidence. There is no "Value of Evidence" that corresponds to "Absolutely True". This concept is crucial to understanding the path to truth. Even the proverbial "smoking gun" does not provide "absolute" truth of a situation. It takes corroborating tests, and additional evidence to increase the probability of truth. An eyewitness of a smoking gun situation is still providing possibly false information. Even fingerprints, ballistics and DNA are probabilistic in nature, although the probabilities are very high, and higher with added evidence. Yet even with all of these elements of evidence available, the proof is not 100% absolute. This is the reason that courts demand evidence that is "beyond reasonable doubt", not 100% absolutely proven.

This continuum does not mean that truth is partially true, partially not true. It means that our ability to reach the absolute truth is dependent on the quality of the evidence. It measures the quality of our knowledge of the fact, not the quality of truth, or of the fact.

1.4 What are Human Thought and Consciousness?

That consciousness and thought exist is well established. Descartes, as he doubted his own doubts, realized that he knew that he was thinking about doubting; this meant that he must exist, in order to think about doubting. This led him to conclude: "I think, therefore I am." (Cogito ergo sum). Significantly, it is the intangible (my mind, my thoughts) that proves the tangible (my own existence).

The intangibles of thought and consciousness are measured by their secondary effects, since direct observation is difficult. For some, the mind is considered to be just a series of random firings of randomly connected neurons. If this were so, intentionality could not occur. Without intentionality, logic would not exist. But a mind can create its own mental state, and then intentionally determine the next mental state. It can even back up state or two, then intentionally branch off to a different state altogether. So for most, I suspect that the mind is known to be both aware of itself as an autonomous thinking entity, and aware of its ability to create, to analyze, and to focus outside the internal workings of the "self". The discovery of one's place in the world and learning to react

with it requires awareness. This awareness and ability to discover autonomously is consciousness, in my estimation.

If mere firings of neurons in a control structure constituted consciousness, then computers would be conscious. Computers fire at rates far faster than brains yet they are not self-aware. Self-awareness means more than knowing your current status, and the current status of the local environs; it means to know the fact of a future as well as a past, and to be concerned with discovering one's place in the current and future environment, as well as to desire to influence that environment. Do computers "desire"?

Computers, in fact provide an interesting comparison to the brain / mind. A computer is actually an accumulation of circuits: wiring, gates, and components that are energized electrically. However, without software, the circuits do nothing but bind up into an incomprehensible state. In order to function, a computer requires two more intangible additions to the tangible, physical circuitry. It needs resident start-up software, permanently installed within the circuitry. And it needs functional software added after the machine has started and lands in a rational state of readiness. Without the intangibles of the two types of software, the computer is merely, as they say, good only for a boat anchor. Keep this in mind as we move through the concepts yet to come.

1.5 What is Logic?

Logic is merely an organizing of the thought processes, so that truth might be extracted systematically from a group of facts and fallacies. There are two categories, Deductive and Inductive logic.

Deductive logic generally resolves toward a specific. It tends to be absolute.

Inductive logic generally resolves toward a generality (such as a natural law). It tends to be probabilistic.

The propositional logical process starts with premises that might or might not be valid, and results in a conclusion based on those premises. The premises must be knowable, stated completely, and tested for validity. And the ordering of the premises within the proposition can influence the truth of the conclusion.

There are more than 100 documented informal logic fallacies. A working knowledge of the basis for falsity is essential for winnowing truth from any claim.

Inductive Reasoning, Deductive Reasoning, and Falsification

Induction, Premises and Conclusion:

Inductive conclusions are not absolute, but are probabilistic. Induction usually resolves from specifics toward generalities.

Example: Fred is mortal and human.
Ethel is mortal and human.
Lucy is mortal and human.
Therefore, probably all mortals are human.
(True in a probabilistic manner?).

This example has three valid premises, but the conclusion is false. It shows how susceptible induction can be to false conclusions when based upon a sample size too small to find a falsifier, or when the data gathering is restricted to one population, ignoring other possible populations. In this case, "Rover is mortal and a dog" would falsify the conclusion.

Another way to write the above is as follows:

X is A and B;
Y is A and B;
Z is A and B;
Conclusion 1: Therefore, all A is B; (A is completely contained inside B)
Conclusion 2: Therefore, all B is A; (B is completely contained inside A)

Both conclusions assume that there is no population that is outside the boundaries, based on the sample size of three. So the accuracy of this type of logical process depends upon the quality of the sampling process, the sample size, and possibly the ability of the sampler to objectively locate all the populations involved. This illustrates the probabilistic nature of the inductive process.

Inductive reasoning is used in defining scientific principles, where a series of isolated facts "induce" a conclusion that is "probably" true. Ironically, the so-called "laws" of science are at best only "probably" true, because there can never be enough verification to prove them for all conceivable cases, or absolutely. ***Keep this in mind!***

Deduction, Propositions and Syllogism:

Deductive conclusions absolutely draw from the premises without depending upon anything else. Deduction generally resolves toward the specific. Deductive "categorical propositions", invented by Aristotle and called "syllogisms", are formed by two premises, and a conclusion.

Example 1: All humans are mortal.
Fred is human.
Therefore, Fred is mortal.
(True, because Fred is a valid subset of humans, and human mortality is well established)

Example 2: All humans are mortal.
Fred is mortal.
Therefore, Fred is human.

(False, Fred is my dog, which is mortal but not human)

Deductive reasoning is used to "deduce" a specific truth from general truths and other specific, related truths. In example 1, a general set (mortal) and subset (all humans) are established. Then a member of that subset (Fred, a human) is identified. When done properly, a correct (true) conclusion can be drawn.
In example 2, the second premise does not establish membership in a valid subset, so the logic has the ability to be incorrect even though the premises are true.

Premises can be written in the following forms, which are given letters (A,E,I,O) for names which identify each one:

A: All S is P E: No S is P

I: Some S is P O: Some S is not P

Deductive Categorical Syllogisms have three terms, two are premises and one is the conclusion. P is the major term, located in the predicate of the conclusion, and in the first term. The minor term, S, is in the second premise only. The middle term, M, is in both the premises, and at least one use must be "distributed" (contain all the members of its class). These look like this example:

All P is M (A)
Some S is all M (I)

:. Some S is P (I)

This particular example is an A-I-I Syllogism. A syllogism category can be from AAA to OOO, and some are never valid while others are always valid. Since the Middle term can occur in four locations in the premises, there are four "figures", or combinations of configuration. This leads to 256 combinations that form Syllogisms.

A simple way to view the syllogism is with the Venn diagram (intersecting circles denoting sets), which allows us to visualize the content and conjunctions of S, P, and M. If S, P and M are each sets, then basic set theory takes hold.

Syllogisms are arguments in basic natural language. They can be formalized into truth tables and into more formal "predicate logic" language specifically for logic. These formal methods are usually not needed for informal logic analysis, and won't be addressed here.

Falsification Process:

An argument cannot be true if any one of the necessary premises can be shown to be false. One way to test this is give values of "T" and "F" to the conclusion, then find the corresponding requirements of the premises. A false premise will show up as a contradiction. This is a "falsification" of the argument. If a premise is not falsifiable, there is doubt as to its validity. Should such a premise be used?

Falsification is the first and most positive test that can be performed on a hypothesis. Because of the limitations of science, a hypothesis can never be 100% verified (Discussion of science is coming up). Many verifications can point to the probability of being correct. But just one falsification serves to disprove the entire theory. So falsification is a very powerful detector for the process of finding truth.

The verification or falsification of premises is a technique that will be used throughout this work to determine the credibility of the claims of Atheism.

1.6 What Are Informal Logical Fallacies?

Definition and Examples
Fallacies are pieces of erroneous reasoning or tactics that lead away from valid conclusions rather than toward them. Knowledge of fallacies is an essential part of detecting departures from valid reasoning. Some common examples are:

Ad Hominem (Abusive): attacking the attacker.
Ad Baculum: appeal to force the acceptance of a proposition.
Ad Ignorantiam: It's true because it hasn't been proven false.
Appeal to Pity.
Begging the question.
False Cause Fallacy.
Hasty Generalization.
Appeal to Fear.
Appeal to Authority.
Circular Reasoning.
Guilt by Association.
Red Herring.
Genetic Fallacy.
Rationalization.

Ad Hominem Abusive
One of the most pervasive fallacies is the Ad Hominem Abusive. The Ad Hominem Abusive is a direct attack on the opposing debater, deflecting the debate away from logic and reason. This has been a common tactic in the makeover of our society from one of absolutes to one of relativism and secular humanism. It involves the use of ridicule to debase the beliefs of others, while maintaining a call for tolerance of one's own behaviors, as shown here:

On July 19, 2006 President George W. Bush vetoed the Embryonic Stem Cell Bill. Senator Tom Harkin had this Ad Hominem Abusive reaction: "George Bush is an embarrassment to His Science teacher; he is acting as the Moral Pope, the Moral Ayatollah". "This veto is a shameful display of cruelty and hypocrisy." (Televised and Print Media interviews with Sen. Harkin).

The name-calling attack has nothing to do with logic, and everything to do with emotional force. These attacks can actually be preemptive in that the attacks are made even before a counter argument is made. The Ad Hominem Abusive attempts to place the victim on the defensive immediately by forcing a denial (which is attacked), then forcing proof of the denial (which is also attacked), and so on. It is a tactic to jerk the debate focus away from controlled logic into angry, defensive, prideful retaliation, thereby resolving in the favor of the attacker who remains cool and collected. It can also force the withdrawal of the timid. Ad Hominem Abusive is a favored attack in the political arena. Here is an Ad Absurdum (taken to an absurd extreme for demonstration purposes) example of the Ad Hominem Abusive Fallacy:

"In the Monty Python 'Argument' sketch, a man enters an office and says to the receptionist: 'Good morning. I'd like to have an argument please." She directs the man to Mr. Barnhart in room 12. When he opens the door to room 12 the following dialog takes place:

Barnhart (angrily):	*Whaddayouwant?*
Man:	*Well, well, I was told outside that…*
Barnhart (shouting):	*Don't give me that you snotty faced heap of parrot droppings!*
Man:	*What?*
Barnhart:	*Shut your festering Gob, you tit! Your type makes me puke! You vacuous stuffy nosed malodorous pervert!!!*
Man:	*Yes, but I came here for an argument!!"*

(Quoted From Fisher, Critical Thinking, An Introduction; Cambridge.)

Non Sequitur

Some have pointed out that all fallacies are really "non sequitur" (does not follow) in the sense that the conclusion doesn't follow the premises. The point is that fallacies derive from improper logic, or a lack of logic at all. There are appeals to fear, to patriotism, to all sorts of emotions. There is outright deception, diversion, and bad evidence. There are mathematical errors, misunderstanding of probabilities, confusion of cause and effect. By some counts the list is over 100 documented informal fallacies. There are many unnamed informal fallacies as well.

Classification
T. Edward Damer, in *"Attacking Faulty Reasoning"* , classifies fallacies into four groups: Irrelevance; Unacceptability, Insufficiency; and Ineffective Rebuttal. The titles of the groups are descriptions of the general defects found in the reasoning process. For example, the Ad Hominem Abusive fallacy falls into the Ineffective Rebuttal category, because it doesn't rebut an argument. Rather it deflects the argument off the logical path, onto an emotional one.

But there are also undocumented fallacies. It is not necessary to know the names and particulars of every known informal fallacy. All one needs is the ability to discern erroneous or insufficient premises, or failure to form a conclusion that follows from the premises . Watch for emotion, deceit, and fear as well as tangled logic. For me, a slow and determined analysis is required (not available in a hot debate!).

There is more on fallacies in the Appendix, along with fallacy use and abuse.

1.7 What is a Paradox?

The most potent detector of non-valid propositions is the self-contradiction. Any statement that contradicts itself in any way can't be valid. A great many of the premises under which our society is operating are in fact self-contradictory, in other words, illogical. Paradox abounds, and once one trains oneself to see them, they are easily found.

Paradox is a violation of the *second* "First Principle", the Principle of Non-Contradiction. A paradox can't be established as true or false because it is self-contradictory.

Paradox in a logic statement or premise automatically falsifies it. However, in secular, neo-pagan, auto-pagan, postmodernism, the ***Worldview*** trumps logic every time, despite any and all paradoxes involved in the worldview. Some worldviews and eastern philosophies consider "either / or" logic too restrictive, and believe that "both / and" logic is correct. 'Both / and" logic embraces both of the contradictory statements as true, and rejects the concept of contradiction. This produces another paradox, the "Both / And" paradox (See Appendix for Paradoxes, Conundrums and Hoaxes). So in such a logic system, truth can be two contradictory concepts simultaneously…in other words, there would be no absolute truth.

Western rationalist logic, on the other hand, requires that no contradiction exist if a set of premises is to be true and produce a true conclusion. So the falsification that paradoxes provide is one of the surest routes to finding truth.

Anatomy of a Paradox
There are two issues to be considered. Self-reference, and ever rising systems.

Self-Referencing Contradictions

Here is a statement that references itself, and contradicts itself:

"The truth is that there is no truth."

^_____|

If there is, in fact, "no truth", then the statement cannot be true. So it is a contradiction, a paradox. Another example:

"This statement is false."

^_____|

If this statement is true, then it is false. Self-contradiction, a paradox.

Double self-referencing:

"The following statement is true.
The previous statement is false."

Standing alone, each statement is OK. Together they form a two-sentence, self-referencing paradox.

Ever Rising Systems: Godel's Theorem

Kurt Godel developed two theorems of undecidability that rocked the mathematics world. The second theorem shook the bedrock under Bertrand Russell's "Principia Mathematica", and influences science, mathematics and culture today. It goes like this (approximately):

> "A system of number theory cannot be consistent if it can validate itself; it requires validation at a higher level, a "meta-theory", in order to be consistent. The meta-theory requires a meta-meta-theory, and so on.

This translates to: System "A" needs validation by a higher system, "meta-A", and "meta-A" needs validation by yet higher system "meta-meta-A", and meta-meta-A requires validation by still higher system "meta-meta-meta-A", ad infinitum. So the validation of system A can never be reached due to the infinite spiraling hierarchy of validation requirements.

System A might be consistently valid (i.e. true), but it also might be false, which we can't know for certain without complete validation. But if System A does, in fact, validate itself, then it is definitely inconsistent (contains false statements). See the Appendix for an interesting proof of Godel's Theorem.

> *"The implication [of Godel's 2nd theorem] is that all logical systems of any complexity are, by definition, incomplete; each of them contains, at any given time, more true statements than it can possibly prove according to its own defining set of rules." From Jones and Wilson; An Incomplete Education, on miskatonic.org*

So, is any system true? The point is that there is a requirement for meta-mathematical thought, and truth is more closely approximated with the amount of hierarchical thought

given it. If one stays locked inside a specific system level, the probability of validity is undecidable. For an idea of the paradox, see the Godel Paradox, below.

Where does this apply? Some critics want to believe that it has a restricted range of mathematical application. However, can these critics prove that their own system of restrictive reasoning is valid, without a hierarchical proof? This is the point. Denying the hierarchical requirement places one in a position of potential fallacy: "I validate myself". Or, "My postulate validates itself". So the denial is actually an example of the undecidability propositions of Godel. Here are some "common sense" Godel exchanges:

> Salesman: "I am honest".
> Me: "Why should I believe that?"
> Salesman: "because I say so."

The salesman has made a self-referenced, self-validated assertion. Is that good enough?

> Salesman: "This data is valid."
> Me: "Why should I believe that?"
> Salesman: "Because the data says so."

Another self-referencing, self-validating assertion. Is it good enough? Is self-validation ever good enough to conclusively confirm the accuracy of an assertion? We intuit that the answer is "no".

> *"And it [Godel's 2nd theorem] has been taken to imply that you'll never entirely understand yourself, since your mind, like any other closed system, can only be sure of what it knows about itself by relying on what it knows about itself."*
> *From Jones and Wilson; An Incomplete Education, on miskatonic.org*

(For an interesting twist, ask the question: "is Godel's 2nd theorem hierarchically validated? Or did it validate itself? Or is it possibly immune to validation, as in a First Principle? Or maybe it is "undecidable" also? And if so, does that not allow for a release from paradox, by creating a different paradox?).

> *"It is not certain that everything is uncertain".*
> *Blaise Pascal*

OK, then.

Type 1 Paradox: Epimenides.
Since "undecidability" does not mean partly true, partly false, violating Godel's Undecidability theorem is not a violation of the first or third "First Principles". It is (a) self-referencing, (b) of the kind "if it is true then it is false; if it is false then it is true", which makes it a paradox. But there are also non-Godel self-contradictions, which are simpler

because they completely exist at one level. These are of the Epimenides ("Liars") type, which I call Type 1 paradoxes. Here are some characteristics and examples of this type of paradox:

Characteristics of a Type 1 Paradox:

a. Self-referencing
b. Self-negating or self-denying. (Internally inconsistent).
c. The negation of the statement is generally true (internally consistent).

Examples of a Type 1 Paradox: (Epimenides and variants):

1. *"I am Lying."* (Epimenides classic statement)
2. *"This sentence is false".*
3. *"I do not exist".*
4. *"This valid statement cannot be validated at this level". (Yes, the Godel statement is a Type 1 paradox).*

Godel's Paradoxes:

Type 2 (a) Paradox: Godel's Explicit.

Characteristics of a Type 2 (a) Paradox:

1. Self-referencing.
2. Explicit external inconsistency or denial. Attempted self-validation while denying the Godel requirement for higher order validation: contradiction, a paradox.
3. The negation of the statement is generally true.

Self validation, because it can't be verified at it's own level, has no truth value.

Let Q be an unvalidated proposition with no truth value;
For Q to claim Q is absolutely true….is false.
For Q to claim Q is absolutely false…is false.

A proposition (that has no truth value) claiming that itself (a proposition that has no truth value), does, in fact, have a specific truth value, is contradictory. (The process is paradoxical). Moreover, result of the paradox is falsity.

Examples of a Type 2 (a) Paradox:

1. *"My mind is supreme."* (Denies higher order Godel requirement for validation; self-validated).
2. *"We are all god."* (Denies higher order Godel requirement for validation; self-validated).

Type 2 (b) Paradox: Godel's Implicit.

Characteristics of a Type 2 (b) Paradox:

1. Self-referencing.
2. Implicit external inconsistency or denial. Attempted self-validation while denying the Godel requirement for higher order validation: contradiction, a paradox.

3. The negation of the statement is generally true.
4. Truncated statement, concealing implicit or embedded presuppositions.

Example of a Type 2 (b) Paradox:

1. *"There is no (Necessary Cause, Deity, Supreme Intelligence)."*

This is an example of a truncated statement, with possible implicit and embedded components that are in play, but not stated. The *complete* statement might be:

> *"{My mind is supreme **and** has the capacity to determine all matters, **and** because of worldview presuppositions A through $Z^{(z)}$ (unstated, and unknown validity), has determined categorically **that**} there is no (Necessary Cause, Deity, Supreme Intelligence)."*

This shows the possibility of embedding several fallacies and worldview self-limitations within an implied-but-not-stated framework, including the obvious implied Type 2a paradox, "My mind is supreme". This type of paradox is found implicitly embedded inside many worldviews, and is the basis for certain irrational approaches to the problems of life. A paradox inside a worldview directs the holder of the worldview away from truth, not toward it. For this reason understanding the nature of paradox is crucial.

Paradox Examples

Here are some of the most well known and some of my favorite paradoxes:

1. Epimenides ("Liars") Paradox (Type 1).
   Epimenides, a Cretan, said, "All Cretans are liars'.
   Statement: "I am Lying."
   Or,
   "This statement is false".
   Is this statement true or is it false?
   I don't know, but it definitely is a paradox.

2. Bertrand Russell's "Set of all sets" Paradox (Type 2).
   Statement: "There exists a set of all sets, which of necessity contains itself".
   Can a set contain itself and all others, or does that produce yet a larger set?
   This was a direct result of Godel's theorem. After 7 years looking for a resolution to this paradox, Russell reputedly gave up declaring it a waste of his time.

3. The Infinity Paradox #1.
   Given an infinite chain of pop-beads, I break the chain at the point where I exist. Then I have two infinite chains of pop-beads. This proves that one equals two, which is a paradox.

   The infinity Paradox #2.

Given that there are an infinite number of numbers, there are also an infinite number of even numbers. This is because for every number there exists a double of that number (an even number). So every number produces a corresponding even number, making the even numbers the same quantity as the total number. The concept of infinity produces lots of paradoxes.

4. The Zero Paradox.
   If there are any two equations:
   A+B = C and X+Y = Z,
   Then,
   A+B-C = 0 and X+Y-Z = 0
   So,
   A+B-C = X+Y-Z.

   Therefore all variables in the universe can be mathematically equated. (Inches can be made to relate to lumens or kilograms, for example).

   This seeming paradox is actually just an exercise in triviality: the "=0" is a trivial solution to all equations. Setting trivial solutions equal to each other is meaningless.

5. The Relativist's Paradox.
   Premise: "All truth is relative."
   Premise expansion: "(It is absolutely true that) All truth is relative (not absolute)."
   Is this statement absolutely true? Or is it a relative truth? If it is true, then it is false. It is a paradox.

6. The Escher 2-D Paradoxes.
   The drawings of Escher show people walking upward on an infinite staircase yet winding up where they started, producing an infinite loop. Paradox in picture form.

7. The Godel Paradox: Questioning the Undecidable.
   Godel's theorem now is being applied to all things, including worldviews. Undecidability is popular because it seems to deny that any absolute knowledge can exist. This of course eliminates absolutes such as moral statements.

   But is Godel's theorem *absolutely* true? Is the system in which the theorem exists self-validating, or does the hierarchy requirement apply, making the validity of the theorem itself questionable? If it's own validity is undecidable, can the theory be used to question the validity of other premises? Here we go:

(a) If Godel's theorem (GT), applies to all things, including worldviews, then it must also apply to itself, meaning that it's own validity is undecidable… thereby opening the door to the possibility of absolute truths, since the GT might not be valid.

(b) If GT does not apply to all things, then it still opens the door to the possibility of absolute truths.

(c) If GT exists as a singular exception to the hierarchical validation requirement, it is therefore a paradox, contradicting it's own premise.

So the Undecidability of GT is not absolute. And other absolutes are not precluded.