Script Outlines Final

Galatians 3:21 *Is* the law then against the promises of God? Certainly not! For if there had been a law given which could have given life, truly righteousness would have been by the law.

Introduction

1. Science + Religion
2. Who is God?
    a. “God is the same yesterday, today, and tomorrow” (Hebrews 13:8, Malachi 3:6, Revelation 1:8, James 1:17, Psalm 89:34)
    b. “God is Love” (1 John 4:8)
3. Questions
    a. Why is there a difference between God in the Old and New Testaments?
    b. Why do natural disasters, diseases, suffering, cancer, death exist?
    c. Why did Jesus have to die to provide salvation for sinners?
    d. Does God punish sinners by burning them forever and ever?
4. Ground Rules
    a. **Number one:** Bible is its own interpreter. Bible is to be taken literally unless the Bible states certain passages should be taken figuratively.
        i. Bible taken as it reads prevents arbitrary interpretation.
        ii. God is all-powerful and all-knowing. He is able to preserve the meanings in the Bible even through translations.
        iii. Every page in the Bible is high rent area. Nothing in the Bible is unnecessary.
    b. **Number two:** Bible and Science should be in harmony
        i. The God who inspired the writings of the Bible also created nature.
        ii. Science should back up the Bible, and the Bible should back up science.

Genomic View

God’s Law

1. What is God’s law?
    a. Psalms 119:15 “Thou art near, O Lord; and all thy commandments are truth.”

b. John 17:17 “Sanctify them through thy truth: thy word is truth.”
c. God’s law is fundamentally a description of reality

2. Scientific Laws
   a. Conservation Laws
      i. Conservation of Mass
      ii. Conservation of Energy
      iii. Conservation of Momentum
      iv. Conservation of Angular Momentum
      v. Conservation of Charge
   b. Newton’s Laws of Gravitation
   c. Kepler’s Laws of Planetary Motion
   d. Laws of Thermodynamics
   e. Maxwell’s Equations for Electromagnetism
   f. Lorentz Force Law
   g. Quantum Mechanics
   h. Quantum Field Theory
   i. Radiation Laws
   j. Laws of Chemistry
   k. Physical laws **are** God’s laws
3. What happens when you break the law?
   a. Physical laws can’t be broken
   b. 1 John 3:4 Whoever commits sin also commits lawlessness, and sin is lawlessness.
   c. Romans 6:23 For the wages of sin *is* death, but the gift of God *is* eternal life in Christ Jesus our Lord.
   d. John 8:34, Jesus answered them, “Most assuredly, I say to you, whoever commits sin is a slave of sin.”
   e. Sin is lawlessness, transgression of the law, slavery, and sin also causes death.
   f. Romans 5:12-14 **12** Therefore, just as through one man sin entered the world, and death through sin, **and thus death spread to all men, because all sinned** — **13** For until the law sin was in the world, but sin is not imputed when there is no law. **14** **Nevertheless death reigned from Adam to Moses**, even over those who had not sinned according to the likeness of the transgression of Adam, who is a type of Him who was to come.
4. Biology
   a. Lawless
      i. Frank-Kamenetskii, Maxim D. “Are There Any Laws in Biology?” *Physics of Life Reviews*, vol. 10, no. 3, 2013, pp. 328–330.,

doi:10.1016/j.plrev.2013.07.002

b. DNA is the law of life
c. Transposable elements change DNA
    i. Shapiro, James A. "How Life Changes Itself: The Read-Write (RW) Genome." *Physics of Life Reviews*, vol. 10, no. 3, 2013, pp. 287–323., doi:10.1016/j.plrev.2013.07.001
    ii. Koning, A. P. Jason De, et al. "Repetitive Elements May Comprise Over Two-Thirds of the Human Genome." *PLoS Genetics*, vol. 7, no. 12, 2011, doi:10.1371/journal.pgen.1002384
d. Referencing Romans 5:12-14, death must be genetic to be inherited from Adam to Moses.
e. Jeremiah 13:23 Can the Ethiopian change his skin or the leopard its spots? *Then* may you also do good who are accustomed to do evil.
    i. The only way the Ethiopian could change his skin or the leopard change its spots is for their genome to be changed.
f. Sin is the actions and behavior caused by transposable elements

5. What does this say about God? God did not intend for selfishness, greed, pain, disease, cancer, and death. These are natural consequences of breaking His law.
6. Origin of sin
    a. Isaiah 14:12-14 **12** "How you are fallen from heaven, O Lucifer, son of the morning! *How* you are cut down to the ground, You who weakened the nations! **13** For you have said in your heart: 'I will ascend into heaven, I will exalt my throne above the stars of God; I will also sit on the mount of the congregation On the farthest sides of the north; **14** I will ascend above the heights of the clouds, I will be like the Most High.'
    b. God is the only being who can create.
    c. Lucifer filled with jealousy and pride because he was not first in heaven.
    d. Lucifer sought to subvert the throne of God and take it for himself.
    e. To be like the Most High, Lucifer wanted to write laws for himself. The only way to write laws like God was to change DNA.
    f. Lucifer invented transposable elements.
7. Controversy
    a. Lucifer claimed to be operating in creation's best interest
    b. Lucifer accused God of being arbitrary and restrictive and that God was holding creation back
    c. Creation should have the freedom to change their own DNA
    d. Does God act in the best interest of all creation or is God vengeful, hateful, and demanding of worship from His subjects?

e. Does God demand love and punish those who don't offer it?
f. Satan can use all forms of lying, deceiving, and scheming to accuse God
g. God must act true to his character and must abide by His own laws that He's established
h. God must show that His laws are not arbitrary and restrictive, that His laws provide freedom for creation, that he acts in creation's best interests

Root Cause

1. Transposable elements are sequences of DNA that can move around in the genome
    a. Class 1 retrotransposons copy-and-paste
        i. Cell's existing machinery creates RNA and Reverse Transcriptase.
            1. Normal cellular usage of genetic code is that DNA is transcribed into RNA which gets translated into proteins
            2. Reverse transcriptase creates DNA from RNA, reverse the normal process.
            3. Reverse transcriptase originates from transposable elements
            4. Reverse transcription is very error prone
                a. Roberts, J., et al. "The Accuracy of Reverse Transcriptase from HIV-1." *Science*, vol. 242, no. 4882, 1988, pp. 1171–1173., doi:10.1126/science.2460925
            5. Elements of inferior design
        ii. Long Terminal Repeat (LTR)
            1. LTR transposons are flanked on either side by long repeating sequences
            2. LTR transposons include retroviruses.
            3. HIV is a retrovirus
        iii. Non-Long Terminal Repeat (non-LTR)
            1. LINEs (Long Interspersed Nucleotide Elements)
                a. 4-7 kbp long
                b. Autonomous: encode the enzymatic machinery to move themselves
                c. LINE-1 are the most common LINEs in mammals
            2. SINEs (Short Interspersed Nucleotide Elements)
                a. 150-500 bp long
                b. Non-Autonomous: don't encode the enzymatic machinery to move themselves
                c. Rely on the enzymatic machinery from LINEs already in the genome to move.

b. Class 2 DNA transposons cut-and-paste
    i. No RNA intermediary
    ii. Transposase enzymes cut and paste DNA directly
    iii. Some transposase enzymes are very specific, others aren't specific.
    iv. Can be identified by Terminal Inverted Repeats (short direct repeats at the target "paste" site) followed by inverted repeats (identify the transposon to "cut")
    v. 3% of the human genome
    vi. Nonfunctional in humans due to losing the ability to transpose
2. Transposable elements cause significant damage to the genome and are implicated as the root cause of many diseases
    a. Genetic Diseases
        i. Ayarpadikannan, Selvam, et al. "Transposable Element-Driven Transcript Diversification and Its Relevance to Genetic Disorders." *Gene*, vol. 558, no. 2, 2015, pp. 187–194., doi:10.1016/j.gene.2015.01.039
    b. Autoimmune Diseases
        i. Volkman, Hannah E, and Daniel B Stetson. "The Enemy within: Endogenous Retroelements and Autoimmune Disease." *Nature Immunology*, vol. 15, no. 5, 2014, pp. 415–422., doi:10.1038/ni.2872
    c. Endocrine and Metabolic Diseases
        i. Costello, Kevin R., and Dustin E. Schones. "Chromatin Modifications in Metabolic Disease: Potential Mediators of Long-Term Disease Risk." *Wiley Interdisciplinary Reviews: Systems Biology and Medicine*, vol. 10, no. 4, 2018, doi:10.1002/wsbm.1416
        ii. Barreau, Olivia, et al. "Identification of a CpG Island Methylator Phenotype in Adrenocortical Carcinomas." *The Journal of Clinical Endocrinology & Metabolism*, vol. 98, no. 1, 2013, doi:10.1210/jc.2012-2993
        iii. Du, Juan, et al. "Chromatin Variation Associated with Liver Metabolism Is Mediated by Transposable Elements." *Epigenetics & Chromatin*, vol. 9, no. 1, 2016, doi:10.1186/s13072-016-0078-0
    d. Psychiatric Diseases
        i. Bundo, Miki, et al. "Increased L1 Retrotransposition in the Neuronal Genome in Schizophrenia." *Neuron*, vol. 81, no. 2, 2014, pp. 306–313., doi:10.1016/j.neuron.2013.10.053
        ii. Larsen, Peter A., et al. "Warning SINEs: Alu Elements, Evolution of the Human Brain, and the Spectrum of Neurological Disease." *Chromosome Research*, vol. 26, no. 1-2, 2018, pp. 93–111., doi:10.1007/s10577-018-9573-4. **Alzheimers disease, Parkinson's disease, Friedreich's Ataxia**

iii. Reilly, M. T., et al. "The Role of Transposable Elements in Health and Diseases of the Central Nervous System." *Journal of Neuroscience*, vol. 33, no. 45, June 2013, pp. 17577–17586., doi:10.1523/jneurosci.3369-13.2013
iv. Guffanti, Guia, et al. "Transposable Elements and Psychiatric Disorders." *American Journal of Medical Genetics Part B: Neuropsychiatric Genetics*, vol. 165, no. 3, 2014, pp. 201–216., doi:10.1002/ajmg.b.32225. **Schizophrenia, Bipolar disorder, Major depression, PTSD, Alcohol dependence, Autism, ADHD**
v. Gandal, Michael J., et al. "Shared Molecular Neuropathology across Major Psychiatric Disorders Parallels Polygenic Overlap." *Science*, vol. 359, no. 6376, 2018, pp. 693–697., doi:10.1126/science.aad6469

e. Selfish Behavior
i. Israel, Salomon, et al. "The Oxytocin Receptor (OXTR) Contributes to Prosocial Fund Allocations in the Dictator Game and the Social Value Orientations Task." *PLoS ONE*, vol. 4, no. 5, 2009, doi:10.1371/journal.pone.0005535

f. Cancer
i. Scott, Emma, and Scott Devine. "The Role of Somatic L1 Retrotransposition in Human Cancers." *Viruses*, vol. 9, no. 6, 2017, p. 131., doi:10.3390/v9060131. **Cancer: Lung, Brain, Colorectal, Liver, Esophageal, Pancreatic, Ovarian**
ii. Hancks, Dustin C., and Haig H. Kazazian. "Roles for Retrotransposon Insertions in Human Disease." *Mobile DNA*, vol. 7, no. 1, June 2016, doi:10.1186/s13100-016-0065-9. **Diseases: Chronic pancreatitis, Hemophilia A, Hemophilia B, Leukemia, Cystic Fibrosis, Breast Cancer, Ovarian Cancer, Hereditary Cancer, Colon Cancer**

g. Aging
i. Cecco, Marco De, et al. "Transposable Elements Become Active and Mobile in the Genomes of Aging Mammalian Somatic Tissues." *Aging*, vol. 5, no. 12, 2013, pp. 867–883., doi:10.18632/aging.100621
ii. Sturm, Ádám, et al. "The Mechanism of Ageing: Primary Role of Transposable Elements in Genome Disintegration." *Cellular and Molecular Life Sciences*, vol. 72, no. 10, 2015, pp. 1839–1847., doi:10.1007/s00018-015-1896-0
iii. Wood, Jason G., and Stephen L. Helfand. "Chromatin Structure and Transposable Elements in Organismal Aging." *Frontiers in Genetics*, vol. 4, 2013, doi:10.3389/fgene.2013.00274

iv. Cecco, Marco De, et al. “Genomes of Replicatively Senescent Cells Undergo Global Epigenetic Changes Leading to Gene Silencing and Activation of Transposable Elements.” *Aging Cell*, vol. 12, no. 2, 2013, pp. 247–256., doi:10.1111/acel.12047

h. Death
   i. Cecco, Marco De, et al. “Genomes of Replicatively Senescent Cells Undergo Global Epigenetic Changes Leading to Gene Silencing and Activation of Transposable Elements.” *Aging Cell*, vol. 12, no. 2, 2013, pp. 247–256., doi:10.1111/acel.12047

i. Other References
   i. Morrish, Tammy A., and Jose L. Garcia-Pérez. “Editorial: Mobile Genetic Elements in Cellular Differentiation, Genome Stability, and Cancer.” *Frontiers in Chemistry*, vol. 5, 2017, doi:10.3389/fchem.2017.00108

j. Transposable elements very active in the brain
   i. LINE-1 retrotransposition is active in neurons and causes somatic mosaicism
   ii. Normal neuron activity causes double strand breaks (DSBs) in neurons
   iii. DSBs occur at locations in the genome where transposable elements are abundant
   iv. DSBs allow even more transposon insertions at the break point
   v. Faulkner, Geoffrey J., and Jose L. Garcia-Perez. “L1 Mosaicism in Mammals: Extent, Effects, and Evolution.” *Trends in Genetics*, vol. 33, no. 11, 2017, pp. 802–816., doi:10.1016/j.tig.2017.07.004
   vi. Newman, Andrew G, et al. “Activity-DEPendent Transposition.” *EMBO Reports*, vol. 18, no. 3, 2017, pp. 346–348., doi:10.15252/embr.201643797
   vii. Madabhushi, Ram, et al. “Activity-Induced DNA Breaks Govern the Expression of Neuronal Early-Response Genes.” *Cell*, vol. 161, no. 7, 2015, pp. 1592–1605., doi:10.1016/j.cell.2015.05.032

k. Transposable elements change behavior
   i. Monogamous Prairie with higher vasopressin 1a receptors, promiscuous Montane voles with lower vasopressin 1a receptors.
   ii. Vasopressin 1a receptors are necessary for societal and emotional behaviors such as forming pair bonds in voles and humans
   iii. Variations in the length of microsatellite gene regions causes variations in vasopressin 1a receptors.
      1. Transposable elements cause variations in the length of microsatellite gene regions which causes variations in vasopressin 1a receptors.

2. Barrett, Catherine E., et al. “Variation in Vasopressin Receptor (Avpr1a) Expression Creates Diversity in Behaviors Related to Monogamy in Prairie Voles.” *Hormones and Behavior*, vol. 63, no. 3, 2013, pp. 518–526., doi:10.1016/j.yhbeh.2013.01.005
3. Abdurakhmonov, Ibrokhim Y. “Introduction to Microsatellites: Basics, Trends and Highlights.” *Microsatellite Markers*, 2016, doi:10.5772/66446

3. Biblical evidence linking transposable elements to sin
    a. Iniquity/unrighteousness = transposable elements
    b. Sin = actions and behaviors caused by transposable elements
    c. Psalms 31:10 For my life is spent with grief, And my years with sighing; My strength fails because of my iniquity [transposable elements], And my bones waste away.
    d. Psalms 38:3-4 **3** *There is* no soundness in my flesh Because of Your anger, Nor *any* health in my bones Because of my sin. **4** For my iniquities [transposable elements] have gone over my head; Like a heavy burden they are too heavy for me.
    e. Psalms 51:1-2 **1** Have mercy upon me, O God, According to Your lovingkindness; According to the multitude of Your tender mercies, Blot out my transgressions. **2** Wash me thoroughly from my iniquity [transposable elements], And cleanse me from my sin.
    f. Jeremiah 33:8 I will cleanse them from all their iniquity [transposable elements] by which they have sinned against Me, and I will pardon all their iniquities [transposable elements] by which they have sinned and by which they have transgressed against Me.
    g. Leprosy and sin
        i. Leprosy
            1. Leprosy was incurable in Bible times.
            2. Leprosy was contagious, spreading via droplets.
            3. Leprosy physically deforms the victim.
            4. Leprosy spreads throughout the whole body.
            5. Leprosy isolates its victims as outcasts.
            6. Leprosy attacks the sheath of nerve cells gradually causing inflammation, then death of the nerve.
        ii. Sin
            1. Sin is incurable.
            2. Sin is contagious.
            3. Sin physically deforms its victims.

4. Sin spreads through the whole body.
5. Sin isolates its victims as outcasts.
6. Sin causes death.

iii. Mycobacterium leprae has been heavily invaded by transposable elements.

1. Cole, S. T., et al. "Massive Gene Decay in the Leprosy Bacillus." *Nature*, vol. 409, no. 6823, 2001, pp. 1007–1011., doi:10.1038/35059006
2. Wegner, Michael. "Mighty Bugs: Leprosy Bacteria Turn Schwann Cells into Stem Cells." *Cell*, vol. 152, no. 1-2, 2013, pp. 15–16., doi:10.1016/j.cell.2013.01.001

4. Sin
   a. DNA codes for head, two eyes, a nose, a mouth, a neck, a body, two arms, and two legs
   b. DNA codes for senses to see, smell, taste, and touch
   c. DNA codes for brain circuitry to think and act on those senses
   d. Defective DNA causes defective brain circuitry which causes a tendency to lie, cheat, steal, gamble, gossip, covet, commit adultery
   e. Root cause of sin must be in DNA
   f. Sin is a physical problem not a legal problem
   g. We would not break God's commandments if we didn't have transposable elements
5. Prediction: all disease is caused by transposable elements

Adam and Eve's Sin

1. Satan's temptation
   a. Satan is cunning and subtle
   b. Satan's temptation was very precise and calculated
   c. God is giving Adam and Eve a vast horizon of freedom with a narrow sliver of restriction. Genesis 2:16-17 **16** And the Lord God commanded the man, saying, "Of every tree of the garden you may freely eat; **17** but of the tree of the knowledge of good and evil you shall not eat, for in the day that you eat of it you shall surely die."
   d. Satan misrepresents the command of God as a vast horizon of restriction with a narrow sliver of freedom. Genesis 3:1 Now the serpent was more cunning than any beast of the field which the LordGod had made. And he said to the woman, "Has God indeed said, 'You shall not eat of every tree of the garden'?"
   e. Satan tricks Eve into overstating her defense of God. Genesis 3:2-3 **2** And the woman said to the serpent, "We may eat the fruit of the trees of the garden; **3**

but of the fruit of the tree which *is* in the midst of the garden, God has said, 'You shall not eat it, nor shall you touch it, lest you die.' "

f. God never told Eve to not touch the fruit. Only to not eat it.
g. The serpent then makes a direct contradiction what God said in Genesis 2:17. Genesis 3:4 **4** Then the serpent said to the woman, "You will not surely die.
h. The serpent seals the deal by giving an ulterior motives to God's command. Genesis 3:5 **5** For God knows that in the day you eat of it your eyes will be opened, and you will be like God, knowing good and evil."
i. The serpent claims that God knows that eating the fruit will make Eve like God and God want's to keep it to himself.
j. The serpent paints God as restrictive, not perfectly upfront, unclear, untruthful, and that He is looking out for His own selfish interests.
k. Was God's command to not eat the fruit of the Tree of Knowledge of Good and evil an arbitrary command?

2. What was the sin?
   a. Previously
      i. Sin is a fundamental distrust of God, of His goodness, and of His trustworthiness.
      ii. Sin entered when a false picture of God enters the mind.
      iii. Sin corrupts the mind when a false picture of God enters the mind.
      iv. What about Adam? He didn't believe the lie yet still had the consequences of sin.
      v. What about those who haven't heard the truth about God? They have never had the chance to believe the truth about God yet still have the consequences of sin
      vi. What about the rest of unfallen creation? They questioned the character of God since Satan raised the controversy yet live without the consequences of sin
   b. The sin was eating the fruit. Genesis 2:17 but of the tree of the knowledge of good and evil you shall not eat, for in the day that you eat of it you shall surely die.
   c. Satan's temptation of Eve was a means to an end to get both Eve and Adam to eat the fruit and change their genome.
      i. Forsman, A., et al. "Uptake of Amplifiable Fragments of Retrotransposon DNA from the Human Alimentary Tract." *Molecular Genetics and Genomics*, vol. 270, no. 4, 2003, pp. 362–368., doi:10.1007/s00438-003-0930-3

ii. Palka-Santini, M., et al. “The Gastrointestinal Tract as the Portal of Entry for Foreign Macromolecules: Fate of DNA and Proteins.” *Molecular Genetics and Genomics*, vol. 270, no. 3, 2003, pp. 201–215., doi:10.1007/s00438-003-0907-2

d. God’s command was not arbitrary. He knew what was in the fruit and was trying to prevent Adam and Eve from corrupting their genome.

God’s Curses

1. Immediately after eating the fruit
   a. Genesis 3:7 Then the eyes of both of them were opened, and they knew that they *were* naked; and they sewed fig leaves together and made themselves coverings.
   b. Adam and Eve suffer the effects before God enters the garden.
   c. Adam and Eve suffer the natural consequences of their sin.
   d. God waits till the cool of the day to come to the garden.
   e. Adam and Eve hide from God.
   f. God questions Adam and Eve to start to reveal the nature of sin.
   g. Adam and Eve respond by blaming each other. Hours ago, Adam could not bear the thought of living without Eve. Now, he is more than willing to throw her off a cliff to save himself.
2. God curses the snake
   a. Genesis 3:14 So the Lord God said to the serpent: “Because you have done this, You *are* cursed more than all cattle, And more than every beast of the field; On your belly you shall go, And you shall eat dust All the days of your life.
      i. Hox genes are an organism’s blueprint.
      ii. Hox genes are sacred, almost entirely devoid of transposable elements in most organisms.
      iii. Snake’s Hox genes infested with transposable elements
      iv. Transposable elements prevent Tbx5 from turning off.
      v. Tbx5 grows thorax segments. The snake can grow only thorax segments once Tbx5 turns on.
      vi. Di-Poï, Nicolas, et al. “Changes in Hox Genes' Structure and Function during the Evolution of the Squamate Body Plan.” *Nature*, vol. 464, no. 7285, 2010, pp. 99–103., doi:10.1038/nature08789
      vii. Woltering, Joost M., et al. “Axial Patterning in Snakes and Caecilians: Evidence for an Alternative Interpretation of the Hox Code.”

Developmental Biology, vol. 332, no. 1, 2009, pp. 82–89., doi:10.1016/j.ydbio.2009.04.031

viii. Peter, Isabelle S., and Eric H. Davidson. "Evolution of Gene Regulatory Networks Controlling Body Plan Development." *Cell*, vol. 144, no. 6, 2011, pp. 970–985., doi:10.1016/j.cell.2011.02.017

b. Genesis 3:15 And I will put enmity Between you and the woman, And between your seed and her Seed; He shall bruise your head, And you shall bruise His heel."
   i. Seed is genetic material
   ii. Eight cell blastocyst halts cell divisions, removes all methylation and heterochromatin, and re-methylates transposable elements.
   iii. This resets the accumulated methylation marks from the mother and father.
   iv. Pregnancy is aborted if these transposable elements aren't locked down.
   v. Dean, Wendy, and Anne Ferguson-Smith. "Genomic Imprinting: Mother Maintains Methylation Marks." *Current Biology*, vol. 11, no. 13, 2001, doi:10.1016/s0960-9822(01)00311-6
   vi. O'donnell, Kathryn A., and Jef D. Boeke. "Mighty Piwis Defend the Germline against Genome Intruders." *Cell*, vol. 129, no. 1, 2007, pp. 37–44., doi:10.1016/j.cell.2007.03.028
   vii. Malone, Colin D., and Gregory J. Hannon. "Small RNAs as Guardians of the Genome." *Cell*, vol. 136, no. 4, 2009, pp. 656–668., doi:10.1016/j.cell.2009.01.045

3. God curses the woman
   a. Genesis 3:16 To the woman He said: "I will greatly multiply your sorrow and your conception; In pain you shall bring forth children; Your desire *shall be* for your husband, And he shall rule over you."
   b. Sugimoto 2009 "the human placenta has been compared to an organ transplant based on its semi-allogeneic status. Its invasive properties, however, have caused investigators to liken it to a tumor."
   c. Syncytiotrophoblast requires synctin-1, a protein derived from endogenous retroviruses, to fuse with the wall of the uterus.
   d. Many genes used in endometrial cells (mucuous lining of the uterus) are located near DNA transposon MER20.
   e. Lynch, Vincent J, et al. "Transposon-Mediated Rewiring of Gene Regulatory Networks Contributed to the Evolution of Pregnancy in Mammals." *Nature Genetics*, vol. 43, no. 11, 2011, pp. 1154–1159., doi:10.1038/ng.917

f. Kaneko-Ishino, Tomoko, and Fumitoshi Ishino. "The Evolution of the Placenta and Viviparity Is Related to LTR Retrotransposon-Derived Genes in Mammals." *Journal of Mammalian Ova Research*, vol. 30, no. 1, 2013, pp. 16–23., doi:10.1274/jmor.30.16
g. Sugimoto, Jun, and Danny J. Schust. "Review: Human Endogenous Retroviruses and the Placenta." *Reproductive Sciences*, vol. 16, no. 11, 2009, pp. 1023–1033., doi:10.1177/1933719109336620

4. God curses the ground and man
   a. Genesis 3:17-19 **17** Then to Adam He said, "Because you have heeded the voice of your wife, and have eaten from the tree of which I commanded you, saying, 'You shall not eat of it': "Cursed *is* the ground for your sake; In toil you shall eat *of* it All the days of your life. **18** Both thorns and thistles it shall bring forth for you, And you shall eat the herb of the field. **19** In the sweat of your face you shall eat bread Till you return to the ground, For out of it you were taken; For dust you *are,* And to dust you shall return."
   b. Polyploid plants
      i. Many plants are polyploid, more than 2 sets of chromosomes.
      ii. Polyploidy in plants may contribute to invasive species success.
      iii. Polyploidization can be caused by stressful situations such as nutritional stress, physical stress, and climate fluctuations.
      iv. Polyploidization may disrupt the epigenetics of a plant and allow previously silenced transposons to be released.
      v. Mable, B. K. "'Why Polyploidy Is Rarer in Animals than in Plants': Myths and Mechanisms." *Biological Journal of the Linnean Society*, vol. 82, no. 4, 2004, pp. 453–466., doi:10.1111/j.1095-8312.2004.00332.x
      vi. Beest, M. Te, et al. "The More the Better? The Role of Polyploidy in Facilitating Plant Invasions." *Annals of Botany*, vol. 109, no. 1, 2011, pp. 19–45., doi:10.1093/aob/mcr277
      vii. Moghe, Gaurav D., and Shin-Han Shiu. "The Causes and Molecular Consequences of Polyploidy in Flowering Plants." *Annals of the New York Academy of Sciences*, vol. 1320, no. 1, 2014, pp. 16–34., doi:10.1111/nyas.12466
   c. Rose genome sequenced
      i. Transposable elements constitute 67.9% of the sequenced genome.
      ii. 50.6% were LTR retrotransposons
      iii. Raymond, Olivier, et al. "The Rosa Genome Provides New Insights into the Domestication of Modern Roses." *Nature Genetics*, vol. 50, no. 6, 2018, pp. 772–777., doi:10.1038/s41588-018-0110-3

d. Lack of evidence presents an opportunity for prediction: transposable elements will be the root cause of thorns

5. God gives the first future prophecy in the Bible
   a. Genesis 3:15 He shall bruise your head, And you shall bruise His heel.
   b. God predicts that He will defeat Satan

Jesus' Nature

1. Jesus' nature
   a. Parents
      i. Joseph's lineage in Matthew 1:1-17
      ii. Mary's lineage in Luke 3:23-38
      iii. Both mother and father (as was supposed) were of royal blood
      iv. Mary was not immaculately conceived.
   b. Jesus was fully human
      i. Hebrews 2:16 For verily he took not on him the nature of angels; but he took on him the seed of Abraham. (KJV)
      ii. Romans 1:3 Concerning his Son Jesus Christ our Lord, which was made of the seed of David according to the flesh; (KJV)
      iii. Deuteronomy 18:15 The Lord your God will raise up for you a Prophet like me from your midst, from your brethren.
      iv. Jesus is the prophet referenced by Moses in John 6:14.
   c. Jesus had a full complement of transposable elements
      i. Being born of a woman guarantees that the baby will be infected by transposable elements.
      ii. Haig 2012 "The close apposition of uterine and placental tissues creates a site for viral transmission from mother to fetus. By this path, a heterozygous ERV in the mother could potentially colonize all of a mother's offspring, not just the 50% that inherit the ERV by Mendelian means."
      iii. Haig, David. "Retroviruses and the Placenta." *Current Biology*, vol. 22, no. 15, 2012, doi:10.1016/j.cub.2012.06.002
   d. Could Jesus have been born without transposable elements?
      i. No. He would've stood out
      ii. Isaiah 53:2-3 **2** For He shall grow up before Him as a tender plant, And as a root out of dry ground. He has no form or comeliness; And when we see Him, *There is* no beauty that we should desire Him. **3** He is despised and rejected by men, A Man of sorrows and acquainted with grief. And we hid,

as it were, *our* faces from Him; He was despised, and we did not esteem Him.

iii. Hebrews 2:14-15 **14** Inasmuch then as the children have partaken of flesh and blood, **He Himself likewise shared in the same**, that through death He might destroy him who had the power of death, that is, the devil, **15** and release those who through fear of death were all their lifetime subject to bondage.

iv. 2 Corinthians 5:21 For He made Him who knew no sin ***to be*** **sin for us**, that we might become the righteousness of God in Him.

e. Could Jesus' brain have Adam's nature before the fall?

i. Genome is a vast, complicated, interconnected information system.

ii. Many genes are pleiotropic producing multiple effects from the same gene.

iii. Bible does not give any evidence that Jesus' brain had Adam's nature before the fall. If it was, He could not be tempted as we are.

iv. Hebrews 4:15 For we do not have a High Priest who cannot sympathize with our weaknesses, but was in all *points* tempted as *we are, yet* without sin.

v. Hebrews 2:17-18 **17** Therefore, in all things He had to be made like *His* brethren, that He might be a merciful and faithful High Priest in things *pertaining* to God, to make propitiation for the sins of the people. **18** For in that He Himself has suffered, being tempted, He is able to aid those who are tempted.

2. What are Jesus' objectives?

a. Destroy the Devil

i. Hebrews 2:14 Inasmuch then as the children have partaken of flesh and blood, He Himself likewise shared in the same, that through death He might destroy him who had the power of death, that is, the devil,

b. Destroy the works of the Devil

i. 1 John 3:8 He who sins is of the devil, for the devil has sinned from the beginning. For this purpose the Son of God was manifested, that He might destroy the works of the devil.

c. Destroy any sympathy creation had for the Devil and replace and rewrite genetic code that was lost in the fall of man.

i. Hebrews 8:10 For this *is* the covenant that I will make with the house of Israel after those days, says the Lord: I will put My laws in their mind and write them on their hearts; and I will be their God, and they shall be My people.

ii. Matthew 13:15 For the hearts of this people have grown dull. *Their* ears are hard of hearing, And their eyes they have closed, Lest they should see with *their* eyes and hear with *their* ears, Lest they should understand with *their* hearts and turn, So that I should heal them.'

d. Set the captives free
   i. Isaiah 61:1 "The Spirit of the Lord God *is* upon Me, Because the Lord has anointed Me To preach good tidings to the poor; He has sent Me to heal the brokenhearted, To proclaim liberty to the captives, And the opening of the prison to *those who are* bound;
   ii. Isaiah 42:7 To open blind eyes, To bring out prisoners from the prison, Those who sit in darkness from the prison house.
   iii. Psalms 102:20 To hear the groaning of the prisoner, To release those appointed to death,
   iv. Zechariah 9:11 "As for you also, Because of the blood of your covenant, I will set your prisoners free from the waterless pit.

Jesus' Death

1. Plan of Salvation
   a. God must show creation the ultimate results of sin, which will show Satan's true character
   b. God must provide a cure for sin without changing the law
   c. God had to design countermeasures into genetic code before creation. The plan of salvation was in place before creation.
2. How are transposable elements dealt with?
   a. Heterochromatin and DNA methylation.
      i. DNA wrapped around histones.
      ii. Euchromatin: loosely packed histones that allow DNA to be transcribed.
      iii. Heterochromatin: tightly packed histones that prevent DAN from being transcribed.
      iv. DNA strand itself can be methylated.
      v. Goodier, John L. "Restricting Retrotransposons: a Review." *Mobile DNA*, vol. 7, no. 1, Nov. 2016, doi:10.1186/s13100-016-0070-z
   b. RISC (RNA-Induced Silencing Complex)
      i. RISCs can target virtually any nucleotide sequence for silencing at virtually any level.
         1. RISCs can repress translation at the protein level
         2. RISCs can degrade mRNA at the transcript level

3. RISCs can form heterochromatin at the genome level.

ii. Common aspects of all RISCs
1. Argonaute family protein
2. Small RNA which guides RISC to a target site
3. Pratt, Ashley J., and Ian J. Macrae. "The RNA-Induced Silencing Complex: A Versatile Gene-Silencing Machine." *Journal of Biological Chemistry*, vol. 284, no. 27, 2009, pp. 17897–17901., doi:10.1074/jbc.r900012200

c. Small RNA
i. PIWI RNA
1. Highly expressed in germ line cells

ii. Small interfering RNA
1. Highly expressed in somatic cells
2. Very specific cleaving one exact mRNA

iii. MicroRNA
1. Highly expressed in somatic cells
2. Inexact, targeting multiple mRNAs, sometimes many hundreds.
3. MicroRNAs are abundant and very powerful gene regulators
4. Two-thirds of all genes are targeted by microRNAs.

iv. Lewis, Benjamin P., et al. "Conserved Seed Pairing, Often Flanked by Adenosines, Indicates That Thousands of Human Genes Are MicroRNA Targets." *Cell*, vol. 120, no. 1, 2005, pp. 15–20., doi:10.1016/j.cell.2004.12.035

v. Friedman, R. C., et al. "Most Mammalian MRNAs Are Conserved Targets of MicroRNAs." *Genome Research*, vol. 19, no. 1, 2008, pp. 92–105., doi:10.1101/gr.082701.108

vi. Khanduja, Jasbeer S., et al. "Nuclear Noncoding RNAs and Genome Stability." *Molecular Cell*, vol. 63, no. 1, 2016, pp. 7–20., doi:10.1016/j.molcel.2016.06.011

vii. Groh, Sophia, and Gunnar Schotta. "Silencing of Endogenous Retroviruses by Heterochromatin." *Cellular and Molecular Life Sciences*, vol. 74, no. 11, 2017, pp. 2055–2065., doi:10.1007/s00018-017-2454-8

3. How was Jesus able to provide salvation?
a. Isaiah 53:5 But He *was* wounded for our transgressions, *He was* bruised for our iniquities; The chastisement for our peace *was* upon Him, And by His stripes we are healed.
b. Isaiah 53:11-12 **11** He shall see the labor of His soul, *and* be satisfied. By His knowledge My righteous Servant shall justify many, For He shall bear their

iniquities. [12] Therefore I will divide Him a portion with the great, And He shall divide the spoil with the strong, Because He poured out His soul unto death, And He was numbered with the transgressors, And He bore the sin of many, And made intercession for the transgressors.

c. Hebrews 2:10 For it was fitting for Him, for whom *are* all things and by whom *are* all things, in bringing many sons to glory, to make the captain of their salvation perfect through sufferings.
d. Hebrews 5:7-9 who, in the days of His flesh, when He had offered up prayers and supplications, with vehement cries and tears to Him who was able to save Him from death, and was heard because of His godly fear, [8] though He was a Son, *yet* He learned obedience by the things which He suffered. [9] And having been perfected, He became the author of eternal salvation to all who obey Him,
e. Stress can change heterochromatin and DNA methylation
    i. Jesus was subjected to intense temptations by the Devil throughout life, significantly worse temptations than you or I can be subjected to.
    ii. By never sinning, Jesus was able to create every possible beneficial variety of microRNAs resulting in a solution to wash away all sin, all transposable elements.
    iii. Hebrews 5:9 And having been perfected, He became the author of eternal salvation to all who obey Him,
    iv. Stankiewicz, Adrian M., et al. "Epigenetics of Stress Adaptations in the Brain." *Brain Research Bulletin*, vol. 98, 2013, pp. 76–92., doi:10.1016/j.brainresbull.2013.07.003
    v. Siomi, Haruhiko, and Mikiko C. Siomi. "Stress Signaling Etches Heritable Marks on Chromatin." *Cell*, vol. 145, no. 7, 2011, pp. 1005–1007., doi:10.1016/j.cell.2011.06.009
    vi. Horváth, Vivien, et al. "Revisiting the Relationship between Transposable Elements and the Eukaryotic Stress Response." *Trends in Genetics*, vol. 33, no. 11, 2017, pp. 832–841., doi:10.1016/j.tig.2017.08.007

4. Why did Jesus have to die?
    a. Jesus did not respond to any temptation from the Devil John 14:30 I will no longer talk much with you, for the ruler of this world is coming, and he has nothing in Me.
    b. Gene transcription does not stop until 24-48 hours after death
        i. Stress response, inflammation response, ion transport and protein transport gene, and developmental control gene (which are typically only

expressed from a very early embryo stage to early adulthood) activity increased after death.

ii. Jesus had to die to prove that his solution worked to remove all transposable elements, even in these gene regions.

iii. Pozhitkov, Alex E., et al. "Tracing the Dynamics of Gene Transcripts after Organismal Death." *Open Biology*, vol. 7, no. 1, 2017, p. 160267., doi:10.1098/rsob.160267

iv. Ferreira, Pedro G., et al. "The Effects of Death and Post-Mortem Cold Ischemia on Human Tissue Transcriptomes." *Nature Communications*, vol. 9, no. 1, 2018, doi:10.1038/s41467-017-02772-x

c. Jesus had to completely remove transposable elements

i. Hebrews 9:26 He then would have had to suffer often since the foundation of the world; but now, once at the end of the ages, He has appeared to put away sin by the sacrifice of Himself.

ii. Romans 6:4-6 **4** Therefore we were buried with Him through baptism into death, that just as Christ was raised from the dead by the glory of the Father, even so we also should walk in newness of life. **5** For if we have been united together in the likeness of His death, certainly we also shall be *in the likeness* of *His* resurrection, **6** knowing this, that our old man was crucified with *Him,* that the body of sin might be done away with, that we should no longer be slaves of sin.

iii. Hebrews 1:3 who being the brightness of *His* glory and the express image of His person, and upholding all things by the word of His power, when He had by Himself purged our sins, sat down at the right hand of the Majesty on high,

iv. Hebrews 10:10 By that will we have been sanctified through the offering of the body of Jesus Christ once *for all.*

d. Mechanism of salvation

i. John 12:24 Most assuredly, I say to you, unless a grain of wheat falls into the ground and dies, it remains alone; but if it dies, it produces much grain.

ii. Domãnguez, Fernando, and Francisco J. Cejudo. "Programmed Cell Death (PCD): an Essential Process of Cereal Seed Development and Germination." *Frontiers in Plant Science*, vol. 5, 2014, doi:10.3389/fpls.2014.00366

e. Jesus' death showed the onlooking universe Satan's true nature

i. Jesus died the death of a sinner, the second death.

ii. Jesus kept God's law completely and was not deserving of death yet He still died.

iii. Transposable elements killed Jesus.

iv. Satan is the killer. Not God.

Judgement

1. What happens on the day of judgment?
   a. Daniel 12:2 And many of those who sleep in the dust of the earth shall awake, Some to everlasting life, Some to shame *and* everlasting contempt.
   b. Matthew 25:46 And these [the wicked] will go away into everlasting punishment, but the righteous into eternal life.
   c. Revelation 20:12-15 **12** And I saw the dead, small and great, stand before God; and the books were opened: and another book was opened, which is the book of life: and the dead were judged out of those things which were written in the books, according to their works. **13** And the sea gave up the dead which were in it; and death and hell delivered up the dead which were in them: and they were judged every man according to their works. **14** And death and hell were cast into the lake of fire. This is the second death. **15** And whosoever was not found written in the book of life was cast into the lake of fire.
2. What are the books of life?
   a. Previously
      i. Recording angel meticulously marks down every action I make
      ii. This record is reviewed to make sure I have asked forgiveness for every sin I've committed.
      iii. God is the antagonist trying to catch me out in some small trivial thing so that He can cast me into the lake of fire.
   b. Genomic view
      i. "Book" = repository of information
      ii. "Book" of Life = Repository of information about life. Its the genome.
      iii. Revelation 20:12-15 implies that we are our own record keeper.
      iv. Psalms 139:14-16 **14** I will praise thee; for I am fearfully and wonderfully made: marvellous are thy works; and that my soul knoweth right well. **15** My substance was not hid from thee, when I was made in secret, and curiously wrought in the lowest parts of the earth. **16** Thine eyes did see my substance, yet being unperfect; and in thy book all my members were written, which in continuance were fashioned, when as yet there was none of them.
      v. Neurons store memories. Not synapses.
         1. Chen, Shanping, et al. "Reinstatement of Long-Term Memory Following Erasure of Its Behavioral and Synaptic Expression in Aplysia." *ELife*, vol.

3, 2014, doi:10.7554/elife.03896
2. Bédécarrats, Alexis, et al. “RNA from Trained Aplysia Can Induce an Epigenetic Engram for Long-Term Sensitization in Untrained Aplysia.” *Eneuro*, vol. 5, no. 3, 2018, doi:10.1523/eneuro.0038-18.2018

3. Why are we judged?
    a. We aren’t. God is the one being judged.
    b. ~~If **we** were to be judged, we would be found guilty. Romans 3:23 for all have sinned and fall short of the glory of God~~
    c. God has to be justified whether he saves or condemns in every human’s case.
    d. God will be justified when He saves the righteous because they have let Him rewrite their genome.
    e. God will be justified when He rejects the wicked because they have rejected God to the point where nothing in them responds to God.
4. What happens to the wicked?
    a. He lets them go.
        i. Hosea 4:17 Ephraim is joined to idols: let him alone.
        ii. Romans 1:17-32
        iii. Deuteronomy 32:20 And He said: ‘I will hide My face from them, I will see what their end *will be,* For they *are* a perverse generation, Children in whom *is* no faith.
    b. They suffer the natural consequences of sin unrestrained.
    c. Wrath of God is when God gives the sinner up.
    d. Do the wicked burn forever and ever?
        i. No. The results are forever, not the punishment.
    e. God is love. God never kills.
    f. God has no pleasure in the death of the wicked
        i. Ezekiel 18:23 Do I have any pleasure at all that the wicked should die?” says the Lord God, “*and* not that he should turn from his ways and live?
        ii. Ezekiel 33:11 Say to them: ‘*As* I live,’ says the Lord God, ‘I have no pleasure in the death of the wicked, but that the wicked turn from his way and live. Turn, turn from your evil ways! For why should you die, O house of Israel?’
        iii. Hosea 11:8 “How can I give you up, Ephraim? *How* can I hand you over, Israel? How can I make you like Admah? *How* can I set you like Zeboiim? My heart churns within Me; My sympathy is stirred.
    g. Ezekiel 18:30-32 **30** “Therefore I will judge you, O house of Israel, every one according to his ways,” says the Lord God. “Repent, and turn from all your transgressions, so that iniquity [transposable elements] will not be your ruin. **31** Cast away from you all the transgressions which you have committed, and

get yourselves a new heart and a new spirit. For why should you die, O house of Israel? **32** For I have no pleasure in the death of one who dies," says the Lord God. "Therefore turn and live!"

Salvation

1. How can we obtain salvation?
    a. Are we saved by God's love?
        i. John 3:16 For God so loved the world, that he gave his only begotten Son, that whosoever believeth in him should not perish, but have everlasting life.
        ii. Love is God's motivation for saving.
    b. Are we saved by God's forgiveness?
        i. Luke 23:34 Then said Jesus, Father, forgive them; for they know not what they do. And they parted his raiment, and cast lots.
        ii. This forgiveness includes every person that ever lived, yet there are those who are still lost.
    c. Are we saved by good works?
        i. Matthew 7:21-23 **21** Not every one that saith unto me, Lord, Lord, shall enter into the kingdom of heaven; but he that doeth the will of my Father which is in heaven. **22** Many will say to me in that day, Lord, Lord, have we not prophesied in thy name? and in thy name have cast out devils? and in thy name done many wonderful works? **23** And then will I profess unto them, I never knew you: depart from me, ye that work iniquity.
        ii. These people did big stuff, casting out devils and working miracles, yet are still lost.
    d. Salvation is allowing God to remove transposable elements and rewrite code lost since the fall of Adam.
2. How is Jesus able to accomplish salvation?
    a. John 15:5 I am the vine, you *are* the branches. He who abides in Me, and I in him, bears much fruit; for without Me you can do nothing.
    b. Tomato plant virus silencing by grafting non-silenced scion onto silenced stock.
        i. Silencing was unidirectional from silenced stock to non-silenced scion
        ii. Both plants had to be infected with the same disease
        iii. Silencing the scion was 100% effective.
        iv. Palauqui, JC. "Systemic Acquired Silencing: Transgene-Specific Post-Transcriptional Silencing Is Transmitted by Grafting from Silenced Stocks

to Non-Silenced Scions." *The EMBO Journal*, vol. 16, no. 15, 1997, pp. 4738–4745., doi:10.1093/emboj/16.15.4738

v. Mlotshwa, Sizolwenkosi, et al. "RNA Silencing and the Mobile Silencing Signal." *The Plant Cell*, vol. 14, no. suppl 1, 2002, doi:10.1105/tpc.001677

vi. Spanò, Roberta, et al. "Grafting on a Non-Transgenic Tolerant Tomato Variety Confers Resistance to the Infection of a Sw5-Breaking Strain of Tomato Spotted Wilt Virus via RNA Silencing." *Plos One*, vol. 10, no. 10, 2015, doi:10.1371/journal.pone.0141319

c. Parallels between grafting and Jesus
   i. Jesus' cure is unidirectional, from Him to us
   ii. Jesus is infected with the same disease that infects us
   iii. Jesus is able to save to the uttermost those that come to him
d. Jesus' Blood
   i. The silencing signal in the plant is small RNA carried through the plant's phloem.
   ii. The silencing signal in Jesus is microRNA carried through the blood.
   iii. Jesus blood the literal antidote for sin.
      1. Ephesians 1:7 In Him we have redemption through His blood, the forgiveness of sins, according to the riches of His grace
      2. Colossians 1:14 in whom we have redemption through His blood, the forgiveness of sins.
      3. 1 Peter 1:17-19 **17** And if you call on the Father, who without partiality judges according to each one's work, conduct yourselves throughout the time of your stay *here* in fear; **18** knowing that you were not redeemed with corruptible things, *like* silver or gold, from your aimless conduct *received* by tradition from your fathers, **19** but with the precious blood of Christ, as of a lamb without blemish and without spot.

3. What does it mean to be saved?
   a. God's commandments diagnose us with sin.
      i. James 2:10 For whosoever shall keep the whole law, and yet offend in one point, he is guilty of all.
      ii. We can't keep His laws ourselves, we need our genome rewritten, which is something only God can do. Jeremiah 31:33 But this *is* the covenant that I will make with the house of Israel after those days, says the Lord: I will put My law in their minds, and write it on their hearts; and I will be their God, and they shall be My people.
   b. A cherished sin will prevent entry into heaven. Revelation 21:27 But there shall by no means enter it anything that defiles, or causes an abomination or a lie,

but only those who are written in the Lamb's Book of Life.

c. "Born again" means we need our genome to be rewritten.
d. We need to die to our old nature.
    i. Colossians 3:5 Therefore put to death your members which are on the earth: fornication, uncleanness, passion, evil desire, and covetousness, which is idolatry.
    ii. 2 Corinthians 5:17 Therefore, if anyone *is* in Christ, *he is* a new creation; old things have passed away; behold, all things have become new.
e. Salvation is a creative process.
    i. The same power by which God created heaven and earth will work to recreate our genome.
    ii. Grace: the power which restores our genome. Ephesians 2:8-10 **8** For by grace you have been saved through faith, and that not of yourselves; *it is* the gift of God, **9** not of works, lest anyone should boast. **10** For we are His workmanship, created in Christ Jesus for good works, which God prepared beforehand that we should walk in them.
f. Faith without works is dead.
    i. Hebrews 11:1 Now faith is the substance of things hoped for, the evidence of things not seen.
    ii. Know that God is working to fix your genome when you start to see changes in your thoughts and actions.
    iii. Philippians 1:6 being confident of this very thing, that He who has begun a good work in you will complete *it* until the day of Jesus Christ;

Summary

1. God's laws are natural laws.
2. Sin is transgression of the law.
3. Satan accused God of being arbitrary and restrictive and amended God's genetic law with transposable elements. There are two designers of genetic code: God and Satan.
4. Satan masked his true nature and the true character of his rebellion. Satan attributed to God his own character of selfishness, envy, hatred.
5. God had to let sin abound till the true nature of Satan's rebellion was unveiled. God had to fight an upright and just battle to clear His name.
6. The natural consequences of sin is death.
7. Transposable elements are implicated in many diseases and cancers.

8. The Bible is a science book and can be read in a straight forward manner. Not absolutely literally, but letting the Bible interpret itself.
    a. Iniquity/Unrighteousness: transposable elements
    b. Sin: behavior originating from transposable elements
9. Jesus came to Earth as a human, fully infected with transposable elements, to destroy transposable elements, show the final result of sin, and to save the sinner.
10. Jesus never once yielded even a thought to sin. He never used brain circuitry generated by transposable elements. He lived a life in perfect obedience to God's law to single out the effects of transposable elements. Jesus was not deserving of death.
11. Jesus had to die to reveal the true nature of Satan's rebellion, to show that the final result of sin is death, and to show that God's law is perfect. Jesus death provides salvation by ridding the genome of transposable elements.
12. Jesus' death was the ultimate result of sin. He died the final death of a sinner, the second death.
13. Jesus can provide salvation not because He died, but because he rose again.
14. We can have salvation if we allow Jesus to do in us what he proved can be done on the cross.
15. We must stay grafted onto Jesus. To turn aside is certain death.
16. We have a work to do in salvation. We must seek to put to death all thoughts and behaviors contrary to the law of God.
17. Jesus will work in us to reveal the areas where we need His help.
18. We have nothing to fear in the judgment if we stay connected to Jesus. We aren't the ones being judged, God is.
19. We should seek salvation because God is love. God's motivation is selfless. God is a God of abundance, beauty, perfection. God wants **only** the best for creation.
20. This is the gospel message: God is love.
21. God's laws reflect His character. God's law is freedom for creation. God's laws are far above what this world can offer.