Introduction

After thinking about imaging the rain, and the technology my friend developed to investigate that¹, I began to wonder about the fascination that we have with the randomness of raindrops² and other natural phenomena. There is something about us that, at certain levels of intensity (of rain, for instance), this randomness brings some sort of fascination to our minds as we try to derive meaning from it, even though there can also be an underlying danger at high levels (storm, fire, flood, etc.).

We generally love order, not chaos. Even though perhaps we try to derive meaning from randomness or try to convert chaos to order to find a feeling of coherence or unity.³ But we also have this certain fascination about watching some types of randomly occurring events – which can induce a sort of comfort or restfulness. Sometimes we have a (perhaps temporary) need for rest from all of our processing through disorder – a chance to "let go" of things that constrain us with complex rules, etc.⁴

We can't help looking for a pattern that allows us to organize the information that is being presented into something that is meaningful to us. Is such looking for order in everything some kind of obsessive compulsion disorder (OCD)?

Perception

Looking for Patterns or Images

God created fascinating patterns out of cosmic chaos⁵. He created the world using his infinite imagination⁶ and generated a new physical, "solid" universe. He could "see" a new world pattern, and then He brought it into being. I believe that He wants us to see His presence from that creative act. We must be able to see God's glory through the chaos of our struggles⁷.

We have an innate ability to see things as we process the raw data our eyes take in. We want to make sense of images, even those that are random; it is like putting a puzzle together, feeling that we are creating good from chaos. Our can brain fill in gaps in an image or pattern to bring in meaning. And we are driven to keep working on it. As Philip Yancey wrote:

We live day by day, scene by scene, as if working on a thousand-piece jigsaw puzzle with no picture on the box to guide us. Only over time does a meaningful pattern emerge...⁸

It is amazing to me how our brain works to find items that we are looking for. There is some sort of mathematical autocorrelation that is processed to produce a match, and then there is a sudden "Aha!" experience. Sometimes in seeing (perceiving) the truth we must consider changing contrast, and perhaps even a type of background subtraction (as is done in computer-driven image processing).

We may see what we want to see instead of what is actually there. Religious pareidolia⁹ is the psychological phenomenon of seeing religious imagery in otherwise mundane objects, like finding the image of Christ of Mother Teresa in a cinnamon bun. It is a false perception of imagery due to what is theorized as the human mind's over-sensitivity to perceiving patterns, particularly the pattern of a human face, in otherwise random phenomena.

Our brain's interpretation of images is why Rorschach ink blots are used to evaluate our thinking processes (and memories). My dad always talked about the images he "saw" in the shapes of clouds in the skies above him. One of the most interesting instances of mental

processing is when Helen Keller – though blind and deaf from infancy, was somehow able to grasp the concept of an alphabet, speech, and a knowledge of the world through the "white noise" of what her defective sensors must have been producing.

We simply must be able to make the proper interpretations in our visionary experiences. As Richard Foster writes¹⁰:

Gestalt psychology ... theorizes that we are hardwired to recognize a unified and meaningful "whole" we can't distinguish simply by calculating the sum of all its parts. We will still see a triangle, for example, even if sections of its three sides have been erased.

This is expected in our pursuit of God even though we don't have the full information package. It must be how we can assemble a more complete picture of Him as we study Him.

Creative Ideas Produced from the Subconscious

Much of our mental processing is the product of complex patterns that take place in the subconscious – below the level of our perception. Sometimes, as I believe we all have experienced, creative ideas break the surface of consciousness so that we could grasp them for further development. This can be connected to our view of inspiration¹¹.

Leonardo Da Vinci's technique for getting ideas was to close his eyes, relax totally, and cover a sheet of paper with random lines and scribbles. He would then open his eyes and look for images and patterns, objects, faces, or events in the scribble. Many of his inventions came forth unbeckoned (sometimes without "searching") from this random scribbling. The process is now used as a methodology for art therapy¹².

"It should not be hard," wrote da Vinci in his Notebooks, "for you to stop sometimes and look into the stains of walls, or ashes of a fire, or clouds, or mud or like places, in which... you may find really marvelous ideas." ¹³

Order vs. Disorder

What appears to be a scrambled interplay of unrelated ideas can somehow coalesce into something very meaningful. As Margaret Wheatley writes:

Disorder can play a critical role in giving birth to new, higher forms of order. 14 ... Dissipative structures demonstrate that disorder can be a source of order, and that growth is found in disequilibrium, not in balance. 15 ... In many systems, scientists now understand that order and conformity and shape are created not by complex controls, but by the presence of a few guiding formulae or principles. 16

Disorder is an evident characteristic of our broken universe; this is expressed using the concept of entropy, which continues to increase³. However, there are underlying orders that can be perceived, because God set them into His creation. Think about God's creative idea – He formed something complex and meaningful from utter chaos¹⁷.

Was the universe before the fall ruled by complete order?¹⁸ The deeper complexity of this type of order is how it must have allowed "creative" thought and free will. God intended that free will to engender a relationship of love and worship of Himself as the Creator¹⁹.

We struggle to see these levels of order because of our limited understanding and ability to see the complete truth and depth of God's handiwork. We can also be fooled by finding a

pattern that really is not there. There can be the appearance of randomness, as well as the appearance of order. The randomness could perhaps be a representation of a "higher" order; indeed apparent randomness can be the result of some type of guiding principles that lie beyond our understanding.

We look for order to see God in the world, but He also works beneath the level of order that we can see and understand. One might ask, "what levels of order are essential for us to grasp?" And, "Can growth can perhaps be found in a balance between order and randomness?"

There has been a lot of study about chaos, which can involve a different type of order. This more complex order is produced by recursive equations, which is a process that depends on a simpler or previous version of itself²⁰. The patterns derived can be very beautiful²¹. The idea of fractional dimensions (fractals) create scenes that have the same basic look at different magnifications²². Chaos theory and strange attractors that have more meaning than expected from pure randomness.

There is a certain general mental resistance to disorder. Imagine if every image that we see was always well defined and contained periodic structures, and they were well organized and utterly predictable! That may sound pretty boring, which is why some people love to look at randomness, such as the art of Jackson Pollock (who spattered paint on canvas). Consider the difference in the art of Piet Mondrian (which also fascinates some because of its visual order) and that of Pollock.

We seek comfort from order, but we may also get it from randomness (assuming that it does not cause risk to us, as in a blizzard or storm). We sometimes enjoy the feeling of safety in a shelter from the storm, like a tent in the snow or rain. We can benefit from a little thinking about the possible benefits of randomness as well as order.

Possible Benefits of Randomness and Order

Some of the real questions about the way our brain works are, "What drives our need to perceive? What draws us to it? What do we get out of it?" It is difficult to analyze why it is so appealing to look for patterns, even in apparently random data. What is so engaging about it? What makes us try to decode the patterns, even of randomness?

Generally, the processing of randomness (as well as order) promotes stillness, an attitude of listening or watching, a zone of meditation. We must in that stillness be able to "turn off" a certain level of understanding to attain the refreshment in our minds. Then sometimes we have an Aha! experience as we discover some type of derived order – or at least experience the stimulation of a new idea.

Perhaps the main benefit of studying randomness is a type of rest or comfort that could exhibit itself in diversion, release and peace - even preparation for the next battle. Too much chaos, though, may indicate the absence of needed boundaries²³. We know that God is not a God of disorder but of peace; but consider that there might be a certain randomness in the higher order of things²⁴ – and under God's control.

Diversion

When we get too focused on a problem, it is oftentimes better to let go of it for a while. This involves letting the high-power process of our lives get some rest by diverting our thoughts - a sort of blanking of our minds or the generation of a form of de-focusing. Our mind gains from this relaxation, just as when we cannot think of someone's name we think of something else for a while and the name suddenly pops into our mind.

We sometimes need mental redirection or diversion to quiet our overactive brains to get to sleep. Worrying with our particular problems often prevents that. Counting sheep (or just counting without any complex considerations), reciting passages from some literary source, or other such activities can be a great aid in solving the sleeplessness problem. It is why we go on retreats to get away from the pressure of our problems (without cell phones, television, etc.) and give ourselves time for quiet and mental reflection without distraction or interruptions.²⁵ When Jesus was distracted by the throngs of demanding people, He went up on the mountain to get away from the pressing crowd so he could think about other things, or perhaps about nothing at all except feeling communion with God.

Release

We must find ways to release our concerns, to relieve stress so that our brains can get back on track. There are very interesting stories of people who work on difficult problems all day without resolution, but during the night their brain relaxes and a solution emerges from their subconscious.²⁶ There are other times when by some type of distraction, we are able to see a pattern more clearly.²⁷

Sleep is an incredibly mysterious way in which our mind finds the release it needs from the pressures of the day. Dreams are hard to understand – for they often seem to create even more stress. But they seem to be a critical part of our emotional balance. It cannot be denied that there is a tremendous creativity in our dreams! They are not just random images, or a random assignment of thoughts or memory replay segments. And our physical bodies react to them with rapid eye movements (REM) and other jerky movements. We may find a meaningful image as ideas or images "surface" during the process of our sleep. We many times have ideas in the night about our work or other projects we have been in our thoughts.

Perhaps the randomness, like white noise, blanks out noise and distractions so that our minds have a better opportunity to think clearly. I am reminded of getting a "sonic" treatment when I hurt my neck and had cramps anytime I turned my head past a certain point. There was a certain randomization of the stimulation of my muscles, like a massage, that ended up really helping.

This release gives us peace, which allows us to think more clearly. And we gain comfort in seeing higher meaning and purpose in things as a result. Randomness in life is like drifting without purpose; the rest helps for a time but should only be used on a short-term basis. We need a quiet break sometimes in our lives - meditation if you will. It could be compared to a blanking of consciousness in order to reboot. Jesus needed rest as well, for He went up into the mountains, away from people (and in our minds, closer to God). He meditated continually on the complete pattern of God, His Father. If we do the same, then God promises a peace²⁸ that transcends understanding. This peace is needed to underpin our actual consciousness so that we can make the best decisions.

Preparation

There is also the idea that randomness may be like a cleansing wash that prepares our minds so that other ideas can appear and be allowed to grow. It might be like plowing a field in preparation of the growing season:

Sow righteousness for yourselves, reap the fruit of unfailing love, and break up your unplowed ground (hardened ground, like our solidified thoughts and beliefs that are so

difficult to change; for it is time to seek the Lord, until he comes and showers his righteousness on you.

Hosea 10:12

We might translate this like, "Seek input for your minds and reap the fruit of the creative Spirit; break up the hardened and solidified pathways in your brain and the beliefs that are so difficult to change. It is time to seek the Lord, until He comes and irrigates your mind so that your good ideas can germinate, take root, and grow."

True or False?

In all of this consideration, we must realize that we may be trying to squeeze certain meaning out of data according to our own agenda. We may see something that is not really there, but that we want to be there. When I began work I was given a cartoon, where there were diverging data curves and a little man was climbing up one curve trying to pull the other curve towards him! We must fight against that impulse!

We need tools to 1) help us "see" the pattern, and 2) discriminate from false or "fake" ones. Fake news is now a common, everyday problem. Repeated examination of a perceived pattern can either crystallize our thinking or reveal different ideas through the depths and mysteries of the problem²⁹.

Thought

I am intrigued by the question, "How can there be thought without some kind of randomness?" How can thought be purely mechanical and without some element of freedom? It cannot be purely mechanical or mathematical³⁰. I always liked the idea that our consciousness is a result of the random assembly of thoughts in the subconscious that trigger conscious realization after the output of some internal "algorithm" crosses a certain threshold.

When we read about the creation, it is clear to me that God had an "idea" about making something that would hold significant meaning for Him. From what did this thought spring? Did it come from some type of free will or process? It would seem that there must be some type of uncertainty related to choice. We know now that the universe is not an absolute mechanical device as was once considered from Newton's laws.

We think of God as being perfectly ordered, without any disorder. But how can a perfectly ordered God deal with the "mess" of randomness? Perhaps it is somehow connected to (or covered by) a higher level of order. Randomness is not always bad or "entropic"; it appears to be necessary for thought.

God is large enough to encompass our own differences in character, caused by a certain randomness in DNA and gene orientation. God does not want perfectly ordered, identical robots – He watches for our individuality and how we make use of or respond to it. He is interested in it (and us).

Creation

I once came to believe that God made a perfect physical universe, and that when mankind sinned, we broke it and introduced disorder (entropy). But is randomness a fundamental part of the broken creation? Or is there a certain randomness even in the "perfect creation"³¹ or in the creative process? Is randomness meaningful or necessary?

An unbroken universe would still need the expenditure or flow of some type of energy. There would be a need for food to supply that energy. How would randomness or choice be

involved in the "perfect creation / universe"? How would "feeding" have been implemented without the process decay? I note that the unbroken creation had a garden that needed tending; there were fruit there (of which some were forbidden, of course). This would also indicate propagation of life with its special force, which would think naturally yield great creative growth.

The idea of a totally undirected and randomized evolution is absolutely impossible for me to believe. There is too much order – too much design for me to ignore. Randomness is certainly a small part of evolution, but can't explain many of the complex issues that I see even in the "broken" universe³². In this universe we have order with variations, as with the colors of flowers, patterns of animal fur, iridescence in butterflies, and many other similar instances.

Music

Music is a balance between order and creativity (which means it contains variations that are limited by various rules which please human behavior). Complete randomness does not present good music, but the highest level of order would be a single, unwavering tone – unpleasant, to say the least. There would be no rhythmic beat like in a song; no logical or ordered sequence. There must be movement and change in the rhythm and notes of music. There are contrasts between notes when they are played and not played. As it has been said, "Music is not in the notes, but in the space between the notes.³³"

We enjoy good music, but there is a beginning and an end to it; a resolution, if you will - a buildup up and cooling down. The "rules" of harmony and closure must be followed for the music to be "enjoyed" or accepted.

There is a certain pseudo-randomness in jazz, but it still has to fit tonal and temporal "rules" or structure. The music is perhaps not so much composed as "felt". A truer randomization of music has been attempted with atonal (13-tone) work; it is an interesting idea, but it is certainly not very enjoyable (at least in my opinion). There are higher levels of order that may be involved, as in the case of musical counterpoint where two melodies (the second one based on the first) blend together very well. The difference between a jazz musician and a concert pianist is the difference between precision (playing exactly as written) and improvisation (playing "randomly" within a well-defined musical landscape). It is hard for me to imagine how one can switch from one mode to another!

Think of the comparison to our understanding, interpreting, or in other words essentially seeing God's Law. Consider two over-arching "Greatest Commands³⁴" that lead to complexity due to the number of ways that this can be accomplished. There is infinite freedom in working within this framework. We could think of the extremes of Justice and Mercy³⁵ in this same way. It is interesting that the apostle Paul finds a way to connect the concept of love, or actually the lack of it, to an unpleasant sound (a resounding gong or a clanging cymbal)³⁶.

We may be sensitive to more complex patterns which have such underlying structure. Complexity itself is not attractive – there must be non-random elements contained therein that lead to some perception of order. We enjoy certain are harmonious patterns and combinations (thirds, fifths, etc.) that are pleasing (even sevenths!). But just adding tones at random times is not!³⁷ We find meaning in the progression of the music. Again, Paul uses the battle analogy and reminds us that if we can't tell whether the trumpet call is for an advance or a retreat then we are doomed³⁸.

Leonard Bernstein makes an interesting comment on the relationship between order and randomness when he says that "for him music is cosmos in chaos. ... all art is cosmos, cosmos

found within chaos. ... some artists look at the world around them and see chaos, and instead of discovering cosmos, they reproduce chaos, on canvas, in music, in words."³⁹

Mathematics

Those of us who like numbers and mathematics are confronted not just with order but also randomness. We think of rational number fractions which have a repeating segment that shows one level of order (1/3 has repeating 3's in the decimal; the fraction 1/7 has repeating "142857" in the decimal), where such cannot be found in irrational numbers (such as pi and e). Think of the never-ending variety of numerals to the right of the decimal point for those. There is never a repeating sequence (like the numbers in pi). It is said that any set of numbers you think of may (or will?) be eventually found there if it is truly random. And there are more irrational numbers than rational numbers⁴⁰.

It is interesting to consider how many times a pattern occurs (an infinite number perhaps?), in the irrational number "pi". Is this a guarantee that any target pattern will occur? Is there a proof of this? I have a friend⁴¹ who memorized the first 1000 digits of pi (not sure why). I would think that this would be so difficult, as it is apparent randomness (are the digits in the sequence truly random or just the appearance of it?). But the creation of a "perfectly random" random number generator has proved to be somewhat difficult.

In physics we find that some things are uncertain⁴²; are they random or just unknowable? Apparent randomness is not necessarily bad; for instance, there is an order in the statistics of radioactivity. The decay of a particular atom is impossible to predict, but the prediction of a large number of atoms is very well determined. The mechanism involved is random but with very controlled statistics through some higher order.

Sometimes we get confused with random events, as in certain card games. In a game that I enjoy playing I have come to realize that though the layout of the cards may be random, they come from a well-defined and complete set. Most card games are like this, as they are constrained by a certain number of complete card decks. If the cards came up randomly from in infinite storehouse, the game would be significantly more difficult (perhaps impossible) to win.

Producing Patterns of Randomness

As I wondered about these things, I realized that I wanted to discuss it with my friend who had developed a device that imaged the rain¹. I went to his lab to talk to him about my thoughts on order and randomness. He smiled broadly as he told me that he had been studying similar ideas. He had actually built a prototype machine to examine a capability of producing various types of random-like patterns so that he could evaluate their effects on the mind.

A couple of the main questions he pursued are "What is the ultimate purpose of this device?" and "What would it be used for?" He listed several possibilities:

- Entertainment
- Peace and/or comfort
- Pursuing the solution of the puzzle
- Aiding Sleep

And then my friend mentioned another idea. Perhaps the combination of order and randomness helps us to see God; enabling a view of Him through a different type of window⁴³ God is interested in how we think, and wants us to think creatively (within the bounds of His will). He attracted Moses with the random flickering of a flame that did not consume the bush

that supported it, so He can engage us in many different ways. In our search of Him we have to look at the randomness which seems to overlay the unbroken nature of the universe that He created. We also probe deeply to find the underlying order that is there, looking for "pearls" amidst the confusion⁴⁴. It could be a link or preview to what we will see in the next life as well.

My wife Soozie is a creative artist, and our entire house is basically an art studio. There are two types of people, I think, in an artistic sense. They could be classified by their reaction to entering our house. One type looks aghast and says, "look at the mess!", while the other says "look at the really interesting art!". Somehow, we have similar attitudes corresponding to our view of the world and of God. Some are able to see the glory of God in the patterns of order and apparent randomness, while some are not.

The Randomization Device

My friend's device was a much-expanded version of an audio sleep-aid machine with many other features, including video and even tactile presentations. The device was a sophisticated artificial phenomena generator. Many of the menu selections involve the "white noise" principle, where all frequencies (temporal and spatial) are included in various levels of intensity. The instrument had knobs to vary the type of randomness. The main options are listed below:

Rain:

- o Audio: the comforting sound of rain on the roof
- Visual: spatial randomness drops hitting pools of accumulated water
 Note: What if rain was always ordered in linear paths? Even rain is not completely orderly and can come in at a slant (should we run or walk to minimize getting wet?)

• Snow:

Visual: watching fluffy snow floating lazily around is captivating⁴⁵
 Note - snowflakes are known for their exact microscopic and unique structures; but from a macro view there is no real structure as it piles up into huge drifts⁴⁶

• Clouds:

O Visual: watching clouds and seeing patterns or images (we've all done this)

• Wind:

- o Audio: sound of wind in the trees
- O Visual: watching the swaying back and forth of the trees
- o Tactile: feeling the wind swirling around you

• Storm (lightning and thunder):

- Audio: the sounds of a storm not very comforting; but there is a feeling of protection if we are safe⁴⁷
- Visual (with audio): consider also the randomness in the "rolling / rumbling thunder" of distant lightning
- O Tactile: the vibrations from thunder may be somewhat relaxing
 Note: This feeling of shelter is something that is very important to us. We all know the
 feeling of being inside safe and warm while we hear the rain and wind of a storm beating
 against the house. Or the feeling of being protected and bundled up when the
 temperature is cold. As Pascal said, 'There is pleasure in being in a ship beaten about by
 a storm, when we are sure that it will not founder...'

• Ocean:

- o Audio: ocean waves or breakers; the constant repetitive rhythm
- O Video: same as the description of the audio

o Tactile: feeling the to and fro of the waves, especially at your feet (especially as the beach sand erodes underneath them)

• Stream:

- Audio: the gurgling sound of a rushing stream or the tumbling waters of a waterfall
 Note peace is not always just like a "still water" river (Psalm 23)
 Note whitewater may be too much; consider also the meaning of the sound of rushing waters in Revelation 1:15 as the awesome and powerful voice of God
- O Visual: watching the turbulence of the flow of water
- o Tactile: feeling the turbulence; perhaps the randomize push and pull while rafting whitewater

• Stars:

- O Visual: consider the randomness of star patterns, and how mankind is prone to see "images" and therefore make and name constellations
- Domestic fireplace or campfire:
 - Audio: random crackling sounds
 - o Visual: watching the infinite variety of a fire in a fireplace or campfire
 - o Tactile: feeling the warmth when we are cold
- Other audio tracks:
 - o Audio: The randomness of popcorn popping "music"
- Other bright displays:
 - Visual: sparkling glitter; fireworks; viewing through a kaleidoscope; some computer screen savers; white noise images on tv screen (old school – when an RF station went off the air)
- Other spatial features:
 - o a random-edged shoreline is interesting; straight lines are not
 - o patterns of faux rock walls; perfectly smooth is boring
 - o tie-dyed or variegated material

My friend had worked all of these simulations as settings into his machine. He told me about all that it would do, and that he was writing an operating manual for it. He wondered aloud to me about how the instrument should be presented or marketed.

He saw the amazing impact of its effects on the human mind, but could not explain it fully. Somehow the brain finds meaning – or just comfort (rest) - without actually decoding the core data stream. We talked about expanding the possibilities of its use – could it enable us to have a view of God as we "look" through it? Could it help us to understanding Him better?

Measurement and Characterization

My friend tried to find some way to test and characterize his device, but encountered significant difficulty. He tried to consider an instrument that could measure and evaluate the impact of the randomized output. It would have to quantify the pertinent parameters, and possibly in some manner reveal the recursion that is behind the "chaos" (or perhaps more accurately "unpredictability"?) He compared this concept to the instruments that uncovered the spectral lines from the sun's radiation. It would need to be a complex "spectrum" analyzer or "pattern recognition" device.

We have sophisticated instruments to detect patterns, especially in images. Our minds do not necessarily analyze these and quantify them, but they respond to what they consider beautiful. It

turns out that the brain is essentially the best instrument possible; it integrates or time-samples the whole context without tracking detailed temporal and spatial information – and yields a higher level of meaning.

Conclusions

Witness Examples

Seeing God's truth is not just about a strict interpretation of the written word; we also see it through the recorded stories where mankind is confronted with God's presence. He doesn't always use words to show us His nature!⁴⁹ The incident where Moses saw the presence of God in the burning bush^{50,51} is an example of being drawn in without words so that God could then communicate with him about his mission to lead the Israelites out of Israel.

There are other examples of this as well. The Israelites saw manna and quail delivered to them in the wilderness; this was randomly distributed but it fully supplied the needs of the people⁵². The sound of marching in the trees as the Lord went out in front of the Israelite army⁵³ is another time that an apparent random activity was a preview of the presence of God and His ultimate victory. When Ezekiel was shown soldiers' bones re-assembled through the power of God, this demonstrated order from apparent randomness⁵⁴ in another way.

The best example in my mind is when God appeared to Elijah in a storm, an earthquake, a mighty wind, and finally a whisper. These all showed the power of God in random phenomenon (not necessarily words), and even though "God was not in them", they certainly grabbed Elijah's attention⁵⁵. And only then did God speak words to Elijah.

There is a level beyond (or higher than) the language of description; the brain absorbs crucial components without complete understanding of the whole. Even we as humans often communicate without using words – in a similar way the Holy Spirit does this for (and with) us. Perhaps this adds meaning to the idea of how it divides soul and spirit⁵⁶, interceding beyond actual expression. The Spirit knows our inner being⁵⁷ and communicates with wordless groans. He has access to all things, even the deep things of God⁵⁸. Our spirits should be doing the same things with the limited mental capacity that we have.

Paul writes in 2 Corinthians 3:17-18, "Now the Lord is the Spirit, and where the Spirit of the Lord is, there is <u>freedom</u>. And we all, who with unveiled faces contemplate the Lord's glory, are being <u>transformed into his image</u> with ever-increasing glory, which comes from the Lord, who is the Spirit. [underlines by the author]" I think that is interesting how the freedom we are given allows us to be transformed into the image of God. The freedom idea indicates that we can be different but still in the image of God.

Absorbing the full picture

Consider the apparent random configuration of the stars and galaxies in the universe; yet this is actually required to support life (by design this was not random, but a higher order of design). As the Psalmist said, "The heavens declare the glory of God..." We absorb the universe (images of the patterns of stars, tec.) without knowing all of the details; so in a similar way we have an ability to discern God in the midst of our experience in this world. We see God – not in a direct view but in the subtle patterns of life. The information we get from the Creator (words and worlds) is somewhat like an impressionist painting, and we must take time to absorb and process it all⁶⁰. We get to see how God works "behind the scenes", and not by obvious "writing in the sky" and not by obvious "writing in the sky" 100.

How do we obtain complete peace? God gives us that peace, as He carries our critical burdens for us (or has, on the cross). This is the critical pattern that we must be able to see. We may not understand everything, but we can know love when we see it! And we should be able to see it in the "Greatest Story Ever Told"!

References

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- 3. consider the definition of entropy: a lack of order, randomness, and uncertainty; the second law of thermodynamics states that the entropy of the universe as a whole is increasing
- 4. Note: "Phenomena perceived to be magical are always the outcome of complex patterns of non-magical activities taking place at a level below perception." Article by Doug Hofstadter, Sci.Am.8204, p.17
- 5. Genesis 1
- 6. Imagination is the Beginning of Creation. George Bernard Shaw
- 7. ... since the creation of the world God's invisible qualities—his eternal power and divine nature—have been clearly seen, being understood from what has been made, so that people are without excuse. Romans 1:20
- 8. Where the Light Fell: A Memoir; Yancey, Philip; p.298
- 9. https://en.wikipedia.org/wiki/Pareidolia
- 10. Life with God: Reading the Bible for Spiritual Transformation; Foster, Richard J.; p.75
- 11. God works to stir the pot in our subconscious
- 12. "Scribble drawing is a simple yet powerful art therapy technique that requires no artistic skill or prior knowledge. It begins with a randomized act of making unstructured scribbles on paper. The absence of structure and intention creates a space where the mind can roam freely and bypass self-criticism, allowing individuals to open up and connect with their emotions in a profound and authentic way." https://www.arttherapynj.com/post/creating-spontaneous-art-the-scribble-drawing-technique-in-art-therapy
- 13. The Einstein Factor, Wenger and Poe, p. 56
- 14. Leadership and the New Science, Margaret Wheatley, p. 11
- 15. Leadership and the New Science, Margaret Wheatley, p. 20
- 16. Leadership and the New Science, Margaret Wheatley, p. 11
- 17. see Genesis 1
- 18. Could there have been something like a broken symmetry, with decay at a certain level for fertilizer and food; how much is the universe actually broken, and how much apparent brokenness was designed in?
- 19. God is in control, but what are the bounds or rails of that control? He is the ruler of the universe. He upholds the universe in its basic operation; but I don't believe that he controls every photon He lets it run and watches mankind to see how he deals with it (and if he seeks God out)
- 20. https://en.wikipedia.org/wiki/Recursion
- 21. https://en.wikipedia.org/wiki/Mandelbrot_set
- 22. This result can be similar to the variations of an oceanic shoreline. https://en.wikipedia.org/wiki/Fractal

- 23. "Where there is an abundance of chaos, there is usually a lack of good boundaries." Good Boundaries and Goodbyes: Loving Others Without Losing the Best of Who You Are; TerKeurst, Lysa, p.10.
- 24. 1 Corinthians 14:33a
- 25. consider the Sabbath rest idea presented in Hebrews 4:9
- 26. see the story of the "witch of Agnesi", https://en.wikipedia.org/wiki/Maria Gaetana Agnesi
- 27. "You make decisions more rationally if you think about them in a foreign language. Trying to process a second vocabulary eliminates your immediate smotional insstincts, which makes you think more analytically and reduces youur need to avoid the possibility of loss." www.didyouknowfacts.com
- 28. Philippians 4:7
- 29. Part of the profundity of the Bible is the way it can give itself to us so differently across an entire life indeed, across millennia and generations, like a never-ending, cascading waterfall whose presence is steady but whose notes and sounds are constantly different. ... There is an important spiritual insight suggested here. Because time is not flat, God doesn't always sound the same. Of course his Word endures, just as the score for Beethoven's Ninth Symphony is "set." But that doesn't mean we don't hear it differently, that it doesn't mean anew. This is why repeated listening is a gift. ... There will be depths and mysteries of Scripture unavailable to me until I have walked through different seasons. Time is a mysterious and yet necessary condition for experiencing the depths of the Bible. How to Inhabit Time: Understanding the Past, Facing the Future, Living Faithfully Now; James K. A. Smith; p. 173
- 30. see Roger Penrose, Shadows of the Mind
- 31. Perhaps similar to like real numbers that have many digits to the right of the decimal that have no real impact.
- 32. Take for example: 1) the songs of birds not just "song-birds", 2) movements of birds (and other animals) are not just random there is a purpose (i.e., order) to their actions, 3) the expenditure of energy for play for most animals, and 4) how about the mothering instinct; how could these things happen randomly?
- 33. various forms of this attributed to Mozart and DeBussy
- 34. The Greatest Commandments: Matthew 22:35-39
- 35. James 2:13
- 36. If I speak in the tongues of men or of angels, but do not have love, I am only a resounding gong or a clanging cymbal. 1 Corinthians 13:1
- 37. this would be like a piercing shriek
- 38. Even in the case of lifeless things that make sounds, such as the pipe or harp, how will anyone know what tune is being played unless there is a distinction in the notes? Again, if the trumpet does not sound a clear call, who will get ready for battle? 1 Corinthians 14:7-8
- 39. Walking on Water: Reflections on Faith and Art; L'Engle, Madeleine; p.7
- 40. https://www.math.net/irrational-numbers
- 41. Chuck Mangino
- 42. https://en.wikipedia.org/wiki/Uncertainty principle
- 43. Some people see Jesus in a pastry...
- 44. Matthew 13:45

- 45. I like the perspective shown here by Wendell Berry: I said, "It's like time falling, and we and the trees are standing up in it." "No," she said. "Look. It's like we and the woods and the world are flying upward through the snow." Jayber Crow, Wendell Berry, p. 350
- 46. I am intrigued by this Zen proverb: "No snowflake ever falls in the wrong place." from The Cat with Three Passports, CJ Fentiman, p. 21
- 47. Awesome, but dangerous if it hits too close (too bright, shocking, etc
- 48. Blaise Pascal, Pensees (Thoughts), #859
- 49. "Preach the gospel at all times; sometimes use words." From Lucado; attributed traditionally to St. Francis of Assisi, but no actual evidence of this; it is not that we do not have to use words, but that we should have our actions consistent with our words.
- 50. Exodus 3
- 51. A story is told of a pagan who asked a rabbi, "Why did God speak to Moses from the thornbush?" ... For the pagan thought God should have spoken instead in a peal of thunder on the peak of some majestic mountain. The rabbi answered, "To teach you that there is no place on earth where God's glory is not, not even in a humble thornbush." Windows of the Soul, Gire, Ken, p.44
- 52. Exodus 16
- 53. 2 Samuel 5:24
- 54. Ezekiel 37
- 55. 1 Kings 19:9-20
- 56. Hebrews 4:12
- 57. Romans 8:26
- 58. 1 Corinthians 2:10
- 59. The heavens declare the glory of God; the skies proclaim the work of his hands. Day after day they pour forth speech; night after night they reveal knowledge. They have no speech, they use no words; no sound is heard from them. Yet their voice goes out into all the earth, their words to the ends of the world. Psalm 19:1-4
- 60. See How to Inhabit Time: Understanding the Past, Facing the Future, Living Faithfully Now; Smith, James K. A.; p.xv
- 61. "If the universe is a miracle written too large for those who are spiritually nearsighted to recognize it, God also works in some details that many people consider too small to recognize." Miracles Today: The Supernatural Work of God in the Modern World; Keener, Craig S.; p.193

[How does God's Providence work with man's free will and their "random-ish" actions, and His knowledge of the exact future?]

[randomness] Just as symmetry can produce a sense of harmony, balance, and proportion, too much symmetry in certain contexts, such as in an endless line of row houses or identical statues, can have negative emotional impact. Similarly, asymmetry can produce a sense of discord and lack of proportionality. But in some instances, such as in the shape of an egg (as opposed to a smooth sphere), it can generate a positive emotional response, a sense of release, freedom, and mystery. Math and the Mona Lisa, Bulent Atalay, p. 16