

God's Innumerable Names of Connection

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I was in my first year of middle school in 1990. My teacher was Mr. Menton. One afternoon he gave the class an assignment to add up all of the numbers between one and one hundred. My mind whirled and just as he had finished explaining the assignment, I raised my hand. He approached my desk and thought that I had not understood the task. He was surprised to see that I had calculated the answer. I had just discovered for myself a new way of adding. I showed him my paper to explain my thinking. I had created a chiasmus pairing of numbers. I paired the number 1 with the number 100. I then paired the number 2 with the number 99. The number 3 was paired with 98. I then skipped a bunch of numbers and paired the number 49 with 52 and the number 50 with 51. I showed that there were 50 pairs of numbers that each summed to 101. The task had been simplified from adding a hundred different numbers to multiplying a series of the same numbers. I had counted 50 pairs of numbers that each summed to 101. I multiplied 50 by 101 and showed him my answer of 5,050. Mr. Menton was impressed. In fact, he was so impressed that he led me to the back of the classroom. He turned on a boxy looking Apple computer that he used to track student grades and let me play games on it for the rest of the class. No one had shown me how to add numbers this way. It just came to me.¹

$$1 + 100 = 101$$

$$2 + 99 = 101$$

$$3 + 98 = 101$$

....

$$49 + 52 = 101$$

$$50 + 51 = 101$$

$$50 \times 101 = 5,050$$

As a young student, it seemed that I had developed a certain talent for math. Later as an adult, I became interested in categorizing the names, titles, and symbols for Jesus contained within the Book of Mormon. After several years of effort, I had amassed a small treasure trove of over a thousand names for Jesus. I also concluded that Jesus had more names than I could ever discover in a lifetime. He is the “Word” mentioned in the

New Testament and in the Book of Mormon.² He is the Lord of Languages. He speaks and the sick are healed. He speaks and the winds and waves listen. How many names might the Lord of Languages have? In how many languages might His Name be spoken? The childhood mathematician in me wondered if I might be able to calculate at least a fraction of his names.

Jesus' mission is about connection. His mission is to lovingly connect us with our heavenly parents, connect us with him, and connect us with each other. This is what the great commandments to love Jehovah and our neighbour are all about.³ The heavenly commandments are about creating connections and loving relationships. Through connection with Jesus, we are healed and transformed. Through connection with each other and God, we achieve the unity of Zion. Jesus is the great "AND" that allows us to become and do what we could not become and do otherwise. This union with individuals, groups, communities, and ultimately the entire world is expressed through relational names.

Jesus is known as the God of Abraham.⁴ This name indicates a personal relationship with Abraham. Jesus is also known as the God of Isaac as well as the God of Jacob.⁵ These relational names indicate three individual covenant relationships with Jesus. However, there is also a family group relationship with Jesus. Jesus is also known as the God of Abraham, Isaac, and Jacob.⁶ This packaging of individual names into a group name shows a continuity of relationship through generations. It reveals a group connection. It tells us something more about Jesus than any one relationship alone. Jesus not only has relationships with individuals, but he also has relationships with groups.⁷ He is the God of all the holy prophets.⁸ He is the God of the whole earth.⁹ He has unique relationships with fathers and sons. He has unique relationships with mothers and daughters.

With one individual there is one relationship with God. With two individuals there are three relationships. With three individuals, there are seven different relationships. With each relationship, there is a unique relational name for God that could be explored.

The God of

1. Abraham
2. Isaac

3. Jacob
4. Abraham and Isaac
5. Abraham and Jacob
6. Isaac and Jacob
7. Abraham, Isaac, and Jacob

With each relational name for God, unique miracles and interactions with the group or individual can be ascribed to God. As I pondered, I wondered how many individual and group relationships might exist across present and past humanity. How many different group relationships exist throughout the eternities? Each relationship could be given a relational name for God. Each relational name could represent a unique thread of God's light woven through each group relationship.

Jesus is the healer of humanity. He reaches out to us individually. He reaches out to us in groups. When the saints gather in his name, his influence is there in their midst. How many unique connections are there? How many relational names does God have with humanity? The childhood mathematician in me was curious so I derived an equation that calculates this for small groups of people. The equation is $Y=2^N-1$, where N is the number of people in the group and Y is the number of group combinations. As N becomes large, Y becomes difficult to calculate. I simplified the equation by transforming it from base 2 to base 10. The equation for large groups in base 10 is, $Y=10^{0.3N}$. For those curious to learn about the derivation and details about this formula, it is found in the end notes. This equation represents the number of relationships that can exist within a group of people and God. However, God will have even more relational names than this if we consider that many of us may have more than one name which can be included in a relational name with God.

The current earth population has been estimated to be on the order of 8 billion people.¹⁰ For a quick estimate on the number of people that have ever lived on earth, we can use an order of magnitude estimate of 100 billion.¹¹ If it is a little more or less than that, don't worry. You can recalculate using a better number later.¹² What is an order of magnitude between friends anyhow?

To calculate the number of possible group relationships that God could have with humanity over the history of the earth, we simply enter 100

billion people for N. The equation then becomes $Y = 10^{0.3 \times 100 \text{ billion}} = 10^{30 \text{ billion}}$. This number also represents the number of possible group relationships within humanity that we may have across the eternities.

It is difficult to express how large of a number this is. If I were to type this number on my computer, it is a 1 followed by 30 billion zeros. When I hold down the zero key on my keyboard, my laptop produces around 25 zeros in one second. I would need to enter a 1 and then continuously hold down the zero key on my keyboard for about 38 years to produce enough zeros to just simply type this number out in standard format. If I were to print out the number in type 12 font and had the computer automatically put in a comma for every three zeros, the number would roughly take up 12.5 million pages with each page containing 2,400 zeros on it.¹³ If all of the paper was stacked on top of one another, the stack would reach over 4,166 feet high.¹⁴ If each page was placed side by side, it would run roughly 1,675 miles or 2,700 km long.¹⁵ Traveling in a car going 70 miles per hour (113 kph), it would take nearly 24 hours to drive by 12.5 million pages placed side by side with 2,400 zeros on each page.

To get a sense for the largess of this number, let us compare it to the number of atoms in the observable universe. The observable universe includes the dust, moons, planets, stars, galaxies, galaxy clusters, superclusters, and everything that we can theoretically ever theoretically see with the best telescope any astronomer could ever dream of having. When all of those atoms are added up, they amount to somewhere around 10^{80} , give or take a handful of zeros.¹⁶ The number 10^{80} is written as a 1 followed by 80 zeros. If the actual number is a little more or less than that, don't worry. You can recalculate using a better number later. After all, what is 10 orders of magnitude (or ten zeros) between friends anyhow?

As large as the number of atoms in the observable universe is, it is insignificant when compared to $10^{30 \text{ billion}}$. The number 10^{80} which is written as a one followed by eighty zeros isn't even close to being a rounding error if I were to subtract it from the number $10^{30 \text{ billion}}$ which is written as one followed by thirty billion zeros. If I divide the number of group connections throughout humanity by the number of atoms in the observable universe, it equals, $10^{30 \text{ billion} - 80}$, or a one followed by 30 billion zeros minus 80 zeros. To type out this slightly smaller number, I would

type a one and then press my zero key for 38 years minus a few seconds. What are 80 fewer zeros after the one, when there are 30 billion more?

This gets into some strange math. The number $10^{30 \text{ billion} - 80}$ is way smaller than $10^{30 \text{ billion}}$. It is a miniscule slice. It is the same percentage as one atom divided by all the atoms in the observable universe. And yet, $10^{30 \text{ billion} - 80}$ is still so large that it would take me over 38 years minus a few seconds to simply type out the new smaller number on my keyboard. In that sense, the division really hasn't changed things much at all. In some sense, if we compare 80 zeros to 30 billion zeros, 80 zeros isn't even a rounding error. The time it takes to write out in standard notation the new smaller number of $10^{30 \text{ billion} - 80}$ is 99.999999733% of the time it takes to write out the old larger number $10^{30 \text{ billion}}$. It is such an incredibly smaller number and yet it is still so large that in some sense, not much has really changed. Of the 12.5 million pieces of paper needed to write out the smaller number, only one page would be different. Instead of having 2,400 zeros on that one page, it would instead only contain 2,320 zeros.

Imagine a universe factory that creates a universe with just as many atoms in it as there are in our entire observable universe. Now imagine that there is a universe factory associated with every single atom in our observable universe. Now imagine that each atom's universe factory churns out an observable universe just as big as our own every single second. Now imagine that this explosion of the multiverse has been continuing for roughly 13.8 billion years which is the current estimated age for our observable universe. After 13.8 billion years, each atom in our own universe would be associated with over 400 quadrillion of its own universes just as large as ours. If we summed up all of the atoms in 400 quadrillion universes and multiplied that by the number of atoms in our observable universe, the total would be around 4×10^{177} atoms.¹⁷ To write this number I would press the number four on my keyboard and then hold down the zero key for about 7 seconds. It isn't close to even being a rounding error in terms of the time it would take me to write out a number as large as $10^{30 \text{ billion}}$ which would require me to press hold down the zero key for over 38 years. The number $10^{30 \text{ billion}}$ is so large that we really are in unfamiliar territory here. Using a different number of persons for the total size of humanity who have lived on earth or a different number for the atoms in the observable universe doesn't really change what all of this

means. The mathematics of group combinations is truly awesome. It is exponential growth on galactic steroids.

So what does this mean? What does an unimaginably large number of group combinations have anything to do with Jesus or us? The mathematical principle of group combinations is found within us. In the brain, a neuron connects with thousands of other neurons. Groups of neurons combine to perform different brain functions. This principle allows each of us to have experiences accompanied by a near endless number of different memories and thought possibilities that are unique to each of us. The principle of group combinations allows everyone to be truly unique. It allows for unimaginable diversity in various modes and forms.

In terms of human relationships, it means that the number of unique group relationships (and hence group relational names) with Jesus are so large that they are beyond anything that we are familiar with. There is an unimaginable number of potential group connections with Jesus and with each other that exist throughout the eternities. Even after trillions upon trillions of years, it will still be possible to have new conversations, new experiences, and new group dynamics with Jesus and each other.

Jesus is interested in connection and with our growth into divinity. To be divine is to be connected. The great commandments to love God and love one another are all about establishing, maintaining, and sharing a divine loving connection. Everything that Jesus did and everything that he does is to enable us to have a loving connection with him and each other. In the scene leading up to the crucifixion, Jesus taught his disciples about divine association. He told them that in his Father's house there are many rooms (or mansions) and that he was going to prepare a place for them. He was preparing a place for everyone. There is enough room to include everyone in God's kingdom. Through his atoning sacrifice, Jesus has prepared a place for each of us individually and collectively.

Rooms (or mansions) can have different meanings. Literally it is a physical dwelling place for a family and servants. God's house is associated with the temple which is God's dwelling place on earth.¹⁸ During the Exodus, Israel carried a tabernacle tent that served as a transportable temple. Isaiah compared the temple symbology of the

tabernacle tent to the congregation of Zion. He prophesied that Zion would lengthen her cords and strengthen her tent stakes.¹⁹ In the church it can symbolize our congregations. Congregations are organized into stakes symbolically representing extensions of the Lord's tabernacle tent and Jesus' dwelling place.²⁰ The temple tent is prophesied to grow to encompass the earth in the millennium. God's tent will cover humanity.

The concept of a temple or a home is also associated with a person's body which houses their spirit.²¹ Bodies can either be mortal or they can be resurrected and immortal. Like many mansions there are also different types of bodies in the resurrection. Paul taught that in the resurrection there were bodies resurrected to celestial, telestial, and terrestrial glories.²²

Dwelling in God's house may have a symbolic meaning such as if we dwell in the Lord or the Lord dwells in us.²³ The concept of the "body of Christ"²⁴ combines the concept of a church congregation with a physical body which then serves as a temple for the Lord. Jesus asks us to not only make ourselves temples for God, but that our congregations and communities also become temples for his presence. Moroni in his last farewell in the Book of Mormon combined the ideas of the stakes of Zion, connection with Jesus, the paradise of God, and the future resurrection.²⁵ One overarching symbolic meaning of God's home is the location where he dwells. Who else dwells there in God's home? God's family of course. Jesus is the father of humanity.

In John chapter 13, John records that Jesus had his last supper with his disciples before his crucifixion. He washed their feet and commanded them to love one another. Then in chapter 14, Jesus told them that in his Father's house there are many mansions and that he was going to prepare a place for them.²⁶ Jesus was about to perform the atoning sacrifice. His sacrifice would eventually draw all people to him.²⁷ People would become connected to him through his atoning love that was about to be proved by his suffering, death, and resurrection. Thomas, who didn't understand, asked where Jesus was going and how they would know the way.²⁸ Jesus responded by stating that he was the way, the truth, and the life. Everyone who comes to the Father comes through Jesus. Jesus said that if they had known him they would have also known the Father. Philip then asked Jesus to show the Father to them. Jesus responded that whosoever had seen him had already seen the Father. Then Jesus stated that he was in the

Father and the Father was in him. Jesus had a living connection and relationship with the Father. Jesus then taught that if his disciples loved him, they would keep his commandments. Whoever would love Jesus would be loved by the Father and by Jesus. They would have a relationship and make their abode with them.²⁹ An abode is a place of residence. In other words, the mansions of the Father represents a loving relationship with the Father and with Jesus. To live in God's house is to have an association and be part of a loving family relationship.

If we love Jesus and his Father, they will make their place of residence within us. We will be connected to them in a group relationship. Jesus then told his disciples that it was time to go. In John Chapter 15, Jesus stated that he was the true vine. We are branches that are grafted into Jesus who is the Mother Tree. Everyone who is a branch of Jesus will become a part of Jesus. Jesus will also become a part of them giving them strength. As we remember Jesus, we invite his spirit or his way of thinking, acting, speaking, and being to be part of us. By being connected to Jesus, we receive the strength of the roots of the mother tree. Jesus provides the strength for us to live and for us to bear the fruit of divine love in our branches. We can't live without him. This is the ultimate connection. We are to be bound to Jesus in a divine connection of love.

Jesus continued teaching his disciples. He gave them a commandment to love one another as he had loved them. He told them that to die for love is a witness that the love that existed was of the highest purity. He repeatedly told them that a Comforter would be sent which would also provide connection. In John chapter 16, Jesus continued his teaching and compared the suffering that was coming to a woman in pain about to give birth to a child.³¹ After the child is born, the mother has joy. His disciples would be in anguish over his death. However, Jesus was about to be born again and resurrected and that anguish would be overcome in joy. Then he told them that his Father loved them because they loved him. In John chapter 17, Jesus then offered the great Intercessory Prayer. In the prayer Jesus connected humanity to the Father through himself. Jesus ended his prayer stating that he had declared unto his disciples his Father's name so that they could be connected through love. The group then walked into the Garden of Gethsemane.

Mormoni stated that we must be full of Christ-like love in order to inherit heavenly mansions.³² Jesus said that there were many mansions in his Father's house.³³ If heavenly mansions represent connections and relationships bound in love where God abides with us, then the number of loving connections, relationships, and interactions that can exist is truly large! There truly are many mansions! There are rooms of connection for everyone and every group combination. There is a room for Abraham and another room for Abraham and Isaac, and another room for Abraham Isaac, and Jacob. There is a room just for me and Jesus, a room just for you and Jesus, and a room for you and me with Jesus. There is a room large enough for all of humanity. The number of heavenly rooms that Jesus has prepared to connect us to him and through him to each other is more than I can really understand. There are many mansions of his love where he can abide in us individually and collectively.

We are connected to Jesus through his wounds and our wounds. Branches are grafted into the tree where both the tree and the branch are cut. He came to die and heal us. He is the wounded healer. He suffered so that he might be able to understand our pains.³³ He draws us all to him with his wounds so that he can heal us of our wounds. When Jesus appeared to the Nephites after his resurrection, he invited the people to see and touch his wounds.³⁴ The people came and felt the tender scars in his hands, feet, and side. They comprehended that he had died for them. They came to understand that his love was greater than death. By inviting the people to touch his wounds, Jesus was in turn able to touch them and connect with them. He was able to share his love. By making himself vulnerable, he was able to connect. By connecting he was able to love and heal them. He loved us enough to create each of us, create the world just for us, and then to live and die for us. He won't stop loving me and he won't stop loving you.

With this interpretation of God's many mansions, kingdoms of glory that are graced upon us in the resurrection may also represent the types of relationships and connections we have with God and each other. Being resurrected as a celestial glorified child of God is about gaining a type of divine relationship. If the celestial kingdom is a location, then it is wherever Jesus is. It is having his spirit connected to ours, and through him to each other. Jesus truly has prepared an innumerable number of

divine connections in the mansions of his father for us, if we graft ourselves to him.

References and Notes

1. Johann Carl Friedrich Gauss, was a famous mathematician and physicist. He was a true prodigy. He had a similar experience when he was only about 10 years old. His teacher asked the class to add a series of numbers and he also had a spark of inspiration to create a series of summations. I'm definitely not Gauss, but I did have a spark of inspiration that I am fond of remembering.
2. John 1:1, Jacob 4:9, Mosiah 26:38, Alma 34:5-6, Mormon 9:17-18
3. Mark 12:29-31
4. Alma 36:2
5. 1 Nephi 6:4, 3 Nephi 4:30
6. 1 Nephi 17:40, 1 Kings 18:36
7. Doctrine and Covenants 6:32
8. Alma 7:25
9. 3 Nephi 11:14
10. Wikipedia estimates that on the order of 100 billion people have ever lived on earth
https://en.wikipedia.org/wiki/World_population
11. [https://en.wikipedia.org/wiki/World_population#Number of humans who have ever lived](https://en.wikipedia.org/wiki/World_population#Number_of_humans_who_have_ever_lived)
12. If you would rather use the current world population, then take 8 billion people and enter it into the equation. The result is $1E(0.3 \times 8 \text{ billion}) = 1E2.4$ billion. As will be shown, this number is so large that it is hard to comprehend.
13. 60 zeros per line (if I include commas) and 40 lines per page = 2,400 zeros per page
14. 500 sheets of letter paper is roughly 2 inches thick. 12.5 million pages is therefore 50,000 inches thick
15. A sheet of paper is 8.5 inches wide. 12.5 million pages side by side is nearly 1,677 miles long.
16. [https://en.wikipedia.org/wiki/Observable_universe#Matter content%E2%80%9494number of atoms](https://en.wikipedia.org/wiki/Observable_universe#Matter_content%E2%80%9494number_of_atoms)
17. $1E80 \times 1E80 \times 4E17 = 4E177$

18. John 2:16, Luke 2:46-49
19. 3 Nephi 22:2
20. Isaiah 54:2, 2 Nephi 22:2, Moroni 10:31
21. 2 Corinthians 5:1-3
22. 1 Corinthians 15:39-57, Psalm 23:4-6
23. Psalm 90:1, 3 Nephi 19:23
24. 3 Nephi 22:2
25. Ephesians 4
26. Moroni 10:31-34
27. John 14:2-3
28. John 12:32-33
29. John 14:5
30. John 14:23
31. John 16:20-22
32. Ether 12:32-34
33. John 14:2
34. Alma 7:11-12
35. 3 Nephi 11

BIG MATH

When the saints gather together in Jesus' name, his influence is there. How many unique connections are there? How many names does he have to describe his group relationships? He is the God of Abraham. He is the God of Abraham, Isaac, and Jacob. He is the God of us. He is the God of them. How many threads of connection could there be throughout humanity? When there are two people, there are three connections. One for each person and one for the couple. When the group increases to three people, the number of possible relationships increases to seven. A pattern can be found to create an equation based on the number of people involved in a group relationship with Jesus.

Number of People	Equation	Number of Group Relationships with Jesus

1	2^1-1	1 personal relationship with Jesus
2	2^2-1	3 relationships with Jesus 1,2 (2 individual relationships) 12 (1 group relationship of 2 people and Jesus)
3	2^3-1	7 relationships with Jesus 1,2,3 (3 individual relationships) 12,13,23 (3 groups of 2) 123 (1 group of 3)
4	2^4-1	15 group relationships 1,2,3,4 (4 individual relationships) 12,13,14,23,24,34 (6 groups of 2) 123,124,134, 234 (4 groups of 3) 1234 (1 group of 4)
5	2^5-1	31 group relationships 1,2,3,4,5 12,13,14,15,23,24,25,34,35,45 123,124,125,134,135,145,234,235,245,345 1234,1235,1245,1345,2345 12345

The number of relationships grows according to the equation $Y = 2^N - 1$, where N is the number of people and Y is the number of relationships. As the number of people increases, the number of possible relationships

grows extremely fast. For a small church congregation of only 50 people, the number of possible group relationship combinations is roughly 1,126,000,000,000,000. That is over one quadrillion. We can rewrite it in scientific notation as 1.126×10^{15} . That is over a million billion different unique relationship combinations. It is hard to imagine how fast the number of relationship combinations grows with the number of people. It is interesting to think about what this means. The addition of only one person to a congregation of 50 people can lead to over a quadrillion new possible group relationships with Jesus.

For very large numbers of people, the number of different unique relationship combinations gets ridiculous. The numbers become difficult to even think about. For large numbers we can throw away the negative one in the equation since the difference between a very large number and a very large number minus one is not significant. The equation then becomes, $Y = 2^N$.

For very large values of n , many calculators and spreadsheets are not able to calculate Y . Many computers will struggle to perform the base 2 calculation for values of N larger than 1,024. Since we would like to know how many relationships could exist for all of humanity a different equation is needed. By converting the equation from base 2 to base 10, a simplified equation emerges that we can play with directly by hand without computers doing the calculations. The new equation is, $Y = 10^{0.3N}$ and the derivation is below.

Our starting equation in base 2 is $Y = 2^N$. The below identity is used to perform a change of base between base 2 and base 10.

$$\text{Log}_{10}Y / \text{Log}_{10}2 = \text{Log}_2Y.$$

Using the above logarithmic identity, and the equation that we are trying to simplify which is $Y = 2^N$, substitute 2^N for Y on the right side of the logarithmic identity.

$$\text{Log}_{10}Y / \text{Log}_{10}2 = \text{Log}_2(2^N)$$

Entering $\text{Log}_{10}2$ into a calculator yields, 0.30103. For simplicity, we will use 0.3 and enter the value into the denominator on the left.

$$\text{Log}_{10}Y / 0.3 = \text{Log}_2(2^N)$$

Using logarithmic rules, the right side of the equation can be simplified as simply N, since $\text{Log}_2(2^N) = N$. Now the equation becomes,

$$\text{Log}_{10}Y / 0.3 = N.$$

Now we rearrange terms.

$$\text{Log}_{10}Y = 0.3N.$$

Then we raise the entire equation with a base of 10 on both sides.

$$10^{\text{Log}_{10}Y} = 10^{0.3N}$$

Using logarithmic rules, the left side of the equation can be simplified, as Y, since $10^{\text{Log}_{10}Y} = Y$. The new equation in base 10 then becomes.

$$Y = 10^{0.3N}$$

We started with our base 2 equation of $Y = 2^N$. We can only go so far with that equation since computers struggle to give us an answer for large values of N. We converted that original equation to be written in base 10 as, $Y = 10^{0.3N}$. Base 10 is much easier to work with. We can now input values for N and calculate the resulting value of Y by hand without a computer. We have a new easier way of counting. Yay!