Introduction

The relationship that exists between mathematics and theology cannot be under estimated because we are living in mathematical age. Our lives from cradle to grave, biological and physical to the ethical according to David (2004) are increasingly mathematicised. It is therefore a fact that cannot be disputed that every major theme of mathematics, its concepts, methodology and philosophy have been linked in some way to theological concepts.

The link is so significant that David (2004) further submits that even mathematical features such as number, geometry pattern, computation, axiomatization, logic deduction, proof, existence, uniqueness, non-contradiction, zero, infinity, randomness, chaos, entropy, fractals, self – reference, description, modelling and prediction are opened for theological questions and answers. Every individual is involved in mathematics either consciously or unconsciously every day. Mathematics permeates our world just as God permeates it. God is the origin of the world, its ultimate power and ultimate reason.

The history of relationship between theology and mathematics is as old as the world itself. The mathematical formula \( \frac{m}{0} = \infty \) demonstrates the creation of the universe by an infinite power out of nothing \( \text{'}M\text{'} \) being any positive number when the formula is expressed as \( \frac{m}{0} = \infty \) that is \( \text{'}m\text{'} \) equals infinity. In view of this, one can therefore submit that God spoke mathematically when he said “let there be light and there was light” (Gen 1:3) because the light came out of nothing.

In this paper, we shall explore the relationship between mathematics and theology and examine the involvement of mathematics and theology in man’s quest for peace.

Relationship between Mathematics and Theology

Mathematics and theology has a history spanning about 4000 years (Davids, 2004). The links between mathematics and theology can rightly be described as part of the mathematical civilization into which we were born. Mathematics and theology may appear like an unlikely couple but their concerns most especially on human development are enormous. Aquinas as cited in James (2011) posits that God primarily acts through secondary causes, in his explanation, God acts in creation through gravitation. He however saw the laws of nature as ideas in the mind of God. He therefore concludes that mathematics provides tools needed to discern the laws God placed in Creation. Mathematical truths exist in God’s reason, thus, in finding mathematical truths one finds part of God’s reason and this reason is a common property between God and man. Involving in mathematics therefore implies that man listens to God’s voice which is comparable to divine service.

The creation was done by "divine mathematics" and so, God remains the most perfect mathematician. Leibniz cited in James (2011) argued that most scientific problems need infinitesimal calculus because everything in nature bears the signature of an infinite author. One can therefore infer from...
Leibniz's submission that everything in nature takes place mathematically. Mathematics should to this extent be viewed as the language God uses to express the structure of the physical universe than as eternal, unchanging, transcendent truths. It serves as a bridge to a numeral world.

Plato in Mactutor (n.d.), presents mathematics as the most fundamental of all ideas so that the deductive reasoning of mathematics is seen as the ideal way of achieving knowledge. Plato opines that God put intelligence into the soul and the soul into man, but believes that real knowledge could not be gained through the senses. According to him, if we would have true knowledge of anything we must leave the body because as long as we are in company with the body the soul cannot have true knowledge. Freeman cited in David (2004) submits that western science grew out of Christian theology. He further claims that modern science grew explosively in ancient Europe. The common root of modern science and Christian theology according to Freeman was Greek philosophy. Theological mathematics comprises that part of mathematics which goes beyond secular mathematics; it focuses on the existence of indefinable entities. The kind of theology in mathematics is particularly pure, it is concerned with discussions that have to do with the establishment of conclusions about, the ineffable, unseen and immortal theological inspirations, motivations and points of reference seen to have been present in the genesis of certain mathematical concepts, Geometry and counting for instance, have origins in religious rituals. In view of this submission, one can assert that both theology and mathematics serve to strengthen our conviction about the world and that their study is of infinite depth and significances. The interrelatedness of mathematics and theology can be elucidated through different phenomena such as number, chance or probability and geometry.

Number

According to David (2002), the earliest existing relationship between mathematics and theology can be traced to number mysticism, number mysticism refers to the attributes of secret or mystic meanings of individual numbers and of their influence on human lives. This in David's explanation is often called numerology and its practice was widespread in ancient times. Numbers are believed to have gender interpretation, while odd numbers are male, even numbers are female. According to David (2004), the Babylonians associate numbers with a variety of gods. The idea of number mysticism gradually and persistently spread from the pagan world to Christianity to the extent that many people believe that God speaks through mathematics. The revelation of John for instance is full of number mysticism. In Revelation which you 1:20, it is stated:

Here is the secret meaning of the seven stars saw in my right hand and of the seven lamps of gold: the seven stars are the angels of the seven churches and the seven lamps are the seven churches

"... anyone who has intelligence may workout the number of the beast. The number represents a man's name and the number value of its letters is six hundred and sixty – six.

The creation of number was the creation of things. This finds explanation in creation story where God created the world in six days because six is a perfect number. A times, one may even find it difficult to phantom God’s message in his use of number. How can one explain God's submission that “one shall chase a thousand and two put (10,000) ten thousand to flight (Dent 32:30)?The inability to phantom God's message has made many people to conclude that God's used some very advanced mathematics in the process of creating the universe. To some, the numerical computations provide the latest answer to the Biblical question:“What is man that thou are mindful of him and the son of man that they should visit him” (PS 8:4).

Just as the first attempts at writing came long after the development of speech, so the first effects at the graphical representation of numbers came after people had learned how to count. Probably the earliest way of keeping record of a count was by some tally system involving physical objects such as pebbles or sticks. Judging by the habits of indigenous people today as well as the oldest remaining traces of written or sculptured records, the earliest numerals were simple notches, marks on a piece of pottery, and the like. Having no fixed units of measure, no coins, no commerce beyond the rudest barter, no system of taxation and no needs beyond those to sustain life, people had no necessity for written numerals until the beginning of what are called historical times. Vocal sounds were probably used to designate the number of objects in a small group long before there were separate symbols for small numbers, and it seems likely that the sounds differed according to the kind of object being counted. The abstract notion of two, signified orally by a sound independent of any particular objects, probably appeared very late (Numerals, n.d.).
Geometry

This is a branch of mathematics that deals with the measurement, properties and relationships of points, lines, angles, surfaces and solids (Geometry, 2011). The relationship between mathematics and theology is demonstrated in the old testament, for instance, we can find in the book of Proverbs 8:27 the statement: "...he set a compass upon the face of the depth" this implies that God compasses the world. Compass is an instrument used for determining directions, as by means of freely rotating magnetized needle that indicates direction or location. The image of God as the one who wields the compass was very common in the ancient time. The renaissance artists drew it over and over to the extent that the compass motif lasted well into the century when Williams Blake (a mystic artist and poet) produced a famous engraving that combined the image of God as the on who wields the compass. The choice of man as his image was therefore similar to the image of God just like man. The renaissance artists drew it over and over to the extent that the compass motif lasted well into the century when Williams Blake (a mystic artist and poet) produced a famous engraving that combined different elements. From the foregoing, one can unequivocally assert that the world therefore, was constructed geometrically by God which implies that the relationship between mathematics and theology antedates, the creation.

Chance and Probability

Chance and probability are other important aspects of mathematics. Chance is the occurrence of events in the absence of any obvious intention or cause. It is simply, the possibility of something happening. When the chance is defined in mathematics, it is called probability. The link between God and randomness can be brought to bear, to some extent by theories of probability. It was believed and taught by some that God speaks through chance and does something randomly. These people corroborated their claim with the creation saga. The creation of man in God's image was done at random (this is what Christians call grace). If God decided to breathe the breath of life into fish, it would have been the image of God just like man. Nobody instructed God to choose man. The choice of man as his image was therefore through randomness. The fact that God speaks through chance is further demonstrated in the bible, for example, casting of lots permeates both the old and the new testament dispensations. We notice the use of lots in 1Sam 4: 41: 42:

Therefore, Saul said unto the lord God of Israel, give a perfect lot. And Saul and Jonathan were taken... and Saul said cast lot between me and Jonathan my son. And Jonathan was taken.

Also in Genesis 7: 2 – 3, we see that God instructed Noah to take (at random) every clean and unclean beast into the Ark to keep seed alive upon the face of all the earth.

Of every clean beast, thou shall take to thee by sevens the male and his female; and of beasts that are not clean by two; the male and his female. This selection was no doubt done at random. Acts 1:26 also reveals that the Apostles made use of lots when they wanted to choose somebody to replace Judas Iscariot.

"And they gave forth their lots; and the lot fell upon Mathías; and he was numbered with the eleven apostles".

The casting of lots to predict the future or to arrive at plan of action is a common practice in the bible. A vestige of this practice is still seen in this present age. People flip coins to determine actions. We cast lots in the interests of democratic “fairness” lots are said to eliminate subjective judgments.

The Place of Theology and Mathematics in Man’s Quest for Peace

Mathematics through its insights into the subtlest patterns of relationship has traditionally been associated with theology (Judge, 2011). Mathematics has a fundamentally complementary concern with both "credibility" and "infinity". It is a fact that cannot be disputed that mathematics and theology are concern with proffering solution to problems. While mathematics offers solution to complex mathematical problems, theology on the other hand offers solution to the problem of sin.

Man is surrounded with uncertainties from cradle to grave. He is not convinced or sure of the story of his past that has been probably made known to him, he only knows the present but the future is not certain. In the world where everything is in shamble and disarray, the ultimate goal of man is to enjoy relative peace. This goal is achievable and attainable through mathematics and theology.
God at creation submitted that one plus one should be one, \((1+1=1)\). "For this reason a man shall leave his father and mother and cleave unto his wife and they shall be one flesh". This theological mathematics has remained a recipe for peace and progress in the family. Any moment this is violated the result is always disastrous.

In Leviticus 26:7-8, God reiterated his promises for the Israelites thus:

And ye shall chase your enemies, and they shall fall before you by the sword.

and five of you shall chase a hundred, and hundreds of you shall put ten,

thousand to flight: and your, enemies shall fall before you, by the sword.

According to this passage, the Israelites would be empowered to overcome their enemies. Through the intervention of God, they would enjoy absolute peace. It is however very clear from the passage above that the desired peace will be experienced by man when God’s mathematics comes into play. One would have expected 100 Israelites to chase 2,000 of their enemies if 5 could chase hundred; but: “hundreds of you shall put ten thousand to flight” God’s mathematics or “theological mathematics is a mystery, man in his wisdom cannot phantom it.

In Deuteronomy 32:30, it is stated: "How should one chase a thousand and two put ten thousand to flight", Israelites at the moment were in danger of losing their trust and dependence upon God. They were warned of what would likely be the danger, if God allowed it, thousands could be influenced or “chased” by just two people. This implies that God would allow one enemy to chase 1000 Israelites and two instead of 2,000 chase 10,000. The expectation here is that if one person would chase 1000, two would chase 2000. God’s mathematics is beyond man’s comprehension. Man needs it to enjoy absolute peace as opined by James (2011).Mathematics is effective in helping us understand the physical universe. For this reasons, God used the pattern expressed by mathematics to create the universe; and built the capacity to do mathematics into the human mind. Everything that has measure, number and order should be attributed to God as craftsman (James,2011). Everything that pleases man in material objects and entices him through the bodily senses has number and that number however great or small comes from God. In view of this, mathematics also brings peace as it helps to solve life real problems.

The understanding of mathematical concepts like interest rates and probability will help an investor to do better when investing his money. When money is properly invested, it brings profits which in turn bring comfort and peace.

A driver through mathematical knowledge will be able to calculate things like reaction, time and stopping distance. Mathematics also helps to interpret data and make prediction in order to stay human. Budgeting for vacation will require figuring out how many hours at your pay rates, you will have to work to afford the trip you want. The knowledge of geometry will help a fashion designer to make perfect skirt.

Mathematics has played central roles in the construction of calendars, the design of religious symbols and construction associated with worships are done through the Knowledge of Mathematics. Logical-mathematical learning gives the ability to reason and solve problems, it also helps one to use numbers, abstract and visual information are supplied through Mathematics while analysis of data are done through it. Logical-mathematics learners are typically methodical and think in logical or linear order. Theology formulates an orderly, rational and coherent account of the doctrines of the Christian faith that assist establishing harmonious relationship and peaceful co-existence. It also enhances critical thinking and analysis of social and historical trends. Through theology, man changes his way of viewing suffering, since he has learned to keep his heart and soul sustained when the hardest tragedies in the take place.

From the discussion above, we can see that the knowledge of theology and mathematics is needed by man for him to enjoy peace in all facets of life. Nevertheless, man needs to understand the mystery of God's mathematics because the understanding of the mystery itself brings peace.

Conclusion

This article provides a survey of the history of dialogue between mathematics and theology. We have been able to see through the study so far that there is a link between them. It is however a naive realism for anybody to hold the belief that they are unlikely couple when mathematics is co-eternal with the mind of God. It was implanted into man together with God’s own likeness. When God breathed the breath of life into man (genesis 2:7) he also breathed mathematics and everything that will make him to succeed into him. It will however be mental aberration for man to conclude that theology has nothing good to offer mathematics.

With its focus on belief frequently symbolized by the heart, theology offers a range of insights to complement the focus of mathematics on confidence established by the mind (Judge, 2011). God speaks to man through mathematics and theology. He speaks in mathematics through the precision of numerical
calculation and logical proof, God also uses theology to speak to man through metaphor. For instance, God is compared to a shepherd in Psalm 23:1; Jesus said that “the day of the Lord will come like a thief in the night” (Matthew 24:32); He describes himself as “the bread of life” (John 6:35); the disciples are described as “the salt of the earth” by Jesus in Matthew 5:13.

The ideas drawn from mathematics can greatly and positively influence our spiritual world views. Nevertheless, such ideas are suggestive, not conclusive. The law of nature are ideas in the mind of God, so, mathematics provides the tool needed to discern the laws God placed in creation. Mathematics and theology if properly explored will no doubt provide integrative insights needed for human developments and values.

References