And so it is with God?

Stephen J Brewer, June 2018*

> "A third realm must be recognized. What belongs to this corresponds with ideas, in that it cannot be perceived by the senses, but with things, in that it needs no bearer to the contents of whose consciousness to belong. Thus, the thought for example, which we expressed in the Pythagorean theorem is timelessly true, true independently of whether anyone takes it to be true. It needs no bearer. It is not true for the first time when it is discovered, but is like a planet which, already before anyone has seen it, has been in interaction with other planets.'" (Gottlog Frege)

Scene: The college's "Christian Action" group is hosting a seminar given by a right-wing Evangelist and Creationist. Outside the conference hall there are some noisy protests. The chants of "Jesus saves" and "my body my choice" drift into Orin's office where Freya has just dropped in for a coffee. Hot and flustered, Max enters:

Max: What a crowd of lunatics taking everything in the bible as literally true, bunch of ignorant homophobic Creationists!

Orin: I agree but on the back of a leaflet entitled "WHY WE BELIEVE", I did find a very interesting snippet of biblical text written by St Paul; "Because we look not for what can be seen but at what cannot be seen; for what can be seen is temporary, but what cannot be seen is eternal".[1]

Max: And it's this invisible and eternal God who tells them what to think?

Orin closes the window; the shouts fade into the distance as the protest breaks up and the usual calmness and peace of his office is restored.
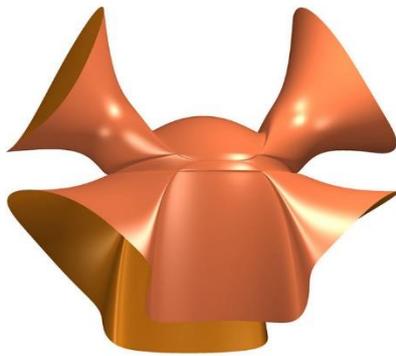
Orin: The passage is interesting because Gottlog Frege, the founder of modern mathematics and logic, argued that math objects are also real and eternal. He claims they are independent of our thought and being. They exist in a third realm where they are discovered, not invented, by mathematicians.

Freya: Are you saying, "And so it is with God"?

Orin: It seems St. Paul thought so. Just as Frege concluded for math objects, God could be an abstract but eternal real object, to be found by anyone exploring the spiritual world. The route leading to the God object would be set out in the manuals, that is the holy books, as written by the various prophets and saints.

Max: If this were really so, the object they discover should be identical. Just as the Pythagorean theorem is always found, so should God. Instead you have a vast number of competing versions.

Orin: Not so, because following on with the math analogy, the type of God object you find will depend on the choice of "axions" and this would depend on the prophet you were following, Mohamed, the Buddha etc. Just as in math, what you discover is not the entirety of all math objects, but the part revealed by the premises you use to explore the realm. Each religion uses different premises for their exploration and so by analogy they will discover different aspects of God. Of course, if not "skilled in the art" and they mix political, moral and religious premises - as we have just witnessed – they will get entirely lost.

Max: Before you both start believing that God is as real as math objects, you do realize that there are plenty who don't think math objects are real but are inventions. Just because Frege said it last century, doesn't make it true!

Freya: But how does being an invention tie in with the fact that math so well describes the physical world? It is intertwined with all our basic physical theories.

Orin: This has been described a the "unreasonable effectiveness of mathematics" [2]. Many leading figures in this field believe that math objects are real, but in truth it has been in dispute for thousands of years and still is. The concept that math is dealing with real objects existing independently of our being is called "Mathematical Platonism". The main opponents are the Mathematical Fictionalists.

Samaria Helmet generated by Surfer using the object: $5*((a*(1+\sqrt{5})/2.5*a)^5*y^2-z^2)*((a*(1+\sqrt{3})/2)^7*b*z^2-x^8)-(1+2*(a*(1+\sqrt{5})/2))*(x^2+y^2+z-1)^3=0$ where $a=0.8$ and $b=0.3$

Max: A fiction! There, as far as religion is concerned, that says it all!

Orin: Just to be clear, the mathematical fiction they are referring to is that there is no such thing as a number, just as there are no such things as mermaids, but it is true that three is an odd number within the math story just as saying that mermaids have fish tails is true within the Little Mermaid story.

Freya: But surely if math is a fiction then the physical sciences that use them, from quantum mechanics to relativity are based on a fiction? This would mean the scientific theories we choose say more about our need to tell a well-rounded story, one with a beginning, middle and where everything is connected into a beautiful logical whole. But that is not how things really are, just how we would like them to be.

Orin: This is the problem created if you follow the fiction route. Max, do you really believe your physics is based on a story we tell ourselves? Do its theories just uncover our psychological needs to introduce order into a dangerous and chaotic world? Of course, if Frege is right and there are real abstract objects, then math objects are really entwined with our physical reality. The scientific method has then revealed them as the forms organizing the physical universe. Then of course, it also becomes possible that God is real, an abstract object entwinned with our lives whose forms can be discovered within the spiritual realm by those "skilled in the art".

Max: If math is just a fiction we use to pull out the order from the chaos and so help us survive, what's the problem? The math "story" we use in physics is of immense practical benefit. The religion those people are following was perhaps a useful story but is now obsolete and has become destructive.

Orin: I agree with you Max; it is not that important whether math objects are real or not, what is important is that we are driven to discover patterns and order in our lives; to find the eternal amongst the chaos. It seems we can do this by logically combining and contrasting sets of axioms and principles covering any field of study. Some of which work better than others.

Freya: For me, a good example is the way our society develops its laws. After all, our law is supposed to be derived from the principles laid down in the constitution. The principles of freedom and equality have no foundation in observable facts and cannot be tested by science.

Spiral Staircase at the Supreme Court. A spiral space curve is generated using the parametric equations x=r.cos(t); y=r.sin(t); z= ct

Orin: Exactly, and the supreme court judges look for a lack of coherence between the constitution and the judgments made by the lower courts. Just as in math we look for a lack of logical connection between different parts of the patterns we have found. This is when, in an attempt to bring the parts into coherence, our axioms or principles need to be adjusted or even discarded. The pleasurable experience of discovering something eternal and transcendent in our mundane existence is, I believe, the driving force behind mathematics, science, the humanities and theology.

Max: And the lack of logic combined with a random selection of principles, explains why that mob of Bible bashing politically motivated Creationists are so dangerous. After all, it's garbage in, garbage out.

Freya: And so it is with God, means that like math, God can also be discovered in this "third realm of ideas". By following a set of religious principles and by study and prayer, it is also possible to have a reproducible experience of God.

Orin: Because Frege's conclusion about the reality of an eternal "third realm" for math came two thousand years after St Paul described God's realm in identical terms, then rather than saying "and so it Is with God" we should say "and so it is with Math".

See Also "The God Postulate"

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