

What Does it Mean to Define?

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Abstract: This paper shall look at the debate within metaphysics regarding whether or not the world exists separately from our minds or not and the role language, perspective, and experience play in that debate. The last part of the paper will attempt to define a few criteria for an ideal language and will propose the hypothesis that mathematics fits these criteria and is therefore the most useful language.

The mystics claim that their ecstasy reveals to them a circular chamber containing a great circular book, whose spine is continuous and which follows the complete circle of the walls; but their testimony is suspect; their words obscure. This cyclical book is god. - Jorge Luis Borges, The Library of Babel.

Introduction

One of the biggest debates in contemporary metaphysics revolves around whether the world exists separate from the way our minds perceive it and whether or not we can know anything about it. Language plays an important role in how this debate plays out, for our thoughts are typically framed by the language we speak, with the definition of words being of vital interest to any language we speak. I would like to say early on in this paper that I am the sort of person who likes to ask questions that often have no easy solutions, not to merely find a definitive answer, but rather so that the answers do not get taken for granted. Many of the ideas in this paper are not entirely original but rather based of the ideas of many other philosophers and thoughtful writers that I have read over the years.

First, let me describe an important point I would like to make: I have experienced a world that exists beyond my mind but this does not prove that it exists as such, as I have also experienced evidence that has shown that all of my senses are generated inside of my brain. That is, inside an awareness that is subject to the bias of perspective and the mistakes of biology. As Morpheus puts it in *The Matrix*, “How do we define what is real? If real is what you can feel,

smell, taste and see, then 'real' is simply electrical signals interpreted by your brain.” However, this does not deny that I have had these experiences, simply that they were generated inside my head. These experiences may be trivially true, or to put it another way, do not correspond to, in any way or form, to a reality outside my mind. This leads me to making a major claim that I would like to make: I exist. (or as Descartes would put it, “I think therefore I am.”) From my perspective, this claim is irrefutable. I have experienced my own existence, so how can I deny it? It does not matter ultimately if this experience is trivially true, what is important that I have had it. If it is indeed the case that my experiences are only trivially true, what possible evidence could be used to show that they are not absolutely true? If I were to experience some kind of evidence that showed my perspective view of reality to be false, how would I show that this evidence itself, was not simply a biological mistake or misinterpretation of sensory data?

Another claim I would like to make now – to be explored more in other parts of the paper – is that our consciousness is probably based in a language, that language being created by the neural impulses of our brain. Looking at language this way, then language is ultimately the process of taking experiences (a walk in the woods, swimming in a pool) which by the idea of consciousness being its own language, were forms generated inside our head to begin with, and then equating them with other experiences (the sounds of words, the shape of letters, the bumps used in Braille) that we then use to communicate with other people.

Language and Its Relationship to Reality

It is more correct to say that in Paradise, Aurelian learned that, for the unfathomable divinity, he and John of Pannonia (The Orthodox believer and the heretic, the abhorrer and the abhorred, the accuser and the accused) formed one single person. (Jorge Luis Borges, The Theologians)

From my perspective, there are other people out in the world outside my mind that seem to have had similar experiences to my own. I can say this because we use language to communicate with each other to share these experiences. Thus language becomes a way of communicating our common experiences. An experience that is not shared among two people in any fashion will be unable to communicate said experience, unless there are enough aspects of that experience that the two people share in common. For example, if a group of aliens on a desert planet had never seen ice because no part of their planet ever went below freezing, they probably would not develop a word for ice and thus astronauts from earth would not be able to communicate with these aliens when talking about ice. It is also worth noting that it is impossible for any two people to have the *exact* same experience, due to the different perspectives that they have.

Common definitions of words are also important for communication. For instance, in the example of aliens from another planet, for them 'cold' could mean anything below 100 degrees Fahrenheit, while 95 degrees Fahrenheit would still be quite toasty for us. If we do not first define a common frame of reference for a debate, then we will probably end up debating two unrelated positions. Or we could end up inadvertently debating the same position because we are using two different frames of reference. This is analogous to the hapless men who were locked in a lifelong battle, in short story *The Theologians* by Jorge Luis Borges, only to discover in the end that their apparently divergent positions were exactly the same.

One point worth noting, the existence of "faux amis," (words that in French have similar spelling and pronunciation when compared to certain English words, yet have completely divergent meanings) is a good example of the fact that the term "water" could just as easily be defined to be the chemical combination of H₂O as it could be used to describe "a solar powered

car”. The spelling and pronunciation of a word can be completely unrelated to its’ meaning. We have to agree which experiences we wish to use to equate to other experiences.

For an applied example from Metaphysics, if we wish to discuss the existence of free will, we would have to define what we are talking about when we use the term “free will”. Now, if one person were to define free will as, “the thesis that we are able to act otherwise than we do” (as Peter van Inwagen does in his essay “The Incompatibility of Free Will and Determinism”) then this is the definition that any person he wishes to engage in a debate with would have to use as well. Any person using a different definition of “free will” is debating a different concept altogether, as the term could ultimately apply to anything that person wishes. Does water or solar powered cars exist and are they compatible with determinism? Even assuming we use Peter van Inwagens’ definition, the debate as to whether or not we have free will is still not simple, particularly if we limit ourselves to empirical evidence. My experience only shows me one version of the past, it does not clearly tell me if I could have done otherwise then what I have actually done in the past.

However, there is an example worth pondering: in a coin toss that I have bet a dollar on with a friend, I decide to call it tails. Regardless of whether or not I win the first coin toss, we decide to toss the coin, again betting a dollar. This second time I decide to call it heads. The circumstances of the coin toss are nearly the same, yet in each case I clearly acted differently. Yet this is a debatable instance for proving the existence of free will even within the context of the previous definition, given that I am not so much making a decision as guessing what an uncertain future holds, in this case the outcome of a 50/50 coin toss. In fact, my experience tells me that many instances of “choice” boil down to setting a few goals and then “guessing” the outcome of a series of unknown circumstances. *Quick, I’m sitting down with an academic*

advisor and I need to decide on a major for college. Will aerospace engineering or philosophy serve me better in the long run? Do I want to build satellites or be asking people “would you like fries with that?” for the rest of my life?

To get back to the original point, if we buy Peter van Inwagens’ definition to frame our debate, then ultimately it boils down to whether or not we believe “guessing” is acceptable when talking about “acting otherwise” than how we have acted in the past. But perhaps a larger point needs to be made, the term “free will” is often used to describe a vague concept relating to the ideas of choice and determinism. This makes Free Will notoriously tricky to define and it could be argued that this is the source of much of the debate surrounding its’ existence. Here it becomes obvious that perhaps it is impossible to develop a precise definition of free will, due to its’ abstract and unquantifiable nature.

Language in a Virtual Environment

*The ruins of the fire god’s sanctuary were destroyed by fire. In a birdless dawn, the magician saw the concentric blaze close round the walls. For a moment, he thought of taking refuge in the river, but then he knew that death was coming to crown his old age and absolve him of his labors. He walked into the shreds of flame. But they did not bite into his flesh, they caressed him and engulfed him without heat or combustion. With relief, with humiliation, with terror, he understood that he too was a mere appearance, dreamt by another. (Jorge Luis Borges, *The Circular Ruins*)*

Recently, an online fantasy role playing game I play regularly, Runescape, changed the way that the “chat filter” worked and removed many words that had previously been blocked. This meant that players of the game could now use words that used to be censored prior to their unblocking by the people in charge of the game. Certain individuals, most notably parents, were upset by these changes. An article on one fan site (known as Tip.it Runescape Help) published an article written in response to the parents who were upset by these changes. Part of the article is as follows:

This is the first time I have ever seen parents truly outraged. It's fascinating. Some are livid over "Suck and Crap." Combined those might make a laughable schoolyard insult, but these parents who are tired of hearing "Lick me, Hoe" or "Nice ass" Or "Suck my ass," are the same ones who don't seem to mind if their little darlings fight religious wars, kill guards, combat or even cast magic and partake in "paganism", be able to drink beer and other alcoholic drinks, use potions drugs to improve their skills, etc. These are the folks who are going nuts because they might see "suck my ass?" (Catherby Curmudgeon, "Split Personalities - Chat Censor")

I would like to point out that there is one difference between the scenarios described here that could explain the rancor. The drinking, paganism and combat are all virtual, performed by avatars in a make believe environment. However, if I insult someone, the language and words I use are virtually the same if I use them in a personal email, chat program, or letter or say them to someone else's character in a game. The meanings of our words are almost exactly the same regardless of the method of communication. The other activities, the ones performed in the virtual game environment are otherwise very different then if I perform them in real life. For example, if I use a battle ax, wielded by my virtual avatar to "kill" another virtual character, the activity is much different than if I were to strike down another person with a real ax in the real world. The former at worst, could be construed as an insult, the latter is a very serious crime. But if I say "F*** off, jerk" there is almost no change in meaning if I say this straight to a persons' face or in a virtual gaming environment. The language is understood to be the same in all related contexts. The symbols we use to experience language change very little from email to chat program to game.

So what does this tell us about language? If language holds the same meaning in a virtual environment as it does in the real environment, is language only capable of describing virtual worlds? Math has often been described as being a universal language. The language of Runescape is written in a binary string of ones and zeros. The binary language is a highly

mathematical language that has shown itself capable of describing an entire array of complex phenomenon, from sound and video to being able to mimic simple human behaviors in video games. It seems only a matter of time before a computer program is capable of creating an intelligent mind, much like the magician of *The Circular Ruins* who spent his last days trying to create another being using his imagination and almost succeeded, only to discover in the end, that he too existed merely within the mind of another.

It would seem as if though any language, even one as simple as binary, is therefore capable of describing not only our world, but all possible worlds, much like The Library of Babel, from the short story by Jorge Luis Borges of the same title, whose books contained every possible story within a pre-defined set of criteria. If a language can describe every possible world, then it of course can describe ours, since our world would naturally have to be part of every possible world. Math can describe every color in the spectrum using simple trigometric functions. English (and presumably other languages) is limited by the fact that we have to develop a new word for each color and even then the infinite possibilities are not covered. What happens to a color between Red and Red Orange? That color is still there, just merely without a word to describe it.

If there is another difference between Math and our more common languages, it is that Math operates within a highly logical set of rules, making it a much more coherent and useful language, to those who speak it. English arguably uses a less stricter set of rules, rules that can be bent or broken more easily based on context. I cannot claim that the idea of math being the most powerful language is my own, for this idea was also put forth by the Pythagorean Mathematiko who, over two thousand years ago, “believed that number was the key to

understanding the cosmos.” (*Readings in Ancient Geek Philosophy – From Thales to Aristotle, 3rd Edition*)

Perspective and Language

The contact and the habit of Tlön have disintegrated this world. Enchanted by its rigor, humanity forgets over and over again that is a rigor of chess masters, not of angels. Already the schools have been invaded by the conjectural “primitive language” of Tlön; already the teaching of its harmonious history (filled with moving episodes) has wiped out the one which governed my past... (Jorge Luis Borges, Tlön Uqbar, Orbis Tertius)

One of the postulates of Einstein’s theory of Relativity, is that there is no best or *absolute* frame of reference and that the only constant in our universe is the speed of light in a vacuum. We can define an axis on a graph to be either positive or negative, much as we can see it is legal to drive on the right hand side of the road or the left hand side. In Relativity Theory, we can define an initial frame of reference to best suit our needs. Commonly in our culture the left axis is defined as negative and the right axis of a graph to be positive, but these do not have to be defined as such, much like many countries have made it legal to drive on either the left hand side of the road or the right side of the road. The only problem that could be develop is if there was no legal side of the road to drive on or an axis were unlabeled within a particular context that left in doubt which one was positive or negative.

We believe ourselves to have the ability to be objective. Indeed much of the pursuit of science seems to be based on this ideal of “pure objectivity”. But is this ideal really possible? In this passage from *Holding the Line*, author Barbara Kingsolver offers her perspective on the topic:

True objectivity may only be possible for those who do not care in the least what happens next, and have formed no expectations – an undirected camera snapping at random, the sound and the fury, a tale told by an idiot.[...] And in every science, journalism included, the things that one expects – or hopes for – will inevitably influence one’s perception of the outcome. Believing themselves the very soul of objectivity, nineteenth-century

*scientists measured men's and women's skulls of various races and constructed a hierarchy of brain size and intelligence – with Caucasian men settled comfortably at the top. Scientists who measure those same skulls now are baffled by their predecessors' results, as no such concrete differences seem to exist. (Barbara Kingsolver, *Holding the Line - Women in the Great Arizona Mine Strike of 1983*)*

If we rely solely on empirical data then obviously our perspective is subject to distortion. This can happen not just from pre-conceived bias, but from any number of other factors, which can be referred to quite simply as “observer error”. Our perspective is limited by where we stand; we cannot see the whole universe. The only possibility for an “objective perspective” would be the ability to see and understand all possibilities.

To go back to the idea of math being a “universal language,” I would like to propose the idea that by being able to describe any number of possible worlds, Math allows not so much for an unbiased perspective but an objective language, the “proverbial camera snapping at random”. It allows us to take a step back and analyze all of the possibilities that exist and see what conclusions we can draw from the evidence at hand. We can use math to create a map to point our way in a relative world and to define a frame of reference for us to use. Unlike math, it may be possible that more ordinary languages -- such as English and French -- are limited by their very nature to accurately quantify an infinite variety of phenomenon.

Criteria for an Ideal Language

*A librarian wearing dark glasses asked him: “What are you looking for?” Hladik answered: “I am looking for god.” The librarian said to him: “God is in one of the letters on one of the pages of one of the four hundred thousand volumes of the Clementine. My fathers and the fathers of my fathers have searched for this letter; I have grown blind seeking it. (Jorge Luis Borges, *The Secret Miracle*)*

If we believe that what we see is real, then what is real is a never ceasing language of electrical signals that our brain interprets into experience and we in turn define as real. These experiences may be true and actually correspond to reality or they might not, but our experiences

are the only thing we can claim to know. Therefore the only thing we know is an interpretation of a language, that language being based on our experiences, which was in turn based on sensory data.

So, what ultimately makes a language useful? I would offer three criteria that make a language more useful:

(1) It must be based in experience, any language or term that is not based in experience, will run into legitimate problems. “Free Will” and the various debates surrounding it’s existence, ran into problems as the empirical evidence that can be collected is limited to the one version of the past that we have experienced.

(2) It must be able to quantify or measure that experience and therefore provide a means to create a common reference frame for all observers who wish to communicate with each other. There are many debates besides the ones used in this paper (the existence/non-existence of altruism or God, what is moral behavior?) that I feel have been complicated by the fact that the debaters were unable to come to a common consensus on what they are debating, either because the ideas were never quantifiable to begin with or people think that only they have the best and/or only possible definition of a particular term.

(3) It must be able to describe not only what we have experienced in this world, but all possible experiences and worlds. Therefore we know of the possibility of what exists beyond what we experience. If our experiences are only trivially true then we at least can be aware of the possibility that it is not.

I would like to put forth the claim here that Math is the language that best fits all of these criteria. The English language for the most part, fits the bill for criteria number (1). I can point to a rock I’ve seen and go “here is what I call a rock”. It falls into a great deal more trouble with

(2) and (3). It's limitations with (2) are obvious. What is handsome, good, evil, trouble or free will? We can point out specific instances of such phenomenon from our experiences; *that guy was incredibly handsome; she did a good a deed today, that group did an evil deed; I got in trouble when I flicked spitballs at the teacher; that coin toss was an undeniable instance of free will.* However, we run into trouble when we try to describe these things in concrete terms to other people, with it ultimately coming down to personal preference as to which definition is 'best' and many people will base their definition on their own experience. English doesn't allow for the easy quantification of the phenomenon at hand and therefore developing a common reference frame for all to use becomes difficult.

Conclusions

Language is ultimately what we base our experiences on. The world will ultimately exist either as we perceive it or not, but our knowledge of it will be based on our interpretation of the language of sensory data, which we call experience. We use language to help us relate common experiences with each other although our language is only indirectly related to experience due to the fact that the words and terms we use can be redefined as we please. The shape of letters, the spelling of words and sounds of these words are based in experience. Any word that does not have a commonly agreed upon definition, will be useless in many regards. Any language that cannot describe all possibilities will also be limited. Therefore the criteria for any useful language are as follows:

- (1) It must be based in experience.
- (2) It must be able to quantify that experience in order to be able to draw a common frame of reference for all to use.
- (3) It must not be able to just describe our world but all possible worlds as well.

If we accept these three criteria, then the best language is the language of Mathematics, due to the fact that other languages run into problems when they attempt to meet the requirements for (2) and (3). Math is a language that can be used to describe experience, to quantify it, and to describe all possible worlds as well.

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