Gumballs and God better explained

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During many discussions on epistemology it is often brought up to me the analogy of a gumball machine to give an example as where by if you don't accept a proposition, it doesn't necessitate you accept it's negation. Often it seems that the person bringing up the example doesn't quite understand their own analogy very well. Many seem to conflate the state of affairs of the gumballs with the beliefs about the state of affairs of the gumballs. The Gumball analogy is usually to attempt to show that if someone posits a claim, that if you don't accept the claim it does not entail that you accept the negation of the claim...which of course is absolutely correct. The misuse of the analogy is when people confuse there being no middle ground between the ontological states and the beliefs about those states which does contain a middle ground ("agnostic" on the proposition being posited). Hopefully this essay will forever alleviate those misunderstandings.

Let's assume that we have a jar of gumballs. Let's further assume the number of gumballs are of a sizable amount as not to be easily calculated, are unbroken and whole, sealed and unable to be properly counted, or any other qualification required to just assume you have a jar of gumballs with no way to determine one way or the other the state of affairs to if there are an even or an odd number of gumballs in the jar, but is a natural number.

Without loss of generality (WLOG), let's then assume we are given the proposition of p="The # of gumballs are EVEN". Ontologically then there are two dichotomous states of affairs to be possibly had here, p is true or p is not true (false). Since if p is true then the # of gumballs are EVEN and if p is false then the # of gumballs is ODD. Or in other words It is either the case that the # of gumballs is EVEN or it is not the case that the # of gumballs are EVEN. If it is not the case that the # of gumballs is EVEN, then it must be the case that the # of gumballs are ODD.

So here we have a true dichotomy with respect to the state of the gumballs in that they are either EVEN or they are ODD. We can then express this as NOT EVEN=ODD or similarly say NOT ODD = EVEN.

This is often then equated to an existential state of God either existing or God not existing as we can arbitrarily ascribe, again WLOG, EVEN as God exists and ODD as God does not exist. Logically we could then write a disjunction (meaning "or" symbolized by "V") of:

EVEN V ODD

It is the case that the # of Gumballs is EVEN or the # of gumballs is ODD. This of course leads to two possible conditions:

If not EVEN, then ODD. and If NOT ODD, then EVEN (By *disjunctive syllogism*: NOT ODD V EVEN, not NOT ODD, Therefore EVEN. p V q, q, :.p). Similarly this would then be applied to the existence of God as it would be here God exist V God does not exist.

EVEN	ODD
God Exists	God does not exist

Tabel 1

Up to this point I think most people would probably agree that there is nothing unusual here and that in fact there is no middle ground to be had as logically it is either the case the # of gumballs is EVEN or NOT EVEN, or they are either EVEN or ODD, and either God exists or God does not exist.This is often unfortunately where the analogy often seems to break down for some people. They confuse the fact there is no middle ground between EVEN and ODD with the belief of whether or not the # of gumballs is EVEN or ODD.

If one believes p and asserts that p is true then they are affirming that it is the case that the # of gumballs is EVEN. If they do not affirm p that could ostensibly mean one of two things. They affirm the negation of p which would be p="The # of gumballs are ODD" or they could not believe p is true nor believe is false. They do not believe one nor the other. They are what is referred to as being agnostic on p or being agnostic on the proposition of p="The # of gumballs are

EVEN". This clearly does allow a middle ground here. A person who doesn't believe p, does not by necessity have to affirm p as they could hold no belief either way which is the middle ground often referred to as being agnostic on the proposition. It is not a middle ground between the state of affairs of the gumballs being EVEN or ODD but between believing they are EVEN and believing that they are ODD.

EVEN	Agnostic on p	ODD
Believes # gumballs are EVEN	Does not EVEN nor ODD	Believes # of gumballs is ODD
Believes God exists	Does not Believe God exits nor Believes God does not exist	Believes God does not exist
Theist	Agnostic	Atheist

Table 2

With respect to just the ontology of God existing or not logically you have:

EVEN	ODD (Not EVEN)
Theist	Not Theist

Table 3

What many atheist activist then try to do is subsume agnostic into atheism and relate it directly to the ontological states of being EVEN or ODD, or God existing or God not existing by just arbitrarily asserting atheist is not theist...or by analogy here ODD is NOT EVEN:

EVEN	ODD (Not EVEN)
Theist	Atheist

Table 4

This creates an artificial or merely conceptual dichotomy based merely on the ontological states, and not the epistemic states of the person evaluating the proposition of the # of gumballs existing or the proposition of God existing.

Semantically, one could make any artificial dichotomy here*

EVEN	ODD (Not EVEN)
Theist	Fish

Table 5

It would here be the case that either one is a theist or a fish. Not theist? Then they must be a fish. Still a dichotomy, but it is just a mere semantic change of "not theist" to be represented by any other word or phrase. In the above case, it is simply "fish := not theist" (:= means defined).

But theism is the belief God exists or equivalently here the belief the # of gumballs are EVEN. In which case we seemingly need a signifier of what we would call the position of believing that the # of Gumballs are ODD. This is normatively understood by the word "atheist" (See: Table #1) or the belief God does not exist.

Relating this back to the gumballs then and Table #1 we have established that with respect to believes there is a middle ground between believing the proposition p is true (believes the # of gumballs is EVEN) and believes p is false (believes the # of gumballs is ODD). What many then try to do is attempt to subsume the term "atheist" to mean anyone who is not a theist. This gives them $\frac{2}{3}$ of the pie so to speak rather than only $\frac{1}{3}$ as given by table #1.

*By artificial here I mean by just arbitrarily assigning a word to represent the logical dichotomy, not "artificial" as in non-discrete or continuous such as "short vs tall" or "pass vs fail" which has some type of arbitrary line of demarcation which separates elements of the sets into one category or the other.

EVEN	Agnostic on p	ODD
Believes # gumballs are EVEN	Does not EVEN nor ODD	Believes # of gumballs is ODD
Believes God exists	Does not Believe God exits nor Believes God does not exist	Believes God does not exist
Theist	Agnostic	Atheist
Theist	**Atheist**	**Atheist**

Table 6

Sometimes when people use the gumball analogy they are taking Table #1, and making it into Table #6 by conflating it with table #4 by merely assigning "atheist :=/ not theist" (table #3) which I have demonstrated can be semantically done with any word, phrase, or signifier (table #5). The gumball analogy actually is a good way to describe the agnostic position as it effectively demonstrates there is in fact a middle ground to be had:

EVEN	Agnostic on p	ODD (Not EVEN)
Theist	Agnostic	Atheist

Table 7

The (middle ground) position that does not believe p is true (EVEN /God exists) and does not believe p is false (ODD/God does not exist)...it is not the position between believe believe p and not believe p which is where I think many people who bring up the gumball analogy often get confused.

I hope this clears up some of the confusion I see when people bring up the gumball analogy in the future. If not...well, as Matt Dillahunty says...you're just wrong. :)

Just as a side note that when an atheist (or anyone) tries to subsume agnostics under atheists (Table #6) then a theist (or anyone) could do the exact same thing to try to also take $\frac{2}{3}$ of the pie as well merely by using the negation of the position by mirroring table #6 and to not allow them to do so if one accepts table #6 would be special pleading':

Assume p="# of Gumballs are ODD" which is the equivalent here as p="God does not exist"):

ODD	Agnostic on p	EVEN
Believes # gumballs are ODD	Does not EVEN nor ODD	Believes # of gumballs is EVEN
Believes God does not exist	Does not Believe God exits nor Believes God does not exist	Believes God does exist
Atheist	Agnostic	Theist
Atheist	**Theist**	**Theist**

Table 8