I. Introduction

The most widely accepted interpretation of Leibniz’s views about the truth-condition of modal statements is the Possible Worlds Interpretation, according to which possible worlds ground the truth of modal propositions. However, this interpretation does not adequately express Leibniz’s position; Leibniz does not use possible worlds to ground the truth of modalities, but only as a heuristic.

In this paper, I will examine the Possible Worlds Interpretation and discuss some reasons why it fails. I will then set out three alternative ways in which the truth conditions of modal statements have been understood and attributed to Leibniz. In the final analysis, I will argue that Leibniz is committed to a Primitivist position, maintaining that a proposition is not necessarily true because it is true in all possible worlds; rather a proposition is true in all possible worlds because it is necessarily true.

Before going on, I want to briefly explain the problem. The pursuit for the ultimate ground of alethic modalities is a search for what determines the truth value of modal assertions. That is, we are looking for something in reality in virtue of which modally qualified propositions are true. The question comes down to one of ontological priority: Are nonmodal facts ontologically prior to modal facts? or are modal facts a primitive feature of reality? If nonmodal facts are ontologically prior to modal facts, then modal truths are ultimately grounded in nonmodal facts. So, for example, some have maintained that there are some entities, possible worlds, that are ontologically primitive and that constitute the subject matter of modal discourse. On this approach, a necessary truth is defined as a proposition that is true in all possible worlds.

On the other hand, one might maintain that modalities are an objective feature of reality and hence ontologically primitive. That is, one might hold that modal facts make up a basic category of reality and are not reducible to any nonmodal facts. On this view, the truth of modal assertions is not determined by entities like possible worlds, rather the truth of modal assertions is ultimately grounded in some prior modal facts.

I will show that Leibniz is committed to this second alternative: Leibnizian modalities are not grounded in possible worlds, rather they are primitive and not reducible to any nonmodal facts.
II. The Possible Worlds Interpretation

A possible worlds analysis of Leibniz’s notion of modality might go as follows: There are an infinite number of possible worlds, from which God chose to create this, the best of all possible worlds. Each possible world contains infinitely many individuals each representable by a complete individual concept. A complete individual concept is the set of properties that is satisfiable by exactly one thing \( x \). It is complete in the sense that for every property \( f \), \( x \) has either \( f \) or \( \neg f \). Individual concepts are said to be *compossible* if they are capable of joint realization. A possible world is a *maximal* set of compossible complete concepts, that is, a possible world contains every concept that is compossible with what it contains. “My principle ... is that whatever can exist and is compatible with other things does exist, because the reason for existing in preference to other possibles cannot be limited by any other consideration than that not all things are compatible.”

Given a possible world \( W \) and a proposition \( P \), \( P \) is said to be true or false of \( W \). Thus given the actual world \( A \), the proposition, ‘Caesar crossed the Rubicon’ is true of \( A \), while the proposition, ‘Caesar is an alligator’ is false of \( A \) (and, indeed, false of all possible worlds). A necessary truth is defined as a proposition that is true of every possible world and a possible truth is one that is true of at least one possible world. A contingent truth is a proposition that is true of the actual world, but not of all possible worlds. So “A man is an animal” is necessarily true; “Caesar did not cross the Rubicon” is possibly true; while “Caesar crossed the Rubicon” is contingently true.

Now, according to Leibniz, each individual ‘mirrors’ all the other individuals of its world, that is, all the individuals with which it is compossible. So, contained in my concept are not only my properties, but yours and Caesar’s as well. Since each individual concept mirrors all the other individual concepts in its world, and since a possible world is maximal in the sense that it is comprised of the entire entire class of individuals that are compossible with each other, concepts belonging to different possible worlds must be incompossible. Thus, a Leibnizian individual is *world-bound*; that is, each individual can belong to one and only one possible world.

In addition, Leibniz denies that an individual can undergo the slightest change and yet remain the same individual:

If I did not make this journey, there would therefore be a falsehood which would destroy my individual or complete concept, or what God conceives of me or did conceive of me before he resolved to create me.
... if, in the life of any person, and even in the whole universe, anything went differently from what it has, nothing would prevent us from saying that it was another person or another possible universe that God has chosen. It would then indeed be another individual.

Since any change results in a different person, it is not possible for a Leibnizian individual to have any other properties than those he in fact has. Hence almost all commentators agree that Leibniz is committed to super-essentialism - the view that all of the properties of an individual are essential to him. As Leibniz writes, no possible individual with properties different from those Caesar has in this world could be Caesar.

If Leibniz is committed to world-boundness and super-essentialism, then he cannot account for the possibility of Caesar’s not crossing the Rubicon by appeal to some other possible world where Caesar (that very Caesar) does not cross the Rubicon. For Caesar cannot belong to any other possible world, nor can he have any properties other than those he in fact has, nor lack any that he in fact has. So, how, does the Possible Worlds theoriest explain the possibility that Caesar might not have crossed the Rubicon?

Some commentators have suggested that Leibniz asserts a ‘counterpart theory’ that can be taken as an interpretation of modal discourse within his system. Mondadori explains that Leibniz's views on de re modal predications and on the question whether a given individual can belong to more than one possible world, “clearly anticipate some aspects of a conception of modality which has recently been revived by David Lewis under the name of ‘counterpart theory’.” Blumenfeld also claims that Leibniz offers an account of de re modal statements in terms of counterparts. He shows that there are passages where Leibniz appears to be giving a legitimate reading of counterfactuals and de re modal predications in terms of counterparts. According to Blumenfeld one way Leibniz might analyze a de re predication to the effect that an individual might have done otherwise is in the sense that God could have actualized another world that did not contain that individual, but one who would have been like him in crucial respects.

According to the counterpart interpretation of Leibniz, the fact that Caesar might not have crossed the Rubicon is possible in the sense that God could have created a different possible world in which some Caesar-counterpart does not cross the Rubicon. So Ishiguro writes:

What Leibniz meant therefore by saying that the opposite of “Caesar crossed the Rubicon” is possible, is that such a world could have been created, namely, there
could have been - in a different world - a person like Caesar who does not cross the Rubicon, and experiences its attendant consequences. He is not Caesar, that particular historical person in this world. So, strictly speaking, it is not the case that “Caesar did not cross the Rubicon” could be true. But it is possible for there to be another complex concept which contains almost all the predicates of Caesar, but which contains “did not cross the Rubicon” instead of “crossed the Rubicon.” That is a consistent concept which characterizes an individual in a different possible world which God could have created.

As mentioned above, on the Possible Worlds Interpretation, modal statements are true or false in virtue of possible worlds. “Caesar might not have crossed the Rubicon” is true if there is a possible world of which it is true that Caesar or one of his counterparts does not cross the Rubicon. And “Caesar is a man” is necessarily true if Caesar and all of his counterparts is a man in every possible world in which he and his counterparts exist. Hence it can be seen that this possible worlds interpretation of Leibnizian modalities provides an answer to the question, What is the ultimate ground of alethic modalities? On this view, the existence of possible worlds is a primitive feature of reality, and necessities and possibilities are parasitic on the nature of the set of worlds. Consequently, modal facts are reducible to, and modal truths are ultimately grounded in, nonmodal facts about possible worlds.

III. Possible Worlds Depend upon Prior Modalities

There are several problems with the Possible Worlds Interpretation. The most significant problem, however, is the fact that some aspects of this account depend upon prior modal facts and thus possible worlds cannot provide the ultimate basis for modal truth. I will discuss two ways in which the Possible Worlds Interpretation presupposes some prior modalities.

First, most commentators try to explain Leibnizian possible worlds in terms of maximal sets of compossibles - a possible world contains every concept that is compossible with what it contains. But compossibility is itself a modality. Consider, for example, Mates’s definition: “A pair of individual concepts, \(A\) and \(B\), are compossible if no contradiction follows from the supposition that there are corresponding individuals for both of them - that is, if the statements ‘\(A\) exists’ and ‘\(B\) exists’ are consistent with one another.” In other words, \(A\) and \(B\) are compossible if the conjunction ‘\(A\) exists and \(B\) exists’ is possible; or they are compossible if nothing logically precludes the coexistence
of $A$ and $B$ - that is, if nothing renders the coexistence of $A$ and $B$ impossible. It can be seen that the definition of compossibility employs a modality. But if compossibility is a modal notion, then one cannot maintain that modal assertions are true in virtue of maximal sets of compossible concepts, without running the risk of circularity.

There is a second way in which the Possible Worlds Interpretation presupposes some modality: Explanations of the nature of possible worlds invoke prior modal facts. One way to see this is to consider how the Possible Worlds Interpretation explains what worlds are possible. Keep in mind that this interpretation assumes that the existence of possible worlds is prior to necessities and possibilities, and thus without worlds there would be no modal truths. Now, if possible worlds are the source of modalities, that is, if they determine what is possible and impossible, then there can be no prior modal restrictions on the worlds themselves. But in order to maintain that there can be no impossible worlds there must be some prior restrictions on what worlds can be like - specifically, *what makes a world be possible*. In other words, there must be some prior modal facts that determine whether a particular world is possible.

There is another way to illustrate this problem. For Leibniz, the worlds are supposed to play a special role: They insure divine freedom. God is free because he can choose from among possible worlds which one to actualize. He did not have to actualize this world, he could have chosen to actualize any one of infinitely many worlds.

On the Possible Worlds Interpretation, God may choose to actualize any world from among the set of possible worlds. Thus God cannot elect to actualize a world that contains a square-circle or a world with a man who has both one nose and two noses on the same face at the same time, for such worlds do not belong to the set of possible worlds. But what determines whether a world belongs to the set of possible worlds? Are there certain criteria that must be met to qualify as a possible world?

In response to these questions, the possible worlds theorist may either maintain that there are no restrictions or criteria that worlds meet that make them possible, or he may say that there are some restrictions as to what worlds are possible. But now the following dilemma arises: If the possible worlds theorist claims that there are no restrictions on what worlds are possible, that God chooses from worlds that are *just there*, then it seems that the set of possible worlds is merely arbitrary, and there could just as easily have been worlds where there are square-circles. But what is arbitrary cannot ultimately ground what is necessary. For if the existence of these worlds is supposed to determine what is necessary, and if the number and nature of the worlds were arbitrary, then what is necessary would be ultimately determined by what is merely contingent - and thus it would not be necessary at all.
If, on the other hand, the possible worlds theorist tries to maintain that the nature of the possible worlds is not arbitrary, that there are certain criteria that determine what worlds are possible, then he runs into trouble of a different kind. For to claim that the set of possible worlds is not arbitrary means that there are some prior modal constraints as to what worlds are possible. And this just means that there are some modalities that are not determined by, that are in fact prior to, possible worlds. Thus either the possible worlds theorist is committed to the position that modalities are ultimately grounded in something non-necessary, or he must acknowledge that there are some modal facts prior to possible worlds. Neither alternative allows for an ultimate grounding of modal truths.

In this section, I have argued that the Possible Worlds Interpretation of Leibnizian modalities fails because it rests upon some prior modalities. In the next few sections I will examine three other suggested accounts of the truth-conditions of modal assertions in Leibniz: The Conceptual Analysis Interpretation, a non-semantic interpretation, and the Primitiveness Interpretation.

IV. The Conceptual Analysis Interpretation

According to Leibniz, in every true proposition (modal or nonmodal), the concept of the predicate is contained in the concept of the subject. As he explains in a letter to Arnauld:

I have given a decisive reason, which in my opinion ranks as a demonstration; it is that always, in every true affirmative proposition, necessary or contingent, universal or singular, the concept of the predicate is included in some way in that of the subject, *praedicatum inest subjecto*; or else I do not know what truth is.

In order to understand Leibniz’s conceptual containment theory of truth, we should begin with a brief explanation of Leibniz’s concept of ‘concept’. According to him, there are complex and simple concepts; complex concepts are constructed out of simple concepts through the logical operations of conjunction and negation. The complex concept ‘Man’ is constructed out of the conjunction of the concepts ‘animal’ and ‘rational’, which may themselves be composed of simpler concepts. Concepts are representations or expressions of the ‘what it is’ or the property of being that individual or property. Thus the concept ‘Man’ expresses what it is to be a man or ‘being a man’; the individual concept ‘Socrates’ represents the property of being Socrates.

Complex and simple concepts are combined to form propositions, which are thus
themselves complex concepts. According to Leibniz's 'great principle,' “there must always be some foundation for the connection between the terms of a proposition, and this must be found in their concepts.” Elsewhere Leibniz expresses this by claiming that in a true categorical proposition, the predicate is said to be in the subject, or that the subject contains the predicate. Since propositions are combinations of concepts, an analysis of the proposition will be an analysis of the concepts that are involved in it. The proposition, “Man is an animal” is made up of the concepts ‘man’ and ‘animal’. And since the concept ‘man’ is further composed of the concepts ‘rational’ and ‘animal’, it can be seen that the predicate concept ‘animal’ is contained in the subject concept ‘rational animal’.

Finally, with conceptual analysis one can also determine whether a proposition is necessarily true or merely contingently so. A necessary truth is a proposition whose contrary implies a contradiction; a possible truth is one that does not imply a contradiction; and a contingent truth is a truth that is not necessary.

The following problem arises from the conceptual containment theory of truth: If all true propositions are such that the predicate concept is contained in the subject concept, then it appears that the contrary of a true contingent proposition must imply a contradiction. For example, if the proposition, “Caesar crossed the Rubicon” is true, then ‘crossing the Rubicon’ must be contained in the concept of Caesar. But how can the proposition, “Caesar did not cross the Rubicon” be possible if crossing the Rubicon is contained in Caesar’s concept? Or, what is the same, how can Leibniz distinguish between necessary and contingent propositions?

The conceptual analysis theorist will explain that according to Leibniz the contrary of a necessary proposition is demonstrable, that is, the demonstration of the contradiction is finite. A contingent proposition, on the other hand, is not demonstrable for the demonstration of the contradiction is infinite.

For if some man were able to carry out the complete demonstration by virtue of which he could prove this connection between the subject, who is Caesar, and the predicate, which is his successful undertaking, he would actually show that the future dictatorship of Caesar is based in his concept or nature and that there is a reason in that concept why he has resolved to cross the Rubicon rather than stop there, and why he has won rather than lost the day at Pharsalus, and why it was reasonable and consequently assured that this should happen. But this man could not show that these event are necessary in themselves or that their contrary implies a contradiction. ... For it will be found that this demonstration of the
predicate of Caesar is not as absolute as that of numbers or of geometry but that it supposes the sequence of things which God has freely chosen and which is founded on the first free decree of God ... But every truth which is based on this kind of a decree is contingent, even though it is certain, for these decrees do not change the possibility of things. And ... though God assuredly always chooses the best, this does not prevent something less perfect from being and remaining possible in itself, even though it will never happen ...

Thus, the response to the problem is that although there is a contradiction between Caesar’s concept and not-crossing the Rubicon, the contradiction is not demonstrable. God, alone, knows the truth of such contingent propositions perfectly, for he alone ‘goes through an infinite series in one act of the mind’.

From what has been said, we can see that on the Conceptual Analysis Interpretation of Leibnizian modalities, what makes a necessary, possible or contingent proposition true, is the fact that the predicate concept is contained in the subject concept. As explained, the reduction of a proposition involves an analysis of the relation between its component concepts. And since the concepts express individual natures or properties, modalities are ultimately determined by the relations between natures and properties. In this way, the account of possibility and necessity in terms of conceptual analysis amounts to a reduction of modal facts to nonmodal facts about natures and properties.

Although it is clear that Leibniz took conceptual analysis to be a characterization of truth, as I will show in the next section, the account of modalities on the Conceptual Analysis Interpretation presupposes some prior modal facts. Consequently, conceptual analysis cannot provide the ultimate basis for modal truths.

V. A Problem with the Conceptual Analysis Interpretation: Essential Features of Properties

Leibniz believes that properties have certain intrinsic natures. In the *Theodicy*, for example, Leibniz explains that the virtues are good ‘by their nature’; to hold otherwise would be like saying that the rules of proportion and harmony are arbitrary. Just as the rules of good music are fixed, so, too, the goodness of virtues. Leibniz explains to Foucher that, “the nature of the circle with its properties is something existent and eternal.” The property ‘being a circle’ is ‘being round,’ ‘having radii equidistant from the center,’ etc.; the property ‘being wise’ is ‘being pious’; the property ‘being a man’ is ‘being rational,’ and ‘being animal’; the property ‘being colored’ is ‘being red or being
blue or being green or ...’.  The intrinsic nature of these properties are not determined by God nor can they be altered, even by God:  “Can it be denied that everything (whether genus, species, or individual) has a complete notion according to which it is conceived by God, who conceives everything perfectly?”  Thus in the Theodicy, Leibniz writes:

God was able to create matter, a man, a circle, or leave them in nothingness, but he was not able to produce them without giving them their essential properties. ... He had of necessity to make man a rational animal and to give the round shape to a circle, since, according to his eternal ideas, independent of the free decrees of his will, the essence of man lay in the properties of being animal and rational, and since the essence of the circle lay in having a circumference equally distant from the centre as to all its parts.

In the previous section I explained that on the Conceptual Analysis Interpretation the proposition, “A circle is round” is true because the predicate concept is contained in the subject concept. And, of course, it is: The property ‘being a circle’ is just ‘being round, and having radii equidistant from the center, and etc.;’ and so clearly the concept ‘circle’ contains the concept ‘round’. In addition, since the demonstration that the contrary implies a contradiction is finite, the proposition is necessarily true.

However, this is not the end of the story. Though it is the case that a proposition is true because the predicate concept is contained in the subject concept, this relation between concepts cannot provide the ultimate ground for the truth of a modal assertion. We have seen that the relation between the subject concept and the predicate concept is based upon the essential features of the properties themselves. What it is to be a circle is just to be round, to have points equidistant from the center, to be such that its circumference is the product of its diameter and pie, and etc.. These are essential features of being a circle. Consequently, the necessary truth, “A circle is round” is grounded in certain essential characteristics of the property ‘being a circle’ - that it necessarily involves ‘being round’. Since relations between properties presuppose some necessary features of the properties themselves, and since relations between concepts depends upon the relations between properties, relations between concepts depend upon prior modalities. Thus the Conceptual Analysis Interpretation cannot provide the ultimate ground for modal truth.

In this section I have shown that, according to Leibniz, the features of properties are fixed and thus grounding modal truth in the relation between concepts presupposes some prior modal facts. It follows that a proposition is not necessarily true because it is
demonstrable; rather it is demonstrable *because* it is necessarily true. That is, the truth of a necessary proposition is not grounded in the fact that it can be reduced to an identity in a finite number of steps; rather, it is so reducible because it is necessary.

VI. A Non-Semantical Interpretation

The Possible Worlds Interpretation and the Conceptual Analysis Interpretation are both semantical theories of truth. Adams and Wilson argue that the primary conception of truth in Leibniz is not semantical, but syntactical. On a syntactical theory, the truth or falsity of a proposition is determined by the logical structure of the proposition and its component concepts, rather than by the properties or objects that are expressed by the concepts. In fact, on such an interpretation, a semantics is dependent upon the syntactical structure.

Proponents of the Syntactical Interpretation point out that Leibniz holds that complex concepts are formed from simpler concepts by the logical operations of conjunction and negation. Conceptual containment can be understood in terms of these operations: A predicate concept is contained in the subject concept if the subject concept is a complex concept, that is, a conjunction of simpler concepts, one of whose conjuncts is identical with the predicate.

This may become clearer when we consider God’s knowledge that a proposition \( P \) is true: God does not need to know what properties are represented by the concepts involved in \( P \), he only needs to know the logical structure of \( P \) in order to know whether \( P \) is true.

Suppose, for example, that God intuits a representation of a complete analysis of \( P \), in which each simple concept is represented consistently and uniquely by a symbol. God could know whether the represented proposition is true or false without knowing what what the symbols stand for.

In this way, on the Syntactical Interpretation the truth and falsity of propositions are determined by the logical structure of the propositions.

Like the Conceptual Analysis Interpretation, the Syntactical Interpretation bases the distinction between necessary and possible truths on demonstrability. However, rather than taking into account what is expressed by the concepts, the Syntactical Interpretation focuses on the definitions of the terms in the proposition. For example, on Wilson’s interpretation, the conception of modality is a proof-theoretical notion of
demonstrability or indemonstrability of falsehood. She explains that according to Leibniz, all true propositions are either identities or reducible to identities. A proposition is necessarily true if it is *demonstrable*, that is, if it can be demonstrated to reduce to an identity in a finite number of steps. Whereas the reduction of a true contingent proposition to an identity takes an infinite number of steps. A proposition is possibly true if its negation is not demonstrable. The demonstration of reducibility proceeds by the use of definitions. By substituting *definiens* for *definiendum*, a true proposition will eventually reduce to an identity. For example, in the proposition, “Man is an animal,” ‘man’ can be replaced with its definition, ‘rational animal.’ Because the substitution results in the identity, “Rational animal is an animal,” the proposition is necessarily true.

Such a reduction is not so easy to see in contingent propositions. Consider the proposition, “Caesar crosses the Rubicon.” Since this proposition is true, there is a demonstration (though infinite) of its reduction to an identity. But how would the substitution with definitions occur? What is the definition of ‘Caesar’? Keep in mind that on this interpretation we are not analyzing what is represented by the concepts, but rather the logical structure of the concepts themselves. But what is the logical structure of the concept of Caesar?

Even if there is a way to explain the logical analysis of individual concepts, there is a more significant problem for the purposes of this project: The Syntactical Interpretation depends upon some prior necessities.

VII. Two Ways in which the Syntactical Interpretation Presupposes Necessity

In this section, I will discuss two ways in which the Syntactical Interpretation presupposes necessity. First, on the Syntactical Interpretation, the fact that a proposition is true does not depend upon the concepts that make up the proposition, but on the logical form of the proposition itself. Rather than grounding truth in some objects or properties that are represented by concepts, a syntactical theory of truth defines truth in terms of the logical structure of the concepts and the proposition in which they occur. It was explained that the logical structure of a concept depends upon the operations of conjunction and negation. However, these operations function according to certain rules. These rules are either arbitrary or they are necessary. If the rules are arbitrary, then it’s not clear how they can generate necessity; if they are necessary, then the logical structures of the concepts depend upon some prior notion of necessity. Either way, the syntactical interpretation fails to provide the ultimate ground of modal truth.

The second way in which the Syntactical Interpretation presupposes some
modality can be seen in the following example: A demonstration of reduction to identity invokes definitions. “Man is an animal” is true because the definition of ‘man’ is ‘rational animal,’ and when this definition is substituted in the original proposition, the result is the identity, “Rational animal is animal.” But, once again, the definitions are either arbitrary or fixed. If the former, then the definitions are merely contingent and not proper to ground eternal truths; if the latter, then there is some necessity prior to the logical structures of the concepts. Again, either way the syntactical interpretation runs into trouble.

On the Syntactical Interpretation of Leibnizian modalities, the truth of necessary and possible propositions is determined by the logical structure of the propositions. However, as I have shown, the logical structure of propositions and concepts depend upon some necessary rules. Furthermore, the analysis by which a proposition is determined to be necessary or possible must invoke some fixed definitions. In both instances, the Syntactical Interpretation presupposes some prior notion of necessity, and hence cannot be the ultimate foundation for modalities.

Thus far in the paper, I have argued that three of the more popular interpretations of the ultimate ground for Leibnizian modalities all presuppose some prior modal facts. A possible worlds interpretation depends upon modal facts for certain restrictions that need to be placed on the worlds; a conceptual analysis account runs into trouble because the natures of the properties and the allowable combinations of properties seem to presuppose some modal facts; and the logical structures and definitions required for a syntactical interpretation are determined by some fixed and necessary rules and definitions. One way to avoid this problem is to attribute to Leibniz the view that some modalities are primitive and irreducible. On such an account, things have modal properties not in virtue of the arrangement of possible worlds; nor in virtue of the relation between properties; but in virtue of other modal properties that are themselves not reducible to any others. I will explain and offer some support for such an interpretation of Leibniz’s modalities in the subsequent sections.

VIII. Explanation of the Primitiveness Interpretation

There are some places where Leibniz claims that modality is a primitive concept. For example, at times Leibniz explains that the definition of ‘possible’ as that which does not contain a contradictory term, is assumed without proof. In other places, he includes ‘possibility’ in the list of simple properties. In addition, Leibniz claims that possibilities
and necessities are possible and necessary ‘in themselves’, not depending on anything to determine their status. Finally, he writes the following:

... of all the things which actually are, the possibility or impossibility of being is itself the first. ... The existence of necessities comes before all others in the order of nature.

And from the possibility and necessity arise essences and eternal truths:

But this possibility and this necessity form or compose what are called the essences or natures and the truths which are usually called eternal.

We need to understand what it means to say that essences and eternal truths are formed from or composed of possibility and necessity.

Let’s look at the beginning of Leibniz's story. According to him, some things follow immediately from ‘the nature of things’ - namely God and certain logical principles - like the principle of identity and the principle of sufficient reason. God has all perfections, which are simple, absolute, positive, indefinable qualities. From the divine perfections or attributes follow simple or primitive properties, i.e. concepts that cannot be analyzed into others. Examples of such concepts are: ‘being,’ ‘color,’ ‘term,’ ‘entity,’ ‘I,’ and ‘individual.’ Complex concepts are formed from combinations of primitive and other complex properties by negation and conjunction. Essences, natures and individual concepts are the results of such combinations.

There are some irreducible modal facts. For example, the principles of identity and non-contradiction are necessary and their truth cannot be further grounded in any other modal or nonmodal facts. In addition, we have seen that properties are as they are ‘by their nature’; that is, properties have necessary, intrinsic characteristics. Like the necessity of the principles of identity and non-contradiction, the necessity of the essential features of properties cannot be further reduced to nonmodal facts.

Given the properties, essences can be generated: “The essence of man lay in the properties of being animal and rational, and the essence of the circle lay in having a circumference equally distant from the centre as to all its parts.” And given the basic principles of identity and non-contradiction, eternal truths that are based upon these essences follow. Thus, “this possibility and this necessity form or compose what are called the essences or natures and the truths which are usually called eternal.”

So the necessary truth, “Man is an animal” is grounded in the fact that ‘being a
man’ is just ‘being a rational animal’. This fact is not reducible to a nonmodal fact; it is based upon the essential feature of the property ‘being a man’, that it is necessarily ‘being a rational animal’. And thus it follows that upon conceptual analysis, the predicate concept is included in the subject concept. That is, the conceptual containment theory of truth depends upon the primitiveness account.

The Primitiveness Interpretation can also account for the truth of possible propositions. Consider the possible proposition, “Caesar might not have crossed the Rubicon.” On the Primitiveness Interpretation, this proposition is true because there is no incompatibility between the essential features of ‘being Caesar’ and the property ‘not a crosser of the Rubicon’. For ‘being Caesar’ includes ‘being Caesar, being a man, being rational, and etc.’ none of which are incompatible with ‘not being a crosser of the Rubicon.’ The proposition, “Caesar might have been a stone,” on the other hand, is clearly not possible. For being a stone essentially involves, among other things, ‘being irrational,’ which is clearly incompatible with ‘being rational’. And thus the proposition, “Caesar might have been a stone” reduces to the contradiction, “Caesar, a rational animal, might have been irrational.”

On the Primitiveness Interpretation, the truth of necessary and possible propositions is ultimately grounded in some modal facts that are themselves irreducible and primitive. Unlike the Conceptual Analysis Interpretation and the Possible Worlds Interpretation, the Primitiveness Interpretation provides an ultimate basis for modal truths.

XI. An Objection Considered

At this point, we might reconsider the problem that Leibniz himself raises: How can a property be denied of an object without destroying the concept of the object? Recall that according to Leibniz, a complete concept includes all the facts about the individual, past, present and future. How, then, can we say that the proposition ‘Caesar might not have crossed the Rubicon’ is possibly true? According to the Primitiveness Interpretation, ‘Caesar might not have crossed the Rubicon’ is true, not because there is a possible world in which Caesar (or his counterpart) does not cross the Rubicon, but because no incompatibility arises between the essential features of the concepts ‘Caesar’ and ‘non-crosser of the Rubicon’. But, one might argue, there is a contradiction between Caesar’s complete concept and not crossing the Rubicon: Caesar’s individual complete concept necessarily includes the property ‘crosses the Rubicon’. Thus there is a contradiction that arises: “Caesar (whose complete concept includes the property
‘crosses the Rubicon’) does not cross the Rubicon’ is a contradiction.

Leibniz discusses this problem in the Discourse and in correspondence with Arnauld. In his responses, Leibniz begins by making a distinction between two types of connection: one is absolutely necessary since its contrary implies a contradiction; the other is necessary by hypothesis since its contrary does not imply a contradiction. If a connection is absolutely necessary, then the property can be deduced from the nature. So, for example, from the fact that Caesar is a man, it can be deduced that he thinks. But if the connection is merely hypothetically necessary, then the properties cannot be deduced from the nature. For such properties do not follow from the essential features of what it is to be that thing, rather they involve the sequence of things that God has chosen freely. The connection between Caesar and crossing the Rubicon is not absolutely necessary since ‘crossing the Rubicon’ does not follow from the nature of Caesar. The connection is, however, hypothetically necessary since once God has chosen this particular series, then ‘crossing the Rubicon’ follows from the complete concept of Caesar.

Leibniz offers a similar explanation in response to Arnauld. Arnauld poses the following question:

But it seems to me that it still remains to ask - and it is here that my difficulty lies - whether the connection between these objects (I mean Adam and human events) is such in itself independently of God, or whether it is dependent upon them. In other words, whether it is only as a result of these free decrees by which God has ordained everything that will happen to Adam and to his posterity that God knows everything that will happen to them, or whether there is an intrinsic and necessary connection between Adam, on the one hand, and all that has happened to him and his posterity, on the other, independently of these decrees.

Arnauld, Leibniz notes, seems to think that Leibniz is committed to the second alternative, because he has said that “God has found, among the possible ones, an Adam with such individual circumstances and who has among his other predicates also that of having such a posterity in the course of time.” And Arnauld then assumes that Leibniz will agree that all possibilities are possible before the free decrees of God.

Leibniz writes that he cannot deny that some possibles are independent of the decisions of God, but that possible individual notions include a number of possible free decisions. In other words, there is, prior to any decision of God, a general concept of Adam (Adam considered sub ratione generalitatis) that includes the primary properties
of Adam. The properties follow from the nature of Adam in such a way that if God creates Adam, he can’t but create him with these properties. There are other properties, however, that are subject to God’s choice. These properties are not contained in Adam’s general concept, nor do they follow from his nature; rather they are included in the individual notion of Adam (Adam considered sub ratione possibilitatis). These properties are contingent properties, belonging to Adam by the hypothetical necessity of God’s choice to create this particular world.

Leibniz compares the distinction between the general concept and the individual notion of Adam with the distinction between a species and an individual. The concept of a species includes only essential properties: ‘The concept of a sphere includes ‘being round and having points equidistant from the center, and etc.’’. The concept of an individual sphere includes all of these essential properties in addition to properties like ‘being made of this material and being made in this place and at this time and etc.,’ including traces of all that has ever happened to it for all time. Similarly, the general notion of Adam includes only essential properties: ‘being a man, being rational, etc..’ The concept of the individual Adam includes these essential properties and certain facts pertaining to time and place. These facts are contingent upon God’s choice to create this world.

From what has been said, we can now see how Leibniz responds to the problem raised above: How can the proposition, “Caesar might not have crossed the Rubicon” be true if it is contained in Caesar’s complete concept that he cross the Rubicon? The answer is that it does not follow from Caesar’s general notion that he cross the Rubicon, hence it is not necessary that he cross it. Although it does follow from Caesar’s complete concept that he cross the Rubicon (and hence it is necessary that he do so), the properties contained in the individual notion of Caesar that do not follow from the general concept of Caesar involve God’s free choice to create this world, and consequently are merely hypothetically necessary, not absolutely necessary. Thus Leibniz claims that if someone did the opposite of something that is contained in his complete concept, “he would do nothing impossible in itself, although it is impossible (ex hypothesi) for that to happen.”

X. A Final Note About Possible Worlds

Leibniz claims that because the natures of the properties are fixed, God had of necessity to make a man a rational animal and to make a circle round. In addition, God perfectly conceives of the nature of everything, whether species, genus or individual. God knows the essences of man, circle, and Caesar NOT because he sees them as such in
different possible worlds; but because he has perfect knowledge of his essence, from which follow the primitive necessities and possibilities and hence essences and eternal truths. *Consequently, if* God creates a world with men in it, *he must* create them as rational beings. And, consequently, the proposition, “Man is a rational animal” is not necessarily true because all men in every possible world that God can create are rational. The proposition is necessarily true because the essences are as such; such essences result from necessities that are themselves primitive and irreducible (and hence primitive features of any world that God creates).

Furthermore, because ‘not crossing the Rubicon’ is compatible with ‘being Caesar,’ God could have created a world in which Caesar does not cross the Rubicon. It is in this sense only that there is a possible world in which Caesar does not cross the Rubicon. Therefore, Leibniz recognizes that modal facts determine what worlds are possible, or what worlds God can create. He does not think that the worlds that God can create somehow determine modal facts.

Leibniz does not use possible worlds in order to ground the truth of alethic modalities. Rather he uses them to make it easier to understand what is going on in a modal assertion; possible worlds play merely a heuristic role. This is why (as many commentators have recognized) Leibniz never defines a necessary truth as one that is true in all possible worlds. And this is why in his logical papers, he seldom (if at all) mentions possible worlds, let alone provide a definition of necessary truth in terms of them. Where Leibniz does talk about possible worlds, he talks about them ‘loosely’. And he agrees with Arnauld that purely possible substances, those that God will never create, are mere ‘chimeras’.

In fact, the passage that is often used to support the Possible Worlds Interpretation, the famous ‘Sextus’ passage from the *Theodicy*, is typically taken out of context. The passage reads as follows:

> These worlds are all here, that is, in ideas. I will show you some, wherein shall be found, not absolutely the same Sextus as you have seen (that is not possible, he carries with him always that which he shall be) but several Sextuses resembling him, possessing all that you know already of the true Sextus, but not all that is already in him imperceptibly, nor in consequence all that shall yet happen to him. You will find in one world a very happy and noble Sextus, in another a Sextus content with a mediocre state, a Sextus, indeed, of every kind and endless diversity of forms.
As it stands, the text may appear to support the Possible Worlds Interpretation. However, what commentators neglect to explain is that Leibniz alludes to this passage as a ‘fiction’ used to express his point more clearly:

> I thought it would be opportune to quote [Laurentius Valla’s *Dialogue on Free Will*] in abstract, ..., and then to continue from where it ends, keeping up the fiction it initiated; and that less with the purpose of enlivening the subject, than in order to explain myself towards the end of my dissertation as clearly as I can, and in a way most likely to be generally understood.

Leibniz’ possible worlds talk is not to be taken literally. As is many times the case with Leibniz, he is merely trying to explicate his philosophy at a level that can be grasped by non-philosophers.

Thus Leibniz does not believe that possible worlds determine the truth of modal assertions. According to him, a proposition is not necessarily true *because* it is true in all possible worlds; rather a proposition is true in all possible worlds *because* it is necessary.

VII. Conclusion

I have argued that Leibniz does not use possible worlds to ground the truth of modal assertions, but only as a heuristic. I have also shown that Leibniz does not define modalities in terms of possible worlds; a necessary truth is not defined as one that is true in all possible worlds. Rather, the truth of alethic modalities is dependent upon certain essential features of natures or properties, that are themselves irreducible and hence primitive facts.

I believe that this is not only a better understanding of Leibnizian modalities, but a more cogent understanding of the nature of modalities in general. The claim that it is possible that I go to Athens tomorrow just means that ‘going to Athens’ is compatible with ‘being a woman, being rational, and etc.’. We are making the observation that I have such a nature with which it is compatible that I make such a trip. We do not mean that there is some other woman very much like me, in some other universe very much like ours, who travels to some other city very much like Athens.

Unfortunately, with the birth of possible worlds semantics, commentators were too quick to adopt Leibniz as the ancestor of modal logic. However, Leibniz is not the grandfather of possible worlds, a distant cousin, twice removed maybe, but no direct relation.