

Redeeming Analyticity

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Ever since W. V. O. Quine wrote his famous “Two Dogmas of Empiricism,” it seems that philosophers have shied away from the notion of analyticity. Tyler Burge wrote in his article “Logic and Analyticity” that “Quine’s “Two Dogmas of Empiricism” changed the course of philosophy . . . [his] arguments . . . subverted the notion of analyticity that had buttressed the positivist view of mathematics and logic” (Burge 199). Burge’s purpose in writing the article was to “survey Quine’s criticism of analyticity in order to evaluate and *celebrate* his achievement” (199–200 italics added). Burge certainly believes that the notion of analyticity is dead. Besides just celebrating Quine’s achievement, he also expands Quine’s argument and attempts to add yet more nails to analyticity’s coffin, as it were. It is my goal to redeem analyticity in the face of the daunting skepticism of Quine and Burge. As Burge says, Quine’s main goal in dismantling the analytic–synthetic distinction was to disprove the positivist verifiability theory, of which the analytic–synthetic distinction was a necessary consequence. When the analytic–synthetic distinction fell, the verifiability argument fell with it trivially. But while very few philosophers seem sad to be rid of logical positivism, I believe that dismantling the analytic–synthetic distinction also has severe consequences for other areas of philosophy. I (and others) argue that the analytic–synthetic distinction is necessary for rationalism. Quine and Burge would have us believe that there is nothing but empiricism. But if there is only empiricism, then there is nothing to save us from Hume’s skepticism of causation and scientific

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knowledge. I hope to redeem the analytic–synthetic distinction by arguing for a hybrid version of what Burge calls the “vacuousness concept” of analyticity:

On this concept, a proposition or sentence is analytic if and only if it is true solely in virtue of its conceptual content or meaning: a subject matter plays no role in its being true; its truth owes nothing to the world. (200–201)

I say a “hybrid version” of Burge’s vacuousness concept because, as will be shown later, I do not define analyticity and a priority in their traditional sense. I believe that the analytic–synthetic distinction can be drawn in terms of truthmakers and falsemakers (or what Burge calls “subject matter”). A synthetic sentence has a truthmaker or a falsemaker in the world. An analytic sentence is a sentence that has neither a truthmaker nor a falsemaker. For example, the sentence “snow is white” is true because there actually is some white snow in the world. We look to the world to tell us if the sentence is true. The sentence “John McCain is the president of the United States” is false. We look to the world to tell us if the sentence is false. Because John McCain currently is not the president of the United States, he serves as a falsemaker for the sentence. But what about the sentence “all bachelors are unmarried?” We do not look to the world to tell us whether or not this sentence is true. We don’t survey all known bachelors to see whether or not the truth value of the sentence holds. If somebody suggested that we conduct such a survey, we would probably question the person’s rationality.

Burge and Quine have some strong criticisms for the vacuousness concept of analyticity. I hope that by offering a theory of truth that answers all of their criticisms, I can redeem analyticity. Burge even seems to throw out a challenge when he says,

No genuine support has been given for using the vacuousness concept. I think that no support is forthcoming. In the absence of a reason to distinguish truths that do not owe their truth to a subject matter from truths that do, the use of this concept of analyticity should be rejected. (208)

In order to give the necessary support for my theory of truth and its vacuousness concept of analyticity, I will structure my paper into three stages of justification. In the first stage of justification, I will show that my theory of truth rebuffs Burge and Quine’s criticisms. In the second stage, I will show how my theory accounts for the double modality of a priori statements that Kripke briefly mentions in his article “Identity and Necessity”. My final stage of justification will be to demonstrate that Quine’s

theory of truth and his dismissal of the analytic–synthetic distinction devastate our ability to have scientific knowledge, therefore rendering his theory untenable. Because his theory is untenable, some alternative—even if mine is unacceptable to the reader—must be found. Before I get ahead of myself, however, I will now give Quine and Burge’s criticisms of the vacuousness concept and posit my theory of truth.

Burge divides Quine’s criticism of the vacuousness concept into three parts. He explains and expounds upon each of these criticisms. It’s important to note that not all of these criticisms come directly from “Two Dogmas of Empiricism,” but also from “Truth by Convention,” “Carnap and Logical Truth,” and “Philosophy of Logic” (Burge 206). It’s also important to note that Quine is mostly criticizing analyticity as it relates to logical truths. Burge first criticizes the notion of vacuousness via convention. Quine believes that “appeal to convention cannot explain logic since it must presuppose logic” (206). In other words, we cannot use convention to determine what is true because we would have to assume something was true before we determined it was true. Thus, any appeal to convention causes us to fall into circular reasoning. The second criticism Burge cites deals with Carnap’s assumption that logical truths are simply vacuously true, not by convention or for any other reason (207). Quine’s main argument against this line of reasoning is that such statements can “be of no scientific value” (207). In other words, such statements say nothing about the world, and are therefore useless. A major purpose of this paper is to demonstrate that this particular assertion of Quine’s is unquestionably false. The last criticism of Quine addressed by Burge is that “logical truths depend only on the meanings of logical words” (207). Burge is convinced that these criticisms devastate the vacuousness concept of analyticity. My goal for the next part of this paper will be to refute these criticisms. To begin, I’ll posit my theory of truth and its hybrid version of the vacuousness concept of analyticity. I’ll then show how it transcends each criticism offered by Burge and Quine. My theory of truth is fairly simple. I believe that the truth value of any sentence can be derived if we test it against the following two conditions:

1. A synthetic sentence will be true or false depending on whether it has a truthmaker or a falsemaker.
2. If a sentence doesn’t have a truthmaker or a falsemaker, it is vacuously true.

I will now give a few examples to demonstrate how my theory works. The sentence “my big toe is currently neon purple” has a falsemaker in the

world. My toe, alas, remains its normal pinkish hue; thus, the sentence is clearly false. The classic sentence “snow is white” has a truthmaker in the world; we can actually find white snow. So the sentence is true. Because both of these sentences have either a truthmaker or a falsemaker, they are synthetic. But what about sentences that don’t have either truthmakers or falsemakers? I believe that they are all true.

I understand the sweeping consequences of such a belief. There is probably an infinite number of sentences that have neither truthmakers nor falsemakers, many of them contradictory. Yet I still believe that they are all true. For example, the sentence “all bachelors are unmarried” doesn’t have a truthmaker or a falsemaker, but neither does the sentence “all bachelors are married.” As I have already stated, we don’t search the world to see if these sorts of sentences are true or not. What would be the point? By definition, none of them have truthmakers or falsemakers in the world. This is where I believe convention plays an important role. Rational beings use convention to decide which truths to apply to our interpretation of the world, and which truths to discard. We apply truths that most accurately describe our lived experience. I will attempt to justify these beliefs in the next paragraph. But before I do, I want to point out that I call sentences that do not have truthmakers or falsemakers analytic. This is different from the traditional sense of the word, which is that analytic sentences are true by virtue of the meaning of the words or concepts used to express them, so that their denial would be a self-contradiction. It is this difference that leads me to call my vacuousness concept of analyticity a hybrid version of Burge’s concept. But my point is that sentences that have truthmakers or falsemakers are synthetic; sentences that have neither are analytic.

I will now explain my theory of convention and application as it regards vacuously true analytic statements. I will use science to illustrate my point because it provides many dramatic examples of contradictory analytic truths being applied to our world to help explain the world. Codell Carter says,

For different purposes, scientists adopt different and even contradictory assumptions. For example, one of the basic assumptions underlying any scientific treatment of acoustics is that the medium through which sound is propagated is continuous. In the Kinetic Theory, on the other hand, one assumes that matter is discrete. Obviously matter cannot be both continuous and discrete; these assumptions are contradictory. (6)

So how is it possible that science can use two contradictory assumptions to explain the world? My theory of truth accommodates this oddity

perfectly. What's really going on here is that science is utilizing two analytic sentences—"matter is discrete" and "matter is continuous"—to explain different phenomena. As of now, neither one of these two sentences has a truthmaker or a falsemaker. Nobody on earth has ever empirically verified either one of these sentences. So they are both analytic and vacuously true (I realize that they are also both a priori; I will explain later that all a priori sentences are also analytic). Scientists choose to apply one sentence or the other depending on whether they are explaining acoustics or Kinetic Theory. Scientists get together and decide which truths should apply where. Thus, we see how analytic truths can be applied to explain the world through convention. I will now give my three stages of justification for this theory.

The first stage of justification for my theory of truth will be to show that it avoids the criticism of Quine and Burge of the vacuousness concept of analyticity. It's fairly easy to deal with the first and third criticisms. Overcoming the second criticism, however, is more tricky. I'll begin with the first criticism, which says that employing convention is inherently circular because it is first necessary to assume the truth of a sentence before deciding it is true. I think it's fairly clear that my theory avoids this flaw. There is nothing circular in assuming that all analytic sentences are true and then deciding which ones apply to our world. Thus, I avoid circular reasoning. Under my definition of analyticity, Quine's third criticism that logical truths depend only on the meanings of logical words is clearly rebuffed. Logical truths are analytic. The sentence " $p \vee \sim p$ " has neither a truthmaker nor a falsemaker. Search the world high and low, you will never find anything in it that justifies this sentence; so it's vacuously true. The truth value of no analytic sentence under my definition is determined by its meaning. Therefore, Quine's criticism is refuted.

To answer the second criticism, (that vacuously true analytic statements can "be of no scientific value"), I must address Kripke's notion of a priority. In "Identity and Necessity" Kripke defines a priori truth. He says, "an a priori truth is supposed to be one which can be known to be true independently of all experience . . . all [this means] is that [it] can be known to be true of the actual world, independently of all experience" (177). It has become common in modern philosophy to associate the notion of a priority with beliefs, and the notion of analyticity with sentences. Under my definition of analyticity, it is impossible to express an a priori belief (truth) without an analytic sentence. All a priori truths require sentences that have no truthmakers or falsmakers to be expressed. So all a priori truths will be analytic. Thus, all a priori beliefs are vacuously true as well. So when Quine argues against analytic sentences, he is also arguing against a priori beliefs.

Though the reader at this point might accuse me of making a strawman of Quine's argument, if we turn to Quine's "Philosophy of Logic," we find his theory of truth, which unequivocally undermines not only analytic sentences, but also a priori beliefs. Quine makes the infamous statement that: "No sentence is true but reality makes it so" (10). Quassim Cassam tells us that this sentence means that

there is no such thing as a true statement which does not owe its truth to the "world" or to the facts. It follows from this that analytic [sentences] cannot both be true and lack factual content. If they are literally true, it is the world which makes them so. (55)

Cassam also says that "Quine's argument is that when the truth predicate is attached to a sentence, it always "serves, as it were, to point through the sentence to reality" (55). If Quine's theory of truth is correct, then a priori truth could never be, as Kripke says, "known to be true independently of all experience" (177). Thus, both analyticity and a priority are taking flak from Quine.

The point of the previous discussion was to show that a priori truths are analytic. If this is true, then Quine's second criticism of the vacuousness concept of analyticity that such sentences have no scientific value must be false. I've already quoted Kripke as saying "An a priori truth is supposed to be one which can be known to be true independently of all experience . . . all [this means] is that [it] *can be known to be true of the actual world, independently of all experience*" (177 italics added). If a priori truth is known to be true of the actual world, then of course it has scientific value. There are many important scientific truths that are a priori. A famous example is Newton's first law of motion: "Every body perseveres in its state of rest, or of uniform motion in a right line, unless it is compelled to change that state by forces impressed thereon" (19). No human being has ever witnessed an object moving uniformly, in a straightforward manner, forever. Actually, nobody has ever witnessed an object move even ten feet without being acted upon by some force or other. Only a god could empirically verify this sentence. So it has neither a truthmaker nor a falsemaker. So the first law of motion is a priori; it is also scientific, and tells us about the world. Because it is a priori, it necessarily is analytic. Thus, Quine's second objection is rebuffed. This is a very important point and one that I will spend more time on later in the third stage of justification for my theory of truth.

Now that I have demonstrated how my theory of truth redeems analyticity from Quine's skepticism, I will move into the second stage of its justification. I don't think that merely showing that a theory can avoid a few criticisms is very convincing evidence of its validity. My second stage

of justification, then, will be to show that my theory can account for the secondary level of modality that Kripke briefly mentions in “Identity and Necessity”. He says, “Notice, by the way, the notion a priori truth as thus defined has in it another modality: it *can* be known independently of all experience” (177). Kripke doesn’t go into a lot of depth on this point. But it’s important to his article. Kripke argues that some truths are a priori, but not necessary. In his book *Naming and Necessity*, he gives an example of a truth that is a priori but not necessary:

If we define what a meter is by reference to the standard meter stick, it will be a contingent truth and not a necessary one that that particular stick is one meter long. If it had been stretched, it would have been longer than one meter. (75)

Thus, on our world it was an a priori truth that the standard meter stick was one meter long. But it could have been otherwise. Thus, the meter stick’s length isn’t necessary. I think an illuminating way of putting this is that on some other possible world, the meter is longer (or shorter) than it is on our world.

This would explain why, according to Kripke, there is a secondary level of modality built into a priori truths. It is sometimes contingent that something can be known a priori on our world. I believe this is because all analytic sentences are true and we must decide through convention which ones to apply to our world. The meter stick could have been longer than it is, but we decided that it should be 39.37 inches. This also explains how there can be contradictory analytic statements. On our world, one meter is 39.37 inches long. But on another possible world, one meter could just as easily have been 45 inches long. That one meter is not 39.37 inches long would be known a priori on that world. Thus, the sentences “a meter is 39.37 inches” and “a meter is not 39.37” can both be known a priori. We use convention on the cosmological level (or sometimes on an even narrower level, e.g. science) to decide which a priori truth to apply. Kripke’s example of the meter stick is similar to the example I gave earlier about matter either being discrete or continuous. In that case, scientists also use convention to decide which a priori truth to apply to acoustics or kinetic theory. That my theory fits so well with Kripke’s views is, I hope, sufficiently convincing evidence for the reader that it is correct.

The third and final justification for my theory of truth is really nothing more than an attack on Quine’s theory of truth. Quine’s “Two Dogmas of Empiricism” demands empiricism. For Quine, there is no room for rationalism. Quine puts it best: “Total science, mathematical and natural and human, is similarly but more extremely underdetermined by

experience. The edge of the system must be kept squared with experience” (75). But it seems to me that the world alone isn’t enough for us to justify scientific knowledge. In other words, for us to justify our scientific knowledge, it is necessary that there be analytic sentences and a priori truths. Without such knowledge, even Newton’s laws of motion remain unjustified. This is because no human could ever empirically verify this law; it’s impossible. If Quine is correct that “no sentence is true but reality makes it so”, then it seems that we must necessarily surrender to Humean skepticism.

We can see the results of Quine and Hume’s theories carried to their furthest logical conclusions in a book called *Worldviews: An Introduction to the History and Philosophy of Science* by Richard DeWitt. The central thesis of the book is that we cannot truly justify any scientific system or worldview. DeWitt claims that there is always room to doubt what we know because we can’t know for sure what makes things true. He uses the firm belief of adherents of the Aristotelian worldview that the solar system was geocentric as evidence for his claim that we can never be sure of our own worldview. Subscribers to the Aristotelian worldview felt confident that their interpretation of the world was correct. But now we think they were wrong. If they could be wrong about something so basic, perhaps we could be wrong about our beliefs too. Not surprisingly, he cites Quine as an inspiration for his ideas:

The Quine-Duhem thesis is closely tied to the notion of worldviews . . . Quine tended to speak of collections of beliefs as “webs of beliefs,” suggesting an analogy with a spider’s web . . . Quine at times defended [a] radical view, maintaining that it is one’s entire web of beliefs—that is, our entire interconnected collection of beliefs—that face the tribunal of experience as a whole. (47–48)

But the problem with this view is the implicit assumption that there is no analytic–synthetic distinction. If there is no justified analytic truth, then we can never be entirely convinced by what we know because we must rely on sense perception. There is always the possibility that our senses are deceiving us. Hume makes it very clear that if we can rely on nothing but sense perception, then we cannot even justify the existence of objects that we aren’t observing. If a person doesn’t think that there is any reason to believe that the future necessarily must continue to be like the past, then I can understand why it might be difficult to feel certain about even simple things, much less science.

I find the uncertainty inherent in empiricism to be more philosophically unsettling than believing that all statements without

truthmakers are true. Quine dealt a harsh blow to philosophy when he dismantled the analytic–synthetic distinction. Quassim Cassam believes that the direct consequence of blurring the line between analytic and synthetic statements is that “‘rationalism’ and ‘empiricism’ are ‘pseudo-doctrines’ between which there is no real difference” (44). The possibility of justified scientific knowledge is dismantled along with the dismissal of rationalism. This fact alone suggests that something is wrong with Quine’s theory of truth. Whether or not my theory of truth is acceptable to the reader, I believe that Quine’s theory is wrong and that analyticity needs to be redeemed.

To conclude, I want to briefly revisit the main points of this paper and defend a theory of truth that contains a hybrid version of the vacuousness concept of analyticity. This allows me to draw the line between synthetic and analytic statements at truthmakers and falsemakers. Sentences that have truthmakers or falsemakers are synthetic; sentences that have neither are analytic. All analytic sentences are vacuously true. Armed with this definition, I can safely rebuff all of Quine and Burge’s criticisms of the vacuousness concept of analyticity. Evidence for the correctness of my theory is found in the fact that it can account for the secondary level of modality in a priori truths. Finally, Quine’s theory of truth has drastic consequences for scientific knowledge that I believe are unacceptable. The redemption of analyticity is necessary for the justification of scientific knowledge. My theory of truth does redeem analyticity, so I believe any philosophical misgivings it may cause are swallowed up by the magnitude of the benefits it has to offer.

Works Cited

- Burge, Tyler. "Logic and Analyticity." *Grazer Philosophische Studien* 66 (2003): 199–249.
- Carter, K. Codell. "Scientific Principles as Rules of Method." Unpublished article.
- Cassam, Quassim. "Rationalism, Empiricism, and the A Priori." *New Essays on the A Priori*. By Paul Artin. Boghossian and Christopher Peacocke. Oxford: Oxford UP, 2000. 43–64.
- DeWitt, Richard. *Worldviews: An Introduction to the History and Philosophy of Science*. Chichester, West Sussex, U.K.: Wiley-Blackwell, 2010.
- Kripke, Saul A. "Identity and Necessity." *Identity and Individuation*. Ed. Milton Karl Munitz. New York: New York UP, 1971.
- . *Naming and Necessity*. Cambridge, MA: Harvard UP, 1980.
- Newton, Isaac. *The Mathematical Principles of Natural Philosophy*. Trans. Andrew Motte. London: Middle-Temple-Gate, 1729. Google Books. 12 Feb. 2012.
- Quine, W. V. *Philosophy of Logic*. Cambridge, MA: Harvard UP, 1986. Print.
- . "Two Dogmas of Empiricism." *The Philosophy of Language*. By A. P. Martinich. New York: Oxford UP, 2008. 63–76.