

# Truth

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The meaning of the word **truth** extends from honesty, good faith, and sincerity in general, to agreement with fact or reality in particular.<sup>[1]</sup> The term has no single definition about which a majority of professional philosophers and scholars agree, and various theories of truth continue to be debated. There are differing claims on such questions as what constitutes truth; how to define and identify truth; the roles that revealed and acquired knowledge play; and whether truth is subjective, relative, objective, or absolute. This article introduces the various perspectives and claims, both today and throughout history.

Thus, 'truth' involves both the quality of "faithfulness, fidelity, loyalty, sincerity, veracity",<sup>[4]</sup> and that of "agreement with fact or reality", in Anglo-Saxon expressed by *sōþ*.

## Nomenclature and etymology

# The major theories of truth

The question of what is a proper basis for deciding how words, symbols, ideas and beliefs may properly be considered true, whether by a single person or an entire society, is dealt with by the five major substantive theories introduced below. Each theory presents perspectives that are widely shared by published scholars.<sup>[5][6]</sup> There also have more recently arisen "deflationary" or "minimalist" theories of truth based on the idea that the application of a term like *true* to a statement does not assert anything significant about it, for instance, anything about its *nature*, but that the label *truth* is a tool of discourse used to express agreement, to emphasize claims, or to form certain types of generalizations.<sup>[5][7][8]</sup>

## Substantive theories

### Correspondence theory

Correspondence theories state that true beliefs and true statements correspond to the actual state of affairs.<sup>[9]</sup> This type of theory posits a relationship between thoughts or statements on the one hand, and things or objects on the other. It is a traditional model which goes back at least to some of the classical Greek philosophers such as Socrates, Plato, and Aristotle.<sup>[10]</sup> This class of theories holds that the truth or the falsity of a representation is determined in principle solely by how it relates to "things", by whether it accurately describes those "things". An example of correspondence theory is the statement by the Thirteenth Century philosopher/theologian Thomas Aquinas: *Veritas est adaequatio rei et intellectus* ("Truth is the equation [or adequation] of thing and intellect"), a statement which Aquinas attributed to the Ninth Century neoplatonist Isaac Israeli.<sup>[11][12]</sup> Aquinas also restated the theory as: "A judgment is said to be true when it conforms to the external reality"<sup>[13]</sup>

Correspondence theory practically operates on the assumption that truth is a matter of accurately copying what was much later called "objective reality" and then representing it in thoughts, words and other symbols.<sup>[14]</sup> Many modern theorists have stated that this ideal cannot be achieved independently of some analysis of additional factors.<sup>[5][15]</sup> For example, language plays a role in that all languages have words that are not easily translatable into another. The German word *Zeitgeist* is one such example: one who speaks or understands the language may "know" what it means, but any translation of the word fails to accurately capture its full meaning (this is a problem with many abstract words, especially those derived in agglutinative languages). Thus, the language itself adds an additional parameter to the construction of an accurate truth predicate. Among the philosophers who grappled with this problem is Alfred Tarski, whose semantic theory is summarized further below in this article.<sup>[16]</sup>

Proponents of several of the theories below have gone farther to assert that there are yet other issues necessary to the analysis, such as interpersonal power struggles, community interactions, personal biases and other factors involved in deciding what is seen as truth.

### Coherence theory

For coherence theories in general, truth requires a proper fit of elements within a whole system. Very often, though, coherence is taken to imply something more than simple logical consistency; often there is a demand that the propositions in a coherent system lend mutual inferential support to each other. So, for example, the completeness and comprehensiveness of the underlying set of concepts is a critical factor in judging the validity and usefulness of a coherent system.<sup>[17]</sup> A pervasive tenet of coherence theories is the idea that truth is primarily a property of whole systems of propositions, and can be ascribed to individual propositions only according to their coherence with the whole. Among the assortment of perspectives commonly regarded as coherence theory, theorists differ on the question of whether coherence entails many possible true systems of thought or only a single absolute system.

Some variants of coherence theory are claimed to characterize the essential and intrinsic properties of formal systems in logic and mathematics.<sup>[18]</sup> However, formal reasoners are content to contemplate axiomatically independent and sometimes mutually contradictory systems side by side, for example, the various alternative geometries. On the whole, coherence theories have been criticized as lacking justification in their application to other areas of truth, especially with respect to assertions about the natural world, empirical data in general, assertions about practical matters of psychology and society, especially when used without support from the other major theories of truth.<sup>[19]</sup>

Coherence theories distinguish the thought of rationalist philosophers, particularly of Spinoza, Leibniz, and G.W.F. Hegel, along with the British philosopher F.H. Bradley.<sup>[20]</sup> They have found a resurgence also among several proponents of logical positivism, notably Otto Neurath and Carl Hempel.

## Constructivist theory

Social constructivism holds that truth is constructed by social processes, is historically and culturally specific, and that it is in part shaped through the power struggles within a community. Constructivism views all of our knowledge as "constructed," because it does not reflect any external "transcendent" realities (as a pure correspondence theory might hold). Rather, perceptions of truth are viewed as contingent on convention, human perception, and social experience. It is believed by constructivists that representations of physical and biological reality, including race, sexuality, and gender are socially constructed. Giambattista Vico was among the first to claim that history and culture were man-made. Vico's epistemological orientation gathers the most diverse rays and unfolds in one axiom--*verum ipsum factum*--"truth itself is constructed." Hegel, Gars, and Marx were among the other early proponents of the premise that truth is socially constructed.

## Consensus theory

Consensus theory holds that truth is whatever is agreed upon, or in some versions, might come to be agreed upon, by some specified group. Such a group might include all human beings, or a subset thereof consisting of more than one person.

Among the current advocates of consensus theory as a useful accounting of the concept of "truth" is the philosopher Jürgen Habermas.<sup>[21]</sup> Habermas maintains that truth is what would be agreed upon in an ideal speech situation.<sup>[22]</sup> Among the current strong critics of consensus theory is the philosopher Nicholas Rescher.<sup>[23]</sup>

## Pragmatic theory

The three most influential forms of the *pragmatic theory of truth* were introduced around the turn of the 20th century by Charles S. Peirce, William James, and John Dewey. Although there are wide differences in viewpoint among these and other proponents of pragmatic theory, they hold in common that truth is verified and confirmed by the results of putting one's concepts into practice.<sup>[24]</sup>

Peirce defines truth as follows: "Truth is that concordance of an abstract statement with the ideal limit towards which endless investigation would tend to bring scientific belief, which concordance the abstract statement may possess by virtue of the confession of its inaccuracy and one-sidedness, and this confession is an essential ingredient of truth."<sup>[25]</sup> This statement emphasizes Peirce's view that ideas of approximation, incompleteness, and partiality, what he describes elsewhere as *fallibilism* and "reference to the future", are essential to a proper conception of truth. Although Peirce uses words like *concordance* and *correspondence* to describe one aspect of the pragmatic sign relation, he is also quite explicit in saying that definitions of truth based on mere correspondence are no more than *nominal* definitions, which he accords a lower status than *real* definitions.

William James's version of pragmatic theory, while complex, is often summarized by his statement that "the 'true' is only the expedient in our way of thinking, just as the 'right' is only the expedient in our way of behaving."<sup>[26]</sup> By this, James meant that truth is a quality the value of which is confirmed by its effectiveness when applying concepts to actual practice (thus, "pragmatic").

John Dewey, less broadly than James but more broadly than Peirce, held that inquiry, whether scientific, technical, sociological, philosophical or cultural, is self-corrective over time *if* openly submitted for testing by a community of inquirers in order to clarify, justify, refine and/or refute proposed truths.<sup>[27]</sup>

## Minimalist (deflationary) theories

A number of philosophers reject the thesis that the concept or term *truth* refers to a real property of sentences or propositions. These philosophers are responding, in part, to the common use of *truth predicates* (e.g., that some particular thing "...is true") which was particularly prevalent in philosophical discourse on truth in the first half of the 20th century. From this point of view, to assert the proposition "2 + 2 = 4 is true" is logically equivalent to asserting the proposition "2 + 2 = 4", and the phrase "is true" is completely dispensable in this and every other context. These positions are broadly described

- as *deflationary* theories of truth, since they attempt to deflate the presumed importance of the words "true" or *truth*,
- as *disquotational* theories, to draw attention to the disappearance of the quotation marks in cases like the above example, or
- as *minimalist* theories of truth.<sup>[28][5]</sup>

Whichever term is used, deflationary theories can be said to hold in common that "[t]he predicate 'true' is an expressive convenience, not the name of a property requiring deep analysis."<sup>[5]</sup> Once we have identified the truth predicate's formal features and utility, deflationists argue, we have said all there is to be said about truth. Among the theoretical concerns of these views is to explain away those special cases where it *does* appear that the concept of truth has peculiar and interesting properties. (See, e.g., Semantic paradoxes, and below.)

In addition to highlighting such formal aspects of the predicate "is true", some deflationists point out that the concept enables us to express things that might otherwise require infinitely long sentences. For example, one cannot express confidence in Michael's accuracy by asserting the endless sentence:

*Michael says, 'snow is white' and snow is white, or he says 'roses are red' and roses are red or he says ... etc.*

But it can be expressed succinctly by saying: *What Michael says is true.*<sup>[29]</sup>

## Performative theory of truth

Attributed to P. F. Strawson is the performative theory of truth which holds that to say "'Snow is white' is true" is to perform the speech act of signaling one's agreement with the claim that snow is white (much like nodding one's head in agreement). The idea that some statements are more actions than communicative statements is not as odd as it may seem. Consider, for example, that when the bride says "I do" at the appropriate time in a wedding, she is performing the act of taking this man to be her lawful wedded husband. She is not *describing* herself as taking this man. In a similar way, Strawson holds: "To say a statement is true is not to make a statement about a statement, but rather to perform the act of agreeing with, accepting, or endorsing a statement. When one says 'It's true that it's raining,' one asserts no more than 'It's raining.' The function of [the statement] 'It's true that...' is to agree with, accept, or endorse the statement that 'it's raining.'"<sup>[30]</sup>

## Redundancy and related theories

According to the redundancy theory of truth, asserting that a statement is true is completely equivalent to asserting the statement itself. For example, making the assertion that "'Snow is white' is true" is equivalent to asserting "Snow is white". Redundancy theorists infer from this premise that truth is a redundant concept; that is, it is merely a word that is traditionally used in conversation or writing, generally for emphasis, but not a word that actually equates to anything in reality. This theory is commonly attributed to Frank P. Ramsey, who held that the use of words like *fact* and *truth* was nothing but a roundabout way of asserting a proposition, and that treating these words as separate problems in isolation from judgment was merely a "linguistic muddle".<sup>[31][32][33]</sup>

A variant of redundancy theory is the disquotational theory which uses a modified form of Tarski's schema: To say that "'P' is true" is to say that P. Yet another version of deflationism is the prosentential theory of truth, first developed by Dorothy Grover, Joseph Camp, and Nuel Belnap as an elaboration of Ramsey's claims. They argue that sentences like "That's true", when said in response to "It's raining", are prosentences, expressions that merely repeat the content of other expressions. In the same way that *it* means the same as *my dog* in the sentence *My dog was hungry, so I fed it, That's true* is supposed to mean the same as *It's raining* — if you say the latter and I then say the former. These variations do not necessarily follow Ramsey in asserting that truth is *not* a property, but rather can be understood to say that, for instance, the assertion "P" may well involve a substantial truth, and the theorists in this case are minimalizing only the redundancy or prosentence involved in the statement such as "that's true."<sup>[5]</sup>

Deflationary principles do not apply to representations that are not analogous to sentences, and also do not apply to many other things that are commonly judged to be true or otherwise. Consider the analogy between the sentence "Snow is white" and the character named Snow White, both of which can be true in some sense. To a minimalist, saying "Snow is white is true" is the same as saying "Snow is white," but to say "Snow White is true" is *not* the same as saying "Snow White."

# Formal theories

## Truth in logic

A *logical truth* (also called an *analytic truth* or a *necessary truth*) is a statement which is true in all possible worlds<sup>[34]</sup> or under all possible interpretations, as contrasted to a *synthetic claim* (or *fact*) which is only true in *this* world as it has historically unfolded. Logical truths are *necessarily* true. A proposition such as "If p and q, then p." and the proposition "All husbands are married." are considered to be logical truths because they are true because of their meanings and not because of any facts of the world. They are such that they could not be untrue.

Logic is concerned with the patterns in reason that can help tell us if a proposition is true or not. However, logic does not deal with truth in the absolute sense, as for instance a metaphysician does. Logicians use formal languages to express the truths which they are concerned with, and as such there is only truth *under some interpretation* or truth *within some logical system*.

## Truth in mathematics

There are two main approaches to truth in mathematics. They are the *model theory of truth* and the *proof theory of truth*.

Historically, with the nineteenth century development of Boolean algebra mathematical models of logic began to treat "truth", also represented as "T" or "1", as an arbitrary constant. "Falsity" is also an arbitrary constant, which can be represented as "F" or "0". In propositional logic, these symbols can be manipulated according to a set of axioms and rules of inference, often given in the form of truth tables.

In addition, from at least the time of Hilbert's program at the turn of the twentieth century to the proof of Gödel's theorem and the development of the Church-Turing thesis in the early part of that century, true statements in mathematics were generally assumed to be those statements which are provable in a formal axiomatic system.

The works of Kurt Gödel, Alan Turing, and others shook this assumption, with the development of statements that are true but cannot be proven within the system.<sup>[35]</sup> Two examples of the latter can be found in Hilbert's problems. Work on Hilbert's 10th problem led in the late twentieth century to the construction of specific Diophantine equations for which it is undecidable whether they have a solution,<sup>[36]</sup> or even if they do, whether they have a finite or infinite number of solutions. More fundamentally, Hilbert's first problem was on the continuum hypothesis.<sup>[37]</sup> Gödel and Paul Cohen showed that this hypothesis cannot be proved or disproved using the standard axioms of set theory and a finite number of proof steps.<sup>[38]</sup> In the view of some, then, it is equally reasonable to take either the continuum hypothesis or its negation as a new axiom.

## Semantic theory of truth

The semantic theory of truth has as its general case for a given language:

'P' is true if and only if P

where 'P' is a reference to the sentence (the sentence's name), and P is just the sentence itself.

Logician and philosopher Alfred Tarski developed the theory for formal languages (such as formal logic). Here he restricted it in this way: no language could contain its own truth predicate, that is, the expression *is true* could only apply to sentences in some other language. The latter he called an *object language*, the language being talked about. (It may, in turn, have a truth predicate that can be applied to sentences in still another language.) The reason for his restriction was that languages that contain their own truth predicate will contain paradoxical sentences like the Liar: *This sentence is not true*. See The Liar paradox. As a result

Tarski held that the semantic theory could not be applied to any natural language, such as English, because they contain their

own truth predicates. Donald Davidson used it as the foundation of his truth-conditional semantics and linked it to radical interpretation in a form of coherentism.

Bertrand Russell is credited with noticing the existence of such paradoxes even in the best symbolic formalizations of mathematics in his day, in particular the paradox that came to be named after him, Russell's paradox. Russell and Whitehead attempted to solve these problems in *Principia Mathematica* by putting statements into a hierarchy of types, wherein a statement cannot refer to itself, but only to statements lower in the hierarchy. This in turn led to new orders of difficulty regarding the precise natures of types and the structures of conceptually possible type systems that have yet to be resolved to this day.

## Kripke's theory of truth

Saul Kripke contends that a natural language can in fact contain its own truth predicate without giving rise to contradiction. He showed how to construct one as follows:

- Begin with a subset of sentences of a natural language that contains no occurrences of the expression "is true" (or "is false"). So *The barn is big* is included in the subset, but not "*The barn is big is true*", nor problematic sentences such as "*This sentence is false*".
- Define truth just for the sentences in that subset.
- Then extend the definition of truth to include sentences that predicate truth or falsity of one of the original subset of sentences. So "*The barn is big is true*" is now included, but not either "*This sentence is false*" nor "'*The barn is big is true*' is true".
- Next, define truth for all sentences that predicate truth or falsity of a member of the second set. Imagine this process repeated infinitely, so that truth is defined for *The barn is big*; then for "*The barn is big is true*"; then for "'*The barn is big is true*' is true", and so on.

Notice that truth never gets defined for sentences like *This sentence is false*, since it was not in the original subset and does not predicate truth of any sentence in the original or any subsequent set. In Kripke's terms, these are "ungrounded." Since these sentences are never assigned either truth or falsehood even if the process is carried out infinitely, Kripke's theory implies that some sentences are neither true nor false. This contradicts the Principle of bivalence: every sentence must be either true or false. Since this principle is a key premise in deriving the Liar paradox, the paradox is dissolved.<sup>[39]</sup>

## Notable philosophers' views

### Ancient philosophers

The ancient Greek origins of the words "true" and "truth" have some consistent definitions throughout great spans of history that were often associated with topics of logic, geometry, mathematics, deduction, induction, and natural philosophy.

Socrates', Plato's and Aristotle's ideas about truth are commonly seen as consistent with correspondence theory. In his *Metaphysics*, Aristotle stated: "To say of what is that it is not, or of what is not that it is, is false, while to say of what is that it is, and of what is not that it is not, is true".<sup>[40]</sup> The Stanford Encyclopedia of Philosophy proceeds to say of Aristotle:

Aristotle sounds much more like a genuine correspondence theorist in the *Categories* (12b11, 14b14), where he talks of "underlying things" that make statements true and implies that these "things" (pragmata) are logically structured situations or facts (viz., his sitting, his not sitting). Most influential is his claim in *De Interpretatione* (16a3) that thoughts are "likenesses" (homoiosis) of things. Although he nowhere defines truth in terms of a thought's likeness to a thing or fact, it is clear that such a definition would fit well into his overall philosophy of mind.<sup>[40]</sup>

Very similar statements can also be found in Plato (Cratylus 385b2, Sophist 263b).<sup>[40]</sup>

## Medieval philosophers

### Avicenna

In early Islamic philosophy, Avicenna (Ibn Sina) defined truth in his *Metaphysics of Healing*, Book I, Chapter 8, as:

What corresponds in the mind to what is outside it.<sup>[41]</sup>

Avicenna elaborated on his definition of truth in his *Metaphysics* Book Eight, Chapter 6:

The truth of a thing is the property of the being of each thing which has been established in it.<sup>[42]</sup>

However, this definition is merely a translation of the Latin translation from the Middle Ages.<sup>[43]</sup> The a translation of the original Arabic text states:

Truth is also said of the veridical belief in the existence [of something].<sup>[44]</sup>

### Aquinas

Following Avicenna, and also Augustine and Aristotle, Thomas Aquinas stated in his *Disputed Questions on Truth*:

A natural thing, being placed between two intellects, is called *true* insofar as it conforms to either. It is said to be true with respect to its conformity with the divine intellect insofar as it fulfills the end to which it was ordained by the divine intellect... With respect to its conformity with a human intellect, a thing is said to be true insofar as it is such as to cause a true estimate about itself.<sup>[45]</sup>

Thus, for Aquinas, the truth of the human intellect (logical truth) is based on the truth in things (ontological truth).<sup>[46]</sup> Following this, he wrote an elegant re-statement of Aristotle's view in his *Summa I.16.1*:

Veritas est adæquatio intellectus et rei.  
(Truth is the conformity of the intellect to the things.)

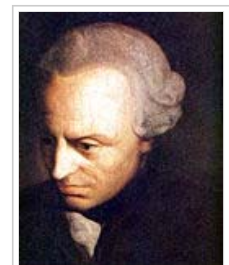
Aquinas also said that real things participate in the act of being of the Creator God who is Subsistent Being, Intelligence, and Truth. Thus, these beings possess the light of intelligibility and are knowable. These things (beings; reality) are the foundation of the truth that is found in the human mind, when it acquires knowledge of things, first through the senses, then through the understanding and the judgement done by reason. For Aquinas, human intelligence ("intus", within and "legere", to read) has the capability to reach the essence and existence of things because it has a non-material, spiritual element, although some moral, educational, and other elements might interfere with its capability.

## Modern philosophers

### Kant

Immanuel Kant discussed the correspondence theory of truth<sup>[40]</sup> in the following manner, criticizing correspondence theory as circular reasoning.

Truth is said to consist in the agreement of knowledge with the object. According to this mere verbal definition, then, my knowledge, in order to be true, must agree with the object. Now, I can only compare the object with my knowledge by this means, namely, by taking knowledge of it. My knowledge, then, is to be verified by itself, which is far from being sufficient for truth. For as the object is external to me, and the knowledge is in me, I can only judge whether my knowledge of the object agrees with my knowledge of the object. Such a circle in explanation was called by the ancients *Diallelos*. And the logicians were accused of this fallacy by the sceptics, who remarked that this account of truth was as if a man before a judicial tribunal should make a statement, and appeal in support of it to a witness whom no one knows, but who defends his own credibility by saying that the man who had called him as a witness is an honourable man.<sup>[47]</sup>



Immanuel Kant

According to Kant, the definition of truth as correspondence is a "mere verbal definition", here making use of Aristotle's distinction between a nominal definition, a definition in name only, and a real definition, a definition that shows the true cause or essence of the thing whose term is being defined. From Kant's account of the history, the definition of truth as correspondence was already in dispute from classical times, the "skeptics" criticizing the "logicians" for a form of circular reasoning, though the extent to which the "logicians" actually held such a theory is not evaluated.<sup>[47]</sup>

## **Kierkegaard**

When Søren Kierkegaard, as his character *Johannes Climacus*, wrote that "*Truth is Subjectivity*", he does not advocate for subjectivism in its extreme form (the theory that something is true simply because one believes it to be so), but rather that the objective approach to matters of personal truth cannot shed any light upon that which is most essential to a person's life. Objective truths are concerned with the facts of a person's being, while subjective truths are concerned with a person's way of being. Kierkegaard agrees that objective truths for the study of subjects like mathematics, science, and history are relevant and necessary, but argues that objective truths do not shed any light on a person's inner relationship to existence. At best, these truths can only provide a severely narrowed perspective that has little to do with one's actual experience of life.<sup>[48]</sup>

While objective truths are final and static, subjective truths are continuing and dynamic. The truth of one's existence is a living, inward, and subjective experience that is always in the process of becoming. The values, morals, and spiritual approaches a person adopts, while not denying the existence of objective truths of those beliefs, can only become truly known when they have been inwardly appropriated through subjective experience. Thus, Kierkegaard criticizes all systematic philosophies which attempt to know life or the truth of existence via theories and objective knowledge about reality. As Kierkegaard claims, human truth is something that is continually occurring, and a human being cannot find truth separate from the subjective experience of one's own existing, defined by the values and fundamental essence that consist of one's way of life.<sup>[49]</sup>

## **Nietzsche**

Friedrich Nietzsche believed the search for truth or 'the will to truth' was a consequence of the will to power of philosophers. He thought that truth should be used as long as it promoted life and the will to power, and he thought untruth was better than truth if it had this life enhancement as a consequence. As he wrote in *Beyond Good and Evil*, "*The falseness of a judgment is to us not necessarily an objection to a judgment... The question is to what extent it is life-advancing, life-preserving, species-preserving, perhaps even species-breeding...*" (aphorism 4). He proposed the will to power as a truth only because according to him it was the most life affirming and sincere perspective one could have.

Robert Wicks discusses Nietzsche's basic view of truth as follows:

Some scholars regard Nietzsche's 1873 unpublished essay, "On Truth and Lies in a Nonmoral Sense" ("Über Wahrheit und Lüge im außermoralischen Sinn") as a keystone in his thought. In this essay, Nietzsche rejects the idea of universal constants, and claims that what we call "truth" is only "a mobile army of metaphors, metonyms, and anthropomorphisms." His view at this time is that arbitrariness completely prevails within human experience: concepts originate via the very artistic transference of nerve stimuli into images; "truth" is nothing more than the invention of fixed conventions for merely practical purposes, especially those of repose, security and consistence.<sup>[50]</sup>

## **Heidegger**

### **Whitehead**

Alfred North Whitehead a British mathematician who became an American philosopher, said: "There are no whole truths; all truths are half-truths. It is trying to treat them as whole truths that play the devil".

The logical progression or connection of this line of thought is to conclude that truth can lie, since half-truths are deceptive and may lead to a false conclusion.

### **Nishida**

According to Kitaro Nishida, "knowledge of things in the world begins with the differentiation of unitary consciousness into knower and known and ends with self and things becoming one again. Such unification takes form not only in knowing but in the valuing (of truth) that directs knowing, the willing that directs action, and the feeling or emotive reach that directs sensing."<sup>[51]</sup>

### **Fromm**

Erich Fromm finds that trying to discuss truth as "absolute truth" is sterile and that emphasis ought to be placed on "optimal truth". He considers truth as stemming from the survival imperative of grasping one's environment physically and intellectually, whereby young children instinctively seek truth so as to orient themselves in "a strange and powerful world". The accuracy of their perceived approximation of the truth will therefore have direct consequences on their ability to deal with their environment. Fromm can be understood to define truth as a functional approximation of reality. His vision of optimal truth is described partly in "Man from Himself: An Inquiry into the Psychology of Ethics" (1947), from which excerpts are included below.

the dichotomy between 'absolute = perfect' and 'relative = imperfect' has been superseded in all fields of scientific thought,

where "it is generally recognized that there is no absolute truth but nevertheless that there are objectively valid laws and principles".

In that respect, "a scientifically or rationally valid statement means that the power of reason is applied to all the available data of observation without any of them being suppressed or falsified for the sake of a desired result". The history of science is "a history of inadequate and incomplete statements, and every new insight makes possible the recognition of the inadequacies of previous propositions and offers a springboard for creating a more adequate formulation."

As a result "the history of thought is the history of an ever-increasing approximation to the truth. Scientific knowledge is not absolute but optimal; it contains the optimum of truth attainable in a given historical period." Fromm furthermore notes that "different cultures have emphasized various aspects of the truth" and that increasing interaction between cultures allows for these aspects to reconcile and integrate, increasing further the approximation to the truth.

## **Foucault**

Truth, for Michel Foucault, is problematic when any attempt is made to see truth as an "objective" quality. He prefers not to use the term truth itself but "Regimes of Truth". In his historical investigations he found truth to be something that was itself a part of, or embedded within, a given power structure. Thus Foucault's view shares much in common with the concepts of Nietzsche. Truth for Foucault is also something that shifts through various episteme throughout history.<sup>[52]</sup>

## **Baudrillard**

Jean Baudrillard considered truth to be largely simulated, that is pretending to have something, as opposed to dissimulation, pretending to not have something. He took his cue from iconoclasts who he claims knew that images of God demonstrated the fact that God did not exist.<sup>[53]</sup> Baudrillard wrote in "Precession of the Simulacra":

The simulacrum is never that which conceals the truth—it is the truth which conceals that there is none. The simulacrum is true.  
—Ecclesiastes<sup>[54][55]</sup>

Some example simulacra that Baudrillard cited were: that prisons simulate the "truth" that society is free; scandals (eg, Watergate) simulate that corruption is corrected; Disney simulates that the U.S. itself is an adult place. One must remember that though such examples seem extreme, such extremity is an important part of Baudrillard's philosophy. For a less extreme example consider how movies, almost without exception, end with the bad guy being punished, thus drilling into the viewers that successful businessmen and politicians are good or, if not, will be caught.<sup>[53]</sup>

## **Ratzinger**

Philosopher and theologian Joseph Ratzinger, before his election as Benedict XVI, explored the relationship of truth with tolerance,<sup>[56]</sup> conscience,<sup>[57]</sup> freedom,<sup>[58]</sup> and religion.<sup>[56]</sup> For him, "beyond all particular questions, the real problem lies in the question of truth."<sup>[56]</sup>

In consonance with Aristotle and Aquinas, Ratzinger affirms that human reason has the power to know reality and arrive at the truth, and for this he alludes to the achievement of the natural sciences. He sees that "the modern self-limitation of reason" rooted in Kant which views itself incapable of knowing religion and the human sciences such as ethics leads to dangerous pathologies of religion and pathologies of science (ecological disasters and destruction of humans).<sup>[56][59]</sup> He thinks that this self-limitation, which "amputates" the mind's capacity to answer fundamental questions such as man's origin and purpose, dishonors reason and is contradictory to the modern acclamation of science, whose basis is the power of reason.<sup>[56][60]</sup>

In his book *Truth and Tolerance*, Ratzinger affirmed that truth and love are identical. And if well understood, according to him, this is "the surest guarantee of tolerance."<sup>[56]</sup>

## **Badiou**

Alain Badiou has gained renown in contemporary continental philosophy for his theory of truth as a situated "truth-procedure" consisting in the practice of fidelity to an event. According to Badiou, truth-procedures are situated, singular, subjective, and universal. Badiou defines love, art, science, and politics as the four domains of truth-procedures, and defines philosophy as a space of thought conditioned by and concerned with thinking through the interaction of truth-procedures in these four domains. Badiou's theory of truth is deeply rooted in his mathematical ontology, and has gained notoriety as a critique of postmodern philosophy and post-structuralism articulated from within the tradition of Continental philosophy.

## Types of truth

Metaphysical subjectivism holds that the truth or falsity of all propositions depends, at least partly, on what we believe. In contrast, metaphysical objectivism holds that truths are independent of our beliefs. Except for propositions that are actually about our beliefs or sensations, what is true or false is independent of what we think is true or false.

Relative truths are statements or propositions that are true only relative to some standard, convention, or point-of-view, such as that of one's own culture. Many would agree that the truth or falsity of *some* statements are relative: That the fork is to the left of the spoon depends on where one stands. Relativism is the doctrine that *all* truths within a particular domain (say, morality or aesthetics) are of this form, and entails that what is true varies across cultures and eras. For example, moral relativism is the view that a moral statement can be true in one time and place but false in another. This is different from the uncontroversial claim that people in different cultures and eras *believe* different things about morality: moral relativism is claiming that the moral facts themselves are different.

Relative truths can be contrasted with absolute truths. The existence of absolute truths is somewhat controversial, but is strongly asserted by universalism. Believers in absolute truth hold that  $2+2=4$  everywhere in the universe forever; likewise, if A implies B and B implies C, then A implies C for every entity, at every time, at any place.<sup>[61]</sup> On a more local scale, for example, from the viewpoint of the microeconomist, the laws of supply and demand determine that the value of any consumable in a market economy is true in all situations; for the Kantian, "act only according to that maxim by which you can at the same time will that it should become a universal law" forms an absolute moral truth.<sup>[62]</sup> They are statements that are often claimed to emanate from the very nature of the universe, God, human nature, or some other ultimate essence.

Absolutism in a particular domain of thought is the view that all statements in that domain are either true in all times and places or false in all times and places: none is true for some cultures or eras while false for other cultures or eras.

## Mythology

A myth is a narrative that a particular culture either currently or in the past believed to be both true and significant, typically involving the supernatural or aiming to explain the nature of reality, or a narrative which is taken to be an allegorical illustration of one or more "higher truths." In the opinion of J. R. R. Tolkien,

"Legends and myths are largely made of 'truth', and indeed present aspects of truth that can only be received in this mode."<sup>[63]</sup>

Similarly, d'Holbach, in *System of Nature*, contrasts Mythology as an attempt to convey truth with theology as an attempt to obfuscate it.

## Religious truth

*For more details on this topic, see Truth (religious).*

Most religious traditions have a body of doctrine that adherents of that religion view as truth. This may take the form of a creed or catechism, it may refer to a book such as the Bible or the Koran, or it may be an unwritten code shared by believers. Unlike scientific truth or observed truth, religious truth often makes the claim of being either revealed or inspired by God.

When there is a clash between religious truth and scientific truth, various methods have been used to reconcile the two. During the Middle Ages, for example, there was conflict between Roman Catholic dogma on the one hand and an emerging body of scientific knowledge on the other. Sometimes the established church sought to suppress scientific truth, as in the case of Galileo, but sometimes the two truths were allowed to coexist, which led to the doctrine of the two truths. According to this compromise, there is a lesser truth, scientific truth, which holds that the earth orbits the sun, and a greater truth, religious truth, that holds that the earth is the fixed center of the universe. According to the doctrine of the two truths, these two truths were both true in their own sphere. <sup>[64][65]</sup>

The modern Roman Catholic church has rejected the doctrine of two truths, and accepts as true all scientific truth. Christian Fundamentalism claims that religious truth should be accepted by scientists, and that if science were not corrupt it would recognize, for example, the occurrence of a world-wide flood. Thus the conflict between religious truth and scientific truth continues.

## Scientific truth

*See also* Empirical truth.

Science seeks to approach truth through the scientific method. Strictly speaking, the scientific method never "proves" a theory or shows that it is definitely true.<sup>[66]</sup> Except when it comes to directly observable facts, the scientific method never claims to reveal "the truth"; rather, it attempts to *approach* the truth by continuously refining theories so that they better approximate the truth.

Someone following the scientific method begins by collecting facts. Scientifically speaking, a fact is a directly observable, reproducible truth.<sup>[67]</sup> A purported truth doesn't qualify as a fact if it's based on the observation of a single person. To qualify as a scientific fact, it must be based on repeated observations by many different scientists. For example, "When on Earth a rock is picked up from the ground and then released, it falls." qualifies as a scientific fact: it's directly observable and it's reproducible, because anyone can test it by picking up a rock and then letting go.

After collecting facts, a scientist formulates a hypothesis, a possible explanation for the facts. A hypothesis makes a suggestion as to what mechanism or relationship lies behind the observed facts. This relationship itself doesn't need to be directly observable. One common view (see demarcation problem), is that to qualify as scientific, a hypothesis must be falsifiable: that is, one must be able to imagine an experiment which, if carried out, could disprove the hypothesis.<sup>[68]</sup>

The scientist then tests the hypothesis by making further observations (sometimes in a highly controlled environment such as a laboratory). Roughly speaking, if repeated observations support a hypothesis, then it qualifies as a theory.<sup>[69]</sup>

The above is a very simplified account of the scientific method. In actual practice, most scientists begin their investigations by collecting more than raw facts. For example, many scientific hypothesis take an already-accepted scientific theory as one of the "facts" that support it or that it seeks to explain. For example, many theories in modern biology take the theory of evolution as part of their supporting evidence.<sup>[70]</sup>

Examples of scientific theories which are accepted by almost all professional scientists include the germ theory of disease, Einstein's theory of relativity, and the theory of evolution.<sup>[71]</sup> A scientific theory is often mathematical in nature.

"Nothing is too wonderful to be true, if it be consistent with the laws of nature, and in such things as these, experiment is the best test of such consistency.", Schwinger 1969 quoting from M. Faraday.

## What Is Truth? An Essay in the Theory of Knowledge

Book by Arthur Kenyon Rogers; Yale University Press, 1923. 190 pgs.

### 1. Belief and Criterion for Truth

- 1.1. My preliminary definition accordingly will be this: Truth for me is what I cannot help believing.
- 1.2. Because some of beliefs prove false or doubtful, we look for some standard of truth. My statement in the first place is intended to presuppose this situation, and to identify real as distinct from mere temporary and apparent truth with what we persist in believing after doubt and inquiry--that from which we find ourselves unable to get away no matter what the sceptical temptation. For now suppose I find myself genuinely able to doubt a pretended truth--not simply to think of myself in imagination as doubting it under different circumstances; can the thing still belong to the category of the true? Evidently not; it belongs to the doubtfully true, or that about which I am in doubt whether it is true. It might be claimed that I still can determine that it should be held true by me through an act of will. But either this supposes that the doubt still persists in my mind, in which case I do not really believe it true, but merely want it to be true, or choose to act as if I believed it true; or else by my act of will I succeed in forgetting the doubt, excluding it from my consciousness. Then real belief indeed returns; but only because I have abandoned critical reflection, and have gone back voluntarily to a naïve and prephilosophic state.
- 1.3. The aforementioned implies that belief is a more fundamental concept than truth. We need, in other words, to start with the psychological existence of a certain peculiar attitude of mind, not with a reasoned definition, or with an objectively valid standard. We experience the belief before the question of truth arises at all; and we have to go back to the fact of belief to determine whether any truth is left at the end of the inquiry. If it is not--supposing such an outcome humanly possible--then we are sceptics, and truth for us does not exist. And if, on the contrary, we still find ourselves believing, this does not mean that we have discovered standards of truth which independently produce the belief, but, rather, that the beliefs left in the field are what we have to examine in order to find in them the marks which we then erect into a standard. And even if we do not succeed in analyzing them sufficiently to elicit the standard, we should still have to hold that the beliefs represent truth. We should be in a hard case indeed if mankind before believing in truth had to wait for the philosophers to define its nature and conditions.
- 1.4. When I say that truth is what we cannot help believing, I do not mean what it is logically impossible not to believe, or what cannot be believed without

self contradiction, but what it is naturally or practically, impossible not to believe after critical inquiry.

- 1.5. Philosophers have assumed that we have no such thing as truth, or knowledge, until we get what can meet this test of logical certainty. By setting up a goal extremely difficult to attain, if not entirely out of reach, it has tended to widen the gap between theoretical and practical truth, and has left in philosophy a general impression of scepticism quite out of relation to the concrete history of the growth of human knowledge. When we find mankind assured of the possession of a great deal of knowledge which the philosopher asserts is not knowledge at all, it would seem more modest, as well as more fruitful, if philosophy were to modify its definition in the direction of common usage, instead of a priori definition of its own, and then condemning actual human knowledge because it does not measure up to this. What accordingly the thesis maintains is, that the feeling of confidence and of assuredness, when this is not dogmatic, but is ready to lay itself open to all the evidence at hand, ought to be taken in the first instance as the sign that we are in possession of truth. If we actually have this, and continue after open-minded criticism to have it, in cases where the logical test cannot be applied, that means that we have no right at the start to identify the logical test with knowledge, and to demand that it must be met before we as philosophers are satisfied. If as human beings we are satisfied with less, then philosophy must accept this as a part of its data. And that men are thus capable of being satisfied is shown among other things by the standing fact that the belief in an outer world, or in the independent existence of our fellows, or in the obligatoriness of moral law, survives with hardly an effort the most overwhelming critical assaults.
- 1.6. Another explanation is perhaps needed in connection with the words "for me." The most direct source of confusion is that between "truth for me" and actual or objective truth. Purely on the ground of experience, it is obvious that at least I may have at one time a conviction of truth which afterwards I may lose. And our common interpretation goes further; it makes a difference not only between the feeling of truth now and later, but between the feeling or persuasion of truth and the real truth now. It holds that whatever my belief in the matter, a thing is really true or not true all the time; there is an objective truth or standard to which the personal belief may or may not correspond.
- 1.7. In saying, then, that truth for me is what I cannot help believing, I do not mean to imply that truth in the so-called objective sense is determined by my psychological beliefs. On the contrary, in every belief there is present the assumption of a validity which does not depend on the belief itself, but on

objective conditions. Whether the belief is justified or is a mistaken one, every truth must first be believed to be true by some man in particular; and therefore, for human purposes, it is impossible to separate what is really true from what is believed to be really true, and to get at the former apart from the belief. The fact may be one way or the other, or it may be something quite different from what has ever entered into the mind of man; but it becomes a matter of human inquiry and human dispute only as it is the object of a belief. Reality, as it presents a definite content that we can talk about, is subject to all the vicissitudes of human thought about reality.

- 1.8. "Truth for me" means, therefore, that man can attain to a knowledge of reality, not by becoming himself identified with this reality, but only through belief about it; and while belief always supposes that it has got at the actual facts, we know that this supposition is not always correct. From such a chance of error we, as human beings, cannot possibly escape. No man, not an absolutist philosopher, is able to get round the fact that any statements which he makes are after all his beliefs about things; they enter the field of discussion as reality interpreted by him, a private individual. Truth, in other words, is a term that belongs primarily to the realm of human thought about reality, and had better be confined to this. When accordingly we mean to refer to the object of a true belief, it will be preferable to speak, not of what I have somewhat loosely called objective truth, but of objective reality, or fact. Objective truth means only beliefs that are really true; and since every belief supposes itself to be really true--contains, that is, a reference to reality which it assumes that it is adequately describing--from the standpoint of its own inner intention at least the word "objective" is superfluous. That the belief sometimes is mistaken is due simply to the fact that it is man who talks about truth; and man is not infallible.
- 1.9. The problem of the criterion of truth is, accordingly, this: What, on reflection, justifies us in continuing to hold to our confidence in the things we believe to be true? And the problem divides itself into two parts: First, what are the original sources of belief? And, second, what is the test which we apply to strengthen our confidence, and justify it rationally, when for any reason it shows signs of failing?
- 1.10. There are two main forms of primitive or intuitive belief--by which I mean belief that rests on its own bottom, and does not depend upon security borrowed from other beliefs.
- 1.11. There is on the one hand intuition in the stricter sense, where confidence seems to depend on the immediate seeing that a thing is self-evidently so. This it is apparently which gives the type of certainty in our thinking, and which creates, perhaps more or less unconsciously, the philosophic demand

for an infallible standard. The range of its application is obviously so limited that it can almost be disregarded in the great majority of significant problems. I may have an immediate and, it would seem, an indubitable apprehension of mathematical and logical relationships, or of the nature of the content that enters into my experiences of sensation or of memory. But the confidence that my geometrical intuitions apply to a real spatial world, or that my logical demands are accepted by the reality with which I come in practical contact, or that events actually were as I remember them, or that sensation gives me information about actual things and forces, is a confidence that must rest on different grounds. None of these last assurances is capable of a certainty beyond the reach of sceptical doubt; and our belief must therefore come from other sources.

- 1.12. The source is, I judge, reducible in every instance to an implicit faith in our own nature and instincts. There are tendencies in various directions which constitute what we mean concretely by "ourselves," and from whose influence therefore we cannot normally get away; and belief may be defined tentatively as just the coming to consciousness of that persistent active direction of attention which no obstacles can effectively shunt off. In this work of influencing belief--it is to be remembered that I am for the moment considering only the starting points of belief, which must be presupposed before confidence can be either strengthened or weakened by the subsequent application of criteria--three roughly distinguishable forms may be enumerated which human nature takes; there is a confidence due to our intellectual nature, to our practical needs, and to our emotional preferences. To show that these all represent actual occasions of belief, it is only necessary to point to familiar facts.
- 1.13. The most fundamental condition of belief is man's intellectual and logical constitution. To think at all we have to accept our human ways of thinking. And that men do accept them, and place confidence in their own intellectual make-up, is a simple matter of fact; the sceptical argument that for all we know our minds may have been constructed to falsify reality rather than to grasp it truly, while it is incapable of logical refutation, has ordinarily not the least effect as against a healthy tendency to believe.
- 1.14. The second aspect of man's nature, his practical needs also is self-evidently a source of belief. Man can satisfy the requirements of his organism only by taking for granted, and utilizing, the physical world about him; and the strong practical assurance he has of the existence of this environing world, and of its general laws, is plainly connected with his absolute need for accepting it if he is to continue alive. It is not difficult to throw doubt upon it if we elect to keep to purely speculative considerations.

But the fact remains that such arguments as philosophy has resorted to have entirely failed to eradicate the belief, either in the non-philosophic mind, or, it is likely, in his better moments, in the philosopher himself. Accordingly as a real and persistent belief it has to be taken account of in our search for truth.

- 1.15. The third source in human nature has a still poorer standing in the philosophic world; and here the philosopher gets some support also from the more cautious layman, who sees that beliefs due to emotion or desire are peculiarly liable to go astray. At present however I am merely pointing to the fact that desire and feeling do notoriously tend to carry belief in their train. And their influence is so far-reaching and insidious that even the philosopher on his guard against it does not escape. The very effort to escape has its dangers; a man will almost invariably be found leaning a little backward through his desire not to be influenced by desire. And if we really cannot escape the influence without superhuman powers, it would seem the sensible course to include this, too, in our theory of belief, and so of truth, since in so far as human nature is actually the source of belief, any ineradicable element of human nature may be expected to play a part.
- 1.16. How, when belief wavers, are we to go to work to give it a reflective or rational justification? It is highly important to remember once more that belief must already exist before this question can be asked, and so that there must be a first and ultimate source of truth which is prerational. But equally it is clear that mere immediate or instinctive belief is not enough for human beings. Such belief needs to be emphasized in its proper place, in view of the strong metaphysical temptation to overlook it, and to reduce everything to logic. But for our ordinary purposes it can be taken for granted. How can beliefs be justified, so as to separate out the sheep from the goats?
- 1.17. The answer I should give to this last question is the familiar one of "coherence." Coherence I think must be rejected as a sufficient definition of truth, or a sufficient reason for belief. That it is not the definition of truth I shall argue presently at length; and there is at least a prima facie objection to the claim that mere consistency of ideal content can safely be trusted even as a criterion, unless it is also backed by the compulsion of so-called "facts." But with belief presupposed, it does seem to be the case that coherence is the only test by which we can

1.18. p. 12 next

## **2. The Definition of Truth or Truthness**

- 2.1. I have constantly presupposed a certain doctrine which at the present day is widely disputed--the notion of truth as a correspondence between idea and reality.

- 2.2. In such a definition we are not at all concerned with what concretely is the truth, nor with a working criterion to distinguish truths from falsehoods. Perhaps the special nature of the problem can be suggested by saying that it is a question about the definition of "trueness." Every belief, that is, makes a claim to being true; what does it mean abstractly by such a claim, irrespective of whether or not the claim is justified? Thus it does not for our present purpose make the slightest difference whether sense qualities like sound or color really belong to the physical world or not; in our unsophisticated moods we believe they do, and the question is what such a belief implies or means.
- 2.3. What are the conditions that must be met if the belief is to have the "trueness" which belief always assumes itself to have?
- 2.4. I shall begin by distinguishing four elements in the knowledge situation which an empirical analysis seems to reveal--distinctions which have enough apparent claim at least to stand for facts.
- 2.4.1.** First, there is the object perceived, the real thing with its status in the world of reality independent of the knowledge relation.
- 2.4.2.** Over against the object stands a second fact, which common sense has been accustomed to accept, and to think of as an independent and--in a specified sense of the term--subjective entity, belonging to the realm of psychological experience--the "state of consciousness," or the psychical state, as an existent. Here again we have a sort of fact that is nowadays not universally admitted; and it will be a part of my task to defend it. But meanwhile I find no excuse for anyone pretending that he does not know what the phrase is meant, at least hypothetically, to stand for. It may be identified summarily as that which constituted the whole stock in trade of the traditional English introspective psychologists--the bits of psychological stuff into which it was their business to analyze the conscious life.
- 2.4.3.** About the next point there is what in familiar language may be called our "meanings" or "ideas." A real possibility of confusion lies in the fact that "meanings" have two different aspects, which it will be one main purpose of what follows to try to adjust. On the one hand, a meaning is distinctly "our" meaning; it belongs, that is, in some sense to the realm of psychological experience. We talk about our "ideas," in the sense of the traditional psychology, as events in the stream of consciousness with a particular existential locus. But on the other hand a meaning, from a different angle, does appear to have a non-psychological objectivity. It is always on the point of breaking loose from its local embodiment in the psychical series. When we subject it to ordinary psychological

introspection it tends to elude us, leaving us simply with the "image"; and between the image, a plain psychological existent, and the meaning, there is, however close the connection, no identity. Indeed the meaning seems to belong rather to the object than to the image; it is the object's nature, or "essence." Or it may even claim a status as a timeless entity, inhabiting a logical world of its own independent of any attachments; thus we may speak of it as the "same" meaning no matter who thinks it,