

$$2 + 2 = 5$$

For the song by Radiohead, see *2 + 2 = 5* (song).

The phrase "**two plus two equals five**" ("**2 + 2 = 5**") is a slogan used in many different forms of media; more specifically in George Orwell's *Nineteen Eighty-Four*^[1] as an example of an obviously false dogma one may be required to believe, similar to other obviously false slogans by the Party in the novel. It is contrasted with the phrase "two plus two makes four," the obvious—but politically inexpedient—truth. Orwell's protagonist, Winston Smith, uses the phrase to wonder if the State might declare "two plus two equals five" as a fact; he ponders whether, if everybody believes it, does that make it true? The Inner Party interrogator of thought-criminals, O'Brien, says of the mathematically false statement that control over physical reality is unimportant; so long as one controls one's own perceptions to what the Party wills, then any corporeal act is possible, in accordance with the principles of doublethink ("Sometimes they are five. Sometimes they are three. Sometimes they are all of them at once").^[2]

1 History

1.1 Coinage

The earliest known use of this idea—that two and two could somehow become five—is in an 1813 letter by Lord Byron to his soon-to-be wife Anabella Milbanke in which he writes, "I know that two and two make four—& should be glad to prove it too if I could—though I must say if by any sort of process I could convert 2 & 2 into *five* it would give me much greater pleasure."^[3]

1.2 Victor Hugo and Fyodor Dostoyevsky

In Fyodor Dostoyevsky's *Notes from Underground*, the protagonist implicitly supports the idea of two times two making five, spending several paragraphs considering the implications of rejecting the statement "two times two makes four."

His purpose is not ideological, however. Instead, he proposes that it is the free will to choose or reject the logical as well as the illogical that makes mankind human. He adds: "I admit that twice two makes four is an excellent thing, but if we are to give everything its due, twice two makes five is sometimes a very charming thing too."

Dostoyevsky was writing in 1864. However, according to Roderick T. Long, Victor Hugo had used the phrase back in 1852. He objected to the way in which the vast majority of French voters had backed Napoleon III, endorsing the way liberal values had been ignored in Napoleon III's coup.^[4]

In *Napoléon le Petit*, Victor Hugo writes: "Now, get seven million five hundred thousand votes to declare that two and two make five, that the straight line is the longest road, that the whole is less than its part; get it declared by eight millions, by ten millions, by a hundred millions of votes, you will not have advanced a step." Here, Hugo is echoing earlier French thought—Sieyès, in his "What Is the Third Estate?" uses the phrase, "Consequently if it be claimed that under the French constitution, 200,000 individuals out of 26 million citizens constitute two-thirds of the common will, only one comment is possible: it is a claim that two and two make five."^[5]

It is very plausible that Dostoyevsky had this in mind. He had been sentenced to death for his participation in a radical intellectual discussion group. The sentence was commuted to imprisonment in Siberia, and he changed his opinions such that they would fit no conventional labels.

The idea seems to have been significant to Russian literature and culture. Ivan Turgenev wrote in *Prayer*, one of his *Poems in Prose* "Whatever a man prays for, he prays for a miracle. Every prayer reduces itself to this: Great God, grant that twice two be not four." Also similar sentiments are said to be among Leo Tolstoy's last words when urged to convert back to the Russian Orthodox Church: "Even in the valley of the shadow of death, two and two do not make six." Even turn-of-the-century Russian newspaper columnists used the phrase to suggest the moral confusion of the age.^[6]

1.3 Soviet planning

The Soviet Union began its first five-year economic plan in 1928. Its goals were ambitious from the start, seeking the immediate transformation of the USSR into an industrial nation. The consequences for underperformance during the plan were severe; managers who admitted missing their targets, even as those targets were revised upward, could be charged with economic wrecking.^[7] After statistics from the first two years indicated that the plan was ahead of schedule, Joseph Stalin announced that the plan would be completed in four years.^[8] Propagandist Iakov Guminer supported this campaign with a 1931

poster reading “ $2+2=5$: Arithmetic of a counter-plan plus the enthusiasm of the workers.” Stalin declared the plan a success at the beginning of 1933, noting the creation of several heavy industries where none had existed; at the same time, he urged more cautious planning in the future.^[9]

1.4 George Orwell

George Orwell had used this concept before publishing *Nineteen Eighty-Four*. During his career at the BBC, he became familiar with the methods of Nazi propaganda. In his essay “Looking Back on the Spanish War”,^[10] published in 1943 (six years before the publication of *Nineteen Eighty-Four*), Orwell wrote:

Nazi theory indeed specifically denies that such a thing as “the truth” exists. ... The implied objective of this line of thought is a nightmare world in which the Leader, or some ruling clique, controls not only the future but *the past*. If the Leader says of such and such an event, “It never happened” – well, it never happened. If he says that two and two are five – well, two and two are five. This prospect frightens me much more than bombs.^[10]

In the view of most of Orwell’s biographers, the main source for this was *Assignment in Utopia* by Eugene Lyons, an account of his time in the Soviet Union. This contains a chapter “Two Plus Two Equals Five”, that referred to Guminer’s slogan.

However, Orwell spoke of the Nazis, so he may have been making reference to the Reichsmarschall Hermann Göring, who once, in a debatably hyperbolic display of loyalty to Adolf Hitler, declared, “If the Führer wants it, two and two makes five!”^[11]

In *Nineteen Eighty-Four*, Orwell writes:

In the end the Party would announce that two and two made five, and you would have to believe it. It was inevitable that they should make that claim sooner or later: the logic of their position demanded it. Not merely the validity of experience, but the very existence of external reality, was tacitly denied by their philosophy. The heresy of heresies was common sense. And what was terrifying was not that they would kill you for thinking otherwise, but that they might be right. For, after all, how do we know that two and two make four? Or that the force of gravity works? Or that the past is unchangeable? If both the past and the external world exist only in the mind, and if the mind itself is controllable – what then?^[12]

2 Self-evident truth

In his play *Dom Juan*, Molière’s title character is asked what he believes. He answers that he believes that two plus two equals four.^[13] Belief is the psychological state in which an individual holds a proposition or premise to be true.^[14] A belief is separate from knowledge.^{[15][16]} Were certain absolute knowledge to exist, belief in an existential claim would be unnecessary. Molière seeks the freedom to believe that two plus two equals four. Orwell seeks the freedom to say that two plus two equals four, as an objective fact which the Party cannot touch.

René Descartes’ realm of pure ideas considers that self-evident ideas such as two plus two equals four may in fact have no reality outside the mind. According to the first meditation, the standard of truth is self-evidence of clear and distinct ideas. However, Descartes questions the correspondence of these ideas to reality.^[17]

3 In popular culture

- Popular English alternative rock band Radiohead used the slogan as the title for the opening track on the album *Hail to the Thief*.
- In the *Star Trek: The Next Generation* episode “Chain of Command, Part II”, Captain Picard is tortured by a Cardassian in a manner similar to the torture of Winston Smith by O’Brien from *Nineteen Eighty-Four*. During the episode, the Cardassian officer tries to coerce Picard to admit seeing five lights when in fact there were only four. Picard valiantly sticks to reality. Near the end when Picard is about to be brought back to his crew, he defiantly declares, once again, “There!...Are!...Four!...Lights!”^[18] However, later in a counselling session with Troi, Picard admits that he believed he *did* see five lights at the end.
- In Ayn Rand’s *Atlas Shrugged*,^[19] the hero John Galt posits that “the noblest act you have ever performed is the act of your mind in the process of grasping that two and two make four”.
- In presidential debates prior to 2009 Iranian presidential elections, reformist candidate Mir Hossein Mousavi accused his interlocutor, president Ahmadinejad, of being illogical and said: “If you ask (the president) what two by two makes he would answer five.” In the following days, one of the slogans chanted by Mousavi’s supporters was “two by two makes five!”
- In Mikhail Bakunin’s *God and the State*, he classifies Deism as: “Imagine a philosophical vinegar sauce of the most opposed systems, a mixture of Fathers of the Church, scholastic philosophers, Descartes and

Pascal, Kant and Scottish psychologists, all this a superstructure on the divine and innate ideas of Plato, and covered up with a layer of Hegelian immanence accompanied, of course, by an ignorance, as contemptuous as it is complete, of natural science, and proving just as two times two make five; the existence of a personal God.”^[20]

- Media critic Andrew Keen uses the phrase in his critique of Wikipedia’s policy to let anyone edit. He believes, along with Marshall Poe, that this leads to an encyclopedia of common knowledge, not expert knowledge. He believes the “wisdom of the crowd” will distort truth.^[21]

4 See also

- Asch conformity experiments – for more on how the influence of a majority can affect how a single person thinks.

5 References

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6 Further reading

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7 External links

- “Two Plus Two Equals Red”, *Time Magazine*, Monday, 30 Jun 1947

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