

In the Service of Good Writing

Accentuate the Positive!

By Laurie Endicott Thomas, MA, ELS

The words *positive* and *negative* have different meanings in different contexts. If you use these words carelessly, you might accidentally say the opposite of what you mean. In particular, be cautious about using *positive* to mean good and *negative* to mean bad. A positive test result can be bad news, and a negative trend in some variable may be good news.

The word *posit* came from the Latin word *positus*, which is the past participle of *ponere*, which means to put. If you posit something, you are suggesting that it is true. In contrast, *negate* came from the Latin word *negatus*, which is the past participle of *negare*, which means to deny. If you negate a statement, you are saying that it is false. The word *negate* can also mean to cause something to be ineffective. For example, an antidote would negate the effects of a poison. Thus, *positive* can imply affirmation, addition, inclusion, or presence while *negative* can imply denial, subtraction, exclusion, or absence.

In laboratory medicine, *positive* is generally used to mean presence and *negative* is generally used to mean absence. A positive test result suggests that something is present. In contrast, a negative test result suggests that something is absent. These results may be good or bad news, depending on which outcome you want. For example, a positive result of a pregnancy test is good news if you want to be pregnant and bad news if you do not. Of course, a test result may be true or false. A test that rarely produces false-negative results is described as *sensitive*. A test that rarely produces false-positive results is described as *specific*.

When you are writing about microbiology, keep in mind the difference between a negative test result and a gram-negative organism. In a specimen that has undergone the Gram staining procedure, the purple bacteria are gram-positive and the pink bacteria are gram-negative. A finding of gram-negative organisms in a sample of spinal fluid (Figure 1) is *not* a negative result. It is a positive result that confirms the presence of bacterial meningitis, which is a terrible thing.



Figure 1. A finding of gram-negative *Neisseria meningitidis* in a specimen of spinal fluid is a positive result. It confirms the diagnosis of meningococcal meningitis (Gram stain, original magnification $\times 1150$). Photomicrograph courtesy of the Centers for Disease Control and Prevention.

Psychiatry also uses *positive* to mean presence and *negative* to mean absence. The positive symptoms of schizophrenia are symptoms that have started happening, such as hallucinations, delusions, confused thought and speech, and movement disorders. In contrast, the negative symptoms represent things that have stopped happening. For example, the person may no longer express emotions normally. This symptom is called flattening of the affect. (Affect means the outward expression of emotion.) The person may withdraw from social interactions and may find it hard to finish or even start many of the ordinary activities of daily living. The positive symptoms of schizophrenia may respond well to antipsychotic medications. Unfortunately, the negative symptoms are far less responsive to treatment and can be far more disabling.

Positive and *negative* also have specialized meanings in mathematics. A positive number is a real number that is greater than zero. A negative number is a real number that is

less than zero. In a mathematical context, positive can also imply increase or progression. If your cash flow is positive, then the amount of money you have is increasing.

Positive and *negative* also have specialized meanings in chemistry and physics. Back in the 18th century, Benjamin Franklin argued that electricity was a form of invisible fluid that was present in all matter and that could sometimes be made to flow from one substance to another, such as when you rub two insulating substances together. Franklin used the word *positive* to describe items that he thought had an excess of this fluid and *negative* to refer to items that he thought had a deficit of this fluid. For reasons that are lost to history, Franklin decided that a piece of glass that had been rubbed with silk would be positively charged and a piece of amber that had been rubbed with fur would be negatively charged. An electrical current would therefore represent a flow of positive charge. But today, we know that an electrical current results from the flow of electrons, which have a negative charge. Thus, in physics, the direction of the current is the opposite of the direction in which the electrons are moving.

In photography, a positive image has shades and tones of color that are similar to its subject. A negative image is the opposite (eg, dark areas in the subject are rendered as light areas on the image). In molecular biology, the words *positive* and *negative* have particular meanings with regard to the information encoded in DNA or RNA.

In many contexts, the word *positive* connotes growth and progress. As a result, the word *positive* is often used to mean good or desirable. In those contexts, the word *negative* tends to connote loss and retreat. As a result, *negative* has often been used to mean bad or undesirable. Yet some kinds of growth are undesirable, and some decreases are desirable. For that reason, careful writers should observe the following rules:

- Avoid using the word *positive* to mean good and *negative* to mean bad, especially in contexts where *positive* and *negative* have other meanings.
- When describing the results of a test that yields a positive or negative result, you may need to explain which result is desirable and why.
- When describing the result of some test that produces a numerical value, you may need to indicate whether a high score is a good or bad thing.

Laurie Endicott Thomas is the author of Not Trivial: How Studying the Traditional Liberal Arts Can Set You Free (www.nottrivialbook.com). For good news about the fight against meningococcal meningitis, see her book No More Measles! (www.nomeasles.com).

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