

# 'In short, the Grelling paradox!'

## A man whose flame could not be extinguished by the Nazis

is "heterological" a heterological word?

no → "heterological" is autological → "heterological" describes itself, contradiction

yes → "heterological" does not describe itself → "heterological" is not heterological, contradiction

### Some background

If one wants to indulge on the thought-provoking delights of the Grelling-Nelson paradox, one has to assume and accept as true a few things which have been defined over history. As is the case of geometry, or more generally of mathematics, where the definitions of *line* and *plane*, for example, are paramount to the theory, study and logical conclusions that may follow, so in linguistics (the scientific study of language) we must be agreed on the denotative, "dictionary", semantic value of the words and terms that we employ in order to understand each other and draw possible conclusions. For the purposes of this extract, I will mention the four definitions that are essential and pertinent to the understanding of this paradox.

A paradox is a self-contradictory proposition or one that seems to be self-contradictory but in reality expresses a possible truth.

An adjective is a describing word that qualifies a noun, being a noun a naming word that identifies objects, living creatures, places, concepts etc. For instance, in a phrase such as "I saw a black dog", black is the adjective and dog the noun.

An autological word is one which can also be descriptive of itself; one that can express properties that it also possesses.

A heterological word is one that does not describe itself; it does not have properties of its own.

Examples:

"pentasyllabic" is an autological word, because it has five syllables and is therefore pentasyllabic itself.

The word "noun" is a noun itself. It is therefore autological.

"English" is autological, because "English" is English.

"Sesquipedalian" is sesquipedalian itself; it contains many syllables and it's long.

"long" is not a long word. "long" is therefore heterological.

"German" is not German. (It's an English adjective)

"monosyllabic" has five syllables; it is not monosyllabic.

Note how synonyms (in this case adjectives with equal or similar meaning) are not all necessarily either autological or heterological.

"Sesquipedalian" and "long" are synonyms, yet the former is autological, whereas the latter is heterological.

### The paradox

It appears that, while for nouns other different theories and reflections may be recounted, most adjectives are definitively either heterological or autological, with the exception of the adjective "heterological" itself.

### **We can ask: Is "heterological" a heterological word?**

If the answer is 'no',

"heterological" is autological.

This leads to a contradiction, for in this case "heterological" does not describe itself: it must be a heterological word. But if the answer is 'yes', "heterological" is heterological. This again leads to a contradiction, because if the word "heterological" describes itself, it is autological.

### **One may also ask if**

If we say that "autological" is autological, and then ask if it applies to itself, then yes, it does, and thus is autological;

If we say that "autological" is not autological, and then ask if it applies to itself, then no, it does not, and thus is not autological.

### In other words

Whilst trying to establish whether "heterological" is heterological we are faced with contradictions, ("heterological" is heterological if and only if "heterological" is autological), and whilst trying to establish whether "autological" is autological we are faced with tautology, ("autological" is autological if and only if "autological" is autological.)

### Sign language

As Grelling himself postulated, although of course it can be studied and has relevance in other languages, the paradox has to be assessed within the boundaries of English;



*Kurt Grelling at work in his study, 1934*

Born 2 March 1886 in Berlin, Kurt Grelling was a philosopher, logician and linguist. In Göttingen, where he received his doctorate in mathematics in 1910 with a dissertation on the axioms of arithmetic and set theory, he collaborated with philosopher Leonard Nelson. Together, they tried to resolve Bertrand Russell's paradox, which in 1903 had rocked the foundations of mathematics. He was fluent in French, Italian and English, and translated books from these languages into German, including four by Russell, of whom he was a champion. In the late 1920s, with Hans Reichenbach and some other philosophers who held logical empiricist views, he established the well-known Berlin Group. His Jewish origins and his socialist political views ended his teaching career after the Nazis took over in 1933. In 1938, following a series of deadly attacks on the Jewish community by the Nazis (The Crystal Night), he resolved to stay in Belgium, where he was arrested in 1940 and deported to a camp in "free" Southern France. When a visa for the US arrived it was already too late. Kurt and his wife were caught and shipped to Auschwitz, where they died in the gas chambers on 18 November 1942.

boundaries of English;  
"Deutsch" is autological in German but its exact semantic equivalent in English, "German",

is heterological in English.  
"Anglais" is not English; it's French, and so on. Also, if we say "manual" in British sign language (considered by some linguists to be an oral language as well as all other spoken languages), "manual" is autological, but is heterological in all other forms of spoken and written British English. This last example may help suggest or confirm that British sign language and British English,

*One may also ask if "autological" is autological.*

*It can be either:*

*if we say that "autological" is autological, and then ask if it applies to itself, then yes, it does, and thus is autological;*

*if we say that "autological" is not autological, and then ask if it applies to itself, then no, it does not, and thus is not autological.*

A **tautology** is a formula that is true in every possible interpretation



sharing many similarities, are two very discreet languages.

### Russell

The Grelling paradox bears some resemblance to the Russell’s paradox, which questions like so: “Does the list of all lists that don’t contain themselves contain itself?”. If it does, it should be removed, because that list is not supposed to contain itself. If it doesn’t, it should be added, because that list is supposed to contain all the lists that don’t contain themselves. So, going back to Grelling, given that each and all adjectives correspond to lists of objects which they describe, an autological word can be understood as a list of elements, one of which element is the element itself. The problem arises when we ask if “heterological” is heterological, which is analogous to asking whether a list of all lists not containing themselves contains itself as

contains itself as an element.

### Other observations

The word “red”, whenever written, painted or printed in **red**, has to be autological. Similarly for all other colours and for “italics” and “bold”, which, whenever in *italics* and **bold** respectively, are no longer heterological but autological. Another exception might be made for the word “embossed”, which, whenever embossed, has to be autological. Incidentally, “embossed” on its own with no additional attributes, has as referents, or nouns it can qualify, *all things embossed*, including itself in its embossed forms. We may also argue that “loud” is always heterological except when it is cried out loud. And in such particular case, “loud” is a signal descriptive of itself, thus autological. Then there are some adjectives such as “redundant” or “superfluous”, which some people may consider to be autological, because, for example, they only use “unnecessary”. “Recherché” is another adjective which can either be autological or heterological

pending on individual opinion or experience.

At this stage a quite convincing conclusion ensues: most adjectives are heterological, much fewer in number are autological, and some appear to be both autological and heterological depending on their different oral or written configurations. This last ambiguity, however, might be eliminated for some adjectives like “red” or “embossed”, or even “loud”, if we make sure we only refer to the abstractions of these words: their concepts (or types) as opposed to their tokens (objects or instances of their concepts).

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autological  
heterological  
paradox

“A list of all horses is not a horse; it’s a list. But a list of all lists must include itself, because it’s a list”