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MAGAZINE

# The language of the popularizer: how to make yourself understood without ambiguity

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**A key figure today is the one of the popularizer, who is tasked with bridging two worlds but also two languages: one that is common but not very rigorous in defining words and one that is technically precise but often incomprehensible. Moving from one to the other cannot ignore the logic implied by the various specific lexicons.**

“Apparently in the medical community negative means good, which makes absolutely no sense. In the real world it would be chaos.”
This is how Michael Scott justifies himself in the series The Office, after misunderstanding the negative outcome of one of his employee’s oncology tests.

This is a semantic ambiguity that is far from new to our ears, especially after pandemic years when we talked about sars-cov2 test outcomes almost on a daily basis: at that time, puns about “being positive” circulated everywhere, but think of Trump’s tongue-twister; he said in 2020 that he had “tested positively toward negative,” i.e., he did not have Covid.

How is such confusion possible?
The point is that the scientific one, at least lexically, is in fact a separate language, distinct from the common one: not only do the various human languages group words differently (e.g. in spoken English fly denotes the whole order of Diptera such as gadfly and firefly, while in Italian, the word for fly, i.e. *mosca*, identifies only one insect), but scientific taxonomy is added to them as an additional language (in both Italian and English we speak of electric eel, but biologically it is not part of the order Anguilliformi).

There is no such a thing as a best language, each one of them is more responsive to a specific purpose: scientific nomenclatures are disambiguating (there is usually only one meaning for each word and vice versa) , but at the price of some degree of technical and opaque wordiness, understandable only to specialists (or at most to those who recognize Greek and Latin suffixes such as -phorion or -cita); common language is less rigorous and gives rise to a higher number of synonyms, but it is simpler and more accessible. This  was noted in 2001 by popularizer N.

deGrasse Tyson, even if he described the language of astrophysics as closer to everyday language.

Thus, a “translation” is often necessary, to avoid misunderstanding.
The figure primarily responsible for this translation, as the bridge between the two worlds, is the one of the popularizer: how to achieve as much clarity as possible without sacrificing as much precision, or vice versa?

A hint comes again from the word negative, in the locution *negative record*, which technically means the lowest value reached in a series, for example, the negative birth record in Italy in 2022. Often, however, people make the same mistake as Michael Scott, interpreting negative as “bad” and not as “minimum”: this is when we speak of a negative record for inflation, goals conceded, or diabetes patients, referring, though, to an all-time high. Similarly, it makes no sense to call the highest unemployment rate since 1992 a negative record (unless you mean the minimum number of people employed).

In short, language – in its lexical organization and syntax – implies logic: if these reasoning assumptions are not easily graspable, one cannot think of silencing them; should we do that, the language implying them would become a vehicle for confusion.

It is again inflation that lends itself as an example: it measures the increase in prices over a period of time, i.e., the speed of such increase. If inflation rises, it means that price growth is even accelerating; if inflation is constant, it does not mean that prices are stable, but rather that they are rising at a fixed rate.
What if inflation falls? It is very common to be led to believe that prices are falling, but they are not: the pace at which they are rising is getting slower, but they are rising – they are just decelerating.

Prices would fall not only if their acceleration were negative, but also their acceleration speed; in other words, it is not enough for inflation to fall (disinflation), but for it to become negative (deflation). This is a problem common to various trends subject to acceleration, think of these past years with Covid case graphs consulted daily: are they decelerating? Are they going down?

In these cases, the language is potentially ambiguous, because the same verbs (“dropping,” “increasing…”) can refer to the curve but also to its pace or even its acceleration, implying something different each time: therefore, before employing these specific terms, a preliminary phase of explaining the logic behind them would be appropriate, but how to do it?

If one masters these topics, it is easy to recognize the relationship between the trend of a function, its first derivative, second derivative, and so on, but for those who are unfamiliar with them is a far from transparent matter.
A more effective way might be to visualize in a simplified and straightforward manner the difference between the different orders of speech: if I drive a car I am moving forward at a certain speed, which may even increase if I step on the accelerator; if I do not accelerate, however, it does not mean that I am not moving, I am simply moving at a constant speed; and if I step on the brake pedal, i.e., I decelerate? I certainly do not move in reverse, I keep moving forward but at an ever decreasing speed.

Without falling into the vicious circle of terms that are used to explain a concept but presuppose an understanding of the concept itself, the solution is perhaps a controlled osmosis between ordinary and scientific language: when a term is needed in both, it should be treated almost as a homonymic pair of words, defining from time to time the meaning being given to it, as in a legend.

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