The problem with jargon is quite massive because most of the major disciplines in science have created terminologies. Also, clinical professionals that apply outcomes developed by researchers are unable to explain the tenets of science to patients.

For example, even the research community is unable to explain how acetylation, methylation and phosphorylation interact relative to cellular physiology. Physicians are aware that the entire human body is comprised of cells. However, they are unable to explain to anyone how cells obtain their nutrients (food) or how they communicate with each other to enable the ability to collaborate.

A life sustaining cellular mechanism such as autophagy is universal to all cells but it has many definitions and interpretations; i.e. recycling and **conversions**. Often referred to as "taking out the trash" the mechanism has been misconstrued by cellular biologists. As a result, the most important cellular mechanism is misunderstood and not addressed adequately as a means of "repair" or prevention of disruption.

In terms of significance, with DNA repair and copy error mutation representing the primary cause of 2/3 of chronic diseases, the catabolic activities in cells (aka autophagy) explains why efforts must be made to overcome misunderstands of this crucial mechanism for cellular health and survival.

Refer to the following non-commercial explanation for catabolic and anabolic activity of cells.

http://www.mcfip.net/upload/Epigenetics%20-%20DNA%20Repair%20-%20Copy%20Errors.pdf

MCFIP has dedicated tens of thousands of hours to prepare messages that bridge communications between scientific disciplines, between researchers and clinicians and between clinicians and patients. Its website was created using hyperlink formats to enable interested parties to bridge communication through reference to technical information when needed to verify or validate assertions made relative to complex issues that are beyond the frame of reference of individuals outside of any particular silo of knowledge.

De-jargonization must start with children at the level of pre-K. Until this hurdle is addressed, STEM education will only advance at a glacial pace.

https://phys.org/news/2017-08-de-jargonizing-decode-science.html

De-jargonizing program helps decode science speak

August 11, 2017

Science is fascinating to many, but sentences that are full of expert-level terms and description can scare away even the most passionate readers. Can scientists learn to talk about their research without using too many technical terms? One of the obstacles to avoiding jargon is that scientists suffer from "the curse of knowledge" – they simply do not remember not knowing what they now know as experts.

To help scientists recognize which words are jargon and should be avoided or explained when engaging with the public, researchers at the Technion-Israel Institute of Technology and HIT–Holon Institute of Technology have created a program that automatically identifies terms the average person may not know. In a recent paper published in *PLOS One*, the free of charge and scientist-friendly De-Jargonizer hosted at scienceandpublic.com is introduced. Once a text is uploaded or pasted, the algorithm color codes words in the text as either frequent or intermediate level general vocabulary, or jargon. This is based on frequency of the words on an internet news site, designed and written for the public. The corpus will be updated periodically, and can be expanded to include other sources and languages.

"The De-Jargonizer provides a grim glimpse at the current level of jargon in scientific writing," says Technion Prof. Ayelet Baram-Tsabari.

When the authors compared 5,000 pairs of lay summaries, written for a wide audience, and their corresponding academic abstracts published in the journals *PLOS*

Computational Biology and *PLOS Genetics*. Results showed that lay summaries indeed include less jargon (10 percent) than academic abstracts (14 percent) on average; however, research previously showed that for adequate comprehension, readers need to be familiar with 98 percent of the words. Therefore, the recommended level of unfamiliar words, i.e. jargon, is 2 percent—much lower than the percentage found in the lay summaries.

"The scientists intuitively understand they need to use less jargon when speaking with the public than to their peers", says Baram-Tsabari, "but using so many unfamiliar words excludes the very people they are trying to engage."

The program is designed to help scientists and science communication instructors improve and adapt vocabulary use when communicating with non-experts. Also, professionals in medicine could use it to evaluate text level for communication with patients. Overall, the importance of such a tool is to aid in making science and research accessible to the public, to support informed citizenship and more productive dialogue in these complex times for science in society.

Explore further: Short science abstracts that avoid jargon and hype are cited less, study shows