

Symmetric language

Source: <http://sci.tech-archive.net/Archive/sci.physics/2005-08/msg02773.html>

- *From:* "Edward Green" <spamspamspam3@xxxxxxxxxxxx>
 - *Date:* 19 Aug 2005 08:35:46 -0700
-

Some characteristic language used in the description of symmetries existing or lacking in physical law seems to be rather misleading. For example:

"The essence of Charge Parity (CP) is the concept of symmetry. Both C and P are symmetries that are conserved in most particle interactions."

"C represents swapping the electric charges of all the sub-atomic particles in an interaction; in other words, swapping particles and antiparticles. P is called parity and it corresponds to looking in a mirror that reverses all three spatial co-ordinates."

<http://news.bbc.co.uk/1/hi/sci/tech/1330190.stm>

The symmetries are said to be "conserved", but the conservation of a physical quantity is not implied; there is no conserved physical quantity called "parity". It so happens electric charge is a conserved quantity, but this merely adds to the confusion. What is meant is that physical law is either invariant in form, or not, under the reversal of charge or coordinates.

-
- *Follow-Ups:*
 - ◆ ***Re: Symmetric language***
 - ◇ *From:* michaeld
 - ◆ ***Re: Symmetric language***
 - ◇ *From:* Uncle Al
 - Prev by Date: ***Re: attractive force via particle exchange – how?***
 - Next by Date: ***Re: Can sound waves tunnel through a vacuum?***
 - Previous by thread: ***The technologist has created an electro-magnetically propelled...***
 - Next by thread: ***Re: Symmetric language***
 - Index(es):
 - ◆ ***Date***

◆ ***Thread***