

Pseudoscience or Bad Popular Science, going deeper

There is a cottage industry that produces pseudoscience, usually for monetary or political gain, selling 4 effective habits, 10 ways to solve any problem, or explaining that men and women are from different planets. When you arrive at popular literature, you have to beware. Among popular books and self-help guides, some may be evidence based (e.g., ones written for general audiences by academics or credentialed reporters), but many are not. A great deal of popular science is really pseudoscience-- misleading and wrong. And some can be actively harmful. For example, so-called "conversion therapy" has been promoted as an intervention to change an individual's sexual orientation. These practices have been strongly condemned by the American Psychological Association. It infuriates scientists to have their beloved profession used for such hurtful purposes, and whenever these practices, recommendations, or books appear you can be sure that many scientific experts will speak out to discredit them.

Once you know what to look for, you can recognize pseudoscience in several different ways. First, it is rarely written by scientific experts who have a history of conducting the research cited as evidence. So, even if an author has many degrees and is at a famous university, you should always check to see whether any of their degrees are in the target subject matter. Second, many scientists, who *are* experts will as mentioned previously, be speaking out to denounce the work, so it will typically be surrounded by controversy in scientific circles. Third, many pseudoscience books are organized around very simplistic ideas that are often justified using reductionist neurobiological or cultural inferiority arguments-- about evolution or genetics or absolute differences between groups. Anyone who says that "all girls" are completely different from "all boys" on any psychological attribute or characteristic is simply wrong. Even if you consider one of the biggest differences between the genders, say height, it is obvious that there is enormous variation within groups and enormous overlap between groups. The difference between the tallest and shortest girls is much greater than the difference between the average girl and the average boy; and the tallest girl is definitely taller than the shortest boy. If you see a book written by a nonexpert that espouses simplistic biased ideas, and is creating a great deal of furor in the scientific community, you have probably had a close encounter with pseudoscience.

