Ray Peat's Newsletter

The first step in the evolution of ethics is a sense of solidarity with other human beings. **Albert Schweitzer**

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Critical Issues

People often ask me what I think of particular medical or biological articles, with the implication that, because it was published in a professional journal, it's worth considering. Skepticism about the statements of government officials and advertisers has increased in recent years, but I think most people still think there's something different about "science" publications.

In recent years, recognizing that they had credibility problems resulting from "lapses in integrity" or "unintentional bias associated with industry funding" (such as the SSRI fraud; Healy, et al., 2018), most medical journals now require their authors to submit statements about their financial conflicts of interest. Most editors, however, don't make such public statements about their own conflicts of interest, and the conflicts of interests of the referees, who evaluate the work, are rarely disclosed. The major publishers of journals are in the business to make a profit, and the editors' jobs depend on pleasing the publishers. Medical journals that sell advertising are in a position similar to that of the television networks, which usually can't afford to report critically on products they advertise. They do, however, like to publish derogatory information about the unadvertised cheap alternatives to their advertised products. The profit from selling reprints of a single article to a drug company to use in promoting sales can exceed a million dollars.

Richard Smith, a former editor of *The BMJ* (formerly the *British Medical Journal*), has said ". . . it took me almost a quarter of century editing for the BMJ to wake up to what was happening" (Smith, 2005).

Occasionally, editorial staffs have broken away from corrupt publishers to start a new journal. A new organization, to make published health-related information openly accessible to the public, the Public Library of Science, now produces open access publications, with free access and unrestricted reuse, as long as the author and original source are properly cited. This was a big step toward reducing the corrupting influence of corporate money in medicine.

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Besides the actual money and gifts, there are other very powerful influences that impair objectivity, for example, a researcher's consideration of the effects that a particular conclusion will have on the person's professional prestige, or its effects on his political or religious involvements. These considerations of power, prestige, and money affect not just

published work in science, but also university administrators and professors and the content of university courses. *Quid pro quo* corruption can be identified and, to some extent corrected, for example by the Open Access movement, and by exposure of the sometimes shady financial arrangements of that movement, as the librarian Jeffery Beall has done, but the antiscientific effects of cultural and professional involvements require a different kind of critical analysis, and as a result are seldom noticed, allowing their devastating effects to persist.

The editors of journals, whose objectivity may be questionable, choose the usually anonymous referees to evaluate the submitted work, so the reader who wants to think about the evidence that's being discussed has to consider the effects that those layers of personality—the funder, the researcher-writer, the judge, and the editor-publisher—have on the facts, the concepts, and the language.

Every word has its history and its locality, every sentence and paragraph has its personality. Any objectivity can only be discovered by taking into account as much of the subjectivity as possible. The style of writing in science journals is explicitly intended to depersonalize language, to give the impression of objectivity. That is a propaganda technique, that contributes nothing to scientific objectivity.

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Freedom to do research is restricted by many of the same forces that shape publication. The people who control the instruments and materials needed for investigating certain problems routinely restrict access to them to people who are known to be loyal to the ruling beliefs. For example, the US Atomic Energy Commission chose Elwood Jensen, with a long history in secret chemical warfare research, for exclusive access to radioactively labeled estrogen, which he used to demonstrate that estrogen isn't metabolized in the uterus, supposedly showing that it acts only by inducing expression of specific genes. **The uterus does metabolize estrogen**, but his false claim changed the direction of research in all the fields involving estrogen.

University administrators hire only the people who will reliably work on the right sort of problems, and too often those decisions are guided by donor interests. Some universities produce an extremely disproportionate amount of estrogen promoting research, and are enriched accordingly. After I had seen some flagrantly propagandistic statements by professors at Yale medical school, I wrote to the dean, asking how much money they received from the estrogen industry. He declined to tell me, and said my question was improper, because it suggested that money might influence the results of scientific research.

I was a professional. And when the president says go shoot somebody I go shoot him. General McPeak

Our daily "news" contains a blend of reports of Wars on Terrorism and Wars on Various Lucrative Diseases, with statements by eminent Experts and Authorities. Fear of terrorism and fear of disease are marketing tools. It is advertising for the interlocking system of government and corporations, at the same time that it is reinforcing the attitude that information is hierarchical, that the best information comes from the top experts, chosen by the top journalists. The basic message is always that the system is protecting us.

The recent "novichok" poisonings in England are a good example of the way the media and government work together. The public, without the slightest access to any facts about chemical testing, were told what they

should understand about the event and the substance, by the BBC, speaking for the secret police agencies and government officials. Critics were carefully excluded from the major media.

Ordinary medical publications are often treated similarly—for example, the news networks tell us a study has found that fish oil cures cancer or that aspirin causes cancer, but to read the details it's often necessary to pay a science journal $35 to see the information that would let you judge whether the reported conclusion was justified by the evidence. Often the research was subsidized by taxpayers, including payment of "page charges" to the publishing journals.

Someone sent me an "unedited" prepublication draft of an accepted manuscript of a recent article on aspirin and melanoma, so I don't know whether it's exactly like the published form. Since aspirin has a protective effect against a variety of cancers (Kaiser, 2012), it was surprising to see articles on the internet saying that this new study (Orrell, et al., 2018) found that aspirin causes melanoma in men. The authors say "Findings of this study suggest that chronic once daily aspirin exposure is associated with an overall increased risk" of malignant melanoma in men. In the context of the text of the article, where the authors contrast their results with a previous study that showed prolonged survival in malignant melanoma patients who used aspirin, they are clearly suggesting that their study shows that aspirin could cause cancer. Their text doesn't suggest that they are aware of any reason for the association other than the effect of aspirin on the organism. However, the details in a table describing the people in the study make the reason clear.

It is very well established that the risk of melanoma (like that of other cancers) increases exponentially with age, with most of the cases and deaths occurring after the age of 60. Heart disease has a similar age distribution, with men being far more likely than women to suffer from it, and it is very common to prescribe aspirin to old men to prevent heart attacks (Woods, 1994). When a man gets old he is more likely to develop melanoma, and (in the US and a few other countries) also likely to be prescribed aspirin—with age, heart disease, and the male gender being associated for biological reasons, and the use of aspirin being associated for social (medical) reasons.

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In the study, men were 2.5 times more likely to be prescribed aspirin than women. The average age of the people who weren't prescribed aspirin was 53.6 years, that of the people prescribed aspirin was 69.3 years. The decision to prescribe aspirin tended to separate older men into one group, younger women into the other group. The decision to prescribe aspirin was probably associated with male pattern baldness and prostate disease, as well as with melanoma, because those become more likely with age, but no one would suggest that aspirin caused baldness and prostate disease.

There was exactly no difference in the melanoma rate according to dose of aspirin, 81 mg. or 325 mg., but the mean age of the aspirin users who got melanoma was 76.8 years, and the mean age of the non-users of aspirin who got melanoma was 61.6 years. Did taking aspirin delay the appearance of

melanoma for 15 years? The most interesting thing to me is why a dozen people would want their name on that article.

The copy I have says "Funding sources: None." Following the title, there is the note**: "...** a large, single-center, urban, U.S. patient population cohort study from the Research on Adverse Drug events And Reports (RADAR) project **...."** According to Wikipedia, **"**Though it was without funding for its first four years, RADAR has raised about $12 million through grants from the National Institutes of Health, the American Cancer Society and other such institutions.**"**

Aspirin is just one of many cheap generic substances that have been attacked frequently in the medical journals. Around 1980, a friend showed me an article in JAMA that warned about the dangers of vitamin E, with many citations of research publications. Most of the articles that the author said showed the harmful effects of vitamin E were actually reporting biological changes that the researchers considered to be beneficial. The author was confident that few readers of JAMA were going to read the articles he cited.

Some authors and editors apparently trust that people are going to read no more than the title or the abstract, and design those to harmonize with the ruling paradigm, though the impression they give may be the exact opposite of the actual data in the article. Once I asked an author for a reprint of an article whose title indicated a brain-protective role for estrogen, but when I got the article it didn't discuss that issue. I emailed her, and said I didn't find that in the article; she replied, saying that it was there. After a couple of email exchanges, she gave up, and told me that that was the consensus of the profession, and that the title wasn't her responsibility, anyway. Around the time she published that article, she had gone to work for a major estrogen producer.

Salt, sugar, saturated fats, coffee, milk, cholesterol, sunlight, carbon dioxide, and progesterone are other things that often receive the attention of science propagandists.

The antiscientific effects of cultural and professional involvements require a different kind of analysis, and as a result are seldom noticed, allowing their devastating effects to persist.

Many dermatologists still recommend the use of sunscreen lotions and avoidance of sunlight, but it's likely that they are contributing to the continuing increase in malignant melanoma. A worldwide survey of exposure to ultraviolet radiation in relation to cutaneous malignant melanoma (CMM) didn't find evidence anywhere of reddening (sunburn) doses of UVB (the higher energy band of ultraviolet) correlating with CMM. They did find that "Both Europeans and Americans in some age groups have significant increasing CMM incidences with decreasing UVB dose, which shows UVB is not the main driver in CMM and suggests a possible role for lower cutaneous vitamin D3 levels and UVA (315–400 nm) radiation" (Godar, et al., 2017).

The production of irrational claims, based on various types of misleading experiments, to justify the use of estrogen supplements has been an important industry since about 1940. Slightly later, a subordinate industry has grown up around the need to misrepresent any of the natural substances that act as part of the body's defense against estrogen excess and estrogen-like processes. Aspirin, vitamin E, and progesterone can be partly understood as antiestrogenic substances, if the biological generality of estrogen is recognized, but it is exactly that idea of biological generality (which, in different forms, was the basis of historical medical doctrines) that the drug industry feels must be suppressed.

The mechanistic drug ideology came to a head several years ago in refining the idea of cancer as a genetic disease, resulting in the scheme of "personalized, targeted, cancer therapy," in which the unique genetic structure of a person's cancer became the (extremely profitable) basis for choosing a "customized" chemotherapy for that "unique cancer." A commercial-academic venture at Duke University was upset, starting in 2012, when the data showing the effectiveness of the method was found to have been falsified. One doctor was judged to have been completely responsible for the fraud, but the extreme slowness of the system to acknowledge that there was a problem has left its impression.

The idea of personalized, tumor-specific chemotherapy itself is fraudulent at a deeper level, since it's based on an individuality based on mutated DNA, while it's now recognized that epigenetic cellular individuality is an on-going process throughout the body, involving continuous changes of the cytoplasm as well as the nucleus.

Meanwhile, the holistic, constitutional approach to cancer and other problems is constantly being attacked, in the effort to create a cultural landscape in which the only acceptable science is mechanistic, molecular, and genetic. Progesterone's long history of anti-tumor effects has led to the discovery of various somewhat clever ways to deny those effects. They discovered that if they used a carcinogenic-estrogenic-immunosuppressive solvent as the vehicle for administering progesterone by injection, they could sometimes overcome and reverse its anticancer effects.

Until the 1970s, polyunsaturated vegetable oils, usually with benzyl benzoate or benzyl alcohol, were used as a solvent for injected progesterone, despite their known cancer promoting effects. They have continued to be used as a solvent for testosterone. Sometimes pure benzyl alcohol was used as the solvent for injections, but the quick crystallization of the progesterone after injection caused problems. Ethyl alcohol came to be the main solvent used for in vitro study of progesterone's effects, especially with cancer cells. Ethanol is highly soluble in water, so that when a solution of progesterone in ethanol is added to a culture dish, the ethanol dissolves in the water, leaving the water-insoluble progesterone to crystallize. As far as I know, the fate of those crystals hasn't been investigated, but it's known that ethyl alcohol has a hormonal action, activating the estrogen response system (Etique, et al., 2004, Monteiro, et al., 2008, Wong, et al., 2012).

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The estrogen so-called receptor can act, without the presence of estrogen, when the cell is stressed by hypoxia, ionizing radiation, or inflammation, allowing things that damage the cell to supplement whatever estrogen is present. Aspirin, vitamin E, and progesterone protect against a broad spectrum of harmful factors, besides their various antagonistic effects on the estrogen system itself. One of progesterone's major effects is to suppress or degrade the "estrogen receptor." The so-called progesterone receptor, however, is induced by estrogen, normally permitting the presence of progesterone to neutralize estrogen's action. This means that, in the absence of progesterone, its "receptor" is simply part of the estrogen system, and is unable to neutralize estrogen. These facts are frequently manipulated to support the claim that progesterone

can do what estrogen is known to do, such as promoting cancer development.

When a substance or process is important economically, it's likely that distorting propaganda will obscure objective consideration. Like the cartoons used in television drug advertising, "hormone receptors" can be used to tell a simple story, and, with the motivation of greed, that story is likely to be nothing but fiction.

Political and economic regulatory decisions are often said to be based on "scientific conclusions." The foods and the medical treatments that are available conform to government policies. There is no issue of scientific fact that isn't potentially of vital importance to the public. Knowledge of objective reality requires personal involvement and personal interests, and to understand any particular issue requires critical understanding of the fundamental commitments of the people who are making the claim of objectivity.

In the 1950s and '60s, the schools and media taught the public not to question the experts, because "they have information that we don't have." Slowly, the public is realizing that the failure of the experts' various wars proves that they didn't have valid information.

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