

why the doctor should prescribe this mixture of vital ingredients. Now let us look at only one of the facts which are carefully omitted. No mention is made of the fact that the zinc deficiency can only be produced by extremely careful and expensive purification of the diet. Every trace of zinc must be eliminated and if the chickens get only an occasional meal by random pecking in the barnyard they obtain enough zinc to destroy the effect. In short, the deficiency is a laboratory artifact and has no counterpart outside the laboratory. Or stated differently, if one is to draw logical conclusions the zinc makes the vitamin pills invaluable for laboratory chickens provided, of course, that one is willing to go to the expense of purifying their diet.

Here the physician is bludgeoned with a barrage of irrelevant facts he has neither the time, the inclination, nor frequently the expert knowledge to examine critically. Multiply this by a dozen detailmen each selling a dozen products and backed by a dozen wizards in the home office who hold a dozen conferences trying to determine the best way to make nothing appear like a pot of gold. This, too, is called post graduate medical education.

But let me turn to the practice which forms the backbone of all advertising and promotion of drugs. This is the use of the testimonial as scientific evidence of the efficacy of drugs.

It was a practice in the Middle Ages for some people to wear suspended from the neck a cloth bag filled with asafoetida. The foul smell was believed to ward off plague. Apparently someone had observed that some people who used this medicinal fetish did not contract plague. Either it was not observed or not considered important that some who did not use it also did not contract plague. Since it is considered unscientific the practice has long since been abandoned. But it flourished a long time simply because it gave some people a greater sense of security and made them feel better, at least until they contracted plague. While the practice has been abandoned the principle which determined it remains with us essentially unchanged. Since the beginning of time men have stumbled over the meaning of the simple fact that when something is done for or to a person, especially if that something has magical or emotional significance, that person frequently feels better. At the present time it is better recognized but still poorly understood. It has been given the unfortunate title placebo effect. Similarly since the dawn of time men have stumbled over the error of attributing to various agents the ability to ward off or to cure disease without taking into account what happens to those who do not get the benefit of the agent. This practice was not abandoned in the Middle Ages and one need only examine any current medical journal to find examples of it masquerading as science.

Since the committee has had adequate exposure to the controlled study, the double blind, and the placebo, I shall not take the time to expand on this. Let me emphasize that no drug study is fool proof, but that the scientific validity of any study can be immeasurably increased by proper experimental design. [A drug trial which makes no allowance for placebo effect, and which fails to make accurate comparison with an untreated group is suspect, and the vast majority of reports on such studies are simply testimonials, not scientific evidence. A testimonial written by a doctor, even when it is given the additional cloak of respectability afforded by publication in a scientific journal, is still a testimonial. It has no more scientific validity than the opinion expressed by the woman who caught the largest tuna on record, that a certain brand of cigarettes are kind to the throat even when it appears in color on the back cover of a magazine. Yet the claims for the efficacy of an amazing number of modern drug products are based exclusively on this type of evidence.]

Testimonials are used not only to give apparent substance to the advertising and promotion of relatively worthless products, but also to extend the indications of effective drugs beyond the range of their real utility. They appear either as complete reprints or as priceless quotations in advertisements or brochures. They convince too many physicians that they should prescribe these drugs.

Now the true nature of these testimonials is well known to the industry and its own contempt for them is shown by its vernacular for sources from which they are easily obtained. These are called "stables". Still it is an important function, usually of the medical division, to send representatives with generous expense accounts to all parts of the country searching out these sources. The burlesque is compounded by calling the drug trials "scientific studies" and by supporting them with grants which are charged to research cost. ]