A LINE ON LIFE 3/14/99 Evaluating Media Psychology * David A. Gershaw, Ph.D.

We see lots of psychological advice in print. However, it is hard to separate accurate information from misleading fiction. Here are some suggestions that might help.

Be skeptical. Media reports are often uncritical. To attract readers, they emphasize "*astonishing*" findings. However, when they indicate "*That's incredible*," it means "*It's unbelievable*." At least those statements are likely to be true.

Years ago, there were reports of "*dermo-optical perception*." They told of blindfolded people who could identify colors and read print (even under glass) with their fingertips. They were reported as having a "*sixth sense*" or "*X-ray eyes*." However, their abilities were based on a stage magician's trick — the "*nose peek*." Blindfolds left a tiny space next to the nose through which these people could peek. Once this peek was controlled, dermo-optical abilities disappeared.

In 1994, the National Enquirer had a headline, "Top University Researchers Reveal... 8 million may have been abducted by UFOs." In contrast, within the article, they quoted the conclusion of one of the researchers, "The public can rest assured that there is no evidence that millions of Americans are being abducted." The headline completely reversed the actual findings. We need to be on guard against this melodramatic misinformation in the popular media.

Consider the source of the information. Expect a bias from those who would profit from the misinformation. For example, "*Government tests have proven that no pain reliever is stronger or more effective than Brand X aspirin.*" What they don't tell you is that none were weaker either. Essentially, they are all equally effective.

The same problem is found with claims for sleep-learning devices, subliminal tapes or expensive courses that make promises of psychic abilities, better memory, weight loss, an end to smoking, or other instant benefits. They have a few testimonials but many unsupported claims.

This is especially true with psychic claims to promote the public's belief in their nonexistent powers. If and when they occur, psychic phenomena are extremely unpredictable. Stage mentalists cannot perform consistently without using deception. Typically they have assistants listening to conversations in the lobby or the line outside the theater. This information is passed to the mentalist. Later, the mentalist astonishes an audience member by stating, "Someone here is very concerned about... their Aunt Bessy... who is very ill." Once the spectator indicates the accuracy of these statements, more of the overheard conversation is revealed.

With so much new information, we need to become critical, selective and informed consumers.

See if a control group was used. To know a treatment is effective, any scientific experiment gives one group the treatment, but another very similar group — the control group — is not given the treatment. If a difference develops between the two groups, it can be attributed to the treatment. Without the control group, it is impossible to tell if the treatment makes a difference. (There is the joke about the flu remedy that cures the flu in a week. Otherwise, it takes seven days.)

The press quotes many experiments that don't have control groups: "Special Diet Controls Hyperactivity in Children"; "Food Shows Less Spoilage in Pyramid Chamber"; "Graduates of Firewalking Seminar Risk Their Soles." The last example talks about people who took an expensive course in "neurolinguistic programming," so they could walk barefoot over hot coals without injury.

To test the need for this course, physicist Bernard Leikind had a group of volunteers (with reasonably callused feet) walk over hot coals — without taking the course. They were not burned. Although the coals could be over 10000 F, they are very spongy, so they don't transmit heat well. When they are touched briefly, only a little heat is transmitted. It is like putting your hand in a hot oven. The air transmits little heat. However, if you just touch the sides of the oven, you can be badly burned. The metal transmits heat effectively.

Don't confuse correlation with causation. When two events occur together there is a natural tendency to perceive the first causing the second. If we eat something and get a stomachache, we assume that the food caused the pain — whether it actually did or not.

Prominent scientists had indicated that there was no scientific basis for astrology. In 1975, astrologer Jeanne Dixon responded, "*They would do well to check their records at their local police stations, where they will learn that the rate of violent crime rises and falls with lunar cycles*." Of course, the variation of crime statistics could have other causes — darker nights, bills or paydays being on a monthly basis, or many other factors. In addition, other, more controlled studies have indicated that this "*lunar effect*" is fiction.

Distinguish between observation and inference. Many people confuse observation with inference. Observable behavior — something that can be directly sensed — is a fact, while inference is a conclusion you make from that fact. Just because you *observe* a person crying, you need not always *infer* sadness. The person could have been peeling onions, just won a million-dollar lottery, or trying contact lenses for the first time. Researchers often make inferences from their data, saying that something *may* be the

cause. Unfortunately, some media and readers go one step further. They declare that it *is* the cause — treating an inference as if it was an observable fact.

These are some of the ways you can improve your evaluation of psychology in the media. In fact, you can start by using them to evaluate this article.

* Adapted from Dennis Coon's *Introduction to Psychology: Exploration and Application*, Brooks/Cole Publishing, 1998, pages 43-45.