Mission for Truth:

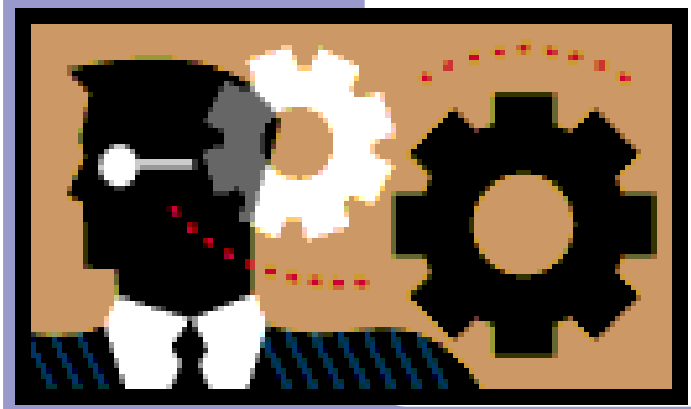
Critical Thinking

"Employ critical thinking skills to sort through the bunk and get to the facts and the real truth."

When researcher A says yes and researcher B says no, confusion abounds. For those who are counting on scientific data, this can be very frustrating. In a world where science is biased, facts are manipulated, doctors are mislead, industry acts to misinform, and few can be trusted, how do we find the truth?

When it comes to controversial illnesses, such as multiple chemical sensitivity (MCS), fibromyalgia (FM), and chronic fatigue syndrome (CFS), patients, doctors, and researchers must employ critical thinking skills to sort through the bunk and get to the facts and the real truth.

This "mission for truth" can be a long and frustrating journey in which those with industry ties may try to mislead others, in many cases for their own personal interests. One must be wary of financial ties, misrepresentations, unclear information, and conflicts of interest.



Critical thinking involves making decisions on facts and sound criteria, distinguishing between fact and opinion; asking questions; making detailed observations; analyzing and assessing ones own thinking, and uncovering assumptions to make assertions based on sound logic and solid evidence.

Attributes of a Critical Thinker

In Peak Performance, Ferret lists the attributes of a critical thinker as one who:

- Asks pertinent questions.
- Assesses statements and arguments.
- Admits a lack of understanding.
- Has a sense of curiosity.
- Desires to find new solutions.
- Clearly define a set of criteria for analyzing ideas.
- Willing to examine beliefs, assumptions, and opinions and weigh them against the facts.
- Listens carefully to others and is able to give constructive feedback.
- Suspends judgment until all facts have been gathered and considered (unbiased).
- Looks for evidence to support assumption and beliefs.
- Adjusts opinions when new facts are found.
- Looks for objective proof.
- Separates perceptions from logic.
- Examines problems closely.
- Rejects information that is incorrect or irrelevant.

"There are many logical fallacies that critical thinkers must watch for."

The process of critical thinking denies blind belief in what one reads or what one is told. One must take such things with a grain of salt and do their own research to form an educated opinion based on facts. Arguments for one side or the other often make assumptions. These assumptions must be avoided in favor of concrete facts and information.

There are many logical fallacies that critical thinkers must watch for. A logical fallacy is an error in reasoning. For example, a teenager might argue it's okay to stay out past midnight because "everyone does it". The fact that everyone else stays out late is irrelevant. How does what everyone else does make it okay? Everyone else could be wrong for staying out late. The teen could have special circumstances. Does the fact that everyone stays out late change the teens ability to get up for school the next morning? No, it doesn't and this is not a sound argument for staying out late.

Common Logical Fallacies

An ***ad hominem*** fallacy occurs when a person's character is attacked rather than discussing the topic itself. This might occur in a debate over whether to open a new school. Proponents against a new school might criticize their opponents personally by making comments about their net worth, identity, or intentions instead of addressing the real issue at hand… the possible need for a new school.

A ***bandwagon*** fallacy occurs when it is argued that a majority of people believe in something or chooses a particular course of action, so the argument/course of action must be true. An example would be "90% of people eat at McDonald's once a week, so it is good to eat at McDonald's once a week. All those people can't be wrong." In reality, there is no evidence on which to base this conclusion. The questions we should be asking are vast. What is the nutritional value of the food? How many calories does the food contain? Have any scientific studies shown an benefit to eating at McDonald's? Who funded those studies?

A ***snob appeal*** fallacy occurs when the argument used is "all those who are in the know support it." An example might be the argument "Anyone who's been around for awhile knows that fibromyalgia will never win a court case." The implication is that anyone who does not hold that belief is not in the "in crowd" and therefore is wrong and should not be trusted. However, this had no bearing on the truth of the claim, which must be examined and researched closely.

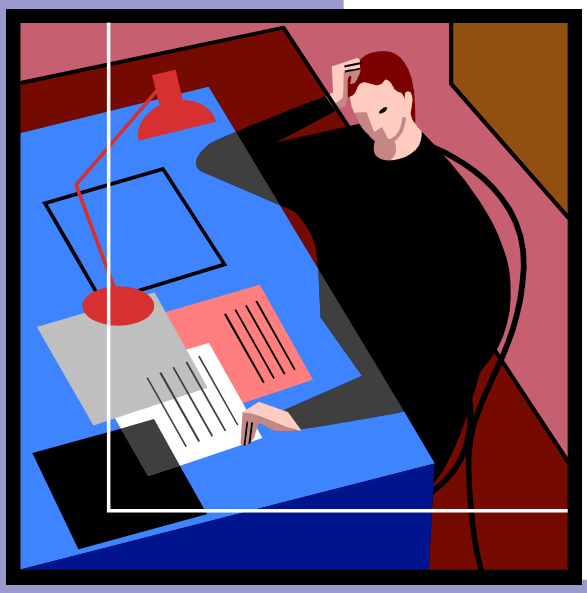
An ***appeal to tradition*** fallacy occurs when one claims that something must be true or best because that's the way it's always been done. In the case of a new school, a fallacious claim might be, "We've never needed another school, why should we build one now?" What has been done in the past has no bearing on the present need for a school.

"No matter how reputable someone is, if they did not have firsthand knowledge, their credibility is not strong."

A ***genetic fallacy*** occurs when ones claims that an idea, product, or person must be untrustworthy because of its racial, geographic, or ethnic origin. For example: "That food is toxic. I was made in China." Even though we know China has been in the news for several toxic products, that has no bearing on the food we are examining now. A critical thinker would need to have the food independently tested before declaring it toxic.

A ***false cause*** fallacy establishes a cause/effect relationship that does not exist and is the basis of superstition. For example, "I stepped on a crack on the sidewalk on my way home. When I got home I found my mother had broken her back falling down the stairs. Because I stepped on the crack, my mother broke her back."

There are many more logical fallacies, however these are enough to get started thinking about the need for critical thinking, questioning, and reevaluating our belief systems. Logical fallacies give the perception of being truthful when they do not provide sufficient evidence from which to make an informed conclusion.



Credibility of Evidence

Since most information comes to us second hand, how can we ensure the evidence we are basing our decisions on is credible? There are five criteria of credibility:

Reputation examines a sources history. A good reputation makes for a more credible source, while a bad reputation makes for a less credible source. Reputation is, of course, based on concrete and verifiable facts, not on ad hominem claims.

Ability to See examines whether the source of information is in a position of firsthand knowledge. No matter how reputable someone is, if they did not have firsthand knowledge, their credibility is not strong. Secondhand knowledge does not hold the same credibility.

Vested Interest examines whether the source of information has anything personally at stake. If a scientist is paid by a pharmaceutical company to perform a study on a new drug, he likely has a vested interest (financial) in the outcome of the study being supportive of the drug. In this case, credibility is reduced.

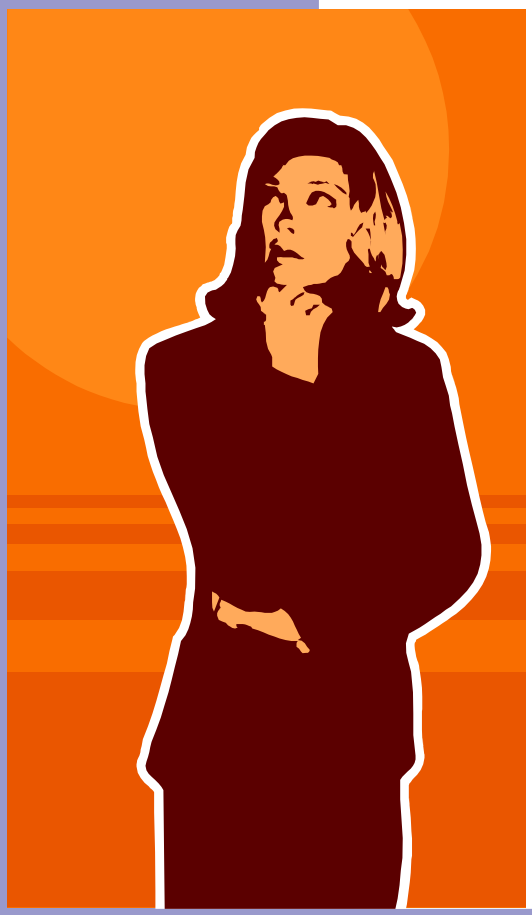
Expertise examines whether the source of information has the specialized knowledge and background needed to interpret the material in question.

Neutrality examines whether someone is predisposed to support a particular opinion for reasons other than vested interest. A woman who has been raped would not be likely to be a neutral witness in a rape trial.

"Each source of information should be rated for credibility."

The Value of Critical Thinking

It is highly likely that while reading this, you have discovered how information can be loaded with trickery designed to lead others to believe something that is not true. Perhaps you recalled being poisoned by something you were told was safe, such as amalgam fillings, vaccinations, or chemical materials used in your job. The dentist said amalgams were safe, but you developed mercury poisoning. The doctor said vaccinations were safe, but your child had a seizure and developed autism afterwards. Your boss said the chemicals on the job were safe or they would not sell them, and you were chemically injured. Critical thinking could have helped avoid these unfortunate mistakes.



Let's take the credibility of the doctor and his recommended vaccinations as an example. Some questions to consider based on the credibility guidelines are:

- What is the doctor's reputation?
- Are there any board complaints against the doctor?
- Does the doctor follow-up with his directly with his patients in a physical exam after vaccination?
- Does the doctor tell parents about adverse reactions and ask them to report any such reactions?
- Does the doctor keep a list of adverse reactions and statistics for his patients?
- Does the doctor receive any kickbacks from the pharmaceutical company making the vaccine?
- Does the HMO the doctor works for encourage vaccination or pay a bonus for exceeding a certain vaccination rate?
- What is the doctors specific training in immunology?
- Does the doctor have a degree in immunology?
- Does the doctor have the drug insert for you to review with both indications and warnings?
- How does the doctor react when you ask these questions?

Exploring these questions can help to determine the credibility of the doctor's opinion that your child should be vaccinated. Once the doctors credibility is determined, additional research into the science of the vaccines and credibility of the vaccine manufactures can be done to form your opinion based on available evidence. Both sides of the vaccination controversy can and should be examined in depth. Each source of information should be rated for credibility. Finally, compile and review the information you've gathered to make an informed decision. Throw out information that is not credible or uses logical fallacies.

Proper decisions can change lives!

Stay tuned for more "Mission of Truth" next month.