Measles, Peanuts And Logic

The outbreak of measles is a concern on the mind and therefore on the lips of many. The topic is a controversial one because many parents choose not to vaccinate due to the potential risk associated with the vaccine in comparison with the possible efficacy.

That argument aside, I want to take a look at the social dichotomy inadvertently established by the manufactured controversy. The arguments presented are often weak but gain traction because the words used are crafty and persuasive, proving that words do indeed have the power to change minds and alter perspectives whether or not they are backed by reason. It is so important for us to learn how to decipher language so that we can avoid attempts to manipulate our decisions. Iâ€™m using this hot topic â€œdebateâ€• to illustrate how we can begin to identify illogical and unreasonable arguments and demand better reasoning before we make important decisions that will affect the lives of our family.

With this post I am not attempting to directly support the pro or con argument, it is simply an observation to illustrate how logic must be exercised in order to have a valid argument; and how it frequently fails to be utilized thereby rendering arguments pointless which is why so often the arguers walk away from the debate feeling frustrated and exhausted, having accomplished nothing but a spewing of their own emotionally charged agenda. Although my opinions are recognizable in the words, let us focus on the logic of the rhetoric so that we can learn to make our own choices.

Being that I do have a strong opinion, Iâ€™ve observed (and engaged in) this particular debate hundreds of times, enough to form a solid observation and use those observations as study points to improve communication skill. Henceforth I offer those observations and explanations to help you improve your ability for artful argument as well.

There are two basic arguments in direct relation to any vaccination, (measles just happens to be the current hot button presently) and those are pro and con. Everyone chooses a side, even if itâ€™s modified (delayed vaccines) itâ€™s still either pro vaccine or against vaccine. Following are the most common topics that are used to make either the â€˜forâ€™ or â€˜againstâ€™ argument.

Guaranteed Disease Prevention

The pro vaccination argument claims that vaccination prevents disease therefore everyone should participate.

The first weakness in this argument is the assumption that vaccination does indeed provide protection. The argument makes a ***sweeping generalization*** and ignores variables that also contributed to eradication and ignores cases wherein vaccinated people have contracted the disease. Because something seems so â€“ does not mean that it is so. The statistical data may seem to provide adequate reliance, but adequate reliance is not the same as guarantee. Where there is no guarantee, one cannot claim a guarantee and must logically, accept the lack thereof.

The con argument claims that the risk associated with the vaccine is too great to warrant the potential benefit.

This assertion by con advocates is sound, but is usually presented without sufficient data to support the claim. The data is available and should be well understood before the claims are asserted. A platform without a foundation will

crack under pressure. Foundation, in any argument, is crucial to its success.

The pro camp usually becomes frustrated with the latter and further claims that the proof is in the fact that the disease occurrence has dropped significantly since the introduction of the vaccine.

The logical fallacy used here is similar to the above but here we see more of the ***post hoc fallacy***. The post hoc fallacy assumes that because -A- has occurred after -B-, then -A- must have occurred as a result of -B-. However, this is just temporal succession and does not entail causal succession. Just because one thing follows another does not mean that it was caused by it. This also ignores important variables which are statistically crucial to the validity of the argument.

Often, ***cum hoc***fallacy is used in this case as well, which assumes that correlation equals causation, which is a flawed assumption.

The con camp usually responds with the introduction of variables that also contributed to the decline of the disease which, when taken into consideration, invalidates the claim that the vaccine was solely responsible for eradication.

This is actually a sound argument that typically only fails in delivery because the delivery is often presented with hostility which has grown by this point, and is frequently accompanied by ***personal attack aka â€˜ad hominemâ€™)***; and personal attacks cause even the most air-tight arguments to fail. If you have a solid argument, stay on point and avoid the slinging of insults. There is no place for chest beating in an intelligent discussion.

Herd Immunity

At some point the pro debaters will assert the â€˜herd immunityâ€™ theory which suggests that the greater the proportion of individuals who are resistant, the smaller the probability that a susceptible individual will come into contact with an infectious individual.

Alas, while this is a seemingly a mathematically sound theory, it is assumed that it is without flaw and will provide overall protection. When presented as an argument, the presenter must consider that reality of potential flaw and avoid the impulse to cite the theory as indisputable fact. Additionally, it can inadvertently provide further fodder for the opposition.

The conâ€™s counter with the assertion that the theory of â€˜herd immunityâ€™ is either flawed or is applicable to natural immunity circumstances as well.

It is important to note that the con phenomenon can also rely on the very same theory, to support allowance for natural immunity. This is a tricky argument to use as a platform and often should be avoided because of its weakness.

The con debaters can also rely on the very essence of the argument itself, assuming that if it is true, then what is the logic in forcing a smaller percentage to be vaccinated if the â€˜herdâ€™ provides protection.

Overall, the herd immunity argument provides easy ammunition for either platform and therefore is not useful in a rational debate.

Professional Citation

Pros at some point will produce documentation or references from those in the medical profession or associated with the American Medical Association and allege that it offers proof that vaccination is both safe and effective.

This fallacy is the ***appeal to authority***.

An appeal to authority relies on the idea that if a person judged to be an authority affirms a proposition, then the claim that that proposition must be true.

However, appeals to authority are always deductively fallacious; even a legitimate authority speaking on his area of expertise may affirm a falsehood, so no testimony of any authority is guaranteed to be true.

Furthermore, the persons cited are often of the medical profession but may not specifically be experts in the area of vaccination or vaccination research, therefore the fallacy is greater; when the authority cited is not an authority on the subject on which he is being cited. If someone or isnâ€™t an authority on the subject about which theyâ€™re speaking, then that undermines the value of their testimony.

Cons will usually counter with documentation or references from persons who *have* performed independent studies and research specifically on vaccination and/or package inserts from the manufacturers which provide risk factors as well as the no-guarantee disclaimer.

It would behoove pro arguers to cite specific sources as well, so that the argument is balanced and logical.

Fear and Ignorance

Pros usually become emotionally agitated and assert that those who refuse vaccination are fearful and ignorant.

Here we see a combination of ***Ad Hominem*** and/or ***Straw Man***

Ad Hominem is a personal attack fallacy. It is an attempt to invalidate a personâ€™s suggestion by attacking their character with claims that are irrelevant or may be untrue.We do not know that all anti-vaccination advocates are either fearful or ignorant so that is an invalid argument.

Straw Man fallacy is one wherein an attempt is made to misrepresent the information.â€œAnti-Vaccine advocates are ignorantâ€• is a***sweeping generalization*** and tries to manipulate and dislodge the premise of the argument.We also see the ***red herring*** fallacy at play here because the emotionally inflated attack attempts to divert attention to the character of the person presenting opposition rather than sticking to the issue at hand.

Pro vaccine supporters would do better to stick to the subject matter and avoid emotional attempts to discredit the speaker with claims that are not necessarily true or valid.

In these cases, the cons usually counter with arguments that in fact, the pros are making fear based decisions to compulsively vaccinate without research, deeming them to be the ignorant.

This may seem like a valid and well-played argument but really itâ€™s nothing more than an egocentric retort and attempt to â€˜***bat the ballâ€™*** back. This usually results in nothing substantial and should be avoided.

Social Bandwagon

Popular in social media networks right now is a statement asserted by a Tweeter:

â€œIf my kid can't bring peanut butter to school, yours shouldn't be able to bring preventable diseases.â€•

This tweet has gained a lot of applause by the pro vaccine majority but I would be remiss in my post if I didnâ€™t point out the obvious flaws in logic which are ***False Equivocation*** and ***Baseless origin.***The peanut allergy has nothing to do with the decision to vaccinate. This statement also assumes that an unvaccinated child will in fact be carrying an infectious disease and therefore pose definite danger to other children â€“ which is not true, (and would invalidate the herd immunity claim anyway) whereas a child with peanut butter can absolutely provide danger to

children with allergies.

Itâ€™s a fun bandwagon to jump on because it uses relatable terminology to capture the attention of parents who already echo the sentiment â€“ but does nothing to offer a logical or convincing argument to parents who object to vaccination. So, catchy as it may be, itâ€™s a fruitless statement.

The overall lesson here is that when arguing an important topic keep these elements in mind in order to reach an objective:

- Keep your emotions at bay because they do not help, but only hinder the legitimacy of, the argument and will inevitably elevate an otherwise intelligent argument to a vicious fight â€“ which is pointless.
- Stay on topic. Traveling off to irrelevant citations, analogies and assumptions is weak. These are flawed and therefore do not propel the conversation to a reasonable objective.
- Exchanging emotionally charged views until the point of frustrated exhaustion is never effective and always a waste of time. The rational exchange of information is far more effective and useful.

Stay on point, employ logic and avoid ego-based language. Happy debating!