Evaluating and Refuting Arguments

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Sources:
General Know-how

1. Use your common knowledge

2. Evaluate the reliability of sources
   Is the person likely to be telling a lie? Has he a record of being untruthful? Is he well-informed? Does he have credible information? Is he potentially influenced by self-interest?

3. Evaluate reasoning
Paris Hilton about the recent credit crisis

This has been the ‘greatest depression since *The Notebook*.’
Evaluating supporting points

**Relevant Support**
Q1. Are the reasons/evidence relevant to the argument?

**Valid Reasoning**
Q2. If so, do the reasons/evidence provide a good basis for accepting the argument?
Evaluating Supporting Points

Viable recommendations

Q3. If the conclusion recommends some action or policy, would it be reasonable to act on the basis of the reasons/evidence?

Consider the following:
• Would the recommended policy or action be likely to achieve the desired aim?
• Would it have some undesirable effects?
• Are there other, possibly better, ways of achieving the aim?
Evaluating Supporting Points

Alternative Evidence

Q4. Can I think of any other evidence which is not mentioned but which would strengthen or weaken the argument?
Flaws in reasoning

Some arguments give either no support or such weak support to their conclusions that it is reasonable to regard them as having a flaw.
Example 1: Violence on television

Some people say that the depiction of violence on television has no effect on viewers’ behavior. However, if what was shown on television did not affect behavior, television advertising would never influence viewers to buy certain products. However, we know that it does. Therefore, it cannot be true that television violence does not affect behavior.
What's wrong with the reasoning?

Summarizing the reasoning:

**Reason:** Television advertising affects viewer's behavior.

**Intermediate argument:** So, what is shown on television affects viewers' behavior.

**Main argument:** So, violence shown on television must affect viewers' behavior.
What is the flaw in reasoning?

The fact that some things which are shown on television affect viewer’s behavior is not a good reason for thinking that violence shown on television must affect viewers’ behavior.

The fact that advertising shown on television affects viewers’ behavior is not a good reason for accepting that everything shown on television affects viewers’ behavior.
Example 2: Affluence and health

If people became healthier as the affluence of the country increased, we would expect the population to be healthier now than it was thirty years ago. However, over the last thirty years, new illnesses, such as chronic fatigue syndrome, have appeared, and we have become more vulnerable to old diseases such as heart disease, strokes and cancer. Therefore the increased wealth of the country has not produced improvements in the health of the population.
Analysis

(Basic Reason 1) Over the last thirty years new illnesses, such as chronic fatigue syndrome, have appeared, and we have become more vulnerable to old diseases such as heart disease, strokes and cancer.

(Intermediate conclusion) There have been no improvements in the health of the population over the last thirty years.

(Assumption: unstated) The affluence of the country has increased over the last thirty years.

(Basic Reason 2) If people became healthier as the affluence of the country increased, we would expect the population to be healthier now than it was thirty years ago.
What is the flaw in reasoning?

Even if some new diseases have appeared and some old diseases have become more common during the last thirty years, it does not follow that the population is less healthy than it was thirty years ago, because people may have long periods of good health before suffering from these diseases.
Conclusion

1. Identify the main conclusion.

2. Identify the reasons and the way in which they are meant to support the main conclusion.
Conclusion

3. For each step of the argument, ask “Does this (main or intermediate) conclusion follow from the reasons which are given for it?”.

4. Explain why the conclusion does not follow, even if the reasons are true, and try to do this by referring to the subject matter of the argument, and not merely stating the name of a fallacy.
Some common logical fallacies (Reid 2000, pp. 194-196)

Hasty Generalization (Jumping to conclusions)

1. All required university courses are boring.
2. All women are emotional.

Avoid general words like ‘all’, ‘everybody’, ‘never’.

Use ‘almost all’, ‘most’, ‘in some cases’ and ‘usually’.
Stereotype

A hasty generalization applied to people

Examples:
1. Happy families make happy children.
2. All politicians tend to misuse their power.

Qualify and specify your statements with words such as *many, sometimes, only rarely, and often*
Oversimplification

too few choices, limited to either/or

1. What’s wrong with this country? Just one thing. There are 11.5 million women who started but never finished high school.

2. “Love it or leave it”

Qualify your statements. For example, “One thing that is wrong with this country is ...” or “Two ways to confront this problem are to love it or leave it”.

Post Hoc Ergo Propter Hoc

• After this, therefore because of this. X happened before Y; therefore, X caused Y.

Examples:

1. He got straight As because he smoked a cigarette before every class.

2. The rooster crowed. The sun rose. Therefore, the rooster made the sun rise.

• Make sure that time is not the only link between cause and effect.
False Authority

Arguing that a person who is competent in one field will necessarily be competent in another.

1. Bill Bryson is an excellent writer. Therefore, he would be an excellent politician.

Be certain that your sources are authorities in your topic area, and evaluate the credibility of the sources you use.
False Statistics
Using numbers and statistics that do not prove what the writer says they prove.

Example: (advertisement)

1. Easiest part-time millionaireship income! $10,700 + daily possible.

Information has to be accurate and relevant.
Vice and Virtue Words

Examples:

Do you want your sons and daughters to fall victim to the nuclear conspiracy? Or die at the hands of this menace?

This book is a great read for any patriotic citizen fed up with today’s sleazy, unscrupulous media.
Guidelines for Logical Analysis

Remember never to say ‘always’ and ‘never’ (and all, none, everyone, no one, and nobody). Reasonable thinking should be reflected in reasonable language.

Even if you are not sure that one thing is the cause (or the effect) of another, it may not be the only cause (or the only effect). Be careful not to oversimplify.
Guidelines for Logical Analysis

Suspicious words like ‘undoubtedly’ and ‘obviously’ are often followed by hasty generalizations and oversimplifications. Do not use them.

Carefully consider your persuasive purpose and your audience. Any opinion you have must be qualified and specified, and must be supported completely with facts, examples, or physical description.
Why Refute Counter-arguments

Readers expect an academic argumentative paper to present counter-arguments (opposing issues in the argument).

There is a need to address opposing arguments to strengthen your arguments and maintain an objective stance.
Ways to introduce counter-arguments

Opponents of this position argue that …
Another argument against X is…
Critics of this position point out that …
It may be objected that …
Several questions come to mind: …
At this point, one may wonder …
Certain objections must, of course, be considered: …
Refuting the counter-argument

However, …
In contrast, …
Although …
Despite …
In spite of …
Even though…
Example

Hospitalized Children: Can Visits from Dogs Make a Difference?

One argument against using dogs as therapists is that they may frighten rather than cheer children. *In contrast*, recent research (e.g., Blackman, 2006; Davis, 2008; Hume, 2006) demonstrates that well-trained dogs stimulate socialization, fulfill children’s needs for intimacy, and even increase the survival rate for severely-ill children.
Should acupuncture become an accepted part of mainstream medicine?

**PROs (yes, because…)**

- **A history of thousands of years of use demonstrates that it heals some medical problems.**
- **It is a completely non-harmful, non-toxic process.**
- **Acupuncturists are highly trained medical professionals who must pass rigorous examinations.**

**CONs (No, because…)**

- **There is no acceptable empirical research that conclusively demonstrates healing.**
- **The theory is unscientific.**
- **There is no quality control in the U.S., so patients might be put at risk.**
Example of counter-argument refutation

Many medical doctors refuse to recognize acupuncture because they believe that the theory behind the practice is “unscientific”. (COUNTER-ARGUMENT) However (CONTRAST TRANSITION), the answer to this viewpoint lies in the definition of “unscientific.” In the U.S., a large number of published empirical studies of thousands of patients, with statistical results and control groups are required before the medical community will accept a practice (or a cancer drug, or the development of nutrition classes in medical school) as “scientific” and therefore, valid. In many other countries in the world, a “scientific theory” is one that has stood the test of time: if a medication or a practice has been used for hundreds or thousands of years, and has proved successful for thousands of patients, can the medication or practice be “unscientific”? For acupuncture, the answer is even clearer: can a practice that “does no harm” (the first rule for medical doctors) and provides relief from many medical problems be considered unproved and therefore, not be used by mainstream medical personnel?
How to approach each counter-argument?

Strategy 1 - Correct the facts of the counter argument: they are Incorrect

Example

The argument that solar energy is not efficient when compared to fossil fuels is no longer correct. Indeed, recent research has demonstrated that for geographical areas that receive at least 300 days of sun a year, newly-developed solar energy systems are as efficient, and sometimes more efficient, than gas or oil heating (Harding & Becker, 2008)
How to approach each counter-argument?

Strategy 2 - Show that the counter-argument is not directly related to the issue: it is irrelevant.

Example

Despite the fact that Truscott’s report (2008) cites a dozen studies that “prove” that correcting grammar errors in ESL student writing is ineffective, every study cited focuses on native English speakers; therefore, while the studies may be valid, they do not relate directly to ESL students.