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| **Baloney Detector: Your Guide to Clear Thinking** |
| **GO TO:**   http://creationsafaris.com/images/b.gif [Propaganda Tactics](http://creationsafaris.com/crevbd.htm" \l "propaganda) http://creationsafaris.com/images/b.gif [Logical Fallacies](http://creationsafaris.com/crevbd.htm#logicalfallacies) http://creationsafaris.com/images/b.gif [Smokescreens](http://creationsafaris.com/crevbd.htm#smokescreens)             [CREATION-EVOLUTION HEADLINES](http://creationsafaris.com/crevnews.htm) |

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| |  | | --- | | **How To Avoid Propaganda – *or* – Think and Grow Righteous** “Lest Satan should get an advantage of us, for we are not ignorant of his devices.”  (II Corinthians 2:11)  **What’s a Baloney http://creationsafaris.com/images/b.gif Detector?**  “The late astronomer and popularizer of science Carl Sagan worried that an epidemic of irrationality is loose in the world . . . What we need to protect ourselves from such false beliefs, Sagan writes in his book *The Demon - Haunted World*, is a well-equipped ‘baloney detector kit.’  A**baloney detector** is simply a good grasp of logical reasoning and investigative procedure.  Carl Sagan and I would agree about how to describe the principles of baloney detecting in general.  We would disagree only about where the detectors are to be pointed, and especially about whether we should ever suspect the presence of baloney in claims made by the official scientific establishment.”   – Dr. Phillip E. Johnson, “Tuning Up Your Baloney Detector” in *Defeating Darwinism by Opening Minds* (Inter-Varsity Press, 1997), pp. 37-38.  “Carl Sagan was right: We do need **baloney detectors**.  But we don’t need to beam them on Christian beliefs, as Sagan urged; instead, let’s use them to get an honest take on the fossil record and to separate science from philosophy.  And we should encourage robust debate between creationists and evolutionists: It keeps both sides from ignoring evidence that does not appear to fit their theories.”  – Chuck Colson, [“Is Natural All There Is?”](http://www.christianity.com/CC/article/0,,PTID2228%7CCHID100546%7CCIID160730,00.html), *Breakpoint* radio transcript #80209, 1998.  *Benefits of Learning the Art of Baloney Detecting*:  Sharpen your mind • Reduce fear of intimidation • Avoid traps that might make you look foolish later • Gain wisdom and increase discernment • Learn how to answer cults • Save money by developing sales resistance • Become a better teacher, preacher, speaker or debater • Improve your conversational skills • Become a wiser voter by learning how to separate the issues from the hype • Gain more respect for truth.  **Propaganda Tactics** Definition:  Any attempt to influence people’s actions or attitudes without making them think.  [Big Lie](http://creationsafaris.com/crevbd.htm" \l "biglie) http://creationsafaris.com/images/b.gif [Half Truth](http://creationsafaris.com/crevbd.htm#halftruth) http://creationsafaris.com/images/b.gif [Repetition](http://creationsafaris.com/crevbd.htm#repetition) http://creationsafaris.com/images/b.gif [Bandwagon](http://creationsafaris.com/crevbd.htm#bandwagon) http://creationsafaris.com/images/b.gif [Plain Folks](http://creationsafaris.com/crevbd.htm#plainfolks) http://creationsafaris.com/images/b.gif [Glittering Generalities](http://creationsafaris.com/crevbd.htm#generalities) http://creationsafaris.com/images/b.gif [Loaded Words](http://creationsafaris.com/crevbd.htm#loadedwords) http://creationsafaris.com/images/b.gif [Association](http://creationsafaris.com/crevbd.htm#association) http://creationsafaris.com/images/b.gif [Suggestion](http://creationsafaris.com/crevbd.htm#suggestion) http://creationsafaris.com/images/b.gif[Intimidation](http://creationsafaris.com/crevbd.htm#intimidation) http://creationsafaris.com/images/b.gif [Fear-Mongering](http://creationsafaris.com/crevbd.htm#fearmongering) http://creationsafaris.com/images/b.gif [Ridicule](http://creationsafaris.com/crevbd.htm#ridicule) http://creationsafaris.com/images/b.gif [Subversion](http://creationsafaris.com/crevbd.htm#subversion) [LOGICAL FALLACIES](http://creationsafaris.com/crevbd.htm#logicalfallacies) • [SMOKESCREENS](http://creationsafaris.com/crevbd.htm#smokescreens)   * **Big Lie** Definition:  Complete falsehood told with bravado. Catch-phrase:  You can fool some of the people all of the time . . . Examples:  http://creationsafaris.com/images/b.gif Satan to Eve: “You shall not surely die . . . you shall be as gods, knowing good and evil.” http://creationsafaris.com/images/b.gif Hitler and Stalin speeches http://creationsafaris.com/images/b.gif “Commit suicide in a *jihad* by killing as many innocent civilians as you can in a shopping mall, and you’ll get 72 virgins of your own for an eternity of bliss.” http://creationsafaris.com/images/b.gif Indulgences: *How can you let your dear mother suffer in purgatory?*  “If anyone put money into the coffer for a soul in purgatory, the soul would leave purgatory for heaven in the moment one could hear the penny hit the bottom” (Tetzel, 1517). http://creationsafaris.com/images/b.gif Faith healers, like Peter Popoff using a radio receiver in his ear to fake “word of knowledge” from God http://creationsafaris.com/images/b.gif Email hoaxes: the Nigeria scam; email scams posing as legitimate banks and corporations; fake warnings about viruses that actually install them in your computer; *You have just won $100,000 – click here!* http://creationsafaris.com/images/b.gif Urban legends: Joshua’s long day found by astronomers; Darwin repented on his deathbed; Margaret Murray O'Hair suing the FCC to ban religious broadcasting; Mars will appear as big as the full moon this month; *Forward this to everybody you know* is often a tip-off. http://creationsafaris.com/images/b.gif Lenin calling his party the Bolsheviks *(majority)* when it was really in the minority. http://creationsafaris.com/images/b.gif KGB “disinformation” campaigns http://creationsafaris.com/images/b.gif Social engineering, e.g., computer hacker pretending to be a legitimate user, calling technical support for help as if he just forgot his password http://creationsafaris.com/images/b.gif Bait and switch http://creationsafaris.com/images/b.gif *Satisfaction guaranteed* http://creationsafaris.com/images/b.gif “Your order should be in next week; I promise!” (Delay, delay, hope you’ll go away.) http://creationsafaris.com/images/b.gif Crocodile tears http://creationsafaris.com/images/b.gif Toddler: “Mommy, Billy hit me in the fist with his stomach!”  ChiComs: *The U.S. knocked down our plane and killed our pilot* (he was ramming the U.S. plane). http://creationsafaris.com/images/b.gif “Non-partisan” voting guides (read the fine print - endorsement paid for by the candidate) http://creationsafaris.com/images/b.gif “I did not have sexual relations with that woman” http://creationsafaris.com/images/b.gif Sun Myung Moon’s “heavenly deception” (telling lies to advance the cult) http://creationsafaris.com/images/b.gif National Enquirer: “Talking dog says astrology cured Jackie’s cancer” or “Elvis lands in UFO with the ultimate diet.” http://creationsafaris.com/images/b.gif Sennacherib to Hezekiah (II Kings 18:25): “The Lord told me to invade your city.” http://creationsafaris.com/images/b.gif Tobiah’s emissaries to Nehemiah: “Let us close the doors of the temple, for they are coming to kill you” (it was just a scheme to make Nehemiah appear cowardly; Nehemiah 6). http://creationsafaris.com/images/b.gif Suppressing the truth: Palestinian schools have maps of the Middle East with Israel missing, and its history books ignore or misrepresent Israel’s historical presence in Palestine. http://creationsafaris.com/images/b.gif Chemical evolutionist: *Billions of years ago, the oceans were warm and teeming with the building blocks of life.* http://creationsafaris.com/images/b.gif Paleoanthropologist: *About six million years ago, our human ancestors migrated out of Africa (blah blah etc. etc.)... then about 30,000 years ago, the Neanderthals proved no match for modern humans, who had invented art and learned to use fire and make tools, due to their superior intelligence....* http://creationsafaris.com/images/b.gif [[http://creationsafaris.com/images/BM-BD-cartoon-sm.jpg](http://creationsafaris.com/images/BM-BD-BigLie.jpg)](http://creationsafaris.com/images/BM-BD-BigLie.jpg)Anti-creationist Ben Bova, *Omni* magazine (10/1980): “ So far not one shred of evidence has ever been found to support the Creationist point of view.  Not a fingerbone, not a leaf, not a shard of evidence exists.  We may have been created by some deity or other unfathomable force, but there is no evidence whatsoever that it happened in this way.” http://creationsafaris.com/images/b.gif *Teaching creation in school is unconstitutional.* http://creationsafaris.com/images/b.gif *There is no controversy among scientists about evolution.* http://creationsafaris.com/images/b.gif Jared Diamond, *Discover* magazine (06/1985): “Darwin’s theories yielded thousands of predictions, some of which have been strikingly confirmed: genes, the dating of the fossil record, transitional forms between modern humans and apes.” http://creationsafaris.com/images/b.gif Piltdown Man http://creationsafaris.com/images/b.gif Nebraska Man http://creationsafaris.com/images/b.gif Haeckel’s “biogenetic law” and faked drawings of embryos http://creationsafaris.com/images/b.gif *Archaeoraptor* hoax http://creationsafaris.com/images/b.gif Dobzhansky: “Nothing in biology makes sense apart from evolution.” http://creationsafaris.com/images/b.gif Reflexive tactic: asserting that your opponent (the truth teller) is telling the big lie.   + Thumb’s Second Postulate:  An easily-understood, workable falsehood is more useful than a complex, incomprehensible truth.   + Parker’s Law of Political Speeches:  The truth of any proposition has nothing to do with its credibility and vice versa.   + Proverbs of Solomon:  The wisdom of the prudent is to understand his way, but the folly of fools is deceit. (Proverbs 14:8) * **Half Truth** Definition:  Part truth and part lie; sugar-coated poison.  Often more effective than the Big Lie. Catch-phrase:  The truth, the whole truth, and nothing but the truth. Examples:  http://creationsafaris.com/images/b.gif Satan using Scripture to tempt Christ http://creationsafaris.com/images/b.gif Spin doctoring http://creationsafaris.com/images/b.gif Accusers of Jesus claiming that he threatened to destroy the temple and rebuild it in three days (but He was speaking of the temple of his body) http://creationsafaris.com/images/b.gif Slanted docudramas like *Birth of a Nation* and *Inherit the Wind* http://creationsafaris.com/images/b.gif Quoting out of context: a well-known pastor said, quote: “Every time I want to, I beat my wife.  Every time I want to, I get stoned drunk.”  The next statement, if omitted, makes all the difference: “I *never* want to.” http://creationsafaris.com/images/b.gif Phillip Johnson said, “We must first demonize our enemies before we can rationalize killing them.” (*Reason in the Balance*, p. 184; he was describing dogmatists, not his own beliefs, which were quite the opposite.) http://creationsafaris.com/images/b.gif TV editing tricks, like interviews that edit in, after the fact, a different question than the one the guest answered http://creationsafaris.com/images/b.gif Exaggerating the bad news (tax hike, gas prices) then later revising the estimate downward, so that the peasants are relieved and you look like a savior. http://creationsafaris.com/images/b.gif Radical deconstruction and revisionist history: textbooks that devote seven pages to Madonna and one sentence to George Washington http://creationsafaris.com/images/b.gif *My political opponent says he supports civil rights, but he voted against the Civil Rights Bill* (because it was an omnibus bill that had more bad than good, or because he supported a better bill later). http://creationsafaris.com/images/b.gif *A woman should have control over her own body* (but her baby has its own body, brain, heartbeat, blood type, sex, and genes – half donated by the father) http://creationsafaris.com/images/b.gif In evolutionary rhetoric, confusing micro-evolution (which is observable) with macro-evolution (which is not). http://creationsafaris.com/images/b.gif [[http://creationsafaris.com/images/BM-BD-cartoon-sm.jpg](http://creationsafaris.com/images/BM-BD-HalfTruth.jpg)](http://creationsafaris.com/images/BM-BD-HalfTruth.jpg)Fossil horse series: they didn’t tell you some were out of order and lived on different continents. http://creationsafaris.com/images/b.gif Antibiotic-resistant bacteria: they didn’t tell you it involves a loss of information and function.http://creationsafaris.com/images/b.gif *The Second Law of Thermodynamics only applies to isolated systems, so it’s not relevant to evolution, because the earth is an open system.* (It was derived using theoretical isolated systems, but it applies to all systems, and can only be overcome locally and temporarily in open systems when stringent conditions are met.  Furthermore, the universe, in which evolution is alleged to have occurred, *is*an isolated system.) http://creationsafaris.com/images/b.gif Sort out the truths or lies in this statement by Ben Bova (1980): “Creationists... presure school boards to give ‘equal time’ with evolution in science classes.  As a result, in many biology texts the origin of the human species is illustrated by Michelangelo’s Adam from the Sistine Chapel’s ceiling.  It’s a fine painting, and Genesis is an inspired bit of writing.  But it isn’t biology.”   + Proverbs of Solomon:  The naive believes anything, but the prudent man considers his steps. (Proverbs 14:15) * **Repetition** Definition:  Saying something over and over till it embeds in the listener’s mind. Catch-phrase:  Ad infinitum ad nauseum. Examples:  http://creationsafaris.com/images/b.gif Brainwashing http://creationsafaris.com/images/b.gif Talking points: *The President’s tax reform bill is a risky tax scheme that will reward his rich contributors but hurt the poor.*  (Ignoring that the poor usually pay nothing, and the rich already pay 95% of the tax burden, this claim is vague on the dividing line between rich and poor – yet repeating this theme in the media is geared to swaying the emotions of the voters). http://creationsafaris.com/images/b.gif “Vain repetition” in prayer (Matthew 6:7) http://creationsafaris.com/images/b.gif Slogans (notice how commercials try to get their slogan in three times in 30 seconds) *We do it all for you* (McDonalds); *Join the Pepsi generation* (Pepsi-Cola); *How do you spell relief?* (Rolaids); *Oh, what a feeling* (Toyota) *Good to the last drop* (Maxwell House); *Got milk?* http://creationsafaris.com/images/b.gif Commercial jingles – slogans are much more effective with music, and can plant ideas in the consumers’ memory for decades: *Nestle's makes the very best, N-e-s-t-l-e-s, choccccccc-late*; *You’ll wonder where the yellow went when you brush your teeth with Pepsodent*; *Brylcreem, a little dab’ll do ya*; etc.  An old Alka-Seltzer commercial, instead of presenting any evidence the product works, simply repeated the musical jingle incessantly for 60 seconds: *Plop, plop, fizz, fizz, oh what a relief it is* [[http://creationsafaris.com/images/BM-BD-cartoon-sm.jpg](http://creationsafaris.com/images/BM-BD-Repetition.jpg)](http://creationsafaris.com/images/BM-BD-Repetition.jpg)http://creationsafaris.com/images/b.gif Buzzwords http://creationsafaris.com/images/b.gifBuzzphrases like “God-of-the-gaps” or “Survival of the fittest” http://creationsafaris.com/images/b.gif “Great is Artemis of the Ephesians!” shouted for two hours in reaction to Paul’s preaching about Jesus (Acts 19:34) http://creationsafaris.com/images/b.gif Picketers chanting at the Capitol steps http://creationsafaris.com/images/b.gif The mantras “Evolution is science, creationism is religion” and “Separation of church and state.” (*Note:* the latter is not part of the Constitution, and is contrary to the Constitutional Convention’s own purpose and intent when drafting the First Amendment.  The phrase was lifted out of context from a letter by Thomas Jefferson, who was not present at the deliberations.  It has since taken on a life of its own, conveniently shielding major issues in a short, memorable, seemingly intuitively-obvious phrase.)   + Souder’s Law:  Repetition does not establish validity.   + Wilkie’s Law:  A good slogan can stop analysis for fifty years. * **Bandwagon** Definition:  The appeal *“Everyone’s doing it!  Better jump on the bandwagon before it passes you by!”* Catch-phrase:  Fifty million Frenchmen can’t be wrong. Examples:  http://creationsafaris.com/images/b.gif TV commercials showing lots of cool young people drinking the soda, implying everybody’s doing it. http://creationsafaris.com/images/b.gif Peer pressure http://creationsafaris.com/images/b.gif Political ads listing all the celebrities and organizations that endorse the candidate. http://creationsafaris.com/images/b.gif “The President’s judicial appointees are *way outside the mainstream*” (i.e., not ultra-liberal) http://creationsafaris.com/images/b.gif [[http://creationsafaris.com/images/BM-BD-cartoon-sm.jpg](http://creationsafaris.com/images/BM-BD-Bandwagon.jpg)](http://creationsafaris.com/images/BM-BD-Bandwagon.jpg)*All scientists accept evolution.* http://creationsafaris.com/images/b.gif *My opponent is in the minority* http://creationsafaris.com/images/b.gif *My opponent is on the lunatic fringe* http://creationsafaris.com/images/b.gif William Patten, Dartmouth (1930): “Evolution itself has long since passed out of the field of scientific controversy.  There is no other subject on which scientific opinion is so completely unanimous.  It is the one great truth we most surely know.” http://creationsafaris.com/images/b.gif Edwin Grant Conklin, Princeton (1943): “The fact of evolution is no longer questioned by men of science.” * **Plain Folks** (argumentum ad populum) Definition:  Projecting a popular image, trying to sound innocent and common, or claiming to have the common people on your side. Catch-phrase:  Friends, Romans, countrymen. Examples:  http://creationsafaris.com/images/b.gif Polls http://creationsafaris.com/images/b.gif The candidate wearing overalls while talking with farmers, and a cowboy hat while talking with ranchers http://creationsafaris.com/images/b.gif When in Rome, do as the Romans do http://creationsafaris.com/images/b.gif Poor me, the David against the Goliath or the sheep surrounded by wolves http://creationsafaris.com/images/b.gif TV commercial testimonials by common-looking people (who are paid a lot of money to read a script written by the ad agency) http://creationsafaris.com/images/b.gif Conspiracy theories (us common people against those liars in government who don’t want us to know the truth about UFOs) http://creationsafaris.com/images/b.gif Demagoguery http://creationsafaris.com/images/b.gif Class warfare: “This tax cut only helps the rich ” http://creationsafaris.com/images/b.gif *We scientists don’t have the resources of all those well-funded creationist organizations* (No, just multi-million dollar government grants, a lapdog media, the ACLU and National Science Foundation, control of the public schools, and practically all the government-funded museums and national and state parks in the country) http://creationsafaris.com/images/b.gif *The voters in Pennsylvania have shown their wisdom by ousting the school board members who would have restricted evolution from the curriculum.*  What percent voted?  How well informed were they?  How well financed was the opposition?  How much did the opposition use propaganda tactics?  Were there other issues involved besides evolution that might have motivated the voters more?  How clear were the candidates’ statements?  Does the outcome necessarily imply the voters want more evolution taught? (see [non-sequitur](http://creationsafaris.com/crevbd.htm" \l "nonsequitur)). * **Glittering Generalities** Definition:  Broad-brush oversimplifications that gloss over exceptions or problems. Catch-phrase:  The devil is in the details. Examples:  http://creationsafaris.com/images/b.gif Love makes the world go round. http://creationsafaris.com/images/b.gif Cliches: *The cream always rises to the top.* (So does the scum.) http://creationsafaris.com/images/b.gif Stereotypes; assuming everyone in a category thinks alike – *the people, the masses, the children, women’s issues, black interests, the Hispanic community, people of faith, people of color, people of colorful faith* etc. http://creationsafaris.com/images/b.gif Most political speeches and slogans, like *war is not the answer* [but what is the question?]; *You can’t legislate morality* [isn’t any law that declares something to be wrong making a moral judgment?] http://creationsafaris.com/images/b.gif Sugar and spice and everything nice http://creationsafaris.com/images/b.gif Nutritional panaceas http://creationsafaris.com/images/b.gif Preachers who use one incident in the Old Testament to characterize everybody in hundreds of Middle Eastern cities and villages over thousands of years, even Western people today http://creationsafaris.com/images/b.gif Politician proposing massive tax increase: “We must save the children” or “We must invest in our future.” http://creationsafaris.com/images/b.gif Grand scenarios of evolution from Big Bang to man, such as in the opening of *2001: A Space Odyssey* or *The X-Men* http://creationsafaris.com/images/b.gif “All religions are but different roads to the same place.” http://creationsafaris.com/images/b.gif “Religion is a multi-colored lantern.  Everyone looks through a particular color, but the candle is always the same.” (Muhammad Nagulb) http://creationsafaris.com/images/b.gif If it feels good, do it. http://creationsafaris.com/images/b.gif> *Scientists may disagree about the mechanism of evolution, but all agree evolution is a fact.* http://creationsafaris.com/images/b.gif Simplistic correlations of evolutionary phylogeny with Genesis http://creationsafaris.com/images/b.gif The Gap Theory as an explanation for the fossil record. http://creationsafaris.com/images/b.gif Theistic evolution as a compromise of the Bible with science. http://creationsafaris.com/images/b.gif [[http://creationsafaris.com/images/BM-BD-cartoon-sm.jpg](http://creationsafaris.com/images/BM-BD-GlitteringGeneralities.jpg)](http://creationsafaris.com/images/BM-BD-GlitteringGeneralities.jpg)Assuming natural selection is always “onward and upward” and can produce any and every complex characteristic http://creationsafaris.com/images/b.gif Carl Sagan, *Cosmos* (after narrating a visual panorama of evolution from Big Bang to advanced human technology, complete with driving music): “These are some of the things that hydrogen atoms do, given fifteen billion years of cosmic evolution.” http://creationsafaris.com/images/b.gif Rich Terrille, on *The Astronomers* (PBS 1994, part 6): “I saw a sign with a quote on it; I don’t know who said this, but it said, ‘Hydrogen: a light, colorless, odorless gas, that given enough time, turns into people.’  And that’s really what science has found.  We, humankind, are a piece of the universe which has become self-aware.” * **Loaded Words** Definition:  Using emotionally-charged words, negative or positive (euphemism), to influence the reaction. Catch-phrase:  Politically correct. Note: The words chosen can emotionally bias the perception of something: Is she *an expectant mother carrying a baby* or *a pregnant female carrying a fetus*?  Is the protestor *pro-life* or *anti-choice*?  Is the abortionist *pro-choice* or a *baby-killer*?  Look for the Jungian label. Examples, positive:  http://creationsafaris.com/images/b.gif *The pain reliever doctors recommend most* (aspirin) http://creationsafaris.com/images/b.gif *Christian Science* (cult of Mary Baker Eddy) http://creationsafaris.com/images/b.gif *Divine Light Mission* (cult of Hare Krishna) http://creationsafaris.com/images/b.gif *Science of Creative Intelligence* (cult of Maharishi Mahesh Yogi) http://creationsafaris.com/images/b.gif *pro-choice* (pro-abortion) http://creationsafaris.com/images/b.gif *free love* (slavery to lust, ignoring the consequences) http://creationsafaris.com/images/b.gif *Gay* (homosexual) http://creationsafaris.com/images/b.gif *Diversity Education* (teaching homosexuality as normal) http://creationsafaris.com/images/b.gif *Tolerance, democracy, progress, freedom, truth, justice and the American Way* http://creationsafaris.com/images/b.gif Food: *all natural, organic, fresh, light* http://creationsafaris.com/images/b.gif Hype: *blockbuster, spellbinding, searing, provocative, lusty, hypnotic, shocking, stunning, most talked about, best seller* http://creationsafaris.com/images/b.gif Higher taxes: *Economic patriotism.* http://creationsafaris.com/images/b.gif Massive tax increase:*Investing in our future.* http://creationsafaris.com/images/b.gif To avoid bad publicity, the FBI changed the name of its spying software from *Carnivore* to “DCS 1000” (but it still did the spying). http://creationsafaris.com/images/b.gif Saddam Hussein, while encouraging terrorist attacks against American interests 9/10/02: “Iraq has a religious right to defend itself.” http://creationsafaris.com/images/b.gif Ernst Haeckel spoke of committing suicide as an act of “self-redemption” – i.e., ending a worthless life, and preventing a drain on the fitness of the species. http://creationsafaris.com/images/b.gif An all-natural, organic herb that will do wonders to your skin. (poison oak) Examples, negative:  http://creationsafaris.com/images/b.gif Hate speech http://creationsafaris.com/images/b.gif Rabble rousing http://creationsafaris.com/images/b.gif The race card http://creationsafaris.com/images/b.gif Name calling: *extremist, radical, kook, nut, ultra*-whatever http://creationsafaris.com/images/b.gif Bible-thumper, fundamentalist, obscurantist, reactionary, bigot http://creationsafaris.com/images/b.gif Political labeling: *fat cats, pork barrel, special interests, witch-hunt, McCarthyism, mean-spirited* http://creationsafaris.com/images/b.gif Calling an appeal for return to a Constitutional majority rule “The Nuclear Option” (US Senate, May 2005), and publishing cartoons of the Senate Majority Leader nuking the capitol. http://creationsafaris.com/images/b.gif *Creationism* (emphasis on the suffix) *is a ploy by fundamentalists to push their religious agenda and brainwash our children.* http://creationsafaris.com/images/b.gif “Intelligent Design” is really *stealth creationism*. http://creationsafaris.com/images/b.gif Densely-packed loaded words from Michael Ruse (July 2002): “Why should science journals give space to intelligent design (ID) or any other crackpot pseudo-theory, manufactured to cover the nakedness of biblical literalism in scientific dress to get around the U.S. Constitution’s separation of church and state?” http://creationsafaris.com/images/b.gif Horatio Hockett Newman, 1932: “There is no rival hypothesis except the outworn and completely refuted idea of special creation, now retained only by the ignorant, the dogmatic, and the prejudiced.” http://creationsafaris.com/images/b.gif Dudley Field Malone at the Scopes Trial: “We do not fear all the truth they can present as facts.  We are ready.  We stand with progress.  We stand with science.  We stand with intelligence.  We feel that we stand with the fundamental freedoms in America.  We are not afraid.  Where is fear?  We defy it!”  Turning and pointing a finger at William Jennings Bryan, he cried, “There is fear!”  According to a report, “the crowd went out of control - cheering, stamping, pounding on desks - until it was necessary to adjourn for fifteen minutes to restore order.” * **Association** (transfer) Definition:  Associating what you want to promote with something people like, or something you want to criticize with something people dislike. Catch-phrase:  Sex sells. Examples, positive:  http://creationsafaris.com/images/b.gif TV commercial celebrity endorsements http://creationsafaris.com/images/b.gif Name dropping http://creationsafaris.com/images/b.gif Photo-ops: getting the candidate on camera holding babies and shaking hands with veterans http://creationsafaris.com/images/b.gif Scantily-clad women in automobile ads http://creationsafaris.com/images/b.gif Dress for success http://creationsafaris.com/images/b.gif Being seen with popular people http://creationsafaris.com/images/b.gif Campaign ads with American flags and apple pie http://creationsafaris.com/images/b.gif Cigarette company commercials highlighting all the community service projects they support http://creationsafaris.com/images/b.gif What can be more smelly, hot and obnoxious than a cigarette?  So name it *Kool* and decorate the package with scenes of forests and waterfalls. http://creationsafaris.com/images/b.gif Commercial: “Feeling good is important to me.  I jog every day, watch my weight and use Acme Eye Drops.” http://creationsafaris.com/images/b.gif Ad campaign for jeans c. 1985 used jungle music and a tiger-voiced announcer, appealing to the animal in customers: – *It’s a jungle out there, and you’ve got to be fit to survive....Sergio Valenti jeans – Survival of the Fittest – the Natural Selection.* http://creationsafaris.com/images/b.gif Naming radical liberal organizations “People for the American Way” or “American Civil Liberties Union.” http://creationsafaris.com/images/b.gif Calling a massive spending plan a “Civil Rights bill.” http://creationsafaris.com/images/b.gif Claiming that teaching evolution is important because it helps us understand medicine. Examples, negative:  http://creationsafaris.com/images/b.gif *My opponent is just like Hitler.* http://creationsafaris.com/images/b.gif Lyndon Johnson’s anti-Goldwater TV commercial showing a little girl picking a flower followed by an atomic bomb explosion, implying his opponent was trigger-happy http://creationsafaris.com/images/b.gif Calling someone who disagrees with quotas a racist. http://creationsafaris.com/images/b.gif Listing creationism alongside pseudosciences like astrology, spiritism and ESP: “...to require teachers to give serious consideration to creationism is as unjustified as requiring them to teach other doctrines – such as astrology, alchemy and phrenology...” (Stephen G. Brush, *The Science Teacher* 4/1981, p. 33) http://creationsafaris.com/images/b.gif Claim made at a creation-evolution debate: *creationism is as dangerous to science as the Islamic revolution in Iran*. http://creationsafaris.com/images/b.gif For a fun example, read the [DHMO Satire](http://creationsafaris.com/humor.htm" \l "dhmo). * **Suggestion** Definition:  Use of subconscious tricks to attract, distract or mislead. Catch-phrase:  There’s a sucker born every minute. Examples:  http://creationsafaris.com/images/b.gif Hypnotism http://creationsafaris.com/images/b.gif Psychics http://creationsafaris.com/images/b.gif Magicians http://creationsafaris.com/images/b.gif Mass hysteria http://creationsafaris.com/images/b.gif Subliminal advertising http://creationsafaris.com/images/b.gif Body language http://creationsafaris.com/images/b.gif Mood music http://creationsafaris.com/images/b.gifLighting http://creationsafaris.com/images/b.gif The psychology of color in packaging or set design http://creationsafaris.com/images/b.gif Perfumes and odors http://creationsafaris.com/images/b.gif Posture, tone of voice, dress, hairstyle, furniture and other accoutrements http://creationsafaris.com/images/b.gif Political posters and billboards with nothing but the candidate’s name, to get “name recognition” that might be remembered in the voting booth http://creationsafaris.com/images/b.gif Planting a fear in the public perception based on a political agenda, like moving the “Doomsday Clock” forward to arouse fear about global warming http://creationsafaris.com/images/b.gif *Whatever you do, do NOT think about a pink elephant right now!* http://creationsafaris.com/images/b.gif Staring into space to get other people to stare http://creationsafaris.com/images/b.gif Innuendo: offhand remarks like “I never said he was gay,” which may be true but causes listeners to wonder http://creationsafaris.com/images/b.gif Leading questions: “Did this teacher upset you because he seemed to be bringing religion into the classroom instead of teaching science?” http://creationsafaris.com/images/b.gif Headlines like “Is Creationism Dying a Slow Death?” when it in fact is undergoing a resurgence, or “Have We Found Life on Mars?” when the body of the article provides no evidence at all, but the headline (which is what most people see) plants an attitude in the mind of the reader. * **Intimidation** Definition:  Use of power to coerce the desired reaction or silence the opposition. Catch-phrase:  We’re only trying to he'p you . . . Examples:  http://creationsafaris.com/images/b.gif Medieval: torture. http://creationsafaris.com/images/b.gif 2001: Threatening the Kansas school board that its students might not be accepted at universities if they voted to diminish the teaching of evolution. http://creationsafaris.com/images/b.gif Sennacherib’s threats to inhabitants of Jerusalem from the city walls (II Kings 18:26-27) http://creationsafaris.com/images/b.gif Sending in the tanks at Tiananmen Square http://creationsafaris.com/images/b.gif[[http://creationsafaris.com/images/BM-BD-cartoon-sm.jpg](http://creationsafaris.com/images/BM-BD-Intimidation.jpg)](http://creationsafaris.com/images/BM-BD-Intimidation.jpg)   Hecklers at speeches http://creationsafaris.com/images/b.gif Phone threats http://creationsafaris.com/images/b.gif ACLU threatening an expensive lawsuit if a school allows a biology teacher to present Intelligent Design ideas (or even weaknesses of evolution) http://creationsafaris.com/images/b.gif Bowling Green State University: colleagues of Dr. Jerry Bergman (creationist) told him if they discovered a student was a conservative Christian, they would fail him or her.  Dr. Trevor Phillips said, “I don’t think these kind of people should get degrees, and I’m going to do what I can to stop them.” http://creationsafaris.com/images/b.gif Threatening creationist professors with loss of tenure, or forbidding them to publish and then claiming “creationists never publish anything.” http://creationsafaris.com/images/b.gif See Ben Stein’s movie [*Expelled: No Intelligence Allowed*](http://expelledthemovie.com/) and Jerry Bergman’s book [*Slaughter of the Dissidents*](http://slaughterofthedissidents.com/) for examples of Darwinist persecution of Darwin-doubters.   * **Fear-Mongering, Hate-Mongering, Scare Tactics** Definition:  Arousing fear of or animosity against the targeted individual, group, or movement. Catch-phrase:  Beware the Jabberwock, my son. Examples:  http://creationsafaris.com/images/b.gif Hitler’s demonizing of Jews before exterminating them http://creationsafaris.com/images/b.gif Pharisees telling Pilate that Jesus was a threat to Roman rule (which they themselves hated) http://creationsafaris.com/images/b.gif Give the bogeymen a label: *The Religious Right* http://creationsafaris.com/images/b.gif “The American President is a tyrant who wants to enslave the Iraqi people” –Saddam Hussein, March 2003 (speak for yourself, buddy) http://creationsafaris.com/images/b.gif A California elementary school put up a sign after the Sept 11, 2001 terrorist attacks that said “God bless America.”  The ACLU wrote a threatening letter to the school, calling the sign a violation of the U.S. Constitution and “a hurtful, divisive message.” http://creationsafaris.com/images/b.gifArousing fear of the “hidden agenda” of your opponent http://creationsafaris.com/images/b.gif Playing the race card http://creationsafaris.com/images/b.gif Conspiracy theories http://creationsafaris.com/images/b.gif Hegelian tactics: create a crisis, then foment a revolution to resolve it (but the cure becomes worse than the disease). http://creationsafaris.com/images/b.gif Pot calling the kettle black: e.g., Napster user accusing the record companies of theft by charging too much for CDs; evolutionist claiming a Christian cannot consider opposing evidence because of his faith in the Bible (compare evolutionary faith in naturalism: see Lewontin quote under *[Subjectivity](http://creationsafaris.com/crevbd.htm" \l "subjectivity)*, below) http://creationsafaris.com/images/b.gif *Allowing creationists to teach their views in science class would be like allowing Holocaust-deniars to teach their views in history class.* http://creationsafaris.com/images/b.gif Ben Bova: “Already the creationists are using political clout to tamper with biology teaching.  Give them the political power and they will outlaw any ideas that they do not agree with.  Evolution is merely one of many ideas that these zealots attack.” (*Omni*magazine, 10/1980, p. 35) http://creationsafaris.com/images/b.gif Isaac Asimov, in a fund-raiser letter for the ACLU: “These religious zealots neither know nor understand the actual arguments for – or even against – the theory of evolution.  But they are marching like an army of the night into our public schools with their Bibles held high.” http://creationsafaris.com/images/b.gif A newspaper (*New Republic*) after the Scopes Trial, of William Jennings Bryan, “ . . . he is still engaged in battling earnestly for organized ignorance, superstition, and tyranny . . . He has illuminated vividly for the rest of us the essentially bigoted position of himself and his followers, and the degree of religious intolerance which they will undoubtedly enforce upon the country if they ever get the chance.” * **Ridicule** Definition:  Attempting to arouse dislike against a person or idea by name-calling, sarcasm or jokes. Catch-phrase:  Everybody is someone else’s weirdo. Examples:  http://creationsafaris.com/images/b.gif Satire http://creationsafaris.com/images/b.gif Cartoons and caricatures http://creationsafaris.com/images/b.gif Sarcastic or humorous ballads http://creationsafaris.com/images/b.gif Tobiah to Nehemiah (Neh. 4:3): “If a fox jumped on your wall, he would knock it over.” http://creationsafaris.com/images/b.gif Mocking caricatures like *Jesus Christ Superstar, Godspell* and the CBS TV drama *Noah’s Ark* http://creationsafaris.com/images/b.gif During the Spanish Inquisition, authorities dressed “heretics” (often godly, courageous martyrs) in dunce caps or costumes painted with the flames of hell and marched them through the jeering crowd. http://creationsafaris.com/images/b.gif Jokes about the Kansas school board and the Land of Oz http://creationsafaris.com/images/b.gif Calling creationists troglodytes, backwoodsmen (Dawkins), flat-earthers. http://creationsafaris.com/images/b.gif After the Scopes Trial, a cartoon was circulating picturing William Jennings Bryan as a monkey with the caption, “He denies his lineage.” * *If all else fails, try . . .* **Subversion** Definition:   Preventing your opponent from getting a hearing. Catch-phrase:   Head 'em off at the pass. Examples:  http://creationsafaris.com/images/b.gif Spying http://creationsafaris.com/images/b.gif Trojan Horse: “Please accept this gift with our blessing.” http://creationsafaris.com/images/b.gif Dumbing down the students to make them compliant, or so that they could never understand the Bible or *The Federalist*. http://creationsafaris.com/images/b.gif Raising a generation of “loyal” followers (Nazi schools, communist “Young Pioneers” clubs) http://creationsafaris.com/images/b.gifRaising a generation of citizens dependent on your services (e.g., welfare) so they keep voting for you lest you take away their entitlements. http://creationsafaris.com/images/b.gif Infiltrating the opposition’s organization to water it down, redirect it or expose its weaknesses for conquest http://creationsafaris.com/images/b.gif Slipping the opponent a truth serum or sedative http://creationsafaris.com/images/b.gif Framing your opponent; planting incriminating evidence http://creationsafaris.com/images/b.gif Communist strategy: three steps forward, two steps back. http://creationsafaris.com/images/b.gif Watering down the opposition through compromise (see *[Appeasement](http://creationsafaris.com/crevbd.htm" \l "appeasement)*, below) http://creationsafaris.com/images/b.gif Getting the opposition’s leader to appear in a compromising situation or making a confession [[http://creationsafaris.com/images/BM-BD-cartoon-sm.jpg](http://creationsafaris.com/images/BM-BD-Subversion.jpg)](http://creationsafaris.com/images/BM-BD-Subversion.jpg)http://creationsafaris.com/images/b.gif Passing a law against teaching intelligent design or even weaknesses of evolution, or making it *appear* to be illegal http://creationsafaris.com/images/b.gif Getting your advocate on the Supreme Court or Borking your opponent’s nominee http://creationsafaris.com/images/b.gif Keeping the populace fat and happy with bread and circuses so they don’t revolt. http://creationsafaris.com/images/b.gif Keeping the students spaced out on drugs, sex and rock 'n roll. http://creationsafaris.com/images/b.gif Getting your enemies to fight each other so they stop bothering you. http://creationsafaris.com/images/b.gif Getting the opposition leader to defect to your side. http://creationsafaris.com/images/b.gifJamming the Voice of Freedom or bombing the studio. http://creationsafaris.com/images/b.gif Preventing publication by your opponent. http://creationsafaris.com/images/b.gif Book burning http://creationsafaris.com/images/b.gif Pulling the cables on the sound system during your opponent’s speech, or sending a streaker through the audience to distract attention. http://creationsafaris.com/images/b.gif Hacking the opposition’s website or mounting a denial of service attack against their computers. http://creationsafaris.com/images/b.gif Dirty tricks http://creationsafaris.com/images/b.gif Gerrymandering http://creationsafaris.com/images/b.gif Gaining control of the media and pretending your opponent doesn’t exist. http://creationsafaris.com/images/b.gif Throwing garbage or a pie in his face. http://creationsafaris.com/images/b.gif Abortion and euthanasia: using population dynamics to build a base of loyalists. http://creationsafaris.com/images/b.gif Shutting the heretic up: lobotomy, imprisonment, drugs, cutting out his tongue, hiring a hit man. http://creationsafaris.com/images/b.gif Crucifying the leader so the movement will come to naught. http://creationsafaris.com/images/b.gif Whatever works: *anything* but allowing the opposition to be heard – the end justifies the means.   [http://creationsafaris.com/images/ztop.gif](http://creationsafaris.com/crevbd.htm#top)  **Logical Fallacies** Definition:  Errors in logic or misuse of methods when used in debate or argumentation.  [Circular Reasoning](http://creationsafaris.com/crevbd.htm" \l "circular) http://creationsafaris.com/images/b.gif [Infinite Regress](http://creationsafaris.com/crevbd.htm#infinite) http://creationsafaris.com/images/b.gif [Non-Sequitur](http://creationsafaris.com/crevbd.htm#nonsequitur) http://creationsafaris.com/images/b.gif [Post Hoc Fallacy](http://creationsafaris.com/crevbd.htm#posthoc) http://creationsafaris.com/images/b.gif [Circumstantial Evidence](http://creationsafaris.com/crevbd.htm#circumstantial) http://creationsafaris.com/images/b.gif [Either-Or Fallacy](http://creationsafaris.com/crevbd.htm#eitheror) http://creationsafaris.com/images/b.gif [Personification](http://creationsafaris.com/crevbd.htm#personification) http://creationsafaris.com/images/b.gif[Analogy](http://creationsafaris.com/crevbd.htm#analogy) http://creationsafaris.com/images/b.gif [Reductionism](http://creationsafaris.com/crevbd.htm#reductionism) http://creationsafaris.com/images/b.gif [Authority](http://creationsafaris.com/crevbd.htm#authority) http://creationsafaris.com/images/b.gif [Extrapolation](http://creationsafaris.com/crevbd.htm#extrapolation) http://creationsafaris.com/images/b.gif [Statistics](http://creationsafaris.com/crevbd.htm#statistics) http://creationsafaris.com/images/b.gif [Best-in-Field Fallacy](http://creationsafaris.com/crevbd.htm#bestinfield) http://creationsafaris.com/images/b.gif [Shifting the Burden of Proof](http://creationsafaris.com/crevbd.htm#burdenofproof) http://creationsafaris.com/images/b.gif [Self-Referential (Self-Refuting) Fallacy](http://creationsafaris.com/crevbd.htm#selfreferential) [PROPAGANDA TACTICS](http://creationsafaris.com/crevbd.htm#propaganda) • [SMOKESCREENS](http://creationsafaris.com/crevbd.htm#smokescreens)   * **Circular Reasoning** (begging the question, special pleading, petitio principii, *a priori* reasoning) Definition:  Assuming what needs to be proved. Catch-phrase:  Horoscopes prove astrology. Examples:  http://creationsafaris.com/images/b.gif Tautologies: statements that are true but meaningless, or have a conclusion that just restates the premise; or identities, such as *boys will be boys, a rose is a rose, it’s not over till it’s over, 4 - 2 = 9 - 7,* etc. http://creationsafaris.com/images/b.gif Deafness is caused by hearing loss http://creationsafaris.com/images/b.gif All bachelors are unmarried men http://creationsafaris.com/images/b.gif Nothing succeeds like success. http://creationsafaris.com/images/b.gif Things are as they are because they were as they were. http://creationsafaris.com/images/b.gif The meaning of life is to live a life of meaning. http://creationsafaris.com/images/b.gif Operational definitions: *Temperature is what thermometers measure.*  What does a thermometer measure?  *Temperature.* http://creationsafaris.com/images/b.gif Operationalism in philosophy of science:*Science is what scientists do.*  What do scientists do?  *Science.* http://creationsafaris.com/images/b.gif Inventing inflation theory to save naturalistic cosmology from the evidence of fine-tuning, then calling inflation evidence for naturalistic cosmology. http://creationsafaris.com/images/b.gif *Natural Selection* translates into *survival of the survivors* or *the fitness of the fit.* http://creationsafaris.com/images/b.gif Using index fossils to date the rock layers, and then using the rock layers to date the fossils they contain. [[http://creationsafaris.com/images/BM-BD-cartoon-sm.jpg](http://creationsafaris.com/images/BM-BD-Circular.jpg)](http://creationsafaris.com/images/BM-BD-Circular.jpg)http://creationsafaris.com/images/b.gif Using homology both as explanation of evolution and proof for it: “If an intelligent being had designed both a fish and Sophia Loren from scratch, there’s no way, if evolution hadn’t occurred, that her arm would have had any internal resemblance to a fish’s [sic].  The similarity in anatomy is clear evidence of evolution; the fish’s forelimb [sic] and Sophia’s show a common ancestry” (Jared Diamond, *Discover* 6/85, p.91 http://creationsafaris.com/images/b.gif Using the geologic column as descriptive of evolution and also as evidence for it http://creationsafaris.com/images/b.gif Assuming long ages for radioactive half-lives, then using them to prove long ages. http://creationsafaris.com/images/b.gif Inventing a term as if it explains something: e.g., *convergent evolution* used as both an explanation and an evidence for Darwinian origin of like characteristics in unlike organisms.   + Cohen’s Law: What really matters is the name you succeed in imposing on the facts – not the facts themselves. * *New*  **Infinite Regress** Definition:  Pushing your explanation off somewhere else that needs explaining, *ad infinitum*. Catch-phrase:  It’s turtles all the way down (see [joke](http://creationsafaris.com/humor.htm" \l "turtles)). Examples:  Who watches the watchers?  *The watcher watchers*.  Who watches the watcher watchers?  *The watcher-watcher watchers* (etc.) http://creationsafaris.com/images/b.gif Evolution: pushing the origin of complex specified information back to a common ancestor, then a more distant ancestor, and so on, without answering the question of where the information came from. http://creationsafaris.com/images/b.gif Panspermia: Life was brought to earth by aliens.  *Where did the aliens come from?*  They were brought to their planet by earlier aliens (etc.) http://creationsafaris.com/images/b.gif Oscillating universe: our current universe is the latest in an infinite series of oscillating universes. http://creationsafaris.com/images/b.gif The multiverse: we exist because our universe was naturally selected from an infinite number of unobservable universes.   + *Note:*  [Circular Reasoning](http://creationsafaris.com/crevbd.htm#circular) is like an Infinite Regress in a circle.  Infinite Regress as described here is a linear regress back into the infinite past.   + *Comment:*  Atheists often argue that theists are trapped in an infinite regress.  They challenge, “If God made everything, who made God?” as if the only answer is a God-maker, who required a God-maker-maker, and so on.  But the argument clings just as much, if not more so, to the atheist.  Since nobody believes the universe came from *absolutely nothing* (i.e., no mass, no energy, no categories, no information, no concepts), everybody has to start with an eternal reality – an uncaused cause.  The question then becomes if the eternal reality is personal or impersonal.  But why, then, would an impersonal reality ever give rise to personality? and how would a personal being be able to know it to be true, unless truth also presupposes personal cognition?  The personal uncaused cause is therefore a superior starting point. * **Non-Sequitur** Definition:  “It doesn’t follow” – confusion between cause and effect; bad use of syllogism. Catch-phrase:  Save the world: buy a Ford. Examples:  http://creationsafaris.com/images/b.gif How can we lose when we’re so sincere? http://creationsafaris.com/images/b.gif *Help our school children; support the NEA.* http://creationsafaris.com/images/b.gif *Promote world peace: support the U.N.* http://creationsafaris.com/images/b.gif *The President is showing his compassion on hurricane victims by pledging $50 billion in federal aid.* (Is it his money?  Is he trying to prevent political criticism?  Is it the federal government’s responsibility?) http://creationsafaris.com/images/b.gif *I found a bone.  It must be a transitional form.* http://creationsafaris.com/images/b.gif Arguing that evolution should be taught in schools to increase the quality of science education. http://creationsafaris.com/images/b.gif Arguing that since we have found the building blocks of life, we have begun to understand the origin of life http://creationsafaris.com/images/b.gif Arguing that since life appears early in the history of the earth, it must be easy to evolve, or must evolve all over the universe http://creationsafaris.com/images/b.gif Major premise: All fish are good swimmers.  Minor premise: Some birds are good swimmers.  Conclusion: Some birds are fish. http://creationsafaris.com/images/b.gif Major premise: Life flourishes in extreme environments.  Minor premise: Other planets have extreme environments.  Conclusion:  Other planets have life. http://creationsafaris.com/images/b.gif Jared Diamond: “...the eyes of the lowly squid, with the nerves artfully hidden behind the photoreceptors, are an example of [design perfection](http://creationsafaris.com/crev0702.htm" \l "body58).  If the Creator had indeed lavished his best design on the creature he shaped in his own image, creationists would surely have to conclude that God is indeed a squid.” (*Discover* magazine 6/1985, p. 91). * **Post Hoc** Definition:  After the fact, therefore because of the fact *(post hoc, ergo propter hoc)*. Catch-phrase:  Serving coffee on an airline causes turbulence. Examples:  http://creationsafaris.com/images/b.gif We lost the battle because we ignored the bad omen of the comet. http://creationsafaris.com/images/b.gif Disciples of Jesus: “Who sinned, this man or his parents, that he was born blind?” (John 9:2) http://creationsafaris.com/images/b.gif I took this pill and felt better; it must work. http://creationsafaris.com/images/b.gif We’re here, therefore we evolved. http://creationsafaris.com/images/b.gif If the universe didn’t have all its fine-tuned parameters, we wouldn’t be here arguing about whether its existence is possible (the “Weak Anthropic Principle”). * **Circumstantial Evidence** Definition:  Assuming physical evidences are causally related. Catch-phrase:  Where were you on the night of November 11? Examples:  http://creationsafaris.com/images/b.gif Astrology http://creationsafaris.com/images/b.gif Linking sunspot cycles to the stock market http://creationsafaris.com/images/b.gif The “face on Mars” http://creationsafaris.com/images/b.gif Pseudo documentaries alleging the Apollo program was a hoax http://creationsafaris.com/images/b.gif Fossil ape bones used to determine human ancestry http://creationsafaris.com/images/b.gif Fossil horses arranged into an evolutionary sequence. http://creationsafaris.com/images/b.gif Magnetite or carbonates in a Martian meteorite viewed as evidence for life.   + *Comment:*  Circumstantial evidence can be used in a court of law but must be handled with care and in the context of other evidence.  It could send an innocent person to death row.  It is especially dangerous when driven by fanatical belief. * **Either-Or Fallacy** (false dichotomy) Definition:  Presenting only two possible alternatives when others are justified. Catch-phrase:  Did you walk to school or carry your lunch? Examples:  http://creationsafaris.com/images/b.gif Religion vs. science http://creationsafaris.com/images/b.gif Hyper-Calvinism vs. hyper-Arminianism http://creationsafaris.com/images/b.gif The poor vs. the rich http://creationsafaris.com/images/b.gif Fat vs. skinny http://creationsafaris.com/images/b.gif Nature or nurture http://creationsafaris.com/images/b.gifRight-wing vs. left-wing http://creationsafaris.com/images/b.gif Throwing out the baby with the bathwater. http://creationsafaris.com/images/b.gif *If I trash my opponent, I will look like Mr. Clean*. http://creationsafaris.com/images/b.gif *I must be a pretty good person; I’m not a murderer, am I?* http://creationsafaris.com/images/b.gif “There are two kinds of people in this world...” http://creationsafaris.com/images/b.gif Molecules-to-man evolution vs. fixity of species http://creationsafaris.com/images/b.gifAtheism vs. young-earth creationism http://creationsafaris.com/images/b.gif *Evolution is science, creation is religion*: “Evolution uses scientific arguments, creationism uses religious arguments.” http://creationsafaris.com/images/b.gif Separation of church and state (implying, if it isn’t philosophical naturalism, it’s unconstitutional – overlooking the religious implications of materialism and misunderstanding the origin, context and legal history of the phrase and intent of the founding fathers) http://creationsafaris.com/images/b.gif *We cannot mix Intelligent Design with science, or else we would have to let every religion teach its own creation myth* (implying that all scientific explanations are equally objective and all religious explanations are equally subjective) http://creationsafaris.com/images/b.gif Horatio Hockett Newman at the Scopes Trial: “ Evolution is merely the philosophy of change as opposed to the philosophy of fixity and unchangeability.  One must choose between these alternate philosophies, for there is no intermediate position; once admit a changing world and you admit the essence of evolution.” http://creationsafaris.com/images/b.gif Darwin’s fallacy: either everything is designed, or nothing is designed.  Either God designed the shape of my nose and planned every raindrop that falls, or there is no God.  In a letter to Lyell, he said: “Will you honestly tell me (and I should be really much obliged) whether you believe that the shape of my nose (eheu!) was ordained and ‘guided by an intelligent cause?’”  To J.D. Hooker he wrote, “As for each variation that has ever occurred having been pre-ordained for a special end, I can no more believe in it than that the spot on which each drop of rain falls has been specially ordained.”   + *Comment:*  Some things are “either-or” (for example, boys or girls, 0 or 1 bits in computers).  Some things are *mostly* one thing or another, or one of a few possibilities, with very few exceptions.  But you need to demonstrate or prove this, not assume it. * **Personification** Definition:  Attributing personal attributes to inanimate objects or concepts. Catch-phrase:  Mother Nature. Examples:  http://creationsafaris.com/images/b.gif *Molecules assembled themselves into primitive proteins, then began to reproduce themselves.* http://creationsafaris.com/images/b.gif[[http://creationsafaris.com/images/BM-BD-cartoon-sm.jpg](http://creationsafaris.com/images/BM-BD-Personification.jpg)](http://creationsafaris.com/images/BM-BD-Personification.jpg)*When it was no longer safe on the ground, they evolved wings and became birds* and other such statements (fish evolved gills, birds developed feathers, bats invented sonar, primitive cells evolved membranes, etc.) http://creationsafaris.com/images/b.gif Portraying evolution as a tinkerer, cobbing parts together to invent novel structures. http://creationsafaris.com/images/b.gif “But we’re just beginning the study of biochemistry; evolution has had billions of years of practice” (Carl Sagan, *Cosmos*). http://creationsafaris.com/images/b.gif Evolution as game theory. http://creationsafaris.com/images/b.gif Evolution as selfish genes.   + *Comment:*  Personification is an artistic literary device, but a poor argument; it often pulls the wool over the eyes. * **Analogy** Definition:  Improperly drawing parallels while ignoring pertinent differences. Catch-phrase:  A pretty face is like a melody. Examples:  http://creationsafaris.com/images/b.gif *A million monkeys typing on a million typewriters could, given enough time, reproduce the works of Shakespeare.* http://creationsafaris.com/images/b.gif Richard Dawkins in *The Blind Watchmaker* tries to illustrate natural selection achieving highly improbable results with an impertinent computer analogy http://creationsafaris.com/images/b.gifThermodynamics: comparing increase in complexity due to biological evolution to crystal growth, growth from embryo to adult, the water cycle or purifying metals by heat. http://creationsafaris.com/images/b.gif Comparing SETI to archaeology (see [09/24/2005](http://creationsafaris.com/%3Ca) story) http://creationsafaris.com/images/b.gif Hillbilly talk: *Thicker than warts on a pickle*; *As tough as shimmying up a thorn tree with an armload of eels* http://creationsafaris.com/images/b.gif Barr’s Inertial Principle: “Asking a group of scientists to revise their theory is like asking a group of cops to revise the law.” http://creationsafaris.com/images/b.gif Comparisons that omit essential differences.  The following have actually been used in creation-evolution debates or anti-creation rhetoric:  David Morofka, in a debate: “Is it any more incredible that a bird should come from a dinosaur, than that a bird should come from an egg?”  http://creationsafaris.com/images/b.gif Later in the same debate: “Criticizing evolution because there are gaps in the fossil record is no more logical or convincing than criticizing medicine because there are gaps in our ability to heal the sick.”  http://creationsafaris.com/images/b.gif Jared Diamond: “One can no more master biology while denying the fact of evolution than one can understand chemistry while refusing to admit the existence of atoms.”  http://creationsafaris.com/images/b.gif William Howells: “Evolution is a fact, like digestion.” http://creationsafaris.com/images/b.gif Ben Bova: “To insist that Genesis be inserted into biology texts [note the straw man] and to pretend that religious mythology can explain biological phenomena [note the loaded words] are about equivalent to believing that straw can be woven into gold.”   + *Comment:*  Analogies are useful to illustrate a point or add color to speeches, but should not be used to prove a point. * **Reductionism**  Definition:  Reducing a complex concept to just a subset of its components as if it represented the whole. Catch-phrase:  He’s just a stuffed shirt. Examples:  http://creationsafaris.com/images/b.gif A music critic described a Beethoven string quartet as “Horse’s hair scraping on cat’s gut.” http://creationsafaris.com/images/b.gif You are what you eat.  (Have some more nuts/turkey/chicken.) http://creationsafaris.com/images/b.gif The human body is just carbon, hydrogen, oxygen, nitrogen, a little phosphorus and some trace minerals. http://creationsafaris.com/images/b.gif Marriage is just sex. http://creationsafaris.com/images/b.gif The Constitution is just a piece of paper. http://creationsafaris.com/images/b.gif A bird is an egg’s way of making another egg. http://creationsafaris.com/images/b.gif An organism is just a gene’s way of making another gene (Richard Dawkins) http://creationsafaris.com/images/b.gif Religion is just man’s attempt to explain mysterious phenomena, like lightning. http://creationsafaris.com/images/b.gif Human personality is the sum total of neurotransmitter interactions in the brain. http://creationsafaris.com/images/b.gif Thomas Hobbes: all social interactions, including ethics and morals, can be reduced to the search for pleasure and the avoidance of pain. http://creationsafaris.com/images/b.gif Evolutionary game theory: altruism and cooperation are artifacts of social interactions processed by natural and sexual selection; the principles are equally valid for bacteria, fruit flies and human beings http://creationsafaris.com/images/b.gif The ratomorphic fallacy (Arthur Koestler): treating humans like just another species of lab rat. http://creationsafaris.com/images/b.gif “The cosmos is all that is or ever was or ever will be” (Carl Sagan, *Cosmos*).   + *Comment:*  A standard technique in scientific explanation is *modeling*, or reducing a complex phenomenon into idealized or simplified components that are more amenable to mathematical manipulation.  Newton represented an orbiting body by a point mass, for instance, while working out the law of gravity.  No scientific theory should be considered valid or complete, however, unless it can be reconciled with the real world to an acceptable degree of approximation that is both useful and falsifiable.  The fallacy of reductionism lies in asserting that the subset represents the essence of the whole, and nothing else need be considered in the explanation: e.g., Thomas Hobbes’ view of man as *merely* a machine subject to physical laws.  Clearly our bodies obey the law of gravity, but can our human qualities like honesty, rationality or altruism be reduced to material substances?  In his view, yes – but then, such an assumption would undermine his own rationality, and consequently, the validity of his philosophical system (see [self-referential fallacy](http://creationsafaris.com/crevbd.htm" \l "selfreferential)). * **Authority** Definition:  Relying on authority to the exclusion of logic and evidence.   Catch-phrase:  A scholar is someone who agrees with me. Examples:  http://creationsafaris.com/images/b.gif Aristotle in the Middle Ages http://creationsafaris.com/images/b.gif TV commercials - “Four out of five doctors agree . . . ” http://creationsafaris.com/images/b.gif Infomercials narrated by “Nutritionist and Medical Doctor So-and-So” http://creationsafaris.com/images/b.gif “Trust me.” http://creationsafaris.com/images/b.gif Assuming peer review weeds out all fallacies in scientific papers. http://creationsafaris.com/images/b.gif *Dobzhansky says, “Nothing in biology makes sense except in the light of evolution.”* http://creationsafaris.com/images/b.gif Assertions made without any support whatsoever: “The days of Genesis could have been long ages, you know.” – “This rock is 50 million years old.”   + Hiram’s Law:  If you consult enough experts you can confirm any opinion.   + *Suggestion:*  Use authority as a buttress, not a foundation.  Consider: Is he speaking outside his area of expertise?  Are there equally competent authorities who disagree?  Has his view been superseded by further research?  Is the quote in context?  Was it a misprint, corrected in the *Errata* of the next issue?  Is he just plain wrong?  (No one is infallible.) * **Extrapolation** Definition:  Assuming a trend beyond what the data permit. Catch-phrase:  If a little’s good, more’s better. Examples:  http://creationsafaris.com/images/b.gif Panaceas: this nutritional supplement will prevent heart disease, cancer and hangnails. http://creationsafaris.com/images/b.gif Finch beak variations demonstrate molecules-to-man evolution.  (Ignoring the fact the beaks oscillate with climate, this is like predicting you’ll be a millionaire in 20 years by extrapolating one upward blip on the stock market.) http://creationsafaris.com/images/b.gif TV commercial testimonials that imply “If it worked for me, it will work for everybody.” http://creationsafaris.com/images/b.gif Claiming that because science has done so many seemingly impossible things liking giving us cell phones, it will eventually solve the riddle of the origin of life and the mechanism of evolution. http://creationsafaris.com/images/b.gif [[http://creationsafaris.com/images/BM-BD-cartoon-sm.jpg](http://creationsafaris.com/images/BM-BD-Extrapolation.jpg)](http://creationsafaris.com/images/BM-BD-Extrapolation.jpg)Extrapolating from amino acids found in meteorites to the origin of life http://creationsafaris.com/images/b.gif Inserting natural selection prior to self-replication http://creationsafaris.com/images/b.gifExtrapolating from carbonates in rocks alleged to be from Mars that Mars once had life http://creationsafaris.com/images/b.gif Extrapolating from the possibility of internal heat on Europa that there might be life there under an ocean (compare early belief in dinosaurs on Venus because of cloud cover, before it was determined the surface is 900o F.) http://creationsafaris.com/images/b.gif *Radiometric dating proves the earth is 4.6 billion years old.*  (Radioactivity was discovered in 1896; we’ve only been measuring it less than .00001% the assumed age of the earth.) * **Statistics** Definition:  Misusing statistics or graphs to give an appearance of scientific respectability. Catch-phrase:  Figures don’t lie, but liars figure. Examples:  http://creationsafaris.com/images/b.gif Polls http://creationsafaris.com/images/b.gif Truncating a curve http://creationsafaris.com/images/b.gif Inflating variations in a curve http://creationsafaris.com/images/b.gif Insufficient sampling http://creationsafaris.com/images/b.gif [[http://creationsafaris.com/images/BM-BD-cartoon-sm.jpg](http://creationsafaris.com/images/BM-BD-Statistics.jpg)](http://creationsafaris.com/images/BM-BD-Statistics.jpg)*80% of accident fatalities are sober; 20% are drunk – it’s four times safer to be drunk while driving.* http://creationsafaris.com/images/b.gif If one woman can make a baby in nine months, nine women should be able to do it in one. http://creationsafaris.com/images/b.gif On Monday, Joe got drunk on gin and soda water.  On Tuesday, Joe got drunk on vodka and soda water.  On Wednesday, Joe got drunk on ale and soda water.  Conclusion: soda water causes drunkenness. http://creationsafaris.com/images/b.gif “Brand X pain reliever has 650 milligrams.  Brand Y pain reliever has 650 milligrams.  OUR pain reliever has 800 milligrams!”  (What is the active ingredient in each?  Is more better?) http://creationsafaris.com/images/b.gif Publishing radioactive dates without the error bars, and with anomalous results thrown out.   + Disraeli’s Law:  There are lies, damned lies, and statistics. * **Best-in-Field Fallacy** Definition:  The best theory is not *ipso facto* a good theory. Catch-phrase:  Best of the worst. Examples:  http://creationsafaris.com/images/b.gif “The Big Bang theory may have problems, but it is the best theory we have” – an astronomer on a radio talk show, after a caller listed half a dozen serious problems with the theory. http://creationsafaris.com/images/b.gif “We don’t have all the answers, but science is the best tool we have.” http://creationsafaris.com/images/b.gif Eliminating the competition by fiat – “Evolution [is] a theory universally accepted not because it can be proven by logically coherent evidence to be true, but because the only alternative, special creation, is clearly incredible” (D.M.S. Watson, 1929). [[http://creationsafaris.com/images/BM-BD-cartoon-sm.jpg](http://creationsafaris.com/images/BM-BD-BestInField.jpg)](http://creationsafaris.com/images/BM-BD-BestInField.jpg)http://creationsafaris.com/images/b.gif “ . . . it is a considerable strain on one’s credulity to assume that finely balanced systems such as certain sense organs (the eye of vertebrates, or the bird’s feather) could be improved by random mutations.  This is even more true for some of the ecological chain relationships (the famous yucca moth case, and so forth).  However, the objectors to random mutations have so far been unable to advance any alternative explanation that was supported by substantial evidence.” (Ernst Mayr).   Sir Julian Huxley says that, once the hypothesis of special creation is ruled out, adaptation can only be ascribed to natural selection, but this is utterly unjustified.  He should say only that Darwinism is better than the others.  But when the others are no good, this is faint praise.  Is there any glory in outrunning a cripple in a foot race?  Being best-in-field means nothing if the field is made up of fumblers. ... The best-in-field fallacy seems to be my own discovery.  It does not appear in books on fallacies and I have not seen it clearly expressed anywhere else.  Perhaps it appears with unusual frequency among evolutionary theorists, who seem to have a special weakness for it.” –Norman Macbeth,*Darwin Retried: An Appeal to Reason* (Harvard Common Press, 1971), pp. 77-78.   * **Shifting the Burden of Proof** Definition:  Forgetting that it is your responsibility to prove a claim, not your opponent’s to disprove it. Catch-phrase:  Hot potato. Examples:  http://creationsafaris.com/images/b.gif Expecting an opponent to prove a universal negative: *Can you prove Santa Claus doesn’t exist?  Then he must exist.* http://creationsafaris.com/images/b.gif *Have you ever been a Mormon?  Then how can you know it is not the true church?* http://creationsafaris.com/images/b.gif Proposing an unconventional theory then challenging your critics to prove you wrong. http://creationsafaris.com/images/b.gif Expecting a creationist to supply a better model, or else he has no right to criticize evolution. http://creationsafaris.com/images/b.gif Evolutionist dodging the question of the origin of life or the universe, but expecting the intelligent design debater to answer, “Who designed the Designer?” http://creationsafaris.com/images/b.gif Claiming creationism is the unconventional theory that needs proof, when Darwinism was a latecomer in the history of science and has never been proven, nor is even capable of proof. * **Self-Referential Fallacy; Self-Refuting Argument** Definition:  Disqualifying your argument by its own premise. Catch-phrase:  Shooting yourself in the foot. Examples:  http://creationsafaris.com/images/b.gif There are no sentences longer than four words. http://creationsafaris.com/images/b.gif Relativism: *There are no absolutes.* (Is that absolutely true?) http://creationsafaris.com/images/b.gif Logical positivism:*Only concepts derived empirically are valid.* (Was that concept derived empirically?) http://creationsafaris.com/images/b.gif Materialism: *Only physics and chemistry exist.* (Did that thought originate only via physics and chemistry?  Then how do you know it is true?) http://creationsafaris.com/images/b.gif Chemical evolution: *If I can just figure out a way to get my multimillion-dollar lab apparatus to produce life, I will have proven that no intelligence was necessary at the beginning.* http://creationsafaris.com/images/b.gif Digital evolution: *If I can just program this computer to get digital organisms to evolve by natural selection, I will have proven that no intelligence was necessary at the beginning.* http://creationsafaris.com/images/b.gif[[http://creationsafaris.com/images/BM-BD-cartoon-sm.jpg](http://creationsafaris.com/images/BM-BD-SelfRefuting.jpg)](http://creationsafaris.com/images/BM-BD-SelfRefuting.jpg)Selfish genes: *A human being is a strategy for selfish genes to replicate themselves.* (How do you know that idea was not a strategy for the genes to replicate themselves?) http://creationsafaris.com/images/b.gif Universal acid: Darwinism is like a “universal acid; it eats through just about every traditional concept and leaves in its wake a revolutionized world-view” (Daniel Dennett).  But a *universal* acid eat through Darwinism, too. http://creationsafaris.com/images/b.gif Maya: *All is illusion*. (How do you know your philosophy isn’t the illusion, and reality is real?) http://creationsafaris.com/images/b.gif Determinist philosophical systems that deny rationality but are taught using logical proofs: e.g., Hobbes, Locke, Hume, atomism, materialism, evolutionary sociobiology. http://creationsafaris.com/images/b.gif “Tolerance” as the greatest virtue: it is impossible to be tolerant of everything, else one would be tolerant of opposites (love and hate, truth and lies, war and peace, good and evil).  Those appreciating your tolerance for their sexual orientation, for instance, would be offended at your tolerance of those who are intolerant of it.  Tolerance, therefore, necessarily implies intolerance (e.g., intolerance of the intolerant).  Yet if one is intolerant of intolerance, then one is by definition intolerant.  (Note that *love* and *righteousness* are different, because they imply the existence of evil; it is intuitive one cannot love hate or call evil righteous.  *Tolerance* has no such distinctions.)  To respond that certain groups cannot be tolerated (whether racists, homophobes, creationists, or people who believe Jesus is the only way to God) is not only to be inconsistent, but to make an arbitrary distinction within a universal virtue (tolerance).  In logic, if you are inconsistent or arbitrary, you can prove anything, thus undermining your appeal to logic.  Tolerance is thus a self-refuting value system if defended rationally.  It can only be defended as an arbitrary, emotionally-laden preference.  In practice, it usually results in tolerance of certain groups (e.g., moral relativists) and intolerance toward other groups (e.g., those who believe in truth or absolutes).  *Example:* Students at some universities have violently protested against military recruiters on campus, screaming the most vile things at them through bullhorns and vandalizing their exhibits, because in their view the military is “intolerant” of gays.  In 2008, a protestor in an angry crowd of homosexuals grabbed a cross out of the hands of a gentle, elderly woman, threw it on the ground and stomped on it, presumably because he considered all Christians intolerant.  The intolerant behavior was rationalized on the basis of tolerance, thereby refuting the very meaning of tolerance, which is to have a fair, objective and permissive attitude toward those whose with differing opinions.  Tolerance is thus impossible, despite its intuitive appeal and the warm feelings some people have toward the word.  *Exercise:* See if the above reasoning applies to a related politically-correct buzzword, “inclusion.” http://creationsafaris.com/images/b.gif The Yoda fallacy: exempting oneself from the human race when explaining how human rationality evolved http://creationsafaris.com/images/b.gifScientism: *Science is a self-correcting process that never relies on dogma, but is always subject to overthrow of its most cherished beliefs.* (Like evolution?) *Of course not; evolution is a fact!*   [http://creationsafaris.com/images/ztop.gif](http://creationsafaris.com/crevbd.htm#top)  **Smokescreens** Definition:  Attempts to evade or confuse the point of an argument.  [Ad Hominem](http://creationsafaris.com/crevbd.htm" \l "adhominem) http://creationsafaris.com/images/b.gif [Sidestepping](http://creationsafaris.com/crevbd.htm#sidestepping) http://creationsafaris.com/images/b.gif [Red Herring](http://creationsafaris.com/crevbd.htm#redherring) http://creationsafaris.com/images/b.gif [Equivocation](http://creationsafaris.com/crevbd.htm#equivocation) http://creationsafaris.com/images/b.gif [Straw Man](http://creationsafaris.com/crevbd.htm#strawman) http://creationsafaris.com/images/b.gif [Card Stacking](http://creationsafaris.com/crevbd.htm#cardstacking) http://creationsafaris.com/images/b.gif [Bluffing](http://creationsafaris.com/crevbd.htm#bluffing) http://creationsafaris.com/images/b.gif [Appeasement](http://creationsafaris.com/crevbd.htm#appeasement) http://creationsafaris.com/images/b.gif [Humor](http://creationsafaris.com/crevbd.htm#humor) http://creationsafaris.com/images/b.gif[Subjectivity](http://creationsafaris.com/crevbd.htm#subjectivity) http://creationsafaris.com/images/b.gif [Visualization](http://creationsafaris.com/crevbd.htm#visualization) [PROPAGANDA TACTICS](http://creationsafaris.com/crevbd.htm#propaganda) • [LOGICAL FALLACIES](http://creationsafaris.com/crevbd.htm#logicalfallacies)   * **Ad Hominem** Definition:  *Against the man*, attacking the opponent instead of his argument. Catch-phrase:  I’m OK; you’re a jerk. Examples:  http://creationsafaris.com/images/b.gif Political attack ads and digging for dirt: *My opponent claims to be for law and order, but he was arrested for jaywalking 52 years ago*. http://creationsafaris.com/images/b.gif *My opponent in this debate is a well-known activist with the religious right.* http://creationsafaris.com/images/b.gif Asserting that creationists are usually ultra-conservative anti-choice pro-NRA homophobes http://creationsafaris.com/images/b.gif Accusing your opponent of quoting out of context when he did not http://creationsafaris.com/images/b.gif Calling your opponent a liar http://creationsafaris.com/images/b.gif Second-guessing his motives: *He just wants to protect his little fiefdom.* http://creationsafaris.com/images/b.gif Shouting down your opponent http://creationsafaris.com/images/b.gif Questioning your opponent’s heritage or education http://creationsafaris.com/images/b.gif “Can any good thing come out of Nazareth?” http://creationsafaris.com/images/b.gif Richard Dawkins: “I was challenged to produce an example of an evolutionary process that increases the information content of the genome.  It is a question nobody but a creationist would ask.” http://creationsafaris.com/images/b.gif Darrow to Bryan at the Scopes trial: “You insult every man of science and learning in the world because he does not believe in your fool religion.” * **Sidestepping** Definition:  Dodging the issue; changing the subject; circumlocution. Catch-phrase:  Go, Dodgers. Examples:  http://creationsafaris.com/images/b.gif “You’re welcome to your opinion, and I’m welcome to mine.  Let’s just agree to disagree.” http://creationsafaris.com/images/b.gif Distracting attention from impeachment proceedings by bombing Iraq http://creationsafaris.com/images/b.gif Ignoring the opposition: textbooks that present evolution as if no one, anywhere, any time, ever believed anything different or ever had a different scientific explanation than Darwinism. http://creationsafaris.com/images/b.gif In *The Origin of Species*, Darwin talked about everything except the origin of species. http://creationsafaris.com/images/b.gif In many creation-evolution debates, the evolutionists have spent their time talking about religion and philosophy instead of evidence for evolution. http://creationsafaris.com/images/b.gif To avoid offending the clergy, some Darwinists deny believing that man descended from apes, claiming rather that “apes and men had a common ancestor.”  This sidesteps the logical yet uncomfortable inference that any such common ancestor would have been essentially ape-like. http://creationsafaris.com/images/b.gif During the Q&A session after a debate, Dr. John Patterson, after clearly ignoring Dr. Gish’s argument on the Second Law of Thermodynamics all evening, was asked point-blank if he or anyone in the audience could refute it.  Dr. Patterson (an expert on thermodynamics) responded, “Well, let me pass on that.  How do you answer a question that isn’t a question?” * **Red Herring** Definition:  Going off on a tangent, from the tactic of luring the hunting dogs off the trail with the scent of a herring fish. Catch-phrase:  Throw the watchdog a steak. Examples:  http://creationsafaris.com/images/b.gif *This debate is really not [[http://creationsafaris.com/images/BM-BD-cartoon-sm.jpg](http://creationsafaris.com/images/BM-BD-RedHerring.jpg)](http://creationsafaris.com/images/BM-BD-RedHerring.jpg)about evolution, but about separation of church and state.* http://creationsafaris.com/images/b.gif At a debate on the scientific merits of evolution, Dr. Russell Doolittle tried repeatedly to get Dr. Duane Gish to state publicly how old he thought the earth was, thinking that would make his opponent appear on the fringe. http://creationsafaris.com/images/b.gif Opponents of Intelligent Design often retreat to statements about the “rules of science” rather than address the scientific problems with Darwinism (e.g., See quote by Richard Lewontin in [Subjectivity](http://creationsafaris.com/crevbd.htm#subjectivity), above). * **Equivocation** Definition:  Confusing the issue by using vague terms or shifting the definitions of words. Catch-phrase:  Superman flies like an airplane; fruit flies like a banana. Examples:  http://creationsafaris.com/images/b.gif “It depends on what the meaning of *is* is.” http://creationsafaris.com/images/b.gif Alexander the Great was a great general.  Great generals are forewarned.  Forewarned is forearmed.  Four is an even number.  Four is certainly an odd number of arms for a man to have.  The only number that is both even and odd is infinity.  Therefore, Alexander the Great had an infinite number of arms. http://creationsafaris.com/images/b.gif Double entendre http://creationsafaris.com/images/b.gif Cults that redefine Christian terms, e.g. Mormon missionary *Why, yes, we believe in salvation by grace through faith* (which, being translated, means working your way up to godhood). http://creationsafaris.com/images/b.gif Newspeak and doublethink (George Orwell, *1984*): *War is peace, freedom is slavery, ignorance is strength*. http://creationsafaris.com/images/b.gif Postmodernism, and deconstructionist interpretation of classic literature:*Shakespeare’s “to be or not to be” soliloquy expresses the eternal struggle for women’s reproductive rights, lesbian acceptance and the freedom to grow pot at home*. http://creationsafaris.com/images/b.gif *Evolution is a fact, but we don’t yet understand the mechanism*. http://creationsafaris.com/images/b.gif Defining your terms so that your opponent is wrong by definition. http://creationsafaris.com/images/b.gif At the Scopes trial, professor Maynard Metcalf was asked to define evolution.  Here was his definition: “Evolution, I think, means the change; in the final analysis I think it means the change of an organism from one character into a different character, and by characters I mean its structure, or its behavior, or its function, or its method of development from the egg or anything else – the change of an organism from one set of characteristics which characterizes it into a different condition, characterized by a different set of characteristics either structural or functional, could properly be called, I think, evolution – to be the evolution of the organism.  But the term in general means the whole series of changes which have taken place during hundreds of millions of years, which have produced from lowly beginnings, the nature of which is not by any means fully understood, the organism of much more complex character, whose structure and functions we are still studying, because we haven’t begun to learn what we need to know about them.” http://creationsafaris.com/images/b.gif Incorporating philosophical naturalism into the very definition of science: “Science is fundamentally a game.  It is a game with one overriding and defining rule:  Rule #1: Let us see how far and to what extent we can explain the behavior of the physical and material universe in terms of purely physical and material causes, without invoking the supernatural” (Richard Dickerson). http://creationsafaris.com/images/b.gif*Evolution just means change over time; do you see change?  Then you’re an evolutionist in spite of yourself.* http://creationsafaris.com/images/b.gif Shifting between microevolution and macroevolution (see [Extrapolation](http://creationsafaris.com/crevbd.htm" \l "extrapolation), above) http://creationsafaris.com/images/b.gif If similar organs fit your assumptions of evolutionary ancestry, you call them *homologous*.  If similar organs do NOT fit your assumptions of evolutionary ancestry, you call them *analogous*. http://creationsafaris.com/images/b.gif Shifting definitions of Natural Selection depending on which has better rhetorical effect in the context of the discussion (excellent treatment of this tactic in *The Biotic Message* by Walter ReMine) http://creationsafaris.com/images/b.gif “Evolution is a fact, not a theory; it really happened” (Carl Sagan, *Cosmos*, after discussing a case of microevolution).   + Truman’s Law: If you cannot convince them, confuse them.   + Dunne’s Law: The territory behind rhetoric is too often mined with equivocation. * **Straw Man** Definition:  Caricature, making your opponent’s argument seem ridiculous so that it is easily knocked down. Catch-phrase:  If I only had a brain . . . Examples:  http://creationsafaris.com/images/b.gif *My opponent believes that God created the universe at 9:00 a.m. on October 23, 4004 B.C.* http://creationsafaris.com/images/b.gif TV debates pitting a silver-tongued orator against a stammering fool http://creationsafaris.com/images/b.gif TV dialogues outnumbering the opposition, like *Politically Incorrect* staging five fast-talking liberals against one token conservative. http://creationsafaris.com/images/b.gif Extrapolating your opponent’s position into something absurd: “You’re against gun control?  So what do you want, everybody to be free to walk around with their own atomic bomb? http://creationsafaris.com/images/b.gif “You support Intelligent Design?  Oh! so I guess we’re all just supposed to go to the science lab and pray for a miracle every time we don’t understand something.” http://creationsafaris.com/images/b.gif PBS *Evolution* TV series, Sept. 2001, ignored all scientific objections to evolution, and portrayed the only opponents as religious fundamentalists, particularly Bible-believing Christians. http://creationsafaris.com/images/b.gif A geologist at the Grand Canyon told a story about a lady tourist who exclaimed, “Why, you atheist, you!  How dare you stand there and claim this beautiful canyon is not exactly the way God created it!”  Turning to his audience, he said, “*That* is the case against evolution.”   + *Suggestion:*  Anyone can knock over a scarecrow.  Play the pros.  Your argument is strengthened when it can stand up to the very best the opposition has to offer. * **Card Stacking**  (selective use of evidence) Definition:  Listing all the points in your favor while ignoring the serious points against it. Catch-phrase:  Pick a card, any card. Examples:  http://creationsafaris.com/images/b.gif Selective reporting http://creationsafaris.com/images/b.gif Contrived product comparison charts that accentuate the positive and eliminate the negative http://creationsafaris.com/images/b.gif The use of a *cause celebre* to push one’s agenda (e.g., Elian Gonzalez; Waco; screaming about a murdered homosexual while ignoring gay child abuse and murder; focusing on an abortion clinic bomber while ignoring cases of women harmed by abortion and remaining silent about the grisly details of partial-birth abortion.) http://creationsafaris.com/images/b.gif Pouncing on one mistake by your opponent but ignoring the major points of his argument http://creationsafaris.com/images/b.gif Trying to prove evolution with peppered moths, finch beaks, and antibiotic-resistant bacteria but ignoring the fossil record and irreducible complexity. http://creationsafaris.com/images/b.gif Presenting *Archaeopteryx* as a transitional form but ignoring the Cambrian Explosion. http://creationsafaris.com/images/b.gif Using dating methods that yield long ages, but ignoring methods that yield young ages, or discarding results that don’t fit the desired range.   + *Comment:*  It is legitimate to amass evidences to argue a point, so long as you present them with integrity and balance, and consider the objections fairly.   + Proverbs of Solomon:  The first to present his case seems just, until another comes and examines him. (Proverbs 18:17) * **Bluffing** Definition:  Appearing to know more than you do. Catch-phrase:  Ignore that man behind the curtain. Examples:  http://creationsafaris.com/images/b.gif Using big words to sound smarter: *Ontogeny recapitulates phylogeny* http://creationsafaris.com/images/b.gif Preacher’s marginal note: ”Point weak; pound pulpit harder here.”http://creationsafaris.com/images/b.gif Making up for lack of substance with volume of material, graphics, equations or references http://creationsafaris.com/images/b.gif Bold assertions made without evidence, e.g., American Museum of Natural History: “Birds are dinosaurs.” http://creationsafaris.com/images/b.gif *It’s been documented!*  (Where?  By whom?  So what?) http://creationsafaris.com/images/b.gif Claiming more accuracy than your methods warrant: *We have dated this meteorite to 4.5672 plus or minus 0.0007 billion years old.* http://creationsafaris.com/images/b.gif At the Scopes Trial, Clarence Darrow bluffed shamelessly with a series of made-up Bible references aimed at making the Bible appear scientifically inaccurate, e.g. “Are your mathematics good?  Turn to I Elijah 2.” [There is no such passage in the Bible.]  “Is your philosophy good?  See II Samuel 3.” [This chapter is a historical account of events during the time of David.]  “Is your astronomy good?  See Genesis chapter 2 verse 7.” [This passage has nothing to do with astronomy.]  “Is your chemistry good?  See – well, chemistry – see Deuteronomy 3:6 or anything that tells about brimstone.” [This verse has nothing to do with chemistry or brimstone.] http://creationsafaris.com/images/b.gif In debates, some evolutionists have claimed the fossil record is *filled* with transitional forms (but Colin Patterson of the British Museum could not think of a single case for which one could make a watertight argument). http://creationsafaris.com/images/b.gif Bradford Smith, on *The Astronomers* (PBS 1994, part 6): “We know what the chemicals are, the elements that are responsible for life and they’re ubiquitous–they’re everywhere, they are the most common elements and molecules in the universe.  If you can get these materials together in the right environment ... this is a natural process, this is chemical evolution; it’s going to take place anyway–there’s no way to stop it.”   + Fairfax’s Law:  Any facts which, when included in the argument, give the desired result, are fair facts for the argument. * **Appeasement** Definition:  The appeal, “We’re really not so different; let’s be friends.”  (Polite in personal relationships, but a dodge in debate.) Catch-phrase:  You can’t bargain with the devil. Examples:  http://creationsafaris.com/images/b.gif Joab to Amasa (II Sam. 20:8-10) “Art thou in health, my brother?” *(stab)* http://creationsafaris.com/images/b.gif Sennacherib to inhabitants of Jerusalem: “Come with me and you will have peace, prosperity and safety” (II Kings 18:31-32) http://creationsafaris.com/images/b.gif Bribery http://creationsafaris.com/images/b.gif Let’s make a deal http://creationsafaris.com/images/b.gif Can’t we all just get along? http://creationsafaris.com/images/b.gif Building toward consensus (Hegelian Dialectic: thesis - antithesis - synthesis): “Let’s see if we can all give a little and meet in the middle.” http://creationsafaris.com/images/b.gif “Why, some of my best friends are Christians, and they don’t have a problem with evolution at all.” http://creationsafaris.com/images/b.gif *I’m not some nasty atheist, you know; I believe in God just like you.* http://creationsafaris.com/images/b.gif Eugenie Scott: “Yes, teach the Bible! - but in the religion class, not the science class.” http://creationsafaris.com/images/b.gif Smoothing acceptance of the Big Bang theory by renaming it “The Creation Event.” http://creationsafaris.com/images/b.gif Stephen Jay Gould’s proposal of *Non-Overlapping Magisteria* (NOMA) to allow science and religion to maintain mutual respect (i.e., religion gets the art and ethics, science gets the physical world).  This in effect relegates religion to the subjective and guarantees naturalistic philosophy a monopoly on objective knowledge (see Phillip Johnson, *The Wedge of Truth*).   + *Comment:*  Blessed are the peacemakers, but cursed are those who speak peace with forked tongue. * **Humor** Definition:  Diverting attention from an issue with a joke. Catch-phrase:  Laugh and the world laughs with you. Examples:  http://creationsafaris.com/images/b.gif TV commercials that get a laugh without telling you anything about the product or why you should buy it. http://creationsafaris.com/images/b.gif William Jennings Bryan at the Scopes Trial responded to Darrow’s question “Do you know how old this rock is?” with, “I’m more interested in the Rock of Ages than the age of rocks!” http://creationsafaris.com/images/b.gif“I’m not left wing or right wing – I’m for the whole bird!” (cute, but what does this mean?  One cannot hold diametrically opposite positions on abortion, for instance.) http://creationsafaris.com/images/b.gif Political cartoons http://creationsafaris.com/images/b.gif Satirical songs http://creationsafaris.com/images/b.gif Making a pun or double entendre out of what your opponent says http://creationsafaris.com/images/b.gif Wincing, sighing, smirking, chuckling or laughing out loud at your opponent’s point rather than facing it. * **Subjectivity** Definition:  Appealing to unverifiable, illogical or intuitive feelings and opinions. Catch-phrase:  How can it be wrong when it feels so right? Examples:  http://creationsafaris.com/images/b.gif Intuition: *In your heart you know he’s right.* http://creationsafaris.com/images/b.gif Mormon: “I have this burning in my bosom that the Mormon church is the true church.” http://creationsafaris.com/images/b.gif Feel-good do-nothing slogans, like “visualize world peace” http://creationsafaris.com/images/b.gif “Dr. Cancerquack is such a kind and caring person; he’s so much nicer than those impersonal doctors in the medical establishment who just want to prescribe chemo and radiation.” http://creationsafaris.com/images/b.gif Most UFO stories, especially abductions http://creationsafaris.com/images/b.gif False prophets (Jeremiah 23:25-26): *I had a dream, I had a dream*. http://creationsafaris.com/images/b.gif TV commercials that tug at your heartstrings without telling you anything about the product or why you should buy it. http://creationsafaris.com/images/b.gif Most testimonials in political ads http://creationsafaris.com/images/b.gif Nutrition, medicine or diet advertisements featuring testimonials instead of double-blind scientific tests. http://creationsafaris.com/images/b.gif Debater 1: “Your argument is invalid because of [rebuttal a, b, and c].” Debater 2: “I’m sorry your feelings were hurt by what I said.” http://creationsafaris.com/images/b.gifHypersensitivity: *It is unconstitutional for the walls of a classroom to have the Ten Commandments on them, because it may lead the students to read them, meditate on them, respect them, or obey them.* (United States Supreme Court, Stone v. Gramm; 1980;9 Ring v. Grand Forks Public School District, 1980;10 Lanner v. Wimmer, 1981.11.) http://creationsafaris.com/images/b.gif Avoiding known contradictions with science by taking refuge in what science might discover in the future: “For some, adaptation was merely an inexplicable fact; these students were few, because scientists rarely are psychologically capable of accepting a phenomenon as a fact and also accepting it as inexplicable” (George Gaylord Simpson) http://creationsafaris.com/images/b.gif *We seem to have a major contradiction here, but maybe more research (and more funding) will solve it.* http://creationsafaris.com/images/b.gif Richard Lewontin: “We take the side of science *in spite* of the patent absurdity of some of its constructs, *in spite* of its failure to fulfill many of its extravagant promises of health and life, *in spite* of the tolerance of the scientific community for unsubstantiated just-so stories, because we have a prior commitment, a commitment to materialism.  It is not that the methods and institutions of science somehow compel us to accept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our *a priori* adherence to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counter-intuitive, no matter how mystifying to the uninitiated.  Moreover, that materialism is an absolute, for we cannot allow a Divine Foot in the door” (italics in original). * **Visualization** (symbolism over substance) Definition:  Using imagery to mislead, attract, or distract, or as a substitute for evidence and logic. Catch-phrase:  The medium is the massage – or – Pictures don’t lie, but liars use Photoshop. Examples:  http://creationsafaris.com/images/b.gif TV commercials that strive to create “image” using fast-paced and extravagant visuals, without telling you anything about the product or why you should buy it http://creationsafaris.com/images/b.gif Tom Daschle showing the Lexus that a rich person could buy with Bush’s tax cut vs the muffler a poor person could afford (but neglecting to tell you how much more in taxes the rich man is paying). http://creationsafaris.com/images/b.gif Fact: President Bush refused to make arsenic standards that have been in place for 50 years more stringent.  How it came across in a Democratic National Committee TV attack ad: a scene of a little girl asking with a smile, “May I please have some more arsenic in my water, Mommy?” http://creationsafaris.com/images/b.gif Haeckel’s embryos http://creationsafaris.com/images/b.gif [[http://creationsafaris.com/images/BM-BD-cartoon-sm.jpg](http://creationsafaris.com/images/BM-BD-Visualization.jpg)](http://creationsafaris.com/images/BM-BD-Visualization.jpg)Evolutionary tree of life http://creationsafaris.com/images/b.gif Geologic column http://creationsafaris.com/images/b.gif Darwin fish http://creationsafaris.com/images/b.gif Reconstruction of Nebraska Man from a pig’s tooth, and other ape-man reconstructions as in the Discovery Channel’s *Neanderthal* and *Humans: Who Are We?* http://creationsafaris.com/images/b.gif Disney’s *Fantasia* portraying the history of the earth and origin of life http://creationsafaris.com/images/b.gif Epcot’s *Universe of Energy* http://creationsafaris.com/images/b.gif Discovery Channel *Walking with Dinosaurs*, movie *Jurassic Park* and other computer-animated reconstructions of unobservable prehistoric animal behavior http://creationsafaris.com/images/b.gif Carl Sagan’s Cosmic Calendar http://creationsafaris.com/images/b.gif *National Geographic* artwork of imaginary feathered dinosaurs. http://creationsafaris.com/images/b.gif For more examples, see [*Icons of Evolution*](http://iconsofevolution.com/) by Jonathan Wells.   + Peter’s Placebo:  An ounce of image is worth a pound of performance.   *Return to*  [PROPAGANDA TACTICS](http://creationsafaris.com/crevbd.htm#propaganda) • [LOGICAL FALLACIES](http://creationsafaris.com/crevbd.htm#logicalfallacies) • [SMOKESCREENS](http://creationsafaris.com/crevbd.htm#smokescreens)  For a good source of historical examples of evolutionary propaganda, including little-known and shameful tactics at the Scopes Trial, cf. Bolton Davidheiser, *Evolution and Christian Faith* (Baker Book House, 1969). [http://creationsafaris.com/images/ztop.gif](http://creationsafaris.com/crevbd.htm#top)  ***Final comment***.  Not all of the above tactics are bad in themselves; it depends on how they are used.  Analogies, humor, visualization, quotations by authorities, and statistics, for instance, are valid parts of rhetoric (persuasive speech), and can be legitimate and helpful teaching aids.  These only err as fallacies or become propagandistic to the extent they *dodge the issue, obscure the truth, mislead* or *take the lazy way out of a debate.*  And to avoid being fooled ourselves, we must be alert to these tactics of misdirection and deception.  Paul warned,  “ . . . That we henceforth be no more children, tossed to and fro, and carried about with every wind of doctrine, by the sleight of men, and cunning craftiness, whereby they lie in wait to deceive; But speaking the truth in love, may grow up into him in all things, which is the head, even Christ.” – (Ephesians 4:14-15). | |