HUMBUG!
The skeptic’s field guide
to spotting fallacies
in thinking

Jef Clark
Theo Clark

eBook Edition

Cartoons by Jef Clark
HUMBUG! the skeptic’s field guide to spotting fallacies in thinking
Foreword

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**Single Cause:** Advocate asserts that there is only one cause of a phenomenon or problem, when the evidence suggests multiple factors.  

**Slippery Slope:** Advocate asserts without evidence that if we take "one step in the wrong direction", it will inexorably lead to catastrophe.  

**Special Pleading:** Advocate claims special insights into an issue, and that the opponent is incapable of achieving.  

**Stacking the Deck:** Advocate is aware of counter-arguments to his or her position, but conceals them in order to defeat the opponent.  

**Straw Man:** Advocate attacks a weakened, exaggerated, or over-simplified form of the opponent's position rather than the real position.  

**Unfounded Generalization:** Advocate draws a general conclusion about a phenomenon based on unrepresentative examples.  

**Weasel Words:** Advocate uses emotionally loaded labels to boost his or her position or to denigrate the opponent's position.  

See the expanded fallacy list @ www.skepticsfieldguide.net
Foreword to the eBook Edition

This is the “cut down” eBook edition of *Humbug! the skeptic’s field guide to spotting fallacies in thinking*. It has all the fallacies from the original paperback. It does not include the introduction. The cartoons in the eBook edition are of lower image quality than the paperback edition; most are early drafts. We make no apologies for this. The paperback needs to be the “best” version of *Humbug!*

So why make an eBook edition? We are currently working on an expanded book on humbug (deceptive talk, and/or false behaviour). As we are doing this, we wish further the goals of the skeptic movement by disseminating knowledge of fallacies as easily and effectively as possible. This is the purpose of the eBook edition.

Whilst we still reserve copyright, we are happy for fallacies from this eBook to be printed/photocopied and used for educational purposes, with appropriate acknowledgement. (Each fallacy prints nicely at two or four pages per sheet.) Electronic versions should not be uploaded to an alternate server. You can easily create a link to the eBook or even embed it in a webpage via [Scribd](http://scribd.com). You may download to a personal computer or other device for personal use; however, it is our preference that this eBook should not be shared directly. Share it by all means – by sending the link – we like usage statistics!

For information on how to purchase the paperback edition, see [www.skepticsfieldguide.net](http://www.skepticsfieldguide.net). There you will also find our full and expanded list of [logical fallacies](http://www.skepticsfieldguide.net) (with real examples), as well as some techniques for [humbug hunting](http://www.skepticsfieldguide.net) (techniques for

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arguing effectively and spotting faulty reasoning), more of Jef’s cartoons and our fallacy podcast Hunting Humbug 101.

**Foreword to the Paperback Edition**

Jef is an academic in teacher education. Theo is a secondary science and mathematics educator. As father and son (respectively), we have shared a long-standing interest in critical thinking, informal logic and fallacies. This book is the most tangible product of an engaging dialogue we have pursued over many years.

The specific genesis of our book project began several years ago, when Jef found that he couldn't assume that his undergraduate teacher-education students brought generic skills in analysis and argument with them when they came to his courses. It also became apparent to Jef that the available books on critical thinking, informal logic and related topics were largely unsuitable for use in generalist courses at undergraduate level. Some were textbooks intended to support specialized courses in informal logic and critical thinking. Some books assumed prior knowledge. Others treated "fallacies in thinking" within an esoteric context such as epistemology, formal logic or argument analysis. There was also a lack of consistency across publications - in particular, the labels given to fallacies, their classification and typology.

In order to meet what we perceived to be an emergent need in both tertiary and secondary education, we decided to write a book on logical fallacies in a "commonsense" style which would be accessible to non-specialist undergraduate students. This book is the result.
Acknowledgements

David Vaughan, a childhood friend of Jef who was also a fellow arts student at the University of New South Wales. He sharpened Jef's thinking skills through his highly analytical contributions to their many discussions about life, the universe and everything. Their discussions were always engaging, often challenging and at times very informative.

Frank Crowley, Professor of History and later Dean of Arts at the University of New South Wales. Jef attended his tutorials and they were always a remarkable experience. Frank applied merciless scrutiny to the ill-considered assertions of under-prepared students. His "blowtorch to the belly" approach, once experienced, was never forgotten. A heady mixture of anxiety and exhilaration.

Ben Retschlag, Theo's friend since the beginning of high school. In discussions about anything and everything, Ben was and is insightful and cogent. He has the capacity to challenge presumptions, and has often left Theo feeling an urgent need to review his position, and to re-examine the factual and theoretical foundations of his argument.

Barry Williams, editor of the Skeptic Journal. Barry provided us with the opportunity to develop and refine our ideas through feedback from readers on our articles in that journal. Some of the content of this book has appeared in our more recent articles in the Skeptic. Some of the content in our Skeptic articles first appeared in earlier pilot versions of Humbug.
Ad Hominem

Other Terms and/or Related Concepts
Personal abuse; personal attack.

Description

Ad Hominem is a Latin expression which means “to the man”. The advocate attacks his or her opponent rather than the argument put forward by the opponent. When personal abuse of this kind is used, the content of the attack does not relate to objective facts about such things as the opponent's membership of a particular group, or the profession they practise (e.g. environmentalist, lawyer). Rather, the abuse is directed at the person's character or other personal attributes.

Example

Phil Schnotter and Nigel Pennyweight are having a heated conversation in the pub about banks when Phil (the advocate) says: "I know why you think bank profits are too high Nigel... you are just prejudiced against banks... If I were such a loser I would be prejudiced against banks too... You just hate hardworking, successful people who happen to have enough money to invest."

Comment

At times this fallacy may be hard to distinguish from other common fallacies such as impugning motives and poisoning the well. In fact, all three fallacies may be closely associated with each other and may even occur in the one sentence. The key characteristic of Ad hominem (personal abuse) is that an abusive label is directed at the individual and used as a
gratuitous insult (that is, an insult which really has no bearing on the subject under discussion).

In the example given above, the use of the word "loser" is the key indicator that personal abuse is taking place. The label is simply a term of abuse, and Phil clearly intends to hurt and belittle Nigel by calling him a "loser". Use of such terms is likely to raise the emotional temperature of the discussion and result in an unproductive trading of insults. Note that immediately after the personal abuse in the example above, Phil then impugns Nigel's motives in the words that follow the personal abuse. He says: "... You just hate hardworking, successful people..."

A form of Ad hominem which is particularly common today is the unjustified use of a negative label associated with the topic under consideration. For example, a witless advocate might label a proponent of zero population growth a "racist" without justification. In doing this, he or she is actually seeking to undermine the proponent's credibility in order to evade discussion of the issue, rather than engaging in considered debate.

It is commonly the case that for each term of abuse that may be directed at a person advocating one side of an argument, there is a term of abuse which may be directed at the other side. For every "greenie", there is a "redneck", for every "misogynist" there is a "feminazi", for every "fascist" there is a "stalinist", for every "homophobe" there is a "queer". Any advocate of a point of view should avoid labelling an opponent with emotionally laden, abusive and grossly simplistic terms. Labelling invites retaliation, and the intellectual level of the debate plummets beyond any hope of recovery. The authors of
this book are particularly averse to puerile name-calling and gratuitous slander directed at individuals during any disagreement. It is our considered view that anyone who deliberately uses personal abuse in an attempt to win an argument is engaging in unconscionable conduct.

No matter what the circumstances, any person who descends to *ad hominem* is a *stupid bastard*. 
Personal Abuse @ www.skepticsfieldguide.net
Appeal to Authority

Other Terms and/or Related Concepts

Appeal to eminence; appeal to "the great and the good".

Description

This fallacy in reasoning occurs when an advocate appeals to an "authoritative" person or agency in support of his or her own viewpoint. The authoritative source may have some prominence in the field under consideration or the person/agency may be prominent in an unrelated field. In the latter case, the gullible advocate is relying on the generalized "eminence" of the authority in an attempt to sway the opponent, rather than the presumed expertise of the authority.

Example

Bryan Bladderpocket is an academic with an interest in social policy. He is giving a seminar on multiculturalism to a small group of postgraduate students. One of the students, Mark Gonz, says: "You claim you're an advocate of multiculturalism, but you're not really - any immigrant group which doesn't conform to liberal middle-class values is anathema to you. Many values of many different cultures conflict with Western conceptions of human rights." Bryan (the advocate) replies: "I don't accept your point – just last Wednesday, Sir Ernest Willynililly wrote in his opinion column in the East Coast Thunderer that the norms of all known cultures are consistent with universal human rights – and I shouldn't have to remind you that Sir Ernest is a Nobel Prizewinner."
Comment

Bryan has cited Sir Ernest Willynilly's views on human rights in support of his own position. What he hasn't said is that the Nobel Prize Sir Ernest won was for Physics. In such a case, there is no reason for presuming Sir Ernest's views on any social issues have any more weight than anyone else's views. The seeker after truth is in principle unimpressed by the prominence of the person expressing a viewpoint on an issue. Even if Sir Ernest did have qualifications in relevant social research, Mark would be entitled to be skeptical about his opinions. After all, there are many historical examples where the consensus views of experts in a field of enquiry have been completely overturned in the light of later investigation by more competent researchers.

Deceitful advocates often appeal to authority in order to bolster their position. The appeal to authority fallacy is a significant problem in contemporary debate on social issues. Journalists and editorial staff in the news media often seek the views of "eminent persons" for no better reason than their availability and visibility. Journalists are under pressure of remorseless deadlines. Print and electronic media proprietors are naturally concerned with circulation figures and ratings respectively. Under such circumstances, it is not surprising that the lazy option is often taken—contact one of the "usual suspects" who can be depended on to comment with affected gravitas on any subject. Preferably a public figure who is popularly seen as humble and self-effacing despite having ruthlessly collected honours, distinctions and personal wealth all his or her working life.
The skeptical viewer will realise (for example) that when Sir Dean Sillybilly, an obscenely rich former supreme court judge and retiring Governor of New South Holland is pontificating on remedies for the plight of the poor during a valedictory television interview, he is more likely to have been part of the problem than part of the solution.

Similarly, the skeptic will realise that when the recently and widely acclaimed Father of the Year – Justice Gustav Flatus OAM, presumes to lecture the rest of us on child-rearing practices, he may not be doing so from credible standpoint. Despite his recent honour, he may not in fact be an exemplary parent. He is in a position to pontificate on parenting because he has managed to achieve a high level of visibility in the community through his "non-fathering" activities. Perhaps he has actually been a workaholic absent father whose long-suffering wife has had to be both mother and father to their children. There is no way of knowing for sure. But we do know that some past recipients of the "Father of the Year" award have put their own careers before the needs of their children.

The prominence of a person is evidence that the person is capable of securing prominence, quite possibly through a meticulously planned, single-minded campaign of self-aggrandizement. It is not evidence that he or she speaks with genuine authority on any matter.
I'll have you know that no less an authority than the mayor agrees with me on my proposal for rezoning.

Isn't the mayor the majority shareholder in your development company?

The shonky councillor appeals to authority.

[Image of a cartoon dialogue:
- Mayor: I'll have you know that no less an authority than the mayor agrees with me on my proposal for rezoning.
- Councilor: Isn't the mayor the majority shareholder in your development company?
- Mayor: The shonky councillor appeals to authority.
]

Appeal to Authority @ www.skepticsfieldguide.net

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Argument by Artifice

Other Terms and/or Related Concepts

Rationalization; asserting an unwarranted conclusion; argument by deception.

Description

The conclusion is all, and drives the argument. In order to make a case the advocate puts forward contrived, convoluted and unfounded assertions which any fair-minded and objective observer would perceive as artificially constructed. The reasoning may be specious, tendentious, flawed in logic and unjust in effect.

Example

Noel Maggot is the Director of Finance for the Faculty of Health at the University of Woolloomooloo. Noel is a bitter man, in part because no-one takes the trouble to pronounce his unfortunate surname correctly. (He insists it is French in origin, and should be pronounced "Mahjay"). Mr Maggot is writing a letter to Ivana Bugarov, formerly a lecturer in occupational health and safety in the School of Nursing at Woolloomooloo. The letter begins: "This is to inform you that the Faculty of Health will be asserting that it has a right to royalties on revenue generated by your leg-pulling device. Our legal office has determined that although you patented the so-called Bugarov Leg-Puller two years after you resigned from the University, you must have conceived the design of the device while an employee of the university. Further, it has been established that one of your lectures dealt in part with the therapeutic application of traction to sports injuries..."
to the tibia and patella. Given this history, the university legal office has determined that you were not entitled to take out a patent on this device."

**Comment**

Devious and mendacious advocates such as Maggot attempt to use any number of self-serving obfuscations to achieve their ends – in this case an unearned financial benefit for the University. This is consistent with his role. As Director of Finance, he is tasked with earning an additional one million dollars for the Faculty of Health each year. If he fails, he will be sacked. So he is always driven by the bottom line, and his "arguments" are always self-serving. More often than not, they are also shonky and disingenuous. At times they are risible.

He was appointed to his position as Director of Finance not because he had a background in research and scholarship, but because he had made lots of money in all his previous positions (telemarketing of skin-care products, car sales, time-share real-estate, and pyramid marketing of magnetic underlays).

In the present case, and if his bullying is successful, he will ensure that the intellectual property produced by the creative mind and hard work of an individual is appropriated by an entity (the university) which made no contribution to the work.

The question of whether or not the university has valid legal grounds for its claim could only be tested in a court of law. Given that the legal resources of the university are apparently behind Maggot's claim, Ivana is unlikely to have her day in court. She would be wary of undertaking a legal defence of her position given the high cost of civil litigation and the uncertainty of the
outcome. Whatever the legal position, it is clear that an *artifice* has been used to bully Ivana into submission.

Argument by artifice may be difficult to detect. It is a commonplace fallacy used by large organisations to further their interests. In higher education, it is often embedded in public documents put out by tertiary institutions. Particularly those documents which employ overblown rhetoric as the authors seek to position institutional policy according to the imperatives of the day.

A good example is assessment policy. Most institutions of higher learning take great pains to convince students and the general public that the assessment of students enrolled in degree programs is fair, equitable and "objective". In practice, such claims may be difficult to meet. The fiction of objectively defined student learning outcomes is often maintained through rhetorical claims rather than reasoned argument. Policies emphasise a focus on clearly specified criteria of achievement. These criteria are represented as "objective" and verifiable, and the notion of comparing students to each other is rejected as a basis for assessment. In practice, any assessment of whether a student has achieved a "criterion" is usually left to the subjective opinion of the marker. A subjective opinion formed through the development of *normative* expectations.
Argument by Artifice @ www.skepticsfieldguide.net
Argument by Slogan

Other Terms and/or Related Concepts

Mantra argument; using emotive language; appealing to sentiment; cliché thinking; reflex thinking; mindless repetition.

Description

Argument by slogan and the family of fallacies associated with argument by slogan (see other terms above) all have in common an intent on the part of the advocate to sidestep the issue under discussion and to "wrong-foot" the opponent. Instead of logically advancing a viewpoint and dealing with any challenges to that viewpoint, the advocate seeks to wear opposition down by repeatedly asserting a simplistic view of the issue.

Example

At a rally to protest a meeting of the World Economic Forum, Brenda Dudgeon is challenged by a forum delegate from the Seychelles, who asserts that his country needs foreign investment to progress. She picks up her megaphone and begins to chant: "Global capital oppresses the poor! Global capital..." In due course, other protesters take up the chant and the delegate from the Seychelles is drowned out.

Comment

There may or may not be some validity in the assertion that "global capital oppresses the poor". Whatever the truth of the matter, the issue is far more complex than the slogan; and use
of the slogan will not advance understanding. If Brenda's behaviour is extremely confrontational, she may even appear on television coverage of the event. If this is her sole aim, she has been successful. But her behaviour is most unlikely to persuade the uncommitted to her view and it is very likely to entrench opposition to her view. Arguably (and ironically), the group least likely to benefit from her sloganeering is "the poor".

If Brenda's beliefs are sincere, and if she wishes to address the causes of poverty in the third world, she needs to engage in productive debate after some thorough self-education on the issues. She needs to break out of her coterie of like-minded activists and to substitute sober reflection and hard work for the "warm inner glow" of sloganeering. If after sober reflection, Brenda has concluded that the unfettered flow of capital around the world is a primary cause of poverty, she will be able to mount a convincing argument. In advancing the argument, she will have supporting evidence for her views and practical suggestions for capital regulation. The uncommitted will seriously consider her perspective. In due course, and in her own small way, she might even advance the plight of the world's poor. It won't be as much fun as public posturing, chanting and sloganeering, but she might actually get results.

The sight of a large group of self-satisfied demonstrators marching under a banner and chanting: "What do we want?" is now a commonplace. This ritual public performance may be boring, alarming, amusing or inspirational to the onlooker – depending on his or her political beliefs, and on what answer the demonstrators give to their rhetorical question ("what do we want?"). To the critical thinker however, participation in a mindless crowd of sloganeers is not an effective vehicle for productive engagement with a substantive and difficult issue.
Often a march under banners, accompanied by an orchestrated chant is more about socialising and group cohesion – rather than a serious attempt to right a wrong, or to initiate political or social change. In most such "demos", visceral posturing has triumphed over intellectual engagement.

It is possible for argument by slogan to manifest itself in even more mindless ways. One of the most outstandingly mindless is the mass-produced "bumper sticker". Sloganeering marches may be futile, but at least walking and chanting is a mild form of healthy exercise. Political bumper stickers really only have one message, whatever the actual words on the sticker itself. The message? "I am a clueless poseur and I apparently believe, in the face of overwhelming evidence to the contrary, that an infantile declarative statement stuck on the outside of my car amounts to a persuasive argument. Further, I am so bereft of wit, imagination, initiative and literary skills that I have to purchase the sticker off the shelf, rather than creating one of my own."

We know that this might seem to some to be a harsh judgment. But truth must prevail, even if the truth offends those asinine advocates who are also sticklers for stickers.
Argument by Slogan @ www.skepticsfieldguide.net
Argument to Consequences

Other Terms and/or Related Concepts

Argument to repercussions; appeal to fear; swinging the big stick; wishful thinking.

Description

The "classic" version of this fallacy is the common case where an advocate will not entertain the possibility that an opponent's argument is correct, because if it is correct there will be adverse consequences.

Example

Margaret Chemise says to Claude Nads: "I was reading about a sociologist who has found that there are differences in the average intelligence of different racial groups. She found this out by conducting what she claims was a culturally neutral IQ test." Claude responds: "Well she must have got it wrong. There isn't an average difference in IQ between different races of people because if there was, it would allow bigots to justify their racism."

Comment

When delusional advocates believe something to be true or false because they want it to be true or false, an argument to consequences is involved. When they are hopeful for a positive consequence, they are engaging in a particular version of argument to consequences called wishful thinking. In the example above however, Claude invokes an argument to adverse consequences.
He reasons that differences in IQ between racial groups must not exist, because if they did exist it would adversely affect race relations. In doing so he is making an unjustifiable assertion. He would be better off addressing his core concerns about race relations by engaging in subtle and complex arguments about: (a) whether or not culturally neutral IQ tests can ever be constructed; and (b) whether statistically significant differences between populations are relevant to public policy. In the end, there may be an argument for not conducting IQ tests across racial and cultural groups, but there cannot be a reasoned argument for simply declaring á priori that there are no differences in IQ.

The key factor here is not whether the proponent agrees or disagrees with a study, assertion, argument, proposition or conclusion (because of what it says). It is the quality of the reasoning behind the agreement or disagreement, (why it says it) that is important. If the reasoning boils down to a general case of the following form: "X cannot be true because it ought not to be true," (or "Y must be true because it ought to be true") then the wishful (non)thinker is wallowing in the fallacy and fantasy world of argument to consequences.

A pernicious form of the argument to adverse consequences fallacy occurs when researchers engaged in some form of advocacy research in the social sciences, assume that results which do not agree with their cherished hypothesis cannot be "true". The individual in such circumstances is forced to contemplate a very unpleasant proposition, which might be put as follows: "My career to date has been based on false assumptions, and I have therefore wasted years of diligent effort."
Under such circumstances, the temptation is for the disillusioned advocacy-researcher to assume some methodological fallacy, rather than to seriously question his or her hypothesis. Disillusioned and desperate researchers redesign and repeat their research until they obtain the desired result. "Failed" surveys or experiments are not of course published in "the literature". Rather, they are discarded and are not ultimately reported to the research community. This phenomenon is sometimes known as "publication bias". Publication bias means that from time to time the corpus of knowledge in a particular discipline is distorted. "If at first you don't succeed, try, try and try again," is probably not an advisable precept for a researcher who claims to be a disinterested seeker after truth.
MY CONSIDERED OPINION IS THAT THE CHAMBER OF THIS PISTOL IS EMPTY - IF IT ISN'T I'LL NEVER KNOW ANYWAY... SO IT'S REALLY A WIN-WIN SITUATION

AN OPTIMIST ENGAGES IN WISHFUL THINKING

Argument to Consequences @ www.skepticsfieldguide.net
Begging the Question

Other Terms and/or Related Concepts

Circular argument; assuming the premise; assuming the conclusion.

Description

The advocate uses the conclusion, or rather the point he or she is attempting to make, as the premise for his or her argument. The circularity of the claim is usually disguised, as the premise and the conclusion are stated in different ways (one is a paraphrase of the other). When advocates "beg the question", they fail to seek external support for their claims. The point under discussion is assumed, rather than demonstrated to be true.

Examples

1. Dotty Pymplebaume is President of the Major-Player Financial Syndicate. She is giving the keynote address to the Society for Currency Remuneration and Excessive Wealth Underwriting (SCREWU), at their semi-biennial conference. Her address is entitled Free-Trade: Why it's good for everyone. She closes her speech with the following summary of her position: "People and organizations opposed to free trade clearly don't understand its logic. To me it's self-evident that free trade is good for everyone. The progress being made by politicians and economists towards the unrestricted flow of goods between countries will result in great benefits to this country and to the whole world."

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2. Russell Farside is explaining gender issues to his friend Mitch Grinspoon: "Men need to get in touch with their feminine side." "Why?" asks Mitch. "I'm perfectly happy being masculine. Shouldn't men and women just behave how they feel?" "I don't think that is a healthy way of living," responds Russell. "It's good for men to gain a better balance of their masculine and feminine selves."

Comment

The fallacy of begging the question assumes (as "evidence" for the argument) the claim or point that is in question. Dotty's argument, when dissected, is a clear example of begging the question. She has assumed without any external evidence that her claim (free trade is good) – is correct. She attempts to justify this claim by restating this in a different form. First she says: "...the unrestricted flow of goods between countries..." This is a long-winded reiteration of "free trade". Free trade is the unrestricted flow of goods between countries. She then follows up with the claim that this "...will result in great benefits to this country and to the whole world." This is merely a paraphrase of her original claim that "...free trade is good for everyone."

In the second example, the same kind of specious reasoning is used. Stripped of its rhetoric, Russell believes that "men need to get in touch with their feminine side" because it is good for them. He gives no actual evidence for this claim; he merely asserts an opinion.

Begging the question is an easily identified fallacy once an argument has been dissected. The conclusion and the premise are identical in all but their expression. Reasonably adroit proponents are able to disguise this reiteration well. But this
deception is readily exposed for dissection when the dedicated debunker points out that the advocate is simply restating the premise as the conclusion.

It should be noted that the expression "begging the question" is routinely misused by journalists (particularly those working in the electronic media). When a journalist, or interviewee or commentator says (for example) that: "The government is begging the question," they often intend to mean something like: "The government is avoiding the question." This corrupted usage should be resisted – unless the original meaning of useful words and phrases is preserved, we lose precision in language. Lack of precision in language is often symptomatic of a parallel lack of precision in thinking. When the phrase "begging the question" is used incorrectly in our presence, it is worthwhile pointing this out. At the same time, it might be useful to point out that careless word usage often signifies careless reasoning.
Begging the Question @ www.skepticsfieldguide.net

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Browbeating

Other Terms and/or Related Concepts

Overtalking; vituperation; bullying; polemics.

Description

This fallacy usually occurs in face-to-face discussion. A discussion in which this fallacy occurs is likely to be heated and aggressive in tone. The advocate is loud, threatening and voluble. He or she does not allow the opponent an opportunity to make his or her case. When the opponent seeks to make a point, he or she is cut off abruptly and not allowed to finish. The speech rate of the browbeating advocate is rapid with minimal pauses. The fallacy of browbeating can also occur in print, but the histrionics characteristic of browbeating are limited by the mode of communication. Browbeating expressed in print or writing is better described as polemics.

Example

Gertrude Grimace is an ageing cultural icon and professional expatriate. She is also a needy exhibitionist who seeks every opportunity to hold forth on any subject. A compliant and fawning media can always be relied upon to afford her plenty of opportunities to pontificate during any of her fleeting visits to the country of her birth. On this occasion she is taking part in a panel discussion on youth. She calls for the voting age to be lowered to twelve. Another member of the panel begins his response: "But don't you think voters need a certain level of maturity to exercise a responsible vote, after all..." This is as far as he gets. From this point on Gertrude overtalks him, all the
other panellists and the moderator. She is loud, obnoxious, strident and rapid-fire in her delivery.

Comment

Most interactions would be improved if participants engaged in more attentive listening. After all, everyone is entitled to express his or her own point of view. But this minimal entitlement is not enough - when a point of view is expressed, the person expressing the idea is entitled to a genuine hearing. This is common courtesy. It is also an essential requirement for the amicable resolution of conflict.

When confronted with browbeating, the detached doubter will make a firm claim for the right to be heard. If this claim proves fruitless and the pontificating browbeater continues to be intransigent, the opponent should terminate the interaction and explain why this proved to be necessary.

In the example given, the moderator of the hijacked discussion could turn off Gertrude's microphone after a minute or two of her tirade and calmly point out that he will not accept such hostility in response to honest opinions freely expressed by other members of the panel. Gertrude's pattern of behaviour suggests that she is suffering from LAME disease (Look At Me Everybody). Like most brow beaters, she has an overwhelming need to "win" an argument through physical suppression of her opponents' arguments. To the superficial observer, she may come across as confident and self-assured, but her browbeating suggests that she has very little faith in the soundness of her position. The skeptical observer will draw the obvious conclusion – Gertrude is all hot air, and her browbeating is a substitute for intelligent analysis and truth seeking.
Browbeating is a common feature of political interviews on television news and current affairs programs. Sometimes the interviewer is the aggressor, sometimes the politician is the aggressor, and sometimes both are aggressive.

Consider the more common case where the interviewer is aggressive. He or she will ask a loaded question and interrupt the answer with a supplementary question. The interruption will be cynical and aggressive in tone. More interruptions will follow and the interviewee will not be permitted to finish an answer. The interview will conclude without extracting substantive information. The interviewer will thank the interviewee for appearing. The thanks will be insincere.

Politicians are often characterized as evasive by the browbeating commentariat (political journalists and commentators). This is ironic. Politicians are circumspect and guarded in their speech because the commentariat is forever on the lookout for the unguarded moment. They seize upon and distort trivial lapses. They quote out of context, "beat up" and manufacture stories. The ego and career considerations of the commentariat often outweigh any commitment to conveying valid information to an informed electorate.
Browbeating @ www.skepticsfieldguide.net
Burden of Proof

Other Terms and/or Related Concepts

Onus of proof; appeal to ignorance (c.f. burden of solution).

Description

The burden of proof fallacy is a common rhetorical trick employed in debating and other public forums. It takes place when the advocate claims that the opponent needs to prove his or her case. Further, if he or she cannot prove the case, then (by default) the advocate's case is made. The situation is deliberately distorted to tip the balance in favour of the advocate. In discussions about the burden of proof fallacy in articles and books on the subject, a particular example is invariably given – an atheist advocate makes the claim that the "absence of proof" for the existence of God is the same as "proof of absence".

Example

Peter Fantickler is the official spokesperson for the Provisional Wing of the Skeptics Society (Hyper-Rationalist Faction). In an effort to provide compelling evidence that God doesn't exist, he sets up an experiment to test intercessory prayer. He has agreement from several local churches to have their congregations pray for the recovery of half the heart patients scheduled for bypass surgery in the local teaching hospital. He ensures that patients are randomly selected for treatment and control groups, and that they do not have any knowledge of which group they are allocated to. When the results are collated, he writes a first draft of a media release which states,
inter alia: "The outcomes for patients in the two groups was comparable... this demonstrates that there is no god." After some critical feedback on his draft from more moderate skeptics, he changes the wording of the claim to: "This demonstrates that if there is a god, he has no interest in humanity, and does not answer prayer."

Comment

Unlike most atheists, Peter has taken up the burden of proof (of the non-existence of God). It is usually the other way around – atheists tend to put the burden of proof on believers, viz: "You can't prove that God exists, therefore he doesn't exist." However Peter has come up against the usual problem when the burden of proof is accepted – he can't prove a negative – there is simply no way the design of the prayer study could prove the non-existence of God. The failure of intercessory prayer could be due to the non-existence of God, or it could be because God doesn't answer prayer, or it could be because God is the one who decides whether or not he answers prayer (it is axiomatic that if there is an all-powerful, omniscient being, he has free will, and an agenda of his own). To the dedicated debunker, Peter's study has only shown that if there is a God who does answer prayer (working premise) he is not a compliant automaton who slavishly follows orders from human beings.

When any proposition – e.g. aliens visit the Earth to observe us; indigenous people are more spiritual; problems in this life are due to events in past lives; dreams are a form of astral travel – can't be disproved, it doesn't mean that the proposition is therefore proved. To claim that it does, is to employ the burden of proof fallacy.
It is perfectly appropriate for each of two parties to a dispute to ask for compelling evidence from the other person to support his or her case. This is skepticism in action. The problem only arises when the advocate takes the position that his or her own case is necessarily made if the opponent's case cannot be made.
Burden of Proof @ www.skepticsfieldguide.net

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Burden of Solution

Other Terms and/or Related Concepts
"That's your/their problem... not my problem" (c.f. burden of proof).

Description
The advocate denigrates a particular action an organization, a government, or an opponent wishes to take to address an acknowledged problem. At the same time, the advocate doesn't attempt to provide any alternative solution. He or she tends to characterize any deficiencies or limitations in the opponent's proposed solution as morally reprehensible or fatally flawed.

Example
It is morning tea in the Faculty of Applied Sociology at the University of Wooloomooloo. Dr Roni Tunnell, a lecturer in holistic cultural autoeroticism is railing against a request from the Faculty Board. The board has asked him to "show cause" why his elective on Gendered Psychic Self-Pleasuring should not be cancelled. The board has pointed out that his average enrolment of three students over the last six semesters is not really viable in times of financial stringency. "It's not my job to justify my course, or to find ways of increasing enrolments, or to find external sources of funding, that's their job... that's what those stupid lazy bastards are paid for."

Comment
While we can understand the vehemence of Roni's response to a possible threat to his sinecure, he is not doing himself any
favours with his intransigence. The board has put forward the obvious solution to this type of financial crisis – cancel non-viable electives to increase efficiencies in staffing. Roni is refusing even "part-ownership" of the problem. He is rejecting the board's solution. At the same time he is refusing to provide any viable suggestions of his own. He is avoiding the burden of solution by attempting to place the responsibility for finding a solution on the board. Further, any solution coming from the board must meet with his approval.

The burden of solution fallacy is commonly encountered in contributions to public debate on sensitive and difficult issues. Individuals who are fond of displaying ethical sensibilities in public forums are sometimes so self-indulgent that they condemn possible solutions of others and yet offer none of their own. They perceive mere opposition as a "principled stance". They presume to tell others what *not to do*; but offer no solutions of their own, or they offer "solutions" which are mere wishful thinking. If (for example) an advocate doesn't agree with economic sanctions to enforce compliance with human rights in a dictatorship, then he or she should offer a better alternative and argue its merits. If he or she is unable or unwilling to do so, then the case must be made that "leaving things as they are" is better than attempting the economic sanctions solution.

If the advocate does attempt to make the claim that the *status quo* is better than the proposed intervention, the skeptical opponent should be alert to the possibility of *wishful thinking* (see *argument to consequences*). The advocate may claim for example that "left to themselves" dictatorships will evolve into pluralist democracies without the application of significant external pressures or interventions – that terror and oppression

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will eventually fade away in the police state if the leaders of liberal democratic nations engage with, and sweet-talk the dictator. This argument is easily countered by opponents. They can simply ask for examples of dictatorships which have become liberal democracies over a reasonable time-frame without the application of external pressures.

In burdening the opponent with the solution, self-indulgent advocates are mere naysayers, and their opinions have little merit. Further discussion is likely to be fruitless.
Cultural Origins

Other Terms and/or Related Concepts

Our way (or their way) is best.

Description

When an advocate either promotes a "way of doing things" by citing its use in a particular culture or group, or denigrates a "way of doing things" by citing its use in a particular culture or group, he or she is making an appeal to cultural origins. An appeal to cultural origins is not in itself a valid way to resolve a contentious issue. Such an appeal is a fallacy and should always be challenged by the critical thinker.

Example

Chuck A. Hissyfit is a member of the Land Use Planning Committee set up as an advisory group to the Jumtup Local Council. The committee is having its inaugural meeting. On the agenda is the election of office bearers. Chuck states his position: "I think that we should operate as a collective. We shouldn't have office bearers. The whole notion of election of office bearers is culturally bound up in Western European notions of how groups should be run. Western culture has failed and we shouldn't be using this approach. We should meet together as the so-called Plains Indians of North America did. They simply sat and talked. They talked until consensus was reached. Their cultural values were more humane than ours and we should follow their example."
Comment

Somewhere in Chuck's rhetoric there may be a point. But he is not making it. He is appealing to cultural origins to both denigrate one way of doing things and to promote an alternative way of doing things. Such an appeal has no merit.

There may be some value in simply "sitting and talking" with a view to reaching a consensus. But that procedure needs to be argued on its merits, rather than accepted because some group or other at some time in the past under certain circumstances are said to have used the method. (Claims such as Chuck's often prove to be false anyway under close examination.) In the present example, and if the other members of the Land Use Planning Committee were both fair-minded and skeptical, they might ask Chuck to explain in more detail just how his proposed meeting style would work in practice. They would also subject his explanation to critical enquiry and would not let him "get away with" rhetorical assertions. They would examine his proposal in the light of the terms of reference of the committee and practical issues such as the time available to members to meet. They might even agree with a trial of his approach on selected occasions. However such trials would involve a proper evaluation and comparison with other modes of decision-making.

The cultural origins fallacy tends to be subject to whims and fashions. In the 19th and early 20th centuries, the transatlantic, industrial cultures were usually held up as positive examples for all of humanity. In the late 20th century, indigenous cultures were seen by many as worthy of emulation in all things. Critical thinkers, when confronted with a fashionable cultural origins fallacy can always "stir the pot" with counter-examples.
Counter-examples are useful devices for challenging facile assumptions. For the sake of argument, consider the following rather simplistic example. An advocate suggests that people living in industrial societies should all adopt a personal totemic animal. Why? Because this was a common spiritual practice of many indigenous peoples. Skeptical participants in the discussion could then make a counter-suggestion to highlight the weakness in the advocate's proposition. They might suggest that within our cultural group, we should draw lots to determine who among us should be ritually murdered to propitiate the gods. Why? Because this was a common spiritual practice of many indigenous peoples.

In the context of the example given above, another member of the Land Use Planning Committee could suggest to Chuck that after they try the Plains Indians methods of consultation, they should give some other cultural methods a tryout during the life of the project. Perhaps Genghis Khan's approach to project management? Or a Viking approach to land acquisition? Or the Spanish Inquisition's approach to group cohesion and motivation?
Cultural Origins  @  www.skepticsfieldguide.net
Exaggerated Conflict

Other Terms and/or Related Concepts

Inflated conflict; exaggerated dispute.

Description

The advocate expresses the view that because there is a dispute between experts in a domain of knowledge, the entire field of scholarship (or at least the specific issue in dispute) should be rejected.

Example

Graham Flatliner is eating with gusto his second bacon and egg burger of the day. His concerned workmate Ed Fuddy is witnessing his consumption. Ed is finally moved to remark: "I don't understand how you can eat so much of that... I feel ill just imagining the way the cholesterol is coating your arteries. If you keep eating like that, your high level of cholesterol means you will get heart disease and keel over before you reach fifty." Graham responds: "That's not true. I was reading about a doctor in Sweden who is an expert in heart disease. He recently completed a study in which he found no link between dietary cholesterol and heart disease, so high cholesterol won't give me heart problems. The so-called experts are always changing their minds and they can't even agree amongst themselves. Next year the Heart Foundation will probably recommend deep-fried pork crackling."
Comment

Outright rejection of a field of knowledge just because there is some level of dispute in the field is fallacious. After all, any field of enquiry advances through a degree of dispute and debate. At times, professional disagreement even at the margins can lead to rivalry and hostility. When such disagreements become public, non-specialists may be dismissive of the whole field. This is not an appropriate position for the seeker after truth. The critical thinker does not dismiss anything out of hand. He or she examines an issue and makes judgements consistent with the revealed facts.

In the present example, and if Ed were a seeker after truth, he might ask Graham for the details of the Swedish research paper. In the meantime, he could point out to Graham that it is the weight of evidence that matters when individuals are trying to make healthy lifestyle choices. He could explicitly reject Graham's position by pointing out that Graham is exaggerating the degree of uncertainty in research on the role of dietary cholesterol in heart disease. The reasonable person will not regard uncertainty in any field of enquiry as a problem. Uncertainty is far better than dogmatism or unjustified certainty. However, lack of absolute consensus does not mean that "anything goes".

Another fallacy examined in this book, false dichotomy may at times be difficult to distinguish from exaggerated conflict. The key feature of exaggerated conflict is the tendency of an advocate to dismiss a field of enquiry because of a false claim that "the experts" are in complete disagreement.

If the experts are in complete disagreement, then it is appropriate to reserve judgement about the issue, or to make a
provisional decision one way or the other, while remaining open-minded and ready to change a decision as more information emerges. Note that "sitting on the fence" on an issue pending more information is a perfectly respectable position for a seeker after truth to take.
Exaggerated Conflict @ www.skepticsfieldguide.net
Factoid Propagation

Other Terms and/or Related Concepts

Truisms; enshrined myths; false assumptions; taken-for-granted propositions.

Description

The advocate advances or states a mere proposition as though it is either: (a) an objectively established fact; or (b) so taken-for-granted by "reasonable people" that it is "beyond question". A key characteristic of a factoid is that it is so commonly assumed to be true, that it becomes "the Truth", when it is not actually established as true. The OED defines a "factoid" as: "Unreliable information which is repeated so often that it becomes accepted as fact."

Example

Dorothy Compost and Sheree Coachbolt are sitting companionably over coffee at a cafe on a Sunday morning. Dorothy reads aloud from a newspaper article: "Teams of trauma counsellors are volunteering to leave immediately for the Antarctic to counsel survivors of yesterday's rabid penguin attack which resulted in the deaths of 12 patrons of a BarfBurger restaurant. The government has not yet agreed to fund the necessary charter flight."

Sheree says in response: "I'm not surprised they won't fund the charter, wouldn't it be better to spend the money on re-uniting survivors with their families?" Dorothy bridles and retorts: "That's so insensitive. Everyone knows that post-traumatic
stress disorder will be much worse and much more prolonged if victims aren't counselled immediately after the event by trained professionals."

Comment

Post-trauma counselling where victims are encouraged to talk about their feelings after a distressing event is a clear example of a "runaway factoid". The practice and belief has become widespread and commonly accepted in the absence of compelling evidence. There is evidence both for and against the practice, but the preponderance of recent evidence suggests that for many individuals, post-trauma counselling as it is currently practiced may be exactly the wrong thing to do.

The doctrine of post-trauma counselling is largely a cultural construct – an historical accident rather than a procedure which has grown out of a sound body of research evidence. In the example given, Dorothy could point out to Sheree that the notion of re-living trauma through dwelling on the event and talking about it seems counter-intuitive. She might venture an opinion that the idea of "bringing out" repressed trauma is based on discredited psycho-analytic dogma rather than evidence. Dorothy could further point out that mental health is more likely to be underpinned by resilience – the capacity to "bounce back" and move on from trauma, rather than dwelling on it. Dorothy's claim that "everyone knows" is the element of her claim that invites a direct challenge and enthusiastic debunking.

The skeptic with iconoclastic tendencies is particularly attracted to factoids. Myths masquerading as facts often assume iconic or even sacrosanct status, and debunking enshrined myths can
be an exhilarating blood-sport. A highly entertaining activity in itself, whatever the topic or subject area.

Some domains of activity or types of publications are a treasure-trove of factoids ripe for debunking. These include: desperately oversold curriculum innovations or educational practices; any best-selling book on health or wellbeing; any book by a crusading historian, anthropologist or cultural guru; any book by or about a LAME (Look At Me Everybody) public figure.
Factoid Propagation @ www.skepticsfieldguide.net
False Analogy

Other Terms and/or Related Concepts

Misuse of analogy; metaphor as argument; cliché thinking.

Description

A false analogy occurs when an advocate presents an example of a phenomenon and implies that the example either proves or compellingly illustrates something about another phenomenon. An example might be an argument that access to firearms should not be severely restricted, as access to kitchen knives is not severely restricted and yet, like firearms, they are sometimes used to kill innocent people. This analogy deliberately ignores critical differences between guns and kitchen knives. Such an example might have some value as a figurative analogy (the purpose of a figurative analogy is illustrative and metaphorical) but it is obviously flawed if it is intended as a literal analogy (advanced as a proof).

Example

Glenn Tropicana is an investment adviser and he is giving a sales pitch to a couple of prospective clients, Sheila and Dennis. Glenn is trying to persuade them to sign up for a regular monthly contribution to an investment scheme. The scheme may or may not be suspect – that is not the issue here. During his spiel, Glenn states: "You know what happens with a steady drip of water into a bucket... before you know it the bucket's full. If you invest only $200 a month, in no time you will have a great nest-egg." Dennis replies: "That's all very well, but what if there's a hole in the bucket that we don't know about?"
Comment

Glenn has met his match in Dennis. Glenn attempted to use his analogy of water dripping into a bucket as a compelling illustration of the wisdom of making a regular contribution to the scheme he is promoting. However Dennis is clearly a critical thinker and a skeptic. He recognized the fallacy in the analogy. When he recognized the fallacy he could simply have said: "Investments are a lot more complex than water dripping into a bucket – you'll need to present me with a better argument." However he chose to use Glenn's analogy against him by extending it, and introducing a confounding variable – the possibility of a leak in the bucket.

A common problem with the use of analogy to support an argument is that another analogy can usually be found to support the opposite position. For example, there are many metaphors, proverbs, clichés, traditional homespun sayings etc in our own culture which seemingly contradict each other. Consider a situation where someone may try to make a case for increasing the number of workers in a project team by citing the venerable proverb "many hands make light work". The proverb seems to be self-evidently true, and supports the notion that an increase in the size of the team would be a reasonable position to take. However someone else could use a plausible counter-proverb to support the opposite point of view, viz: "too many cooks spoil the broth". The latter proverb invokes a common experience of some large teams – separate agendas, lack of coordination, "too many chiefs, not enough Indians".

The fact that many proverbs are directly contradicted by other proverbs is an indication that reliance on proverbs or analogies
in decision-making or resolution of issues is fraught with danger. We might (for example) be presented with an exciting once-in-a-lifetime business opportunity. We mull over the decision. A series of proverbs come to mind – opportunity only knocks once; make hay while the sun shines; seize the day; strike while the iron is hot. We invest. We go broke. Reflecting on our financial disaster, another set of proverbs comes to mind – look before you leap; act in haste, repent at leisure; haste makes waste; there's many a slip twixt the cup and the lip; don't count your chickens before they hatch.
False Analogy @ www.skepticsfieldguide.net
False Attribution

Other Terms and/or Related Concepts
Unreliable source; fabricated source (c.f. appeal to authority).

Description
This fallacy in reasoning occurs when an advocate appeals to a marginally relevant, irrelevant, unqualified, unidentified, biased or even non-existent source to support a claim. The advocate may in some cases have a "half-hearted" degree of faith in the alleged source (he or she may have a dim recollection of having read something somewhere about the topic), or the advocate may deliberately fake knowledge of a source which he or she knows does not exist.

Example
Simon Murmurgut and Jenny Peristalsis are selling home-made herbal extracts at the local market. They have a sign at their stall advertising a "special slimming mixture". The main ingredient is paspalum juice. They are challenged by Kevin Jaded, a skeptical bystander. He says: "How do you know it works?" Simon immediately responds: "There has been a recent study published in the Medical Journal of Patagonia which shows that eating four grams or more of paspalum each day results in the loss of up to 500 grams of body fat per fortnight."
Comment

If Simon did in fact read such an article, and if he is truthfully reporting the findings, he is not guilty of false attribution. However, if he only thinks that Jenny may have mentioned about a month or two ago that she had read somewhere in a South American journal that eating some paspalum each day results in the loss of some body fat, then he is guilty of false attribution. In this case, he is deliberately misleading Kevin about his own degree of certainty about the supposed "facts". If however, Simon is just inventing the reference, then he is guilty of the most reprehensible form of false attribution – deliberate deception through the citation of a fake source.

The deliberate or inadvertent fabrication of source information is a common feature of vigorous discussion. It is a tactic often used in desperation by advocates when they feel that the argument is about to be lost. The seeker after truth will often be assured by advocates that they have read some compelling facts about the topic under discussion – facts which unequivocally support the advocates' position. The initial response of a seeker after truth to apparent dissembling of this kind should be a courteous request for a specific citation. This request should not be in the form of a provocative challenge, if the skeptic wishes to maintain a positive emotional climate as the discussion proceeds. In making the request, the point should be made that "going directly to the source" is always more reliable than a second-hand report.

Skeptical seekers after truth will not reject claims a priori. Nor will they accept claims a priori. They will reserve judgment on an issue and ask advocates for details of the source – with a view for reading it for themselves. Note that this request for a
citation so that the skeptic can read the alleged information for him or herself will not usually resolve the question on the spot, so the question may remain open. However, the more dedicated debunker may decide to pursue the issue beyond the particular discussion as a matter of principle. If the skeptical opponent subsequently finds out that false attribution has taken place, he or she could take the trouble to contact the evasive advocate (perhaps even several months after the initial discussion) and point out that the source cited doesn't exist, or the advocate's interpretation was in error.
False Attribution

THE OLD FALSE ATTRIBUTION TRICK DOESN'T WORK THIS TIME.

False Attribution @ www.skepticsfieldguide.net
False Cause; Correlation Error

Other Terms and/or Related Concepts

Post hoc ergo propter hoc (after this, therefore because of this); false association; superstitious belief.

Description

This fallacy is the result of the common human tendency to associate events which occur in sequence and to assume that there is a causal link. When an advocate claims that there is a causal relationship between two events, he or she needs to give a plausible reason beyond simple association. If the advocate cannot do this he or she is probably in error. There are two possible "levels" of false association:

- The relationship may simply be apparent rather than real (e.g. coincidence). In this case the error is a false cause because there is no causal relationship.
- There may be an actual link, but the direction of cause and effect claimed by the advocate is incorrect. In this case the fallacy is correlation error because the cause and effect are reversed, or indirectly related.

Examples

1. False Cause: Trixie Trendy-Chump has just opened up her new business card business – The Business Card Business. One week after opening, her total sales amounts to one pack of fifty cards for the local gravel merchant. She is talking to her husband Bevan Chump-Trendy about how she can improve sales. "I was reading recently about how Beijing is going..."
through an economic boom. Now, everyone in China practices Feng Shui. They don't even think about setting up a shop without consulting a Feng Shui guru to make sure the energy lines of the store are conducive to business." Bevan responds: "So what you're saying, is that Feng Shui has made Beijing money, so why not you? Sounds good to me!"

2. Correlation Error: Aaron Fibreglass is writing up his report on the link between self-esteem and obesity. He concludes: "There was a correlation of 0.8 between morbid obesity and low self-esteem. We need to raise the self-esteem of obese people to help them overcome their weight problem."

Comment

In the first example Trixie and Bevan assume there is a causal link between Feng Shui and economic prosperity. However, if Beijing is undergoing economic growth and its citizens happen to practice Feng Shui, it does not follow that Feng Shui is the cause of the economic growth. This relationship may simply be apparent rather than real – that is, a coincidence. To establish whether or not Feng Shui can influence economic prosperity, systematic tests would need to be conducted.

In fact at any one time, a great many cities around the world are going through economic growth. Few, if any city administrators give any consideration to Feng Shui. There are no doubt a great many other cites in China where Feng Shui is practiced. What is their economic activity like? The seeker after truth should always ask questions which go beyond mere association, and looks for alternative possibilities.

In the second example, Aaron claims low self-esteem causes obesity. However on the evidence presented, causation could
be in the opposite direction – obesity could be the cause of low self-esteem. Or both could be caused by a third, unidentified variable. To a skeptical scientist, such a strong correlation between obesity and low self-esteem is potentially of great interest, but a series of sophisticated follow-up studies would be needed to determine the nature of the correlation and the direction of causation.

False cause can have very serious consequences. For example, the false cause fallacy during the European dark ages led to the widespread belief that illness, famine and personal misfortune was caused by black magic and sorcery. Such beliefs led to 'witch-hunts" (literally) and unfounded but widely believed accusations of sorcery. The absence of skepticism in communities wallowing in superstition led to the burning to death of innocents falsely accused of witchcraft. In the present day, the false cause fallacy has led (for example) to premature or unnecessary deaths of cancer patients due to diversion from effective treatments (to ineffective or harmful treatments offered by quacks or frauds).
THE BAD NEWS IS THAT YOU HAVE ABSOLUTELY NO HOPE OF RECOVERY. THE GOOD NEWS... YOU'RE A PISCES, WHICH MEANS THAT YOU'RE AN OPTIMIST...ALTHOUGH I'M A SCORPIO AND SO NATURALLY I DON'T BELIEVE IN SUCH DELUDED TWADDLE

A SKEPTICAL DOCTOR TRYING HOLISTIC TREATMENT

False Cause; Correlation Error @ www.skepticsfieldguide.net
False Compromise

Other Terms and/or Related Concepts

Splitting the difference.

Description

The advocate asserts that because he or she does not understand or accept the opponent's views, in fairness the two should agree to "split the difference" and arrive at a middle position. Such an approach to addressing an issue is more about mollifying the parties to a disagreement, than arriving at the truth of the matter.

Example

Jason Typeface and Wolfgang Von Volkswagen are senior bureaucrats in the Department of Justice and they have been engaged in a protracted discussion on the wording of a sentence in their jointly-authored report on police "stop, question and search" powers. Jason has come to believe that police effectiveness in drug law enforcement is dependent on an absolute power to stop, question and search at their own discretion. Wolfgang believes that any questioning or search of suspects should only take place in the presence of legal representatives. They agree to split the difference and the final sentence reads: "Police may stop and search suspects at their own discretion, but any evidence so obtained cannot be used to prosecute the suspect."
Comment

It is a safe assumption that neither Wolfgang nor Jason is satisfied with the compromise wording of the sentence. Neither of them actually believes that the stop, question and search policy they have come up with is the best one. Yet the reader of their report might make the assumption that the view expressed is a consensus reached by the authors. To avoid this misperception, Wolfgang and Jason should make it clear in the wording of their report that their conclusion is a compromise rather than a consensus position. Their compromise then would be open, rather than concealed.

There is a more intellectually respectable alternative to an open compromise. Wolfgang and Jason could be quite explicit about their disagreement and make it clear that they came to different conclusions as a result of their study. They could indicate that they have "agreed to disagree", and they could state their separate conclusions. This would then leave it up to the decision-makers who read the report to decide on a final policy. This alternative would be the one favoured by the seeker after truth.

If they adopted this approach, both Jason and Wolfgang would preserve their integrity and they would be free to argue vigorously for their own favoured position. This approach is common in public documents such as reports of parliamentary enquiries, where a "minority report" is commonly included when consensus cannot be reached.

Part of the problem with this issue is the emotional loading associated with the term compromise. In almost all contexts where the word is used, it carries either a positive or negative connotation. In the context of peace talks, industrial
negotiations and the like, to compromise is to put aside "selfish" considerations in the interests of a "fair" outcome. In the context of principled decision-making, a person who compromises is often seen as morally deficient.

Seekers after truth are always prepared to entertain the possibility of a compromise, but in doing so, they will be candid about differences, while putting differences aside in the interests of fostering a pragmatic and workable outcome.
I've forgotten which leg has to be amputated... no need to panic, I'll just take a little off both sides.

A Compromise Solution

False Compromise @ www.skepticsfieldguide.net
False Dichotomy

Other Terms and/or Related Concepts

Excluded middle; black-and-white reasoning; false dilemma; polarization of debate; forced choice.

Description

The advocate presents an issue as "black and white" when it is in reality "shades of grey". The reasoning put forward is unjustifiably "all or nothing" rather than subtle and measured. Debates about emotive issues such as euthanasia, GM foods, criminal justice, race relations etc., are often polarized in this way.

Example

During an election campaign, the incumbent Attorney-General, Frank Payne appears on television and makes his case for a review of current censorship laws affecting television broadcasting. He states that the review of the laws will be informed by broad community consultation. The interviewer (Barbra Twining) asks Margo Blarneypickle (President of the Collective for Smashing of Post-Colonial and Patriarchal Oppression) to comment. She states: "There cannot be any censorship imposed by the State... anyone should be able to hear or see anything they like... any level of censorship is oppressive."

Comment

Margo is portraying the issue as censorship versus freedom of speech. She is attempting to put one issue up against the other.

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and she is hoping that her version of the issue prevails in the "contest". The flawed belief at the core of this strategy is that censorship is "all or nothing". In fact, the degree and nature of censorship which might be exercised in any society is subject to multiple variables. It is perfectly reasonable for example, for standards of what constitutes obscene or violent material to change over time along a continuum. The debate should be about how far along the continuum and in which direction the standards should shift – not on whether standards should be abandoned or raised to a level of complete repression.

In the present example, and if Barbra were an effective interviewer, she would challenge Margo on her "all-or-nothing" stance and either dismiss it as an unworthy contribution to the debate, or probe her position with examples which would be problematic for her. For example, she could ask her whether she would be in favour of live broadcasts of executions on free-to-air television, or the removal of doors and screens from public toilets. Such challenging examples would be an appropriate use of reductio ad absurdum by Barbra to point out that it would be ludicrous to apply Margo's views without qualification. Such a challenge might provoke Margo and lead to her indignant exit from the debate. But it's also possible that it would function as a reality check and cause her to modify her position and engage more effectively in the discussion. Either way, whether she leaves or moderates her position, the debate would be more fruitful.

Many LAME commentators (LAME – Look At Me Everybody) are unhappy with ambiguity and complexity. Such individuals prefer to characterize an issue as "black or white", as they find dealing with nuanced shades of grey difficult and confusing, and more often than not, a threat to their position. The seeker
after truth on the other hand, should not attempt to oversimplify any issue in order to bring it to a premature or unjustified resolution. It is much more acceptable in principle to decide that an issue has to remain unresolved, rather than oversimplifying and drawing the wrong conclusion.
LOOK SPORT, YOU ORDERED HOT COFFEE AND MADAM ZELDA THE SPIRITUALIST ORDERED ICED COFFEE - SO NATURALLY WE SPLIT THE DIFFERENCE... THAT'S WHY YOU BOTH GOT LUKWARM

NO DICHOTOMIES MAY NOT MEAN A HAPPY MEDIUM

False Dichotomy @ www.skepticsfieldguide.net
**False Dilemma**

**Other Terms and/or Related Concepts**

False linkage (of choices); concocted dilemma.

**Description**

This is the error of portraying one choice as necessarily excluding another, even though there is no necessary connection. For example, an advocate might make the following statement: "They should solve world poverty before they try to put humans on Mars." While this may sound superficially plausible, the unstated and bizarre implication is that the advocate believes that if money were not expended on a Mars expedition, it would be diverted to the alleviation of poverty. This is clearly false.

**Example**

Dr Harry Oversteer is an epidemiologist with an interest in health statistics. He is having a conversation over dinner with Sally Butt, an old school friend. He remarks that men's health in general is in a much poorer state than the health of women in general. He points out that on almost all measures of mortality and morbidity – from suicide to heart disease – men fare significantly worse than women. He speculates on whether there should be more health promotion programs targeted specifically at men to address this anomaly. Sally bristles and forcefully states the following: "It's taken the better part of a century to have women's health taken seriously by a male-dominated medical profession and public policymakers. If we
embark on the course you suggest, women's health will take giant strides backwards."

**Comment**

What Sally is saying, without any evidence or compelling logical reason, is that a focus on men's health will necessarily lead to reduction of health services to women. This is clearly not a sound coupling of events. It is even possible that an increased focus on men's health will lead to better targeted health programs across the board. In the example given, a more reasonable response from Sally might be: "I can see the anomaly you've pointed out. The issue that needs to be addressed is how men's health outcomes can be improved, while at the same time ensuring that there aren't any adverse effects on women's health. We need a response which is acceptable to the whole community."

Sally's error arises from the supposition that there is a fixed health budget and that an increase in disbursement of funds to one group (i.e. men) *necessarily* results in less resources going to another group. Sally is right to alert Harry to the possibility that increased health promotion targeting men may lead to diminution of emphasis on women's programs. Her error is in asserting that it definitely will lead to this outcome.

Note that increases or decreases in the expenditure of scarce budgetary resources on government programs is a legitimate topic for political debate and social commentary. It is also true that the total "cake" available for allocations to programs is necessarily limited. At times, increasing budgetary allocations to program "X" may have a clear link to a decrease in budgetary allocations to program "Y". If this is the case, a genuine dilemma may be argued and the benefits of one program can
be directly compared and contrasted to the other program. The seeker after truth will be able to distinguish a false dilemma from a genuine dilemma, and will make his or her case accordingly.
False Dilemma @ www.skepticsfieldguide.net
Gibberish

Other Terms and/or Related Concepts

Obfuscation; gobbledegook; nonsense; drivel; academic English; jargon.

Description

Gibberish is an argument or assertion that is so flawed in its presentation that it is essentially meaningless. When the advocate has not advanced an intelligible argument, a considered response from the opponent is a waste of time. Gibberish is quite common in academic literature. Stephen Murray-Smith, in his book Right Words: A Guide to English Usage in Australia is scathing in his definition of this particular form of gibberish: "Academic English is a horrible corrupt dialect of the English language, used by teachers in tertiary institutions in order to sound cleverer than they really are and thus to win promotion, power and money."

Example

The prevalence of gibberish in academic literature was also a major concern of Alan Sokal and Jean Bricmont. In their book Intellectual Impostures, they give many examples from the social sciences in particular. One is quoted here by way of illustration: "The time of this instant without duration is 'exposure time', be it over or under exposure. Its photographic and cinematographic technologies already predicted the existence and the time of a continuum stripped of all physical dimensions, in which the quantum of energetic action and the
punctum of cinematic observation have suddenly become the last vestiges of a vanished morphological reality."

**Comment**

Advocates who use gibberish may be unaware of just how unintelligible their language is to the listener or reader. Or they may be deliberately using gibberish to obscure the issue and to avoid any possible challenge. Whether gibberish is the result of stupidity or duplicity, skeptics and critical thinkers will not be cowed by their own lack of comprehension. They are entitled to ask for clarification, and if appropriate, to draw attention to the flawed use of language.

The seeker after truth's initial response to gibberish in a verbal exchange will be courteous and pragmatic, viz: "What are you saying?...Could you explain what you mean?... Could you give an example?...You need to put your argument with greater clarity." If mild and courteous requests for clarification are ignored, more emphatic requests might be necessary, viz: "Could you please come to the point?...I can't tell whether your position has any merit because I have no idea what you are saying... Complex ideas need to be expressed in simple, direct language... I think what you just said is essentially meaningless, but I can't tell for sure because your explanation was so garbled..." If this still has no effect, perhaps a more confrontational approach is in order: "How can I tell the difference between what you are saying and complete horse manure?"

Note that it is critically important to distinguish between unnecessary gibberish and the use of uncommon words to convey complex ideas with precision. There is nothing wrong with an advocate using an advanced vocabulary when this is
necessary to communicate an exact meaning. The problem of obfuscation arises when an esoteric vocabulary is used in ignorance, with little or no regard for meaning, or for the effect on the listener or reader. The expansion of vocabulary to enhance the quality and precision of written expression or speech is laudable. However when an advocate engages in the indiscriminate use of meaningless words, or uses meaningful words meaninglessly, the practice should be treated with the scorn, mockery and censure it deserves.
Gibberish @ www.skepticsfieldguide.net
Impugning Motives

Other Terms and/or Related Concepts

Accusation that the opponent is: insincere; running a hidden agenda; "in denial".

Description

The advocate claims that the opponent has devious motives for making his or her case, or has unconscious motives which have led to a biased position on the issue under discussion. If the advocate claims that the opponent has devious motives, then the opponent stands accused of concealing the truth in order to win an argument. If the advocate claims unconscious motives on the part of the opponent, then the opponent is characterized as prey to his or her own emotions and unworthy of engaging in discussion.

Example

There is a staff meeting being held in a high school maths department. Jill Flypaper (the advocate) says: "I know the real reason why you are arguing the merits of voice recognition computer software Barry, you just want everyone to know that you are the expert and that you have more technical knowledge than the rest of us."

Comment

In this example, Jill is attempting to cast doubt on Barry's argument in favour of voice recognition software by claiming that Barry is just "showing off" his computer knowledge and doesn't really have good reasons for advocating voice
recognition software *per se*. It is likely that Jill's deliberate intention is to convey the impression that Barry is insincere. But it's also possible to interpret the comment as implying that Barry is sincere, but simply unaware of his "real" motives. While the accusation of insincerity or delusion may in fact be true, there is no way of knowing whether it is or isn't true. Even if true, it is not a compelling reason for rejecting the purchase of voice-recognition software. At the most, it is a reason to be cautious about Barry's argument and for examining it carefully. In the final analysis, the case for purchasing the software needs to be decided on its merits, rather than dismissed out of hand because of supposed suspect motives.

The problem with the tactic of casting doubt on motives is that discussion between antagonists can degenerate into a spiral of accusation and counter-accusation. While witnesses to such arguments may form conclusions about the motives of the protagonists, and weigh one against another, they could be totally wrong. The most credible and apparently forthright people might be devious in the extreme. While a "shifty-looking" person might in fact be very honest.

The seeker after truth will be alert to, and recognise the use of, the fallacy of impugning motives - and will draw attention to any attempt by an advocate to use it. They will point out that all behaviour and opinions are by definition motivated. Motives for any point of view can be assumed, but not the nature of those motives. Further, idle speculation about motives may be completely incorrect, and even if such speculation is correct, it does not usually clarify a debate or help determine the actual merits of a point of view.
In our view, anyone who engages in gratuitous speculation about motives is motivated by malice. Except the authors of this book. When we speculate about motives, we do so in a spirit of disinterested enquiry, and our speculations have proven in the past to be almost invariably correct.
Impugning Motives @ www.skepticsfieldguide.net
Misuse of Information

Other Terms and/or Related Concepts

Misuse or misunderstanding of statistics; misuse or misunderstanding of facts and/or theories.

Description

The advocate misinterprets information (and the misinterpretation supports his or her position); or the advocate deliberately misuses information (a statistic, fact or theory) in order to support his or her position.

Examples

1. Misuse of statistics: Scott Armani raises a delicate issue with his boss Phil Greenspan: "What am I going to do about the average wage of the employees in our third world factory for this report? We need to make it look like we pay decent wages." Phil responds: "Easy to fix, just include the factory manager's pay rate and the average should come out nicely." Following Phil's advice, Scott works out the average wage as follows. He uses accurate data based on the ten employees from the factory (including the manager). Their rates per hour in dollars are: 1, 1, 1, 1, 2, 2, 2, 3, 3, 50. Thus the average wage for the factory as stated in the Annual Report will be $6.60 per hour.

2. Misuse of facts/theories: Karl Vladimir Eyemnotritez is the editor of the monthly Stalinist newsletter, We've Still Got China, Cuba and North Korea. Writing in his usual opinionated style, he editorializes against the recent attempt to introduce laws to

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ban gay marriage. "The problem with laws like this, is that they are judgmental. They tell us how to live. But we are in no position to judge anyone else. In order to judge, we must first be able to observe. Einstein showed us, with his theory of relativity, there are no privileged observers. Everything is relative. Quantum physics adds to this. The act of observing (or rather judging) changes the properties of things. So given these two fundamentals of physics – everything is relative, nothing absolute, and observations change what we are observing – how can we judge something like gay marriage if it does not harm us directly? The answer? We can't."

Comment

In the first example, Scott has not technically lied in his report. But he has used a statistical technique to create the impression the company prefers. The average chosen for the report is the mean. It is one of three measures of central tendency – the others are the median and the mode. The mode of Scott's data range (that is, what most of their employees are paid per hour) is $1. The median pay, (the middle number when the data is arranged in ascending order) is $2 per hour. Through the selective use of statistics Scott (on the advice of Phil) has painted the picture he wanted the shareholders to see.

In the second example, Karl Vladimir has cited two concepts of modern physics to back up his claim. These are theories of the physical world and say nothing about ethics or law. Thus they are being misused. We have no view on the issue Karl raises in his editorial, but his justification for his position misuses a theory and is therefore flawed.

The best defence for seekers after truth – against being deceived by the misuse of information – is to do their
"homework" on the topic under consideration. This is only really possible if the general topic of discussion is known beforehand (in the case of verbal discussion), or if time is available for follow-up reading (when the misleading material is in a publication). If the misleading material is offered during a spontaneous discussion, the best recourse for the skeptic is to question advocates closely on the details of their claim, and to be alert for circular arguments, weak premises, unwarranted inferences and weak or unconvincing anecdotes. Close questioning often reveals that ill-informed advocates know far less about the topic than they are claiming to know.

We have found that at least 100% of those few people who routinely disagree with us know five eighths of three fifths of nothing at all about anything.
Misuse of Information

**Misuse of Information**

I've had it with you lot, every time I give you a test, almost half of you score below average.

Next week's test!
Everyone will try to score above average.

A maths teacher who needs to do remedial maths.
Moral Equivalence

Other Terms and/or Related Concepts

Moral confusion; deceptive moral comparison; mendacious moral equivalence (also see sanctimony).

Description

The advocate seeks to draw false comparisons between two phenomena which are not morally equivalent. The fallacy of moral equivalence is a strategy often used to denigrate an agency or entity by implying or stating that its policies or practices are as reprehensible as a widely (and justifiably) despised agency or entity.

An Example

Adam Polemicist is the third speaker for the negative in the Fooloomooloo High School senior debating team. He is attacking the third speaker for the affirmative who has just spoken. The topic of the debate is: "Asylum Seekers should be detained in a secure facility while their applications for refugee status are assessed." Adam (the advocate) states: "So-called refugee facilities are nothing more than concentration camps. Just like concentration camps used by the Nazis, they are designed to break the will of the inmates while plans are made for their disposal."

Comment

At times this fallacy may be closely associated with another common fallacy – weasel words. If for example, Adam had just referred to refugee detention centres as "concentration camps"
and left it at that, he would be using *weasel words* in an attempt to evoke an emotional response in the audience.

However he has not just used this label – he has gone on to make an explicit claim of moral equivalence. He has asserted that the refugee detention centres are "just like" Nazi concentration camps. While there may be some superficial points of comparison between a refugee detention centre and a Nazi concentration camp, these would need to be made point by point on their own merits (and tested one by one by the skeptical opponent). In the present example, the advocate's sweeping claim of aggregate moral equivalence is a mere rhetorical device which says more about his penchant for moral posturing than his grasp of the issue.

It is worth noting that arguments to moral equivalence often employ the fallacy of *false analogy*. Adam's attempt to equate detention centres with concentration camps is a particularly egregious *false analogy* because he intended it to be taken as a *literal analogy*.

Debunking opponents should explicitly repudiate instances of unjustified moral equivalence. When egregious claims of moral equivalence are made between (say) the US Government and Nazi Germany; or between a labour union and Stalinist Russia; seekers after truth should not just reject the claim. They should address false moral equivalence as an issue in itself. It should be pointed out that those who are in the habit of claiming baseless equivalence are not primarily interested in solving problems or addressing issues – they are interested in winning an argument through the use of shallow rhetorical devices.

An unfortunate by-product of the promiscuous use of the moral equivalence fallacy is the potential for moral confusion. For

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example, an individual who keeps a pampered pet cat indoors in a home unit might be castigated by an animal rights activist for confining the cat. The claim might be made that the confinement is "a form of torture". The activist advocate further claims that the cat owner is no better (in a moral sense) than a feedlot operator. The comparison is clearly inappropriate and unjustified – the cat owner knows this and so the argument is not persuasive. Further, the cat-owner would tend to be dismissive of any further points made by the animal rights activist, whose credibility would therefore be fatally compromised.
Moral Equivalence @ www.skepticsfieldguide.net
Moving the Goalposts

Other Terms and/or Related Concepts

Shifting sands; raising the bar; running for cover.

Description

The advocate changes the nature of the discussion by seeking to make the opponent tackle a more difficult version of the topic. The topic that was originally under discussion is recast and the new version favours the advocate. This tactic is often used when the backpedalling advocate feels that he or she is about to lose the argument. With the "goalposts" in their original position, the opponent would "score". But with the posts moved, the opponent's "shot" is now "off target".

Examples

1. Bella Donna claims that Sybil Antwhisper, her room-mate, is not sharing the housework equitably. Sybil tells Bella to go away and itemize and record who does what household tasks. If Bella can show that she does more housework than Sybil, then Sybil will mend her ways. A week passes and Bella shows Sybil clear evidence that Sybil does not "pull her weight" around the house. Sybil (the advocate) responds: "That's all very well, but I have more work and study commitments than you do – you should do more housework than me... it's the total work of all kinds that matters, not just housework."

2. Three weeks out from the State Election, the Premier and Leader of the opposition are taking part in a televised debate. The issue in contention is the running of Public Hospitals under...
the current government. The Leader of the Opposition, Ken Oath, is making his point: "Under your government, the average waiting times in emergency rooms is four hours. Now that's just not good enough." The Premier, Phillip Ingheck, replies: "I agree, four hours is clearly not good enough. That's what it was before we came into office. Under my government the waiting time has actually been reduced from four to two hours." Ken responds: "Well that's not the real issue anyway, it's waiting times for operations."

Comment

In the first example the implied agreement between Bella and Sybil at the outset was that the amount of housework done by both parties should be about the same. When Sybil was confronted by the evidence however, she quickly and unilaterally "changed the terms of the debate". She did this because the evidence was against her version of events and she was about to lose the argument on the issue as originally defined. Whether or not it is morally right to count all forms of work when assessing household contributions is not the issue here.

The issue here is that the ducking and weaving advocate (Sybil) is seeking to change the terms of the dispute to avoid a defeat on the original issue in contention. In this situation, and if Bella is a skeptic and critical thinker, she would point out that Sybil was attempting to move the goalposts. She would insist that they resolve the original question as agreed, and that any further discussion or extension of the issue would have to be considered separately. If the issue had originally been defined as "total work" rather than "housework", then Sybil would have a point. As it is, her argument is weak and ethically suspect.
In the second example Ken realizes that he had initially used out of date information which did not support his case. Instead of acknowledging this, he attempts to change the focus of their discussion on Public Hospitals – from emergency room waiting times to waiting times for operations. Phillip would be well advised to point this shift in focus out, and say that he is more than happy to discuss this new issue (waiting times for operations) once the first issue has been resolved.

Moving the goalposts can be avoided if both parties agree at the outset to clearly define the parameters of the discussion. Time spent doing this is time well spent. Otherwise discussions can become misdirected, frustrating and pointless.
Moving the Goalposts @ www.skepticsfieldguide.net
Observational Selection

Other Terms and/or Related Concepts

Selective observations; counting the hits and ignoring the misses; searching for confirming instances; observer bias; publication bias.

Description

Research into sensitive and complex social issues is often carried out by advocates of a particular viewpoint (advocacy research). An advocacy researcher has definite convictions about the importance of particular variables and for this reason, they may consciously or unconsciously tend to seek confirmation of their views in the data and ignore contradictory evidence. The advocate "observes", but only pays attention to information which seems to support his or her existing convictions.

Example

Jenny Frame is being interviewed on the national radio program Social Issues. The subject of the interview is her PhD research on "recovered memories of childhood sexual abuse". In the course of the interview, she states: "My research is designed to demonstrate that child sexual abuse is very widespread and that most victims repress their memories of abuse throughout their adult lives."

Comment

Jenny's description of her research indicates that she is seeking to "prove" a hypothesis, rather than to test it. Her approach to
research is clearly partisan and biased. Policy-makers, lawyers or practitioners in the field of child protection could not safely rely upon Jenny's conclusions. She would be far more credible if she described her research in the following terms: "I am seeking to establish the nature and extent of child sexual abuse, and whether and to what extent the victims repress their memories of abuse throughout their adult lives." This improved description of Jenny's research intentions is certainly more even-handed than the original description, but of course there is still no guarantee that her research will prove to be unbiased. Ultimately the credibility of her research can only be assessed by closely examining her methodology.

Observational selection is extremely widespread in research programs. PhD candidates in the "social sciences" naturally frame a topic which accords with their current interests and convictions. They try to find a supervisor whose mind-set is compatible with their own. The thesis is also probably examined by academics who are sympathetic to the topic, methodology and "findings". (For a notorious case history of observational selection of this kind, the reader is encouraged to retrieve and read articles and/or books by Derek Freeman and others on Margaret Mead's anthropological fantasies in Samoa.)

Public enquiries about social issues conducted by panels of self-selected advocates are usually profoundly biased and hopelessly compromised. Campaigners for human rights are arguably the least suitable panellists for a disinterested, truth-seeking enquiry on human rights; judges are arguably the least suitable panellists for a truth-seeking enquiry on judicial powers; parliamentarians are arguably the least suitable panellists for a truth-seeking enquiry on parliamentary
superannuation; developers are arguably the least suitable panellists for a truth-seeking enquiry on local government rezoning powers.

Observational selection is not confined to flawed methodologies in formal research programs or public enquiries. Few individuals can even read a newspaper article without selectively attending to information which confirms their own biases. Casual readers of magazine horoscopes often see accurate predictions where none exist. Two bystanders present at a brawl between police and protesters will sincerely ascribe blame for the incident to different protagonists.

In any contentious situation, the seeker after truth will at least recognise the potential for biased observation, and will be wary about possible distortions of the truth, overstatement, exaggeration or outright fabrication by partisan advocates.
Observational Selection @ www.skepticsfieldguide.net
Poisoning the Well

Other Terms and/or Related Concepts

Guilt by association; "they're all tarred with the same brush."

Description

The advocate attempts to undermine or throw doubt on the opponent's position by linking the opponent's argument to a group which is seen as suspect, or a source which is denigrated by the advocate. Thus the metaphor of poisoning the well. Any "water" (idea) taken from that "well" (source) is poisonous (tainted, of no value).

Example

Stan Webserver (the advocate) is engaged in a dispute with Sally Cubbyhouse during a seminar on unemployment. Sally cites some figures published by the Catholic Welfare Agency which suggest that 10% of families resident in urban areas are living below the poverty line. Stan says: "I wouldn't even consider any figures put out by them, they all have an axe to grind and just want to undermine the policies of the government."

Comment

It may actually be true, or partially true that an advocacy group such as the Catholic Welfare Agency is prone to selective publication of results, using biased research methods, and concealing information that doesn't support their case. It may
also be true that their research is impeccable, objective and extremely valuable.

The seeker after truth is not naive, and therefore should be skeptical about research results. But seekers after truth are not cynical. Stan's fallacy is in the act of dismissing the results out of hand (á priori). In doing so he refuses to give careful consideration to Sally's point. Stan's intransigence obstructs the discussion, and probably creates an implacable opponent out of Sally. Further discussion between them will be fruitless. Stan's response should have been to question Sally about the provenance of the article, and to seek further information. If the time was available to him, he could then read the article for himself and draw his own conclusions.

Advocates who habitually poison the well by denying á priori that information from particular sources can have any value may see themselves as skeptics. For example, a common bonding ritual in our culture, and within a particular social class, is "bagging the Americans". This is a social activity where like-minded people share variants of the sentiment that "the Americans can't be trusted". In sharing these sentiments they (by implication) congratulate each other and see themselves as skeptical, principled and capable of deep insights into global political issues. However, it could be argued that such sentiments are shallow rather than profound, and that persons expressing such sentiments are selectively cynical rather than skeptical. A seeker after truth can always come up with a skeptical response to a fatuous generalization intended to poison a well. For example, an analytical line of probing questions could be directed at the advocate who claims that "the Americans can't be trusted". Each question would move the advocate out of his or her comfort zone. "What do you
mean by 'the Americans? All Americans? All of the time? Aren't Americans pretty diverse... like Australians?"

When smug and ignorant advocates assert that they "always disbelieve" a particular source of information – e.g. the Americans, the police, a particular political party, the government, the unions, the environmental lobby, the mining companies, the military – more often than not, they fondly imagine that they are enlightened, principled and skeptical. In actual fact, they are proudly declaring their knee-jerk cynicism.

Ignore the well-poisoners and seek out the company of open-minded persons. Persons more like your good self.
Popular Opinion

Other Terms and/or Related Concepts

Ad populum; majority rules.

Description

The advocate asserts that because the great majority of people in general agree with his or her position on an issue, he or she must be right. A variant is where the advocate asserts that he or she must be right because a particular group (rather than the population as a whole) agrees with the advocate.

Example

Alison Granules is a "concerned mother" taking part in a televised "Hypotheticals" debate on decriminalisation of Heroin use. She asserts: "People are not stupid. The great majority of voters will not stand for the provision of free heroin to users by government authorities. You can't cure addiction by supplying addicts with addictive drugs." Dr Dennis Pontificatum (the spokesperson for the Society of Physicians on drug policy) interjects: "Yes, but the great majority of drug and alcohol experts would take the opposite view. Who are you going to believe?"

Comment

In the example above, both Alison and Dennis are attempting to validate their positions by claiming support from majority opinion. In Alison's case, she is asserting the value of general, non-specialist, "democratic" opinion in the general population. Perhaps underlying her case is the assumption that
"commonsense" opinion is of more value than the views of "so called" experts. Dennis is attempting to trump her appeal by citing the opinions of a group which he presumes has more credibility and insight than the general population. His underlying assumption is that the majority views of specialists are of more value than the "ignorant masses". When appeals to popular opinion are made in arguing a point, the seeker after truth needs to be skeptical about majority views – whether those views are from the general population or a selected, expert group with "insider knowledge". The general population once believed that the Earth was flat – and so did the experts.

There is a temptation to place greater weight on expert opinion as against popular opinion on any contentious topic. But this tendency may lead the seeker after truth very badly astray. In many fields of enquiry or policy-making for example, the experts are almost always entirely self-selected. That is, they choose to seek a career in (say) child protection, drug policy, defence studies or social welfare because of a pre-existing set of strongly held values. They may use their position of influence to ensure that their views prevail in the relevant areas of social policy. Seekers after truth will not meekly accept the validity of an expert opinion. They will demand rational justification.

Consider two rather extreme but plausible hypothetical examples of self-selection. Both Michael and Jane are respected professionals who have well-established careers with a child protection agency. They both have appropriate degrees. There the similarity ends.

Michael is an undetected paedophile who uses his position to protect his paedophile network and to gain access to children. Jane was remorselessly sexually abused as a child by both
natural parents, and has an implacable bias against natural parents and the nuclear family. Clearly, neither individual could be relied upon to give a balanced view about child protection policy and practices.
Popular Opinion was very unpopular with gladiators

Popular Opinion @ www.skepticsfieldguide.net
Sanctimony

Other Terms and/or Related Concepts

Sententiousness; seizing the moral high ground; moral posturing; "holier-than thou"; self-righteousness; priggishness.

Description

The advocate represents his or her position as morally superior to the opponent's, and links this by implication to the "correctness" and validity of the advocate's position. This is a fallacy when the supposed moral high ground is merely asserted or appropriated by the puffed-up advocate rather than legitimately acquired through reasoned argument. Most sanctimonious claims to the moral high ground are either deluded or self-serving. Deluded prigs are often unable to recognise the circularity of their claim to moral superiority – viz: "I am morally superior because... um... I am morally superior."

The preening and morally superior advocate may be attempting to avoid scrutiny of a weak argument by placing a taboo on the opponent's position, or by "ruling out" his or her line of argument beforehand. That is, the line of argument taken by the opponent is deemed to be "beyond the pale" and could not even be considered by any "right-thinking person".

Note that some sanctimonious advocates may be well-meaning but unable to distinguish between what ought to be true and what is true. (See wishful thinking in argument to consequences.)
Example

Orson Pecksniff is the host of a syndicated radio talk program which goes to air live between 3am and 4am on Sundays. Orson's producer is Gerry O’Waldheim, a like-minded inhabitant of the same inner-city boutique suburb. On their promotional website, Orson and Gerry assert that they are both committed to a cutting-edge program which fearlessly engages with difficult social and political issues in order to secure social justice for the underprivileged. In fact, the featured guests are carefully selected to ensure that their views are in accord with those of Orson and Gerry. Orson's interviews usually amount to nothing more engaging than amiable conversations with a sympathetic guest.

Tonight Orson is interviewing Jeanne Streetwise who has written a book called The Perils of Colonialism. Orson has prepared for the interview by scan-reading a precis of the book prepared by his research assistant. He launches into the interview with his usual confidence. However it soon becomes apparent that Orson has misread the situation. The title is in part ironic, and Jeanne's wide-ranging treatment of the topic is critical of both colonists and the critics of colonists. Further, she makes the case that the wealthy middle class is currently colonising the inner city precincts of capital cities. In so doing, they are advantaging themselves at the expense of the urban poor. She finishes by declaring: "Inner-city suburbs are colonised by individuals rather than nation-states, but the process is still about the dominance of the powerful over the powerless."

Orson back-announces Jeanne and her book, waits for her to leave the studio, draws a breath, recovers his composure and
then editorialises: "Well, Jeanne believes that something can be said in defence of the European colonial powers who engaged in a savage war of conquest against native peoples... Such a position is so self-evidently obnoxious that it doesn’t deserve to be taken seriously."

Comment

Orson is entitled to disagree with Jeanne, but his position cannot be credible until he has carefully considered her arguments. His dismissive statement is without merit. It clearly positions him as an empty vessel, full of sound and fury, but signifying – nothing. His instinctive response to discomfiture is ego-protection. His sanctimony is shallow and visceral rather than well-founded. The seeker after truth will recognise this type of blustering response as a feint designed to let the poseur off the hook. When sanctimony is encountered in a discussion, the debunker will call the bluff, label the tactic moral posturing, and press on regardless.

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Sanctimony

Orson Pecksniff in a humble, reflective mood

Sanctimony @ www.skepticsfieldguide.net
Simple-Minded Certitude

Other Terms and/or Related Concepts

Intransigence; studied, wilful, implacable and/or indefatigable ignorance; "denial"; bovine complacency.

Description

Simple-minded certitude is the preferred descriptor in this book for a habit of mind which is commonly labelled intransigence. Simple-minded certitude is an unshakeable belief that will remain unchanged even when indisputable evidence is presented which convincingly demonstrates the belief to be false. "Simple-minded" is intended to convey the voluntary use of simplistic reasoning, rather than an "organic" limitation of intellectual capacity. Otherwise intelligent individuals can choose to be simple-minded in their approach to a particular topic.

It is a temptation to accuse someone of intransigence or simple-minded certitude simply because they disagree with us. But this accusation should not be used lightly. If it is used too lightly, then its utility as a legitimate criticism is compromised. True simple-minded certitude occurs when an advocate has a characteristic mindset that simply refuses to entertain the possibility of being wrong on a matter of fact. Or the advocate, in effect, rules out any possibility of being persuaded to another opinion, whatever the evidence presented by the opponent. Intransigent advocates are deaf to information which might disturb their state of comfortable, implacable ignorance.

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Example

Ramone Pust-Yool and Debbie Pust-Yool are getting to know each other after a whirlwind courtship and marriage. Debbie has just disclosed the fact that she would like to have three children. She also states: "...and if they ever get sick, I won't be taking them to a doctor – my iridologist is infallible... and when he treats me, my iris changes to confirm that I am cured." Ramone is somewhat alarmed at this, and states mildly: "But they use iris scanning now as a form of identification... like fingerprints... that wouldn't work if the iris changed according to your state of health." Debbie bridles and loudly proclaims: "I don't care what they claim to do... the iris is at all times an accurate reflection of every aspect of your health – end of story!"

Comment

Leaving aside the question of whether or not iridology works, Debbie is exhibiting a defensive stance which indicates that she is preparing to enter a state of simple-minded certitude. Her initial statement above is extravagant and emphatic. It seems to be intransigent. If she continues in that vein, she would clearly be exhibiting the fallacy of simple-minded certitude. If, however, her statement is merely an immediate emotional over-reaction, and she then becomes more open-minded and reasonable as the discussion proceeds, she is not fundamentally intransigent.

Ramone's best strategy in the face of Debbie's apparent over-reaction would be to respond with "sweet reason". As a critical thinker, he would focus on the issue without raising the emotional temperature. His response would be mild and
measured. He might think: "Uh-oh, I've married a crazed rage-aholic." But he wouldn't say it. He would say something like: "Well sweetheart, I'd like to look into it... it's a decision for both of us... we should always put the health of our children first."

Pure, persistent simple-minded certitude in the face of incontrovertible contrary evidence is a characteristic of the less reflective and intellectually respectable professions to be found in our community – such as clairvoyants and opinion columnists. Consider for example, the common situation where an opinion columnist (who also happens to believe that he is clairvoyant) expresses a prediction in the following form: "If the government does X, then Y will surely follow." In time, the government does X, but Y does not in fact follow. In such circumstances, the more opinionated opinion columnist is unlikely to admit error. He will characteristically dissemble, squirm and avoid at all costs the admission "I was wrong".
Simple-Minded Certitude @ www.skepticsfieldguide.net
Single Cause

Other Terms and/or Related Concepts

Reductive fallacy; over-simplification.

Description

Single cause fallacies occur when a person assumes that there is only one cause of a complex problem. For example, an advocate might solely attribute youth homelessness to child abuse within dysfunctional families. Other advocates might attribute it to unemployment. Still others might attribute it to lack of discipline in schools and the home. It is unlikely that only one of these factors is involved, and the solution of such a complex problem requires looking beyond simple causes, no matter how dear to the heart of the particular advocate a particular cause may be.

Example

Nelly Impacted-Molar is giving a lecture to adult students enrolled in a community-based self-development program on substance abuse. She answers a question from Jake Loosely. Jake has just asked her why some drinkers become alcoholics or problem drinkers and some don't. She states: "The only reason a social drinker progresses from occasional drinking to full-blown alcoholism is low self esteem. This is why alcohol is such a problem in remote rural communities. These communities suffer from collective low self esteem brought about by poverty and isolation."
Comment

It may or may not be the case that low self-esteem increases the likelihood of problem drinking, but Nelly is claiming it is the sole reason for the problem. This is unlikely since alcoholics are present in all strata of society and exhibit all levels of personal achievement. She doesn't cite research to back her claim and her audience is likely to have anecdotal knowledge about cases of alcoholism that don't fit her sweeping claim of a single cause. In such circumstances, the audience is entitled to be skeptical, to challenge her statement and to insist on hearing evidence that supports her view. Note the particular words she uses in her statement – "the only reason" – indicate clearly that her error is the single cause fallacy, or over-simplification. However, in this example the single cause fallacy is likely to be further compounded with yet another fallacy – false cause; correlation error. It may well be possible for example, that low self-esteem is a consequence of alcoholism rather than one of the causes.

Nelly's error is not a trivial one. If she were to undertake a community based program to address alcoholism in an isolated and impoverished rural setting, and if she makes the wrong assumption about the cause of alcoholism, her remedial program might compound the problem, rather than address it effectively.

The single cause fallacy is widespread and commonplace, perhaps because a single cause implies a relatively straightforward solution. It is also easier to fool ourselves into believing that we comprehend a complex problem if it is artificially stripped of its complexities. Unfortunately, to pretend a complex problem is simple is delusional – a retreat
from reality rather than an engagement with reality. Seekers after truth will seek the truth, in all its messy complexity. They will metaphorically roll up their sleeves and do what is necessary to address the problem, no matter how complex or difficult it may be.
There’s only one reason I lost my job as a dental nurse... age discrimination.

It’s possible there’s more than one reason.
Slippery Slope

Other Terms and/or Related Concepts

Thin end of the wedge; Trojan horse.

Description

The slippery slope fallacy assumes without evidence that if we take a particular step which in itself doesn't cause a problem, it is nevertheless the first in a series of steps that will lead inevitably to some undesired outcome. This fallacy in reasoning is often called the "thin end of the wedge" argument. An example might be the view that if marijuana is decriminalized, then this will inevitably lead to decriminalization of harder drugs. Or: "If we allow simulated depictions of sex on TV after 9.30pm, it won't be long before such things are depicted early in the evening when young children are watching." While this view is technically flawed (not based on direct evidence), dismissing such concerns as necessarily without foundation would be problematic (see burden of proof), as experience suggests that communities, nation-states or civilizations may sometimes be incapable of recognizing and responding in a timely way to incremental, adverse change.

Example

Gene Toadstrangler is a spokesperson on public affairs for the Church of Chastisement. He has been asked by the editor of The Daily Drumbeat, a small regional newspaper, to write an article on a Bill before state Parliament on the Rights of the Child (Safety and Security). Among his remarks is the following statement: "At the moment, the proposed legislation states
that parents are not allowed to assault their children with a heavy object... this is something we would all agree with. But the problem with such legislation is that it won't stop there... once this is passed, it will give impetus to 'do-gooders' who will be encouraged to remove all rights to parents to discipline their children."

**Comment**

Gene is in the paradoxical position here of seeking to argue against a proposition that he actually believes in. He believes that parents should not be allowed to belabour children with a solid object, but he doesn't want the legislation because legislation which might follow might go too far.

Gene would be well advised to clearly define for himself just what level of punishment should be available to parents in chastising children. He should then develop as clear a case as possible for reserving the right to punish at that level. Following this, he could then point out that although the current legislation is acceptable to him, there is a widely recognised tendency for "crossing lines drawn in the sand". He could argue that the community as a whole should be alert to possible further shifts in the levels of correction available to parents. When such a shift occurs, he can then vigorously oppose that further shift from a credible standpoint.

The slippery slope is a widely recognised and documented fallacy in informal logic. However, it is often the case that accusations by an opponent that the advocate is employing the slippery slope fallacy are unwarranted. Sometimes individuals who simply wish to halt an incremental change at a particular point will present a rational case for their position. For example, an advocate may argue against cloning as a solution
for human infertility on the grounds that cloning is itself undesirable for various reasons. Further, that once the technology for safe and effective human cloning is developed, elective cloning is likely to follow. An accusation that the advocate has made unjustified use of the slippery slope argument in the latter proposition may not be warranted. If (for example) the advocate can illustrate and support his or her case with parallel examples where technological developments have outpaced ethical controls, then he or she is likely to be a seeker after truth rather than an emotionally driven alarmist.

On the other hand, when people who lack the mature judgement of the authors venture onto a slippery slope, they will inevitably wallow in ever-more bizarre misconceptions and fallacious reasoning until we end up with nothing but gibberish — and finally, the complete destruction of civilization as we know it.
Slippery Slope @ www.skepticsfieldguide.net

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Special Pleading

Other Terms and/or Related Concepts

Claiming to have special insights or superior sensitivity; asserting connoisseurship.

Description

This fallacy occurs when an advocate claims that he or she has a special insight into the topic under discussion. Further, (by implication or explicit claim) the opponent cannot possibly comprehend the subtleties or complexities of the issue because he or she is unable to attain the level of insight available to the advocate. Underlying such special pleading or claims to deep insight or empathy is a presumption that the views of the advocate cannot be evaluated because the opponent lacks the capacity to make any valid judgement. All such claims should be treated with deep skepticism.

Example

Toby Nightlight is writing a letter to the local newspaper. He is incensed at a column in the paper written by a local medical practitioner, Dr Sally Sodfreud. The basic theme of Sally's article is that violence associated with alcohol abuse in the local indigenous community has increased enormously over the last year. She attributes this to the construction of a "wet canteen" at the community centre just over a year ago. Toby's first sentence reads as follows: "As an aboriginal man, I know what damage has been done by paternalism towards aborigines in the past. Dr Sodfreud might be well meaning, but she doesn't
have a clue... [if she were to] walk a mile in my shoes, she would understand just how insulting her suggestion is."

**Comment**

In the example given, the wording of Toby's opening sentence appears to be attempting to establish from the outset that his views on the issue of alcohol use are unchallengeable. Seekers after truth would place little weight on such a claim *per se*. They would examine the rest of the letter and consider any of Toby's claimed insights on their own merits. Reasoned justification of views would be needed before they could be considered to be credible. After all, Sally could herself claim special insights not available to Toby. As a local GP she would no doubt be attending to injuries inflicted by alcohol-fuelled violence and she would be talking to the victims.

Special pleading is a commonplace feature of newspaper opinion columns, political speeches, television panel discussions and the like. People who seek to air their convictions in such public forums are usually attempting to influence public policy. Often there is also an attempt at self-aggrandizement through moral and intellectual posturing. In such circumstances, and when the "public advocates" fail to mount a well-researched, intelligent argument in favour of their convictions, they often fall back on a range of shallow rhetorical devices, including special pleading. Any statement along the following lines is special pleading and can safely be ignored by the skeptic: "You don't understand because you are: a man, a woman, an aborigine, a whitefella; or you are ignorant, a philistine, insensitive, lack cultural awareness or intellectual ability, spirituality etc. If you were like me or had my fine sensibilities you could not help but agree with me."
It is worth noting that special pleading can take many forms and can be employed in a wide variety of contexts. If for example, the judge at an art show is unable to convincingly explain her choice of a prizewinner, she may fall back on transparent and self-serving special pleading by way of justification. We here quote verbatim some examples of the genre from an actual judge at an exhibition (attended by Jef). The judge is commenting on the first prizewinner: "It speaks to me... it is perhaps... I sense that the artist is challenging and inviting self-examination... the viewer needs to be attuned to minimalism... only seems like a four-year old could do it... that is perhaps a figure.... perhaps looking down... perhaps in torment."

Perhaps the judge is an arts wanker?
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Stacking the Deck

Other Terms and/or Related Concepts

Concealing counter-arguments.

Description

The advocate deliberately conceals or avoids counter arguments to his or her own position in order to defeat the opponent. In such circumstances, the motive of the deck-stacking advocate is to win the argument at all costs. He or she is not interested in arriving at a solution to a problem or the truth of the matter under discussion. Even when the deck-stacker is aware of compelling information which would be of significant assistance to the opponent, his or her attitude is that it is up to the opponent to make the opposing case.

Example

Homer Stimson is arguing with his neighbour Ned Flinders about gun control. "People should be allowed to protect themselves. What if someone breaking into my house has a weapon? With a gun I'll be able to keep my family secure." To which Ned replies: "I just think it would be too diddly-dangerous. If everyone had a gun there would be more and more shootings."

Homer has an internal dialogue with his brain... he thinks: "That's true about society in general, but if I keep the conversation to breaking and entering...". He then says: "That's not true... if everyone had a gun in their home, there would be less breaking and entering, as criminals would be frightened
because they would think that they might end up facing a gun-toting homeowner. So there would be less criminal acts, and therefore less shootings."

**Comment**

In this example, Ned points out a potential problem with Homer's initial argument. With more people owning guns, it seems likely that there would be more shootings. Homer thinks about this and sees that Ned may have a point. His tactic is to limit the discussion to breaking and entering. He knows full well that Ned's argument applies to gun control in all areas of society, but he limits the discussion to an area where he feels his argument has a chance — i.e. he "stacks the deck" in his favour. Homer argues that "everyone owning a gun" would be a crime deterrent (specifically against breaking and entering), and thus (through unjustified and implicit extrapolation) less crime and less shootings.

In the present example, and if Ned were a reasonable person, he would find many weak points in Homer's position, despite the deck-stacking. However it is also important to address the deck-stacking *per se*. The seeker after truth in such a situation would make explicit reference to stacking the deck and would repudiate the use of such a tactic whenever it is used in argument.

It should be noted that the term stacking the deck is sometimes misapplied to situations where the composition of a discussion panel is biased in favour of one side of a controversial issue. Producers and presenters of radio and television discussion programs rarely take the trouble to ensure that panel members or interviewees are numerically equal, or equal in terms of their ability to present a cogent argument. While the expression
"stacking the deck" seems like an appropriate description for such practices, its use might lead to confusion with the standard usage. A better expression might be "stacking the panel" or "panel selection bias".

We regard "stacking the panel" as a reprehensible and pernicious practice which leads to ungovernable bias in television and radio current affairs journalism. In our view, the only corrective to this bias would be to give us our own program and to let us have a free hand in choosing the on-air talent.
Stacking the Deck @ www.skepticsfieldguide.net
Straw Man

Other Terms and/or Related Concepts
False positioning; false target; aiming off; caricaturing a position; misrepresenting a position.

Description
The advocate attacks a weakened, exaggerated, over-simplified or otherwise false or distorted form of the opponent's argument rather than the real one. Commonly, the devious advocate presents a simplified caricature of his or her opponent's argument, then demolishes this "straw man", which is nothing more than an invention of the advocate.

Example
Harry Cackleberry has just taken the floor during a public debate on the teaching of evolution in schools. "These evolutionists would have us believe that our great-great-great-grandparents were nothing more than monkeys. They say that one day, hundreds of thousands of years ago, a monkey gave birth to a human. Now I ask you ladies and gentlemen, how can a monkey give birth to a human?"

Jim Flakehammer, an evolutionary biologist from a research institute challenges Harry from the floor and says: "You are giving a false account of the evolutionary explanation of human origins. The way you put it, evolution is an easy target to be knocked down – the idea of a monkey giving birth to a human is quite ludicrous. However the real account given by evolutionary theorists is far harder to dismiss. The current view of scientists working in my field is that humans and monkeys
are related through a common ancestor from which both species have evolved gradually by a process of natural selection."

**Comment**

Harry may genuinely believe that his simplistic version of evolution is the one held by evolutionary scientists. In which case he is committing the straw man error in ignorance. However it is often the case that the straw man error is a deliberate rhetorical device used by a dishonest advocate to "wrong-foot" an opponent.

For the purposes of analysis, we will assume that in the present case, Harry is being deliberately disingenuous. He is fully aware of the actual claims of evolutionary scientists. However he is uncertain of the strengths of his argument against the real theory of evolution. He therefore conceals his knowledge and advances a hackneyed caricature of the theory of evolution in order to create an easy target for scornful comments. His motives are to win the argument on the day, rather than to genuinely explore the issue.

A genuine seeker after truth does not resort to the construction of a straw man. If an opponent's argument is actually weak or incorrect, then there is no need for the advocate to misrepresent it in order to win. In the present example, Jim (the opponent) responds to Harry's subterfuge by pointing it out. Even if others in the room are unable to fully understand the actual account of human evolution given by science, they should at least be alerted to the fact that Harry (the advocate) is painting a false picture.
Note that the term "straw man" is at times used to mean something quite different to false positioning. This can sometimes lead to confusion. The alternate meaning is roughly equivalent to "bogeyman". That is, a scary apparition which is apparent rather than real – some imagined problem or consequence of an action which is conjured up by a party in a dispute to stop a proposed action. This usage is similar to the expression "paper tiger". The implication is that although a consequence of an action looks fierce (or difficult), in reality it is nothing to be concerned about.
Unfounded Generalization

Other Terms and/or Related Concepts

Unwarranted inference, false generalization, over-generalization, stereotyping.

Description

There are two fairly distinct forms of unfounded generalization which may nevertheless "blend" into each other. They are false generalization and over-generalization. A false generalization may involve drawing a conclusion about an issue based on too small a sample or on atypical cases. It involves making a claim about a group which is untrue or unsubstantiated. An example would be a statement such as: "Both my grandfathers were heavy smokers and died of old age in their 90s so I don't think smoking causes lung cancer." An over-generalization, on the other hand is a blanket statement which asserts that a whole group has certain characteristics when the characteristics in question may only be widespread or typical of the group rather than universal.

Example

Cecily Backspace has just completed a study of gender and leadership based on open-ended interviews with bosses and workers. She has written an article for Financial World Weekly purporting to be based on her work. In the introduction to the article she states: "It is commonly accepted that women in leadership positions build consensus in work teams, whereas men seek to dominate through competition. My research
project seeks to identify the impact of such leadership styles on subordinates..."

Comment

It may or may not be true that on average women in leadership positions seek to build consensus, but Cecily's blanket statement above suggests that this is her á priori belief whatever the evidence. Even if it is true that on average, women seek to build consensus (when compared to men), her assertion that "women in leadership positions build consensus" is much too unequivocal. If what she asserts were literally true, then there would be no autocratic female politicians and no consensus-building male leaders.

Two more examples: (a) "Men are smarter than women" is a false generalization because it is untrue; (b) "men are taller than women" is a true generalization given the unstated assumption that it only applies "on average" and not to particular individuals.

Unfounded generalizations are often the core of racial or gender stereotypes. For example, a person may assume all members, or almost all members of a racial or cultural group are violent because the two individuals from the group that they met in a dark alley last week were violent. It is generally the case that "enlightened" people living in contemporary cosmopolitan cultures are sensitized to issues such as racism and sexism. They know that they shouldn't hold negative stereotypes about vulnerable groups in society, even if a member of such a group assaulted them with a broken beer bottle last night in the hotel carpark. Negative stereotypes are readily recognized as unfounded generalizations. Right-thinking people tend to avoid them because they understand they

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should not pre-judge an individual because of their group associations or characteristics.

However, people are less likely to recognize the flawed reasoning in positive stereotypes. Consider the following statement: "Indigenous peoples are more spiritual than people living in industrialized societies." Few would take offence at such a statement, but it is nevertheless a blanket assertion offered without evidence. As stated, it is clearly an unfounded generalization and just as logically flawed as a negative stereotype.
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Weasel Words

Other Terms and/or Related Concepts

Euphemism; dysphemisms, emotionally loaded language; missile words.

Description

The phoney advocate uses euphemisms, dysphemisms or emotionally loaded labels to boost his or her own position or to undermine the opponent's position. The general descriptor weasel words is a metaphorical usage which connotes a "weasel-like" slippery evasion. The fraudster, in using weasel words, seeks to misrepresent the issue under discussion by avoiding an accurate and factual description of the topic.

Example

Hazel Clavicle the peace activist and Irwin Tammany the former Minister of Defence are being interviewed by Bob Sizlics on a current affairs television program. The topic under discussion is the French bombing campaign in support of the rebel alliance fighting government forces in the Republic of Mukalukaluk. After viewing footage of bomb damage, Bob asks them both for a comment on civilian casualties. Hazel claims the damage is evidence of genocide. Irwin says that collateral damage is always regrettable.

Comment

Both Hazel and Irwin may be sincere in their beliefs. However both are obscuring the reality of the issue by using weasel words.
When Hazel describes the situation as "genocide", she is seeking to equate war-zone civilian casualties with the deliberate mass killing of non-combatant ethnic groups because of their ethnicity (i.e. actual genocide). She is appropriating a legitimate and essential term for her own corrupt purposes. She is using "genocide" as a dysphemism. In doing so she compromises its accepted meaning and reduces its potency and precision. Over time, widespread misuse of the term will leave us with no label for actual genocide in common usage. A by-product of watering down such a term is the comfort it provides to perpetrators of genuine genocide.

Irwin's euphemistic use of "collateral damage" is intended to distance the viewer from the human drama and tragedy which is the outcome of almost any bombing campaign. Civilians are, after all, people. Collateral implies buildings and real estate rather than individual human beings. If Bob, the interviewer, were a seeker after truth and a good journalist, he would challenge both his interviewees on their tendentious use of terminology. He would ask them to justify their usage. If he did this, and pursued the matter, they might even both agree that they are talking about "civilian casualties" rather than genocide or collateral damage. If participants involved in any discussion agree to reject the use of weasel words (in favour of precise descriptions), the discussion is much more likely to result in a fruitful outcome.

Mealy-mouthed weasels commonly accuse their opponents of not being "open-minded". The seeker after truth will treat such accusations with skepticism. The weasel may simply be using a disparaging label as a rhetorical tactic. The "thought processes" underlying the accusation might be something along the following lines: "My opponent does not agree with me. Further,
because I believe I am open-minded, my opponent's disagreement must mean they are not open-minded."

Corruption of a useful term like open-minded by closed-minded weasels should be attacked with vigour at every opportunity.
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**Jef** is an academic in teacher education. **Theo** is a secondary science and mathematics educator. As father and son (respectively), we have shared a long-standing interest in critical thinking, informal logic and fallacies. This book is the most tangible product of an engaging dialogue we have pursued over many years.