

A Handbook of Logical Fallacies
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- **AD FIDENTIA**

(Against Self-Confidence) If you cannot directly refute someone's principles, you strike indirectly with an attack on their confidence in those principles. Question their certainty of the principles' validity: "How can you be sure you're right?"

- **AMBIGUOUS COLLECTIVE**

The use of a collective term without any meaningful delimitation of the elements it subsumes. "We" "you" "they" "the people" "the system" and "as a whole" are the most widely used examples. This fallacy is especially widespread and devastating in the realm of political discussion, where its use renders impossible the task of discriminating among distinctively different groups of people. (The term "as a whole" is an assertion that a group of people somehow becomes an entity endowed with attributes other than those attributes possessed by an aggregate of individuals. It would be better to use the expression "composite" than "as a whole" as this preserves the awareness that the group is merely a collection of independent elements.) Social problems are difficulties resulting from the interactions of groups of people. Before a social problem (or indeed any kind of problem) can be solved, it is

imperative that the problem be precisely identified. To identify a social problem, you must delineate exactly the groups of people who are involved in that problem. The Ambiguous Collective fallacy prevents this identification. An antecedentless pronoun is an example in the singular of the Ambiguous Collective fallacy. I often challenge those who commit this fallacy to eliminate from their discussion all general collective terms, and each time they want to use such a term to use instead a precisely delimiting description of the group the term is intended to subsume. Very few people are able to do this. One reason this fallacy is so prevalent and difficult to deal with is that it is built into the English language. Consider the question "Do you love anyone?" The ambiguity arises from the fact that the word "anyone" can denote either of two completely different meanings:

1. An individual, specifiable human being. A single, particular person, in the sense that there is some one person whom I love.
2. A non-selected unitary subset of the human race, in the sense that I love whichever person happens to be in my proximity.

Here are some examples of the Ambiguous Collective fallacy: "Last November, 77% of us voted in favor of term limits." In this statement, who exactly are the "us"? The speaker wants to convey the idea that term limits are very widely supported, but in fact the 77% refers only to those who voted, the supporting subgroup may well be a quite small percentage of the total population.

"We need to train doctors to teach us how to get and stay healthy." In this statement, who are the "we" and who are the "us"? Is the speaker trying to promote socialized medicine by advocating government control of the medical schools? When he says "we need to" does he really mean "the government should"? And is the "us" merely a subtle way of saying "me"?

South Africa sanctions as an example of the consequences in real life of the ambiguous collective fallacy: "I imagine you support your government's sanctions against South Africa?" "Of course. Every decent person does." What about disinvestment of American business from my country, you are all for that too?" "I campaigned for it on campus. I never missed a rally or a march." "Even if it means a million blacks starve as a direct consequence? Your plan is similar to trying to convert a country by withdrawing all your missionaries and burning down the cathedral. You forced your own businessmen to sell their assets at five cents on the dollar. But it wasn't the impoverished blacks who purchased those assets. Overnight you created two hundred new millionaires in South Africa, and every one of them had a white face! That's maliciously stupid! We would be grateful to you if your efforts had been failures!"

Perhaps the most widely-known example of the Ambiguous Collective fallacy is the statement: "Government of the people, by the people, and for the people." In this statement "the people" has three distinctly different meanings: One group of "the people" (the victims, or producers) are ruled by another group of "the people" (the bureaucrats, with their action arm, the police) in order to achieve the goals of another group of "the people" (the politicians).

Here is an excellent demonstration of the significance of the Ambiguous Collective fallacy (from THE TEN THOUSAND by Harold Coyle): Dixon was ready. "Who, Colonel Stahl, would you be betraying?" Stahl looked at Dixon with a quizzical look on his face before responding. "Why, I would be disobeying my orders. I would betray Germany." Dixon switched tactics. Leaning forward for dramatic effect, he looked into Stahl's eyes as he spoke with a clear, sharp voice. "Whose Germany Colonel Stahl? Chancellor Ruff's Germany, the Germany of his dreams and ambitions? The Parliament, who are at this very minute debating the constitutional right of Chancellor Ruff's authority and actions? The mayor's Germany, one of working people and their families who have had no say in the past weeks over Chancellor Ruff's provocative actions and unreasonable demands upon my government? Or your Germany - a theoretical Germany that knows only blind duty to orders and traditions? Who, Colonel, will you be betraying?" The concept that a soldier is honor-bound to obey Orders without question allowed the German Army to be drawn into helping the Nazis create the nightmare that led ultimately to the death of millions of Germans and the near total destruction of Germany.

- ANTI-CONCEPTUAL MENTALITY

The anti-conceptual mentality treats abstractions as if they were perceptual concretes. It regards a concept as a self-contained given, as something that requires no logical process of integration and definition. This syndrome is motivated by the desire to retain the effortless, automatic character of perceptual awareness, and to avoid the mental independence, effort and risk of error that conceptual integration entails. In the anti-conceptual mentality, the process of integration is largely replaced by a process of association. The anti-conceptual mentality breeds an identification with and dependence upon the group, usually a group united by such concrete traits as race, sex, or geographical proximity. The moral universe of such people consists of concrete substitutes for ethical principles: customs, traditions, myths, and rituals. The anti-conceptual mentality is incapable of abstracting from concrete differences among people and formulating general principles of common human rights, or common standards for judging an individual's moral character and conduct. Its sense of right and wrong is anchored not in reason but in loyalty to the tribe and its practices. The solidarity of the tribe is sustained in part by xenophobia - thus the bigoted racism frequently manifested by these people. For the anti-conceptual mentality, relativism is the only possible alternative to tribal prejudice because for him the refusal to judge is the only alternative to judging by concrete-bound criteria. If one does not think in terms of principles, one has no way of distinguishing those aspects of human conduct and character that are essential from those aspects that are optional.

- APPEAL TO IGNORANCE

Assertions based on what we do NOT know: "No one knows precisely what would happen if a core was to melt down." And the compounding of arbitrarily asserted possibilities.

What COULD happen is what is possible. The burden of proof is on the skeptic to provide some specific reason to doubt a conclusion that all available evidence supports. It is not true that "could's" and "maybe's" are an epistemological free lunch that can be asserted gratuitously. The case against the skeptic is that doubt must always be specific, and can only exist in contrast to things that cannot properly be doubted.

- ARGUMENTUM AD POPULUM

(Bandwagon fallacy) "All societies require military service. We are a society. Therefore we should require military service."

- ARGUMENTUM AD VERECUNDIAM

The appeal to authority.

Whose authority? If an argument is to be resolved by such an appeal, the authority must be one recognized by both parties. A justice system that does not recognize the rights of the individual will not provide a satisfactory authority. The only way the appeal to authority can be a viable means of conflict resolution is if both parties can agree on a completely neutral, objective authority to decide the issue. Where does one exist? Only in the facts of reality. Who decides? In all issues pertaining to objectivity, the ultimate authority is reality - and the mind of every individual who judges the evidence by the objective method of judgment: logic.

- ARGUMENT FROM INTIMIDATION

"Only the most degenerate, morally depraved, cretinous imbecile could fail to see the truth of my argument."

Usually, however, this is somewhat more subtle:

"It would be unwise to exclude the possibility that my surmise is correct." To dare is to challenge someone to perform an action as proof of his courage. This is the behavior of a pitiful little creature with the aspirations of a tyrant but without the power to compel. Since you do not have the power to compel, you attempt to swindle him into the acceptance of your goals and the use of your judgments as the standard for his actions. You trick him into performing the action by impugning his character. This is a form of the Argument from Intimidation.

- ASSUMPTION CORRECTION ASSUMPTION

He assumes (implicitly) that I will correct his mistaken assumptions.

- BAREFOOT

(See Rothbard, FOR A NEW LIBERTY, Chapter 10) - "If government didn't exercise control over the manufacture, distribution, price and sale of shoes we would all go barefoot!" If "shoes" doesn't suit you, just substitute "police" or "fire protection" or "mail delivery" or anything else the government claims to provide. Nothing the government claims to provide cannot be provided in a more humane, just, and economical manner by free associations of individual people.

- **BARKING CAT**

(From "Free To Choose" by Milton Friedman) What would you think of someone who said, "I would like to have a cat provided it barked"? Your statement that you favor a government provided it behaves as YOU believe desirable is precisely equivalent. The political principles that determine the behavior of government agencies once they are established are no less rigid than the biological principles that determine the characteristics of cats. The way the government behaves and its adverse consequences are not an accident, not a result of some easily corrected human mistake, but a consequence of its nature in precisely the same way that a meow is a consequence of the nature of a cat.

- **BEGGING THE QUESTION**

An assertion that implies and/or uses its answer.

"Why should you be good to people?" (He expects me to be good to him by responding to his question.)

"We must institute the death penalty to discourage violent crime." (He assumes that capital punishment does in fact discourage crime.)

- **BOOLEAN**

Choosing to view a continuum as represented by only its extremities. It consists in dividing a range of options exhaustively into the two extremes and then insisting that a choice be made between one or the other extreme, without regard to any of the intervening alternatives. An example would be to insist that if a man does not behave like a genius he must therefore be a moron. A more subtly dangerous example is the attitude of a person who has an aversion to the necessity of defining one's terms. She may attempt to avoid this necessity by maintaining that "defining every single term used in a discussion would result in such a tedious and turgid presentation that communication would be impossible." What she ignores is the intervening alternative of defining only the terms that are SIGNIFICANT to the discussion. In fact, some phenomena are Boolean by nature and some are Gaussian. Human intelligence is Gaussian, the Law of Identity is Boolean. The Excluded middle is another name for what I call the Boolean Fallacy.

- **CHERISHING THE ZOMBIE**

Touting the existence or effectiveness of an idea that has been dead for a long time.

"The forthcoming election could be the big turning point in the Libertarian Party's electoral significance." The LP has been a political zombie since 1980 but he is still cherishing it.

"The President's statement casts doubt on the administration's credibility." The Zombie is the idea that the administration has any credibility.

Chief Justice Warren Burger: "We may well be on our way to a society overrun by hordes of lawyers, hungry as locusts." The Zombie is the self-blinded belief that America has not already become such a society.

- **CONTEXT IMPOSITION**

An attempt to impose his own intellectual or moral context on another person by someone who has closed his mind to reality and manufactured a fantasy, then expects (or if he is a tyrant, demands) others to share it and help him sustain it. He ignores the objective realities of the situation, concentrating instead on subjective perceptions that are false. (See the definition of Social Metaphysics in the DICT file.)

"If you were terminally ill, you too would advocate life preservation."

"There are no atheists in foxholes." [While cringing in the foxhole, the atheist realizes fully that he does not believe in God: What sort of bloody-minded deity would let the creatures he created perpetrate something like this?]

Imposition of the Slave Mentality: "Aren't you thankful that they allow this?" [I am expected to limit myself to the context of "their" allowables.] The proper answer is, "No, I am resentful that they forbid other freedoms I should possess."

They behave as though by naming your opinion in advance they will make you unable to alter it.

They have a six-inch knife and have stuck it four inches into me. Should I be thankful they have not shoved it in the final two inches? Or resentful that they have shoved it in four inches? [I am expected to accept their behavioral context and to judge my situation from within that context.]

"Let 'em eat cake!"

- **DETERMINISM**

(The Objectivist Newsletter, May 1963) - "The doctrine of determinism contains a central and insuperable contradiction - an EPISTEMOLOGICAL contradiction - a contradiction implicit in any variety of determinism, whether the alleged determining forces be physical, psychological, environmental or divine. In fact, Man is neither omniscient nor infallible. This means: (a) that he must work to ACHIEVE his knowledge, and (b) that the mere presence of an idea inside his mind does not prove that the idea is true; many ideas may enter a man's mind which are false. But if man believes what he HAS to believe, if he is not free to test his beliefs against reality and to validate or reject them - if the actions and content of his mind are determined by factors that may or may not have anything to do with reason, logic and reality - then he can never know if his conclusions are true or false....But if this were true, no knowledge - no CONCEPTUAL knowledge - would be possible to

man. No theory could claim greater plausibility than any other - including the theory of psychological determinism."

One of the catches to determinism is that you cannot argue with it. To argue is to make an attempt to induce someone to alter the actions or content of his mind. The determinist enters the argument with the claim that such alteration is impossible - that he has no power to volitionally change his state of consciousness. He says, and means literally, "My mind is made up - don't confuse me with the facts!" But at the same time, the determinist always counts on the free will he argues against, because he hopes to persuade YOU that HE is right; and to be persuaded is to choose freely between two or more competing options.

The fundamental question of free will does not involve Man's physical behavior but his psychological behavior. It concerns Man's ability to control the functioning of his own mind. The argument is frequently heard that hormones control behavior. This is not quite true. Although hormones do have a controlling effect on much animal behavior, we humans have an organ whose size and functional significance enables us to override the influence of hormones on our behavior: the cerebral cortex. Indeed, it is the size and significance of this organ that primarily differentiates us from our fellow animals. In human beings, hormones don't exactly control behavior, what they do is provide motivation for the behavior. It is my mind that chooses whether or not I will act according to that motivation.

Under justice, individuals are held to be responsible agents for the acts that they commit, and they are held responsible for the consequences of those actions. Under all the forms of determinism you can't have justice, because individuals are not held to be causal agents. Instead, they are regarded as billiard balls, as entities who are merely acted upon, and therefore helpless in doing the things they do.

On the Determinist premise, men are not merely unfit for freedom, they are metaphysically incapable of it since they do not have fundamental control over the choices made in their minds. Political issues become matters of pure pragmatism: there is no right or wrong, but only effective or ineffective techniques of social manipulation.

Biologists have tacitly assumed that when they have understood the operation of each molecule in a nerve membrane, they will understand the operation of the mind. But both the digital and the analog paradigms of computation make it clear that this assumption is wrong. After all, a computer is built from a completely known arrangement of devices whose operation is understood in minute detail. Yet it is often impossible to prove that even a simple computer program will calculate its desired result or, for that matter, that it will even terminate.

Wilder Penfield explored the brain with electrical probes. By stimulating different parts of the brain he could cause a subject to turn his head, blink his eyes, move his limbs and a host of other things. But though he could make the patient's hand move he could never make the patient feel that he had WILLED the hand to move. Penfield found that the effects of consciousness could be selectively controlled by outside manipulation. But however much he probed, he could not enter consciousness itself. He could not find the mind and invade its autonomy.

- DISCARDED DIFFERENTIA

Define by using the Genus only.

- DONUT

A form of false alternative. It insists that all donuts be divided into two piles: large donuts and sugar donuts.

- ECLECTIC

Eclecticism consists of selecting the good parts from a set of ideas and discarding the bad parts. But this process implies that you already know how to do the selecting, and have a standard of judgment to use for evaluating the ideas. If you in fact do, then there is no problem and eclecticism is a valid intellectual process. But if you approach a set of ideas from a state of ignorance, you are not intellectually equipped to pick and choose from among them. You could not know whether what you accepted is true or false. Herein lies the danger of eclecticism - if you are going to pick and choose you must already have enough knowledge to do the selecting.

- ELEPHANT REPELLENT

"Hey, mister, you better buy a bottle of my Elephant Repellent. If you don't buy it, the elephants will come into the neighborhood and trample you! My proof that this stuff really works is that there are no elephants around here." for "Elephant Repellent" substitute the word "Government" and for "elephants" substitute the word "crime" or "Russians" or "poverty" or "chaos" or anything else the government claims to prevent. Nothing the government claims to prevent cannot be prevented in a more humane, just, and economical manner by free associations of individual people.

All statisticians use one or both of these fallacies. A good example, and an illustration of the motive underlying their use, can be found in the Commentaries of William Blackstone:

"...the whole should protect all its parts, and that every part should pay obedience to the will of the whole; or, in other words, that the community should guard the rights of each individual member, and that (in return for this protection) each individual should submit to the laws of the community; without which submission of all it was impossible that protection could be extended to any

Under the spurious claim that the State will "guard the rights of each individual" Blackstone demands their obedient submission. In reality, the rights are never guarded but the slavery is always imposed.

- * EMPHATIC

To emphasize one element of a set at the expense of other equally significant elements. Or to place emphasis on a spurious aspect of a situation. You see this

when people react violently to comparatively minor troubles but are seemingly unshaken by really serious ones. It is a sort of being at a loss for a proportionate emotional reaction - a shivering at shadows.

- **EXCLUSIVITY**

Trying to make an idea of limited applicability extend in its coverage to the inclusion of an overly large range: "All human experience can be explained by a study of energy flows."

- **FALSE ALTERNATIVE**

Assuming that only one alternative exists in a given situation, when in fact, other and usually more fundamental alternatives exist also. This is frequently expressed by the question, "What other explanation could there be?"

- **FANTASY PROJECTION**

- **FLOATING ABSTRACTION**

(Barbara Branden's lectures, Principles of Efficient Thinking - lecture #4) A generalization subsuming no particulars.

- **FALSE ATTRIBUTION**

The Straw Man syndrome. Present a false description of your adversary and then base your repudiation on that description. You caricature a position to make it easier to attack:

Objectivism advocates infanticide, therefore Objectivism is evil.

If we allow abortion in the first weeks of pregnancy, it will be impossible to prevent the killing of a full-term infant. If the state prohibits abortions even in the ninth month, it will soon be telling us what to do with our bodies around the time of conception.

The defendant must be found guilty; otherwise, it will be an encouragement for other men to murder their wives. As a justification for your proposal, you present your supposition of adverse consequences.

- **FALSIFIABILITY**

Also known as the Appeal to Ignorance

Karl Popper: A conjecture or hypothesis must be accepted as true until such time as it is proven to be false. Popper maintains that scientists approach the truth through what he calls "conjecture and refutation." In actuality, scientists approach the truth not through conjecture and refutation, but through conjecture and **CONFIRMATION** - the demonstration, by means of careful experiment, that a hypothesis corresponds to the facts of reality. This impatience with ambiguity can be criticized by the phrase: absence of evidence is not evidence of absence. Until the phenomenon is proven

TRUE there is no obligation to base your attitude toward it on the assumption that it MIGHT be true. If there were such an obligation, then you would be obliged to give serious consideration to every crackpot notion that has ever been put forward. Falsifiability can be a valuable intellectual tool: it can help you to disprove ideas which are incorrect. But it does not enable you to prove ideas that are correct. See * PROVING A NEGATIVE

- **FALSIFIED INDUCTIVE GENERALIZATION**

Restrict a wide abstraction to a narrow set of particulars and then conclude that an attribute of these particulars must be definitive of the abstraction, thus negating the entire principled structure underlying the abstraction.

A similar fallacy is that of equating opposites by substituting nonessentials for their essential characteristics. Conservatives always do this when they claim to be Objectivists or libertarians.

- **FLAT EARTH NAVIGATION SYNDROME**

Devoting a lot of time and energy to solving problems that don't exist, such as figuring out ways to navigate on a flat earth. Generalizing from a hypostatization. Looking for an easy way out of a dilemma that does not exist. Theology is a study with no answers because it has no subject matter.

- **FROZEN ABSTRACTION**

(The Virtue of Selfishness, chapter 10) Substituting a particular concrete for the wider abstract class to which it belongs - such as using a specific ethics (e.g., altruism) for the wider abstraction "ethics."

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- GOVERNMENT ABSOLUTIST

This is the person who makes comparative judgments (usually of people's behavior) that are based not on any moral or ethical principle but are made by reference to a government (invariably his own government). The consequence is to make a spurious distinction between two people (or groups) who in fact manifest identical behavior.

Tom Clancy: "Terrorists don't relate to the people around them as being real people. They see them as objects, and since they're only objects, whatever happens to them is not important. Once I met a man who killed four people and didn't bat an eye; but he cried like a baby when we told him his cat died. People like that don't even understand why they get sent to prison; they really don't understand. Those are the scary ones."

What Clancy cannot see is that any policeman or any soldier of any country manifests exactly the same behavior that Clancy has condemned as terrorism.

William Buckley: "The Cold War is a part of the human condition for so long as you have two social phenomena which we can pretty safely denominate as constants. The first is a society that accepts what it sees as the historical mandate to dominate other societies - at least as persistently as microbes seek out human organisms to infect. And the second phenomenon, of course, is the coexistence of a society that is determined NOT to be dominated or have its friends dominated."

Buckley does not realize that a Soviet analyst would make precisely the same identification that Buckley has made, but with the roles reversed.

- GOVERNMENT SOLIPOTENCE

The claim that if the government is not doing something about a problem, then nothing CAN be done about it. ONLY the government can solve society's problems.

- GRATUITOUS INCULPATION

- GRAVITY GAME

This consists of demanding that an idea be proven over and over again indefinitely before its validity is acceptable. (The name was conceived while watching an infant throw her toy onto the floor over and over and over again.) An open mind does not grant equal status to truth and falsehood. Nor does it remain floating forever in a stagnant vacuum of neutrality and uncertainty.

- GREEK MATH

The inability to discriminate a scale delineating greater and lesser positives from a scale delineating greater and lesser negatives. This inability results in considering a lesser negative to be a positive. ("My government is a good government - because it's not as bad as other governments.") I call it the Greek Math fallacy because the Greeks did not have the mathematical concept of zero - that which separates positive quantities from negative quantities. See * RELATIVE PRIVATION

- HOMILY AD HOMINEM

Appealing to a person's feelings or prejudices, rather than his intellect, with a trite phrase designed to reinforce a subjective rather than objective view of a situation. If the homily is not accepted in answer to the situation, the next thing that will be done is to attack the person's character rather than answer his argument.

- I-CUBED

You assume that your adversary is Ignorant, Incompetent, and/or Inexperienced and then impose this context on the discussion. I almost always encounter this from astrologers, who admonish me to "examine this before you reject it!" They always assume I have not done so.

People who don't think in principles will not be able to see the principles underlying a philosophy. Usually, all they will be able to see is the behavior of individuals who call themselves adherents of that philosophy.

- IGNORING HISTORICAL EXAMPLE

People who do not look into the future beyond the end of their nose also do not look into the past beyond yesterday (and sometimes not even that far). If they did, they

would readily see that the previous implementation of their schemes was invariably a failure. Not only do they fail to see that their scheme WILL BE a failure, they fail to see that it HAS BEEN a failure.

- **IGNORING PROPORTIONALITY**

"You are safer walking down a dark alley than sitting in your living room with friends, because most murders are committed in the victim's home by his acquaintances." This ignores the fact that most people spend much more of their time at home than walking down alleys. Some journalists bias their reports by expressing outcomes in terms of relative changes rather than of absolute numbers. Thus, reporters of one experiment claimed a 19 percent reduction in coronary deaths among men treated with drug Alfa when in absolute numbers there was only a 1.7 percent difference between the two groups: from 9.8 percent of the untreated group (187 of 1,900) to 8.1 percent of the treated group (115 of 1906). Similarly, reporters of another trial that used the drug Beta, described an absolute difference of 1.4 percent as a 34 percent relative reduction.

- **INSTANTIATION OF THE UNSUCCESSFUL**

To insist on implementing something which is known to have failed. "What we need is government control of the economy!"

- **JOURNALISTIC/POLITICAL FALLACIES**

Weasel words - calling wars something else - "police actions" or "pacification." Euphemisms for war are one of a broad class of distortions of language for political purposes. Talleyrand said, "An important art of politicians is to find new names for institutions which under old names have become odious to the public." (Or have been shown to be failures.) Some subtle methods of media distortion: the use of emotionally loaded images. The limitation of debate to "responsible" options. The framing of dissident viewpoints in ways that trivialize them. The personification of complex realities (Saddam = Iraq). The objectification of persons ("collateral damage"). The isolation of events from their historical context. (By taking a person's statements out of their historical context and judging them by present-day standards, the journalist or politician effectively hides the real author under a mask of caricature.) Remember that journalists and politicians must look for strong, quick impact, so they avoid the thoughtfully analytical and the cerebral, which take too much time and mental effort.

- **MEATPOISON**

The National Association of Scholars proclaims, as the two foremost items in its platform for reforming the academic community of America, its aims to:
"enhance the quality and content of the curriculum"
"resist the ideological misuse of teaching and scholarship"

The NAS seems oblivious to the fact that these aims are merely two sides of a coin, and that what they call "enhancing the quality and content of the curriculum" their opponents will call "the ideological misuse of teaching and scholarship." One man's Meat is another man's Poison.

- MEGATRIFLE

Take a small, inconsequential effect and magnify it to become all-encompassing in its supposed influence. These are people whose fear of the snake in the grass is so great that they are unable to see the bear that is about to eat them.

When somebody gets all upset over something that makes no practical difference, you are dealing with a person whose world exists only within her mind (and the minds of her significant others) rather than outside it. So don't bother asking "What difference does that make?" You will generally find that verbal assurances are the only way to calm her down. Repeated verbal reassurance plays the same verification role in the mind of a subjectivist that repeated experiments plays in the mind of an objectivist.

- MISPLACED PRECISION

The museum guide says the dinosaur skeleton is 90,000,006 years old - because when he was hired six years ago he was told that it was 90 million years old.

The time for the Olympic 30-kilometer relay race, which takes almost an hour and a half to run, is measured to one one-hundredth of a second.

- MOVING GOALPOST SYNDROME

"Computers might be able to understand Chinese and think about numbers but cannot do the crucially human things, such as...." - and then follows his favorite human specialty - falling in love, having a sense of humor, etc. But as soon as an artificial intelligence simulation succeeds, a new "crucial" element is selected (the goalpost is moved). Thus the perpetrators of this fallacy will never have to admit to the existence of artificial intelligence. The proponents keep changing their definition, presenting you always with a moving target that you can never get hold of. Rand referred to this as trying to grasp a fog.

- NULL VALUE

A statement (or question) that gives (or elicits) no cognitively meaningful information: "Are you honest?" If he's honest, he'll say 'Yes' - but if he's a liar, he'll say 'Yes'. You learn nothing in either case.

- OVERLOOKING SECONDARY CONSEQUENCES

To consider only the immediate results of an action, ignoring the long-term effects.

- **PERFECTIONIST**

"I'll stick with what I have, no matter how bad it is, rather than switch to something that is better - but not perfect."

I once knew a woman who refused to use any contraceptive. She was in her mid-20s and was sexually active with her boyfriend. Her rationale for this refusal, which she stated in a very clear and explicit manner, was that "no contraceptive is 100% reliable, therefore none of them is acceptable to me." (I knew her only briefly and was not present to observe the long-term consequences of this idiocy.)

Other such rationales for rejecting change include:

Reification of the Possible, which is to regard a possible outcome as being a foregone certainty, when making an evaluation of a cause.

Reification of the Existent, which consists of the claim that one possible outcome of a scheme might lead to a state of affairs that already exists under the present circumstances.

We take risks every day of the week. When buying a house, for instance, you know you may have to spend money to repair it someday, but you don't go live in a cave instead in order to avoid the risk. You accept the risk because the benefits outweigh it. But the word "outweigh" implies an act of self-responsible judgment, and what the person who uses the Perfectionist fallacy is trying to avoid are self-responsibility, judgment, and risk.

- **PIGEONHOLING**

An attempt to subsume something into a frame-of-reference that is too small to incorporate the thing.

You call me a name so you don't have to see me - you just see the name that you call me.

Tyrants have a need to call other people names; it soothes their consciences when they exercise coercion. Oppression of people offends their Christian values; but it is no crime to tyrannize a "wog" or a "raghead." It is the nature of tyranny to reduce its victims to names of disparagement.

- **PRETENTIOUS**

Here the speaker assumes omniscience with respect to the subject under consideration. He assumes also that he speaks for the entire human race.

"We don't know what life is" (or insanity, intelligence, etc).

"We can't conceive of personal death."

"My contention must be true because we can think of no alternative mechanism as a cause for this phenomenon."

Just because your eyes are shut doesn't mean the sun has been turned off. If you believe so, then your belief system has locked you into a low level of awareness about a situation that has been resolved everywhere except in your own mind.

- **PRETENTIOUS ANTECEDENT**

Having made a brief reference to, or speculation about, a phenomenon, he later asserts that the phenomenon has now been fully explained. Although the direct evidence he presents is extremely thin, he later assumes that his thesis has been established with certainty.

- PROOF BY SELECTED INSTANCES

Richard Feynman: "Many years ago I awoke in the dead of night in a cold sweat, with the certain knowledge that a close relative had suddenly died. I was so gripped with the haunting intensity of the experience that I was afraid to place a long-distance phone call, for fear that the relative would trip over the telephone cord (or something) and make the experience a self-fulfilling prophecy. In fact, the relative is alive and well, and whatever psychological roots the experience may have, it was not a reflection of an imminent event in the real world. After my experience I did not write a letter to an institute of parapsychology relating a compelling predictive dream that was not borne out by reality. That is not a memorable letter. But had the death I dreamt actually occurred, such a letter would have been marked down as evidence for precognition. The hits are recorded, the misses are not. Thus human nature unconsciously conspires to produce a biased reporting of the frequency of such events. If enough independent phenomena are studied and correlations sought, some will of course be found. If we know only the coincidences and not the unsuccessful trials, we might believe that an important finding has been made. Actually, it is only what statisticians call the fallacy of the enumeration of favorable circumstances." (Counting the hits and ignoring the misses.)

Another example is the Texas Sharpshooter effect: a man shoots at the side of a barn and then proceeds to draw targets around the holes. He makes every shot into a bull's-eye. For example: if an epidemiologist were to draw a circle around the greater Boston area, he would find an incidence of leukemia comparable with the rest of the USA. Draw a circle around Woburn and he'd find a worrisome elevation. Draw a circle around the Pine Street neighborhood and he'd find an alarming cluster. Is it a real cluster? Or is he just drawing bull's-eyes where he found bullet holes?

A large professional organization once surveyed its members on a variety of topics. One of the questions on the poll was "Did you vote in the last society election?" When the responses to this question were compared with the actual voting records, the pollsters noted a large discrepancy - the percentage of respondents who said they had voted was significantly larger than the percentage of society members who actually had voted. Of course! Those who responded to the survey were a self-selected subgroup of the general membership: those members who are more likely to participate in organizational affairs such as voting and polling.

"They say 1 out of every 5 people is Chinese. How is this possible? I know hundreds of people, and none of them is Chinese."

And then there is the optimist who exclaims "I've thrown three sevens in a row. Tonight I can't lose!"

And President Dwight Eisenhower expressing astonishment and alarm on discovering that half of all Americans have below average intelligence.

- PROVING A NEGATIVE

(The Objectivist Newsletter, April 1963) "Proving the non-existence of that for which no evidence of any kind exists. Proof, logic, reason, thinking, knowledge pertain to and deal only with that which exists. They cannot be applied to that which does not exist. Nothing can be relevant or applicable to the non-existent. The non-existent is nothing. A positive statement, based on facts that have been erroneously interpreted, can be refuted - by means of exposing the errors in the interpretation of the facts. Such refutation is the disproving of a positive, not the proving of a negative.... Rational demonstration is necessary to support even the claim that a thing is possible. It is a breach of logic to assert that that which has not been proven to be impossible is, therefore, possible. An absence does not constitute proof of anything. Nothing can be derived from nothing." Doubt must always be specific, and can only exist in contrast to things which cannot properly be doubted.

- RELATIVE PRIVATION

To try to make a phenomenon appear good, by comparing it with a worse phenomenon, or to try to make a phenomenon appear bad, by comparing it with a better phenomenon. See * GREEK MATH

Consider junk food. A very nutritionally conscious person has a rather low opinion of junk food. But what would be your attitude toward a greasy hamburger if you hadn't eaten for three or four days? You can malign junk food because your nutritional standards are high enough to permit you to do so. But an Ethiopian would like nothing better than to have access to MacDonald's, Hardee's or Wendy's and, in fact, such access would be the best thing that could happen to the Ethiopian. Because you have alternatives that the Ethiopian does not have, he is in a position of relative privation when compared to you.

In just the same way, the people who labored in sweatshops at the turn of the century were in a state of relative privation when compared to you. Because your alternatives are different (and much better), the sweatshop seems to you to be an abomination, but in fact the sweatshop was immensely preferable to the alternatives available at that time.

"Eat your carrots! Just think of all the starving children in China."

"I used to lament having no shoes - until I met a man who had no feet."

The real danger from this last example of the fallacy is that if people believe that their own situation really is ameliorated by such a comparison, they will naturally conclude that their own situation can, in practice, actually BE ameliorated by MAKING somebody else worse off! This is what underlies the behavior known as "beggar thy neighbor."

"I know of no assumption that has been more widely and totally disproved by actual experience than the assumption that if a few people could be prevented from living well, everyone else would live better." ... George Kennan

- RETROGRESSIVE CAUSATION

An interview with a young woman who had seven children - all of them "crack babies":

Interviewer: "Didn't you ever think about the effect your drug use was having on your children?"

Woman: "Yeah, that thought entered my mind now and then. Whenever it did, I got high so that I wouldn't have to think about it."

The cause (drug use) has an effect (remorse). She invokes the cause in order to eliminate the effect. Thus the effect acts retrogressively to induce further implementation of the cause.

- SELECTIVE SAMPLING

"The death rate among American soldiers in Vietnam was lower than among the general population." But the soldiers in Vietnam were young and healthy. They are being compared with a database including non-young and non-healthy people.

- SELF EXCLUSION

This is a form of the Stolen Concept fallacy. It denies itself.

"Nothing makes any difference." (including this statement?)

"Music is the only genuine form of communication." (but this statement, meant to be a communication, is not music)

"True knowledge is impossible to man." (but this statement is meant to be knowledge)

"There are no absolutes." (except this one, of course)

"Words have no validity."

"One should not make judgments." (but this statement is itself a judgment.)

"There are questions whose truth or untruth cannot be decided by men; all the supreme questions, all the supreme problems of value are beyond human comprehension." Nietzsche

David Kelley: "To assert 'what is known depends on the knowledge of it' is to offer that very thesis as something known, and therefore as a statement that subsumes itself. But this is manifestly not what the proponent of the thesis intends. That facts depend on our belief in them, he implies, is objectively true, a fact of reality about consciousness and its objects, made true by the nature of things, not by his believing it. Otherwise he would have to allow that objectivity is a fact for the objectivist. He would have to allow that the primacy of consciousness is both true, because he believes it, and false, because the objectivist denies it. [The Marxist multi-logic dialectic does indeed assert this very notion.] To avoid this, he must assert that the objectivist is wrong, which means asserting the primacy of consciousness as a fact he himself did not create. He thereby contradicts his own

thesis. It is an inner or performative contradiction, like that of the person who denies the axiom of action - the denial itself being an action."

If I say, "Anything is possible" I must admit the possibility that the statement I have just made is false.

Anything is possible, right?

No. It's not possible for you to be wrong when you claim that anything is possible.

- SHINGLE SPEECH

Agglomerating several different superficial aspects of a subject, in hopes that the resulting verbal structure will be comprehensible. The aspects presented may be important, but they are treated topically, not hierarchically - as talking points, not building blocks in a structured argument. There is no sense of fundamentality, no sense of which concepts are primary and which derivative, no sense of which ones explain, justify, or depend upon which. And there may not even be any interconnection among them.

- SILENCE IMPLIES CONSENT

Consent to what? Just what is it I consent to when I do NOT vote? To the policies of Bush? To the policies of Clinton? To the policies of Marrou? To the policies of all those whose principled disagreement with the electoral system precludes their participation in it?

The process of implication contains a causal relationship. For one thing to imply another thing, there must be a causal sequence between the two things. People who make the assertion "silence implies consent" never propose any chain of logical connection between the silence and the consent. Precisely how does consent arise from silence? How can dead men be said to consent to anything? If my silence does imply consent, then how far does that implication reach? If I am silent about one side of an argument, and also silent about the other, and contradictory, side of the argument, then what implication can be drawn concerning my consent to either side? Am I considered to consent to all things about which I am silent? Even those about which I am completely ignorant? To the fact that someone in Calcutta beats his wife? If I must express disapproval of all things to which I do NOT consent, for fear of reproach resulting from my silence about any of them, there would not be sufficient hours in the day for such a plethora of expressions as would be required for me to preserve my honesty and impartiality.

- SIMPLISTIC-COMPLEXITY

If someone comes up against a large bundle of particular facts, but has no general principles with which to integrate those particulars, and is not in the habit of thinking in principles, the multiplicity of facts will appear so complex to him that he will not be able to deal with the situation analytically. This is why to many people ethical issues seem a nightmare tangle of unanswered questions, a moral labyrinth. You will hear them say: "This is too complex a situation to yield any easy solution!" "Unfortunately,

no easy answers exist. The solution to the problem will turn out to be as complex as the problem itself." "That's a simplistic view of a complex situation." When somebody makes one of these assertions, he means that he doesn't perceive any principle under which to subsume all the specific consequences of the violation of that principle. For him the world is indeed too complex - he has no way to sort facts, to identify their distinguishing characteristics, and to grasp the fundamentals underlying them. Without any integrating principles he just cannot cope. His solution will be an Ad Hoc solution that will fail to address more than a few of the particulars. He will manifest a Descriptive (rather than Analytical) intellectuality. (This person believes that his description IS an analysis.) He does not think in principles, but focuses his attention on the presentation of specific phenomena only.

Complexity does not make something unintelligible, any more than the complexity of the symptoms of a disease makes the cause of those symptoms unintelligible. What makes the phenomenon unintelligible is the attempt to analyze it without reference to fundamental principle - to a unifying cause. Only cognitive abstraction offers a method for thinking about complicated issues in a precise way. By resorting to particularizing rather than generalizing, pragmatists are left floundering in a mire of complexity. The contention that principles are simplistic is a spurious one; it is only by means of principles that man is able to retain and make use of the vast storehouse of knowledge relevant to any given issue. Concretes by themselves are meaningless, and cannot even be retained in the mind for long; abstractions by themselves are vague or empty. But concretes subsumed by an abstraction acquire meaning, and thereby permanence in our minds; and abstractions illustrated by concretes acquire specificity, reality, the power to convince.

- SPURIOUS CAUSATION

"The consumer will have to pay the bill for the oil spill."

"Scientists are responsible for the danger of nuclear war."

"The advance of modern medicine underlies the present population explosion."

"Henry Ford is responsible for air pollution."

"Taxpayers are forced to finance policies that many of them would oppose."

The taxpayer does not do the financing - the government does. The statement implies that the taxpayer is performing some positive action, when in fact he is the passive victim.

These seem to be variants of the POST HOC fallacy. The selected element is contributory but is certainly not a sufficient cause. An attempt is being made to transfer blame onto someone who is only marginally (or not at all) responsible.

Related to this is the Confusion of Correlation and Causation: A survey shows that more college graduates are homosexual than those with lesser education; therefore education makes people gay. Children who watch violent TV programs tend to be more violent when they grow up. [But did the TV cause the violence, or do violent children preferentially enjoy watching violent programs? Very likely both are true.] Before women got the vote, there were no nuclear weapons.

- **SPURIOUS SUPERFICIALITY**

When a disputant insists on introducing irrelevant considerations, ignoring his opponent's logic and evidence. He cannot grasp the whole of the issue - or the principle underlying it - so he focuses on some small part (usually just one word) and directs his rebuttal to an attack on that tiny bit which is all he can perceive. He views things through his specialized eyes, extracts a part of the truth and refuses to see more, sometimes quoting your least significant statements, in order to make it appear that you have said nothing better. When something is too strange or complicated to deal with directly or comprehensively, he extracts whatever parts of its behavior he can comprehend and represents them by familiar symbols - or the names of familiar things that he thinks do similar things.

"What do you mean by -----?" Where ----- is any word included in your presentation, usually a quite ordinary word that your opponent uses without any difficulty in other contexts.

Some Ad Hominem arguments probably have the same source: He can't see your ideas so he directs his rebuttal at your person. Or will simply start talking about something he CAN understand - the result being a jarring change-of-subject in the discussion. He seizes upon one instance and constructs a generalization from it: Observing that I don't like clams, he concludes that I have an aversion to seafood in general. She sees something happen once or twice and concludes that it is a regularly occurring phenomenon.

These responses are not consciously deliberated, but result from his inability to perceive the focal idea of the discussion. His only alternative to one of these responses would be bovine immobility - unless he possessed a sufficient degree of intellectual acumen to realize his lack of comprehension, and a sufficient degree of self-esteem to admit to it.

- **STOLEN CONCEPT**

(The Objectivist Newsletter, Jan 1963) Using a concept while ignoring, contradicting or denying the validity of the concepts on which it logically and genetically depends. "All property is theft." "The axioms of logic are arbitrary." (something is arbitrary only in distinction to that which is logically necessary.) "All that exists is change and motion." (change is possible only to an existent entity) "You cannot prove that you exist." (proof presupposes existence) "Acceptance of reason is an act of faith." (faith has meaning only in contradistinction to reason)

- **SUPPRESSION OF THE AGENT**

"During the economic crisis, millions of people were thrown out of work." Who threw them out? The first answer to this would probably be, "their employers." The statement certainly invites the readers to infer this. But in fact, government, which destroyed the unfortunate workers' industries by means of taxation and regulation, is

the causal agent that the passive construction of the statement suppresses or banishes from the mind.

Dehumanization of the Action: "During the first two years of Garcia's administration, the economy grew rapidly." This sentence establishes a strong, though implicit, causal connection between Garcia's interventionist programs and good economic news. "But inflation escaped the government's control and the economy soon began to contract." Economic developments are now pictured as things with their own, non-human, principles of action. They are not caused by anything that humans like Garcia do, but proceed on their own way.

- THOMPSON INVISIBILITY

(Atlas Shrugged Part 3 Chap 8 page 1076) Someone so far removed from your frame of reference that he is psychologically invisible.

- UNKNOWABLES

(The Objectivist Newsletter, Jan 1963) "That which, by its nature, cannot be known. To claim it unknowable, one must first know not only that it exists but also have enough knowledge of it to justify the assertion. The assertion and the justification are then in contradiction. To make the assertion without justification is an irrationalism." Branden's argument implies that the unknowable must be a particular, specifiable entity. I maintain that it can be merely an aspect of existence that consciousness cannot perceive. To assert that all things CAN be known is to imply that existence is subsumed by consciousness. I claim that there are unknowables. Not any particular, specifiable unknowable items (for that would indeed be the contradiction Branden noted above), but merely aspects of reality that are unperceivable. For example: you cannot simultaneously perceive both sides of your cat. My justification for this assertion is the primacy of existence over consciousness. Thus Quantum Indeterminacy is a genuine phenomenon. It is the closest we can come to specifying an aspect of reality that is truly unknowable: the simultaneous perception of position and momentum

- UNINTENDED SELF-INCLUSION

"The whole problem with the world is that fools and fanatics are always so certain of themselves, but wiser people so full of doubts." - Bertrand Russell.
Why didn't he put "I think" at the end of it? By omitting the "doubt-qualifier" Russell is unintentionally describing his own attitude.

- VARIANT IMAGIZATION

Generating dissimilar images from similar concepts. Certain kinds of crops, such as corn, are "harvested", but other kinds, such as trees, are "slashed" or "devastated". Who would forbid farmers to "harvest" a crop of beets? But who would willingly allow men armed with chainsaws to "devastate" the ecology?

- VERBAL OBLITERATION

"When did I say that?" There is a kind of denial of the past involved here. Unless you can specify the exact moment I made a certain statement, then I insist that I never made that statement. For a clever (and bewildering) retort reply: "About 20 minutes past 2 on Thursday afternoon."

The alteration of history by personal decree is done by the sort of person who tries to rewrite history in your mind, just as he rewrites it in his own mind as time goes on.

- WOULDCHUCK

If you take the old tongue-twister: "How much wood could a woodchuck chuck if a woodchuck could chuck wood?" and make a slight homonymous substitution: "How much would could a wouldchuck chuck if a wouldchuck could chuck would?" you arrive at a label for a certain kind of dissertation made by people who are trying to "prove" an idea for which they have no factual corroboration, or who are simply trying to obliterate the distinction between the actual and the potential.

This is a description of much of scientific belief before the time of Galileo. For instance, it was believed that if you dropped a 5-pound rock and a 10-pound rock simultaneously, the 10-pounder WOULD hit the ground first because, being heavier, it WOULD therefore be pulled down harder and WOULD therefore travel faster. Notice the use of the word "would" in those statements. This expression of conditional probability is chucked around as though it were an assertion of factual reality. Implicit to such statements is the assumption that what seems plausible is therefore true and requires no further proof.

I became acutely aware of this "WouldChuck" phenomenon while reading the Tannehills' book, "The Market For Liberty." The entirety of Part 2, which sets forth in detail their view of a free-market society, consists of the WouldChuck argument.

Here is a typical example:

"This insurance would be sold to the contracting parties at the time the contract was ratified. Before an insurance company would indemnify its insured for loss in a case of broken contract, the matter would have to be submitted to arbitration as provided in the contract. For this reason there would be a close link between the business of contract insurance and the business of arbitration."

Sounds plausible, doesn't it? Yes... BUT, no proof of these conjectures is offered.

They are nothing more than unsubstantiated hypostatizations.

They always say: "This is what would happen if...."

They never say: "This is what does happen when...."

The former is based on surmise, the latter is based on fact.

The proponent of a scheme, through the use of the WouldChuck fallacy, can articulate a comprehensive framework within which the implementation of his scheme seems undeniably plausible. But if the framework itself has no other foundation than this WouldChuck supposition, the whole scheme rests on a very

shaky basis. He has a plausible argument for everything, but no detailed answers to anything. This type of presentation can often turn an un-informed audience into a misinformed one.