

12 Common Fallacies Used in Social Research

Phil Howard

Writer and prof @oiioxford. Cyber-optimistic musings, bots, fuzzy logic. www.paxtechnica.org.

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Think social science is free of fallacies? Here are the ones we use, and where we use them. Commentary essays, op eds, and blog posts often make arguments by using a few carefully chosen fallacies. Academic writing, meanwhile, is not supposed to have such errors in reasoning. But academic writing takes many forms, from peer review articles and book manuscripts, to grant proposals and publicity materials for funders, to research blog posts and invited essays for public scholarship. And researchers still face the constraints of word length, publishing venue, document genre, and audience that often means committing a few fallacies on the way to delivering a punchline. So argumentative fallacies still appear in social research, and there are three families of fallacies you can often spot even in the best academic manuscripts.

Fallacies of authority are usually found in literature reviews.

Fallacies of logic are usually found in explanations of research questions, hypotheses or findings.

Fallacies of emotion are usually found in grant proposals or public scholarship, such as reports to funders, policy makers, employers, journalists, and the public.

The process of actually doing research, getting a manuscript reviewed, and working with an editor can often clean up the fallacies in research writing. But some invariably slip through. So here is a guide to the most prominent kinds of fallacies in research writing.

Fallacies of Authority

Creating a "Straw Man"

This occurs when an academic dismisses an unreasonable counterargument. "Some people think students should spend all their time studying, but I think it's important for students to use their college experience to expand their social and cultural capital outside of the classroom." Does anyone really think that students should only study? This fallacy creates the illusion of different opinions, and forces the author to overlook the specific aspects of a topic where real differences of opinion exist. The argument is set up just so it can be knocked down, and it is a fallacy often found in literature reviews where a researcher is trying to justify their new study.

Irrelevant Conclusion (Non Sequitur or Ignoratio Elenchi)

This occurs through the (often accidental) omission of information needed to for the reader to make a connection between two ideas. For example, "The professor is attractive therefore the class must be good." The connection between people who are attractive and people who teach well is missing in this argument. In attempting to prove that a public policy is guilty of exacerbating homelessness, a researcher might argue that homelessness is a horrible social problem in every country. This fallacy can be found in conclusions, where researchers need to demonstrate that their findings are relevant for public policy.

Killing the Messenger (Argumentum ad Hominem)

This fallacy disputes an argument by attacking the person who makes the argument. When a researcher skewers "feminists", "conservatives," or "positivists" they are usually guilty of killing the messenger. Using this fallacy means singling out people who are aligned with a theory or ideology without examining the validity of their arguments. This kind of fallacy can be committed by either insulting someone or by misrepresenting their associations. An abusive example would be "Don't believe anything John says, he does social network analysis." An example of circumstantial association would be "Of course he thinks social network analysis is the best. He a quant jock." This

fallacy can occur when researchers want to quickly dismiss how a rival subfield approaches the same research question.

Faulty Authority (Argumentum ad Vericundiam)

Can someone with a Ph.D. in history really give you good medical advice? Is a TV star or pro-athlete a good person to ask about the best computer software, insurance, or automobile to buy? The fallacy of faulty authority is when we use someone whose name is familiar or whose credentials might seem relevant to validate an opinion beyond their expertise. This fallacy appears in two forms in academic research: when a researcher claims that “studies show” something without providing citations; when a researcher makes passing, unsubstantive references to great scholars like Habermas and Foucault without actually using their ideas.

Fallacies of Logic

Correlation is not Causation (Post Hoc Ergo Propter Hoc)

When an event happens in close proximity to another event, it can be easy to assume that the first caused the second. Social phenomena always have multiple, conjoined, non-linear causes—it is the researcher that has to simplify things. “John played a lot of violent video games. Then John did this awful deed, so the violent video games must have caused John to do the awful deed.” John may have often played violent video games before behaving badly, but demonstrating that violent video games caused the bad behavior and the particular awful deed requires complex, multi-faceted evidence. This fallacy can also be used in reverse, to deny any connection between facts. “Student workloads have increased, and the college dropout rate has also increased. However, students also suffer more psychological damage in high school these days, so the increased workloads in college must not be the real source of the problem.” Psychological damage in high school may be part of the problem, but that doesn’t mean student workloads should be dismissed as a causal factor. This fallacy can appear in quantitative social science, which often relies on correlational statistics. Whether or not traditional statistical models support causal arguments depends on the study design.

Begging the Question (Petito Principii)

This fallacy usually occurs when researchers misread their audience, treating an arguable proposition as if it were a fact. “Because students are no longer concerned about receiving a broad range of knowledge in college, the university should not require courses outside a student’s major.” In some research communities, everyone would agree that students no longer want a broad range of knowledge. Across broad discipline, or among policy makers and journalists, this assertion would be highly debatable. For example, a social scientist may present “because I said so!” as a justification, but doing so begs the question, “why say so?” This fallacy can often take the form of complex questions such as “Have you given up falsifying your data?” This fallacy can appear when a researcher is writing for a cross-over journal, the disciplinary flagship journal, or an audience of non-specialists.

Hasty Generalization (Dicto Simpliciter)

We often generalize in order to prove our points, and this is not necessarily bad. We rarely come up with an absolute truth, and natural scientists also have to use generalization to prove their theorems. These generalizations are only considered fallacies when the sample we take is unrepresentative. Using three people who voted for a Presidential candidate does not prove that most voters voted for that candidate; you would need a larger sample to make that assertion responsibly. Convincing an audience that a sample is representative is one of the great challenges of social research, and if conclusions are unsafe the researcher will be accused of hasty generalization. This fallacy can also be called a converse accident. “That man is an alcoholic. Liquor should be banned.” Hasty generalizations are usually found in the conclusions of academic articles and books—the points in a manuscript where a researcher has to make their findings seem important and transportable.

Circular Logic (Circulus in Probando)

Circular logic occurs when the reasons offered in support of an argument simply restate the argument itself. “To succeed in college, students need to effectively manage their time because success comes from a balance of work and social time.” Students need to balance their time because they need to balance their time. Circular arguments are ineffective because they don’t provide support for the author’s opinion, they just restate the opinion. Culture and deviance are among the most difficult things for social scientists to study, because clumsy wording around findings can appear to offer circular logic. “These social deviants are peculiar and interesting because they do peculiar and interesting things.” “Culture explains what is going on here because these are unique and local phenomena.” Sometimes social researchers call culture a “black box” variable because it appears as both cause and effect.

Fallacies of Emotion

Appeal to Tradition (Argumentum ad Antiquitatem)

Appeals to tradition can appear when researchers justify their method choices by referring to what previous researchers have done. “Following the accepted methods in our field, we interview 30 people and generalize with this sample.” Other researchers would say that the sample is too small. So rather than providing citations to past scholars who generalized from this sample size, it is best to offer citation to a recent methodologist who confirms that this sample size is appropriate for generalization. “We’ve always done it this way. Why do we need to change now?” This fallacy can also work in reverse, when an author evokes the appeal of the new. “We need a new method because this is a new phenomenon.” Appeals to tradition also appear at the end of an argument when researchers need to quickly run through the caveats and qualifications to their findings, but reassure readers that any problems are minor and acceptable in the discipline.

Appeal to Pride (Argumentum ad Superbiam)

Scholars are often guilty of assuming that the methods they have chosen are the best or only route to generalizable knowledge. For example, critical scholars may claim that they are best equipped to study power and social injustice, qualitative researchers may claim that they are at developing strong causal narratives, and quantitative researchers may claim that they are best at making empirical arguments. Such claims are usually not necessary, and they help reinforce disciplinary silos. All forms of scholarship, well composed, can study power and social injustice, offer convincing causal explanations, and marshal significant amounts of evidence. This fallacy can appear in disciplinary newsletters, grant proposals, or in studies where one discipline is beginning to take up research questions that another discipline has been asking. “Media Sociology is better than Science and Technology Studies at explaining the culture of internet use in the United States because media sociologists have rigorous training in the distinguished field of sociology.”

Appeal to Pity (Argumentum ad Misericordiam)

This fallacy is often committed by researchers who want to demonstrate the social importance of the study they have conducted. This is an argumentative fallacy but it is not always a bad one. It is usually committed by researchers who study how institutions replicate social inequality, or who study marginal and under-represented groups. “Think of the children!” “My research has found some important things, and dismissing my findings is dangerous for the victims of this social process.”

Appeal to Popular Opinion (Argumentum ad Populum)

This may be among the hardest academic fallacy to avoid, because it is impossible to fully explain every assumption in a study. Providing citations to every single assumption would make a piece of scholarly writing unreadable. A parent’s favorite fallacy: “If everyone else jumped off a cliff,” you may have heard your parents say, “would you join them?” It is also an advertiser’s favorite fallacy—“A

million users can't be wrong." This fallacy says that because everyone else is doing it, it must be the best, correct, or only way. Like the appeal to tradition, it is a shortcut that takes advantage of research precedent. In the literature review sections of social research, this fallacy can appear in two forms: when scholars offer a long string of citations as examples of what everyone else is doing without referring specifically to findings; when scholars offer a citation to someone else's literature review, review essay or meta-analysis.

Some of these examples are adapted from a handout that appears to be lost in internet time. There are several large collections of lots of other argumentative fallacies at Purdue's excellent writing lab website, and the philosophers who work on fallacies of logic have their own extensive catalogs. This work can be cited as Howard, P. (2016). 12 Common Fallacies Used in Social Research. Retrieved from philhoward.org. This work is licensed under a Creative Commons Attribution—Non Commercial—Share Alike 4.0 International License.