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Hasty Generalization

(also known as: argument from small numbers, statistics of small numbers, insufficient statistics, argument by generalization, faulty generalization, hasty induction, inductive generalization, insufficient sample, lonely fact fallacy, over generality, overgeneralization, unrepresentative sample)

Description: Drawing a conclusion based on a small sample size, rather than looking at statistics that are much more in line with the typical or average situation.

Logical Form:

*Sample S is taken from population P.
 Sample S is a very small part of population P.
 Conclusion C is drawn from sample S and applied to population P.*

Example #1:

My father smoked four packs of cigarettes a day since age fourteen and lived until age sixty-nine. Therefore, smoking really can't be that bad for you.

Explanation: It is extremely unreasonable (and dangerous) to draw a universal conclusion about the health risks of smoking by the case study of one man.

Example #2:

Four out of five dentists recommend Happy Glossy Smiley toothpaste brand. Therefore, it must be great.

- False Effect
- False Equivalence
- Fantasy Projection
- Far-Fetched Hypothesis
- Faulty Comparison
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- Gambler's Fallacy
- Genetic Fallacy
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- Having Your Cake
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- Hypnotic Bait and Switch
- Hypothesis Contrary to Fact
- The Fallacies: Id–Mu <
- The Fallacies: Na–Ri <
- The Fallacies: Sc–Wi <

Explanation: It turns out that only five dentists were actually asked. When a random sampling of 1000 dentists was polled, only 20% actually recommended the brand. The four out of five result was not necessarily a biased sample or a dishonest survey; it just happened to be a statistical anomaly common among small samples.

Exception: When statistics of a larger population are not available, and a decision must be made or opinion formed if the small sample size is all you have to work with, then it is better than nothing. For example, if you are strolling in the desert with a friend, and he goes to pet a cute snake, gets bitten, then dies instantly, it would not be fallacious to assume the snake is poisonous.

Tip: Don't base decisions on small sample sizes when much more reliable data exists.

References:

Hurley, P. J. (2011). *A Concise Introduction to Logic*. Cengage Learning.

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Krista Neckles

Monday, May 21, 2018 - 11:56:43 AM

Hello Sir,

Suppose that somebody uses a study to reference a general statement about a group of people, but that statement is only true for a certain age group. For instance there are some people in the autism community that argue that there is a separate female phenotype of it. Yet it is only among toddlers that there seems to be a significant difference in how boys and girls experience symptoms. What type of fallacy would this be?

Thank you Sir

[login to reply](#)

3 replies

0 votes

Monday, May 21, 2018 - 05:12:27 PM



Bo Bennett,
PhD

This would be either a case of ignorance or dishonesty. Not sure I would call it a fallacy, because it sounds as if they are withholding information from the other person, and that person isn't expected to know that.

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0 votes



Allyn Kahn

Friday, September 07, 2018 - 11:58:32 AM

@Bo Bennett, PhD:

Wouldn't this be called a fallacy based on a biased sample, or the Texas Sharpshooter Fallacy, AKA Cherry Picking the data?
By the way, great website that I am recommending to my Critical Thinking students.

[login to reply](#)

0 votes



Bo Bennett,
PhD

Friday, September 07, 2018 - 12:18:08 PM

@Allyn Kahn: Cherry picking could work, assuming they are aware of the other studies that don't support their conclusion.

Thanks for the recommendation!

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0 votes



George

Can anyone help me with the following:

Monday, April 23, 2018 - 01:20:19 AM

It is good to do X to Y.

All Y's are Z

Therefore, it is good to do X to Z.

I would like to know if it's valid or invalid. Why or why not? Thank you.

[login to reply](#)

5 replies

0 votes



Bo Bennett,
PhD

Monday, April 23, 2018 - 07:01:53 AM

No, not valid. Because all Z are not all Y.

It is good to kill (X) ticks (Y).

All ticks (Y) are eukaryotes (Z).

Therefore, it is good to kill (X) eukaryotes (Z) (which include humans).

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1 votes



George

Wednesday, April 25, 2018 - 01:04:57 AM

@Bo Bennett, PhD: Thanks for the reply, But would the validity of the argument change if stated in this way

Torturing some people can be good
Therefore, torturing people can be good.

Does the first statement not imply the second more general statement?

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0 votes



Bo Bennett,
PhD

Wednesday, April 25, 2018 - 07:55:05 AM

@George: If by "people," "some people" is what is meant, then it is valid. If "all people" is meant, then it is not valid. If it is the former, this is just a *tautology* and one can argue still bad form.

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George

Thursday, April 26, 2018 - 12:27:06 AM

@Bo Bennett, PhD: It was not specified what was meant by "people" but the person was arguing that it was valid because of "can be." He said, " 'Can be' and 'all are' are different true/false logic tables."

It all started with Person A saying: torturing people can be good when they are terrorist.

Person B then said that Person A said: torturing people can be good. The person I was arguing with said that the second statement was justified because it was valid and it was an implication of the first statement. No quantifier was ever used before people. To me this second statement seems dishonest at best. Anyway, thank you for your responses and clarifications.

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Bo Bennett,
PhD

Thursday, April 26, 2018 - 06:36:07 AM

@George: Dishonest, manipulative, or simply unhelpfully unclear. We all need to focus on being more clear in our conversation and saying what we mean. By saying "torturing people can be good" this implies the desire for a very loose policy on torture. What it doesn't take into consideration is the downside that such a policy would have, which can result in an overall net negative. In that is the case, torturing people can be *BAD*. While both statements can be literally true, they can only both be true at the same time when we equivocate what we mean by "people."

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0 votes



Krista Neckles

Saturday, March 10, 2018 - 01:47:35 PM

Hello again Sir,

When I am on the Internet, I sometimes see videos with titles such as "The Five Types of Women" in the world, or "Black People Be Like..", etc. Would categorizing people into such categories be an example of simplistic thinking, a hasty generalization, or both?

Thank you,

Krista Neckles

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2 replies

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Bo Bennett,
PhD

Saturday, March 10, 2018 - 01:56:03 PM

If anything believed that there were just "five types of women", etc, then this would fall under many fallacies, including simplistic thinking, but I don't think hasty generalization.

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0 votes



Krista Neckles

Sunday, March 11, 2018 - 03:03:29 PM

@Bo Bennett, PhD: Thank you for the clarification.

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0 votes



Ken Fontenot

Tuesday, February 13, 2018 - 08:44:50 AM

Would hasty generalization also cover when someone argues what a situation was like in the past by using the best example as though it were average? For example, in Amusing Ourselves to Death, Neil Postman's argues that the example of Daniel Webster's brilliant mind shows that lawyers of the past (when print dominated all forms of public discourse) were better than lawyers have been since television has dominated. It's like saying NBA basketball players were better in the 80s because of Michael Jordan. Michael Jordan may be better than any player now, but that does not prove the average was better in the 80s. Is that a hasty generalization or is there another terms covering this fallacy?

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2 replies

0 votes



Bo Bennett,

Tuesday, February 13, 2018 - 09:16:13 AM

That would be a good example of this fallacy. Jordan is a sample of one, then the (hasty) generalization is that players in general were better in the past.

PhD

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0 votes



Ken
Fontenot

Tuesday, February 13, 2018 - 09:17:48 AM

@Bo Bennett, PhD: Great!
Thank you.

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0 votes



Harry

Tuesday, July 18, 2017 - 03:56:43 AM

“ For example, if you are strolling in the desert with a friend, and he goes to pet a cute snake, gets bitten, then dies instantly, it would not be fallacious to assume the snake is poisonous.

Actually if the snake bit him then it would be venomous not poisonous. It would be poisonous if the friend ate the snake and then died. Nothing wrong with the logic just thought I'd clarify.

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1 reply

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Bo Bennett,
PhD

Tuesday, July 18, 2017 - 07:26:34 AM

Makes sense, thanks!

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