

Generalizations

by *Hans Bluedorn*

IMPORTANT: Read this email very carefully. At the bottom there is a short quiz which you can take if you like. If you answer all the questions correctly, then you will receive a small, unimportant, and generally not-so-great prize.

Generalizations

We all generalize about things. That is, we all make broad comments about a group of people or things. We say things like:

"No matter what they say, salesmen don't care a bit about the people they sell to. They just want your money."

We say this because we have met many salesmen, heard from our friends about many salesmen, or been a salesman ourselves once. We generalize every day, and it is very useful. (See, that last sentence was a generalization.)

We make predictions on what somebody is going to do before they do it, and sometimes we are right. For instance: you are playing a game of Clue with Jenny and Bert. Bert, after one of his turns, lays down his cards with a crooked smile and begins to study the ceiling unconcernedly. You have seen that look before. That means he has the solution and is about to win the game.

Next turn, he wins. You knew he would because you generalized. You noticed that he did those things in past games when he won, and you generalized that he would do the same this time.

When you examine examples of people or things in a class, you are taking a "sample" from which you make a generalization about the things in the class. You say: "All salesmen (the class here is "salesmen") are money grubbers" or, "92.93% of salesmen are money grubbers" – based on your generalization.

Unless you know what you are doing, taking samples and making generalizations can be a risky business. When our samples and generalizations are not conducted properly, they are called a "hasty generalization."

I will discuss hasty generalizations more below. Right now you need to know.....

Some comments on generalizations, particularly on how to make good ones:

1. Generalizations must rely on samples which are taken of a class - not on studying everybody or every thing in a class.

If I examined every single politician (the class here is "all politicians") that ever was, and found out that every one was corrupt, and then said so, I wouldn't be generalizing when I said "All politicians are corrupt." I would be stating what I knew to be true.

2. A generalization may be strong or weak.

Generalizations are useful because with them you don't need to study every single thing in a class before you make a conclusion. If we were trying to figure out whether all politicians were corrupt, it would be very tedious to examine every politician who ever existed on the planet (and, recently, in outer space) to check if they ever took a bribe.

So, we generalize. However, you never REALLY know whether your generalization is completely correct until you examine every single politician; there is always the chance that you will later find one who isn't corrupt.

Therefore, we must say that a generalization can't be true or false; it can be only strong or weak. A strong generalization is one which is more likely to be correct.

3. Any generalization must be overthrown, or at least must be adjusted, by a single contrary case.

If I studied 3,000,000 politicians all over the world and I found that they were all corrupt, I might generalize that all politicians are corrupt. But, if I found a single politician who wasn't corrupt (maybe he was living off in the jungle somewhere and didn't show up for the census), I would have to throw out my generalization – or at least modify it: "All politicians – except one I know of who lives in the jungle – are corrupt." Or, "All the politicians whom I have studied are corrupt." Or, better yet, "Most politicians are corrupt."

4. A generalization becomes stronger by finding a larger sample and by finding more representative samples.

A good generalization is one which examines a large sample that is spread out over all corners of the class being studied. I will cover this in greater depth further on.

HASTY GENERALIZATIONS.

The most common logical fallacy is the hasty generalization. Ah, there we go with another generalization!

A hasty generalization is one in which someone generalizes about a class or group – say, "all Italians" – based on a small and poor sample; perhaps just the Italians that live next door.

Examples of this can be found everywhere (a generalization) – especially when we buy things. We tend to make generalizations about brands.

Out here in the wilds of Illinois, people tend to generalize a lot about brands. All farmers own at least one pickup truck – a major pickup to drive – and several minor "backup" pickups which serve time as lawn ornaments.

Every farmer will bear allegiance to one brand of pickup over another. Certain farmers are Ford farmers and others are Chevy farmers. (A growing minority are Dodge farmers.) Each thinks his brand is the best.

And the reason for their allegiance? "Well," Farmer McDonald will say, "I once owned a Ford, and it was junk. Now I only drive Chevies."

So, all of Farmer McDonald's experience with Ford trucks came from this single sample. Is that a good basis to judge all Ford trucks? When pressed further, Farmer McDonald will confess: his unfortunate Ford really was junk, 15-year-old junk, bought used, and all Farmer McDonald's subsequent Chevies have been bought new and sold early.

So his sample of Ford trucks may not be representative.

Farmer Brown, down the road, has a similar story: "I only buy Ford trucks. I once owned a Chevy and it was junk." Of course, farmer Brown's dilapidated Chevy had also seen better days before he nursed it home for the first time.

Maybe Ford trucks are junk. Maybe Chevy trucks are junk. But while Farmer McDonald and Farmer Brown may be right to call their own trucks "junk," they need to see many more trucks before they can accurately say one brand is better than the other. Their generalization is hasty.

SOME WAYS THAT PEOPLE MAKE HASTY GENERALIZATIONS:

1. Too small of a sample.

Hasty generalizations commonly do not take a large enough of a sample. If our sample is not large enough, then we risk finding a sample which is not representative of the class we are studying.

We all know that tossing a coin will result in it landing half the time heads, and half the time tails. However, this does not mean that if we toss it four times we will see heads twice and tails twice. Even if we toss it a dozen times, we might not see an equal number of heads and tails. In order to actually see the heads and tails even out, we need to toss it many, many more times – say, a hundred or a thousand or more – and even then we may be off a few.

Obviously, Farmer McDonald and Farmer Brown did not have enough samples for their generalizations. The trucks they bought simply may have been the duds which come out of all factories, or worn-out second-hand vehicles.

2. The sample is not representative.

In a generalization, sometimes the sample is large enough, but it isn't representative of the entire class. When making generalizations, people very often will study only samples near at hand, or easy to

get to. Oftentimes, this will not give a good picture of the entire class being studied, which will make the resulting generalization lopsided.

For example: If I wanted to know the eating habits of Italians, it would be very easy for me to study the Italians who live in my town. However, there are many Italians in the world: those who live in America and have or have not adhered to their regional fare; those who still live in Italy; those who are or aren't in the Mafia; those who are on a diet....

The Italians in my town may not eat the same things as those who live somewhere else. My study could conclude that most Italians eat spaghetti, when in reality, just those in my town do. And maybe not even all of them. Or maybe everywhere else they eat pizza and ravioli. Maybe I only studied Italians when they ate supper and found out that they ate spaghetti then – but the rest of the time they ate pop tarts.

Farmer McDonald and Farmer Brown's trucks also weren't representative of the "average" truck of their kind. There are many kinds of trucks in various states of decay. Their trucks were old and broken down. They would need to see a few examples which were not.

Quiz Time

So, now that you know everything about generalizations, it's time for – you guessed it – a quiz. Reply to this email with your answers typed in just below each question.

If you answer them ALL correctly, then I will send you the free Logic Loop Coffee Mug (dual dimensional). I'll warn you: think hard about each question; they can be tricky.

In the following examples, answer these questions: 1. Is the example a generalization? 2. If so, how large is the sample which is being taken? 3. In your opinion, is it a hasty generalization? And if so, why?

QUESTION 1. All plumbers are brilliant. I know a plumber who can calculate Pi to the 289,954th digit.

QUESTION 2. All plumbers are rich. I just went to the international plumbers convention and studied 3,000 plumbers there. They all made over \$100,000 a year.

QUESTION 3. My mom teaches people well. Whenever she explains something to me, I understand it perfectly.

QUESTION 4. Some plumbers are brilliant. I'm a plumber, and I know I'm brilliant.

QUESTION 5. Everything by Charles Dickens is boring. I have read all his novels, and they all put me to sleep.

QUESTION 6. There are parts of Alaska that have a high elevation. Mount McKinley is 20,320 feet high.

QUESTION 7. All dogs have fleas. I just finished examining every single dog in the universe, and they all had fleas.

QUESTION 8. A barrel contains 100,000 jelly beans. After shaking up the barrel thoroughly (taking care that none get squished), you extract 5,000 jelly beans. 500 of them are black. Therefore, 10% of the jelly beans in the barrel are black.

QUESTION 9. Commercial airlines are very safe. How many major airline crashes do you hear about every year? Maybe two or three. Compare that with how many flights there are every year. Or compare the number of plane crashes with the number of car crashes!

QUESTION 10. Premise: I wore this straw hat several times last week while weeding the garden and I started to sneeze.

Premise: I wore this straw hat when I went to the bonfire, and I started to sneeze.

Premise: I wore this straw hat outside yesterday and I started to sneeze.

Conclusion: I'm allergic to this straw hat.

BONUS (if you answer this bonus question you can miss one of the other questions and still get The Logic Loop Coffee Mug): Find an example of a hasty generalization on your own. Looking in the newspaper or the evening news might yield results. Look for places where people make broad statements and look to see how well they back them up.

Hans Bluedorn

LETTERS I HAVE RECEIVED

Date: Tue, 20 Nov 2001 21:04:31 -0800 (PST)

From: Ted and Robin Shoemaker shoemakerted@yahoo.com

Subject: another fallacy on TV

Hello,

Here's a fallacy, but I don't know the name of it. This was on a re-run of "Roseanne."

Some women are talking about abortion:

"Some people say that's murder."

"Some people say it isn't."

"Yeah, and some people say that you have a choice."

I am against abortion. But regardless of that, there is a very interesting fallacy (or fallacies) used here.

* The person who said the final line is set up (by virtue of being the last speaker) to be the Voice of Wisdom.

* Even though the final statement pretends to be "above" the others, i.e., more objective, it simply repeats one of the previous opinions.

Is this one fallacy or more? What is it called?

Thank you very much,

Ted Shoemaker

RESPONSE:

Ted Shoemaker,

The abortionists for a long time have been trying to get us to say "pro-choice" instead of "pro-abortion." This is a clever mind manipulation technique, sometimes called propaganda, that tries to get us to think about anything other than what they actually believe in. Pro-what choice? Being able to choose our flavor of ice cream? The abortionists know that the word abortion is associated with death and so they try to use it as little as possible.

Your quote is a good example of a propaganda script line that is arranged to make the writers viewpoint show through – without you knowing it.