"Consider the source": new research indicates people may pay too much attention to origin of information instead of content

March 20, 1996

EMBARGOED BY NATURE FOR RELEASE 1 P.M. P.S.T., MARCH 20, 1996

Media Contact: Janet Howard, (619) 534-7572

Imagine you have a friend, Phil, who is a compulsive gossip. He has to tell you everything, but half the things he tells you are wrong. You've known Phil a long time, so you know that when he tells you something, there's a 50 percent chance he's got the facts wrong.

Now imagine that one day Phil tells you that his friend Margo had breakfast yesterday, and that his other friend Mike was abducted by aliens. Would you believe that for each piece of information there's a 50 percent chance that it's true, or would you believe there's a better chance that Margo had breakfast than that Mike was abducted?

In the March 21 edition of the journal Nature, Adam S. Goodie and Edmund Fantino of the University of California, San Diego psychology department explore the psychological phenomenon of "base-rate error" in which people think that the probability of a supposed fact depends only on the accuracy of the source, not on how likely the information was to be true in the first place. (Alien abductions, if they happen at all, happen a lot less often than people eating breakfast.)

"Obviously, this is an extreme example, and everyone would believe that it's more likely that Margo had breakfast than that Mike was abducted," said Goodie. "Still, people tend to pay more attention to Phil's poor overall accuracy than they should, and less to the relative frequency of breakfasts and abductions."

In short, while people often use the adage "consider the source," Goodie and Fantino's work indicates that people may consider the source too much.

Goodie and Fantino actually used a much simpler scenario in their laboratory than gossiping friends to study the phenomenon of base-rate error. They asked UCSD undergraduates to guess whether a hidden rectangle was blue or green. It turned out to be green twice as often as blue.

Before the students guessed, however, a computer told them what the answer would be. This should have made the problem much easier to solve, but the computer was programmed to mislead the students by "accidentally" supplying the wrong answer half the time, just as the information Phil gave was wrong half the time. The information from the computer was worthless, so subjects should have ignored it and just guessed that green was the correct color more often than blue.

But Goodie and Fantino discovered that isn't what people do. Instead, the subjects tended to reason that since the computer's information was right only half the time, they should respect it half the time and go against it half the time. This led them to guess that blue was the correct answer significantly more than it was.

Goodie and Fantino's results suggest that people commit the base-rate error because they're so familiar with the elements involved in uncertain situations that they don't think about them carefully. If people can be made

to step back and consider each possibility rather than just the source, the base-rate error can be reduced, and people could become more skeptical when they hear reports of alien abductions.

(March 20, 1996)