# 3Qs: Psychological basis for fascination with mystery

March 28 2014, by Angela Herring

When Malaysia Airlines Flight 370 disappeared on March 8, the world responded with an outpouring of attention and curiosity. Only in recent days have Malaysian officials publicly announced the plane likely crashed and satellites finding "credible" evidence of potential debris. Still, so much uncertainty about what happened remains. Northeastern psychology associate professor John Coley's research focuses on how we mentally organize our knowledge of the world, and how we use it to make predictions. We asked him to explain why humans have a deep-seated need for explanations.

## Why does the human mind yearn for explanations and in what areas of society does this need arise most often?

I think we seek out explanations because they allow us to generate predictions. The world is a complicated place. There is far more information available to our senses at any moment than we could possibly take in and make sense of. In order to deal with that complexity, our cognitive systems are very good at simplifying, in order to make the world (at least seem like) a predictable place. An explanation for an event makes it seem predictable, and we like things to be predictable. Indeed, the cognitive scientist Alison Gopnik famously compared explanation to orgasm because we are highly motivated to seek out explanations, and feel deeply satisfied when we find them.

I think the need for explanations is ubiquitous—look at the mental calisthenics we engage in to explain random statistical variability in things like the stock market, the performance of our favorite athlete, or the yield of our vegetable garden. We deeply believe there is an explanation, and if we can find it, we might be able to make favorable outcomes more likely and unfavorable outcomes less likely. However, this need is probably most pronounced in areas in which we are more personally invested, such as jobs, personal relationships, or health.

## How does your research specifically address this topic—what questions are you examining in particular?

In my lab, among other things, we study how people make inferences. How they use what they know to make guesses about what they don't know. One way we do this is by giving people hypothetical information, and seeing what they do with it. One thing that my colleague Nadya Vasilyeva and I are finding is that the way people explain the hypothetical information plays an important role in this process. For example, one reasoning problem might be, "There's this substance called sarca. Lots of things have sarca inside them. In fact, hawks and chickens have sarca inside them. What else do you think might have sarca?" People seem to generate an explanation for the given information—answering the question (which, by the way, we didn't ask) of "why would hawks and chickens both have this property?"—before coming up with an inference. And their answer matters. So, people who come up with a categorical explanation—hawks and chickens are both birds, maybe sarca is related to being a bird—tend to make categorical inferences, e.g., "Other birds might have sarca." In contrast, people who come up with a causal explanation—hawks eat chickens, so maybe they get it via ingestion—tend to make causal inferences, e.g., "something that eats the hawk might have sarca." In other words, we're finding that

the way you explain a new bit of knowledge has important implications for what you do with that knowledge.

## How does the story and media coverage of the missing Malaysian Airlines jet play into this phenomenon? Do mysteries like this one short change other important societal happenings?

The media, for its part, clearly knows a good story when it sees one. Whether this is because those working in the news industry explicitly realize, "People will be interested in potential explanations" or because those working in the news industry are human beings with human cognitive systems that are designed to seek out explanations, I don't know. I suspect it's a combination of both. But the result is endless hours of "experts" spinning possible explanations, to which we seem to be glued.

To be honest, I think that stories like this absolutely do short change other important issues. People prefer simple explanations to complex ones. The explanation for the disappearance of Flight 370 is likely to be fairly simple. In contrast, the explanations for the current state of healthcare in the U.S., or arguments for changing the structure of social security taxes and their implications, or explanations for climate change, are very complex, but ultimately will directly affect many more people.

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