

## Credibility

In 2002 two eminent conservationists, Jack Ward Thomas and Daniel H. Pletscher, published an article in the *Wildlife Society Bulletin* about the controversy that surrounded efforts by the U.S. Forest Service to ascertain the distribution and abundance of lynx (*Lynx canadensis*) in the United States. The “lynx affair” had attracted national media attention due to accusations of data falsification. According to the authors, this episode damaged the credibility not only of the agencies and biologists involved, but also of efforts to protect the species and even the profession of wildlife conservation itself. “Without credibility,” they wrote, “neither individuals nor professions can be effective. Credibility is the alpha and the omega—the beginning and the end, the very essence—of professionalism. As such, a profession’s credibility is to be cultured, nurtured, enhanced, and fiercely protected if it is to endure” (Thomas & Pletscher 2002).

Thomas and Pletscher are not alone in their concern about the credibility of conservation and wildlife biology. In a Google Internet search, conducted in June of 2008, I found 1,930 Web pages that included the word *credibility* and the term *California condor*, 10,400 pages with *credibility* and *spotted owl*, and 60,300 pages with *credibility* and *polar bear*. Credibility is a regular topic of discussion at professional conferences, and on email lists such as that of the Social Science Working Group of the Society for Conservation Biology. During the past two decades, the journals *Conservation Biology*, *Wildlife Society Bulletin*, and *Human Dimensions of Wildlife* have published more than 3 dozen articles that included the words *credibility* or *credible*.

The authors of these Web pages, email lists, and journal articles all have two things in common. Everyone seems to think credibility is a good idea, and they all want more of it. But exactly what credibility is remains the subject of considerable confusion. Natural scientists, policy makers, resource managers, and even many social scientists speak freely about what makes or breaks credibility without ever defining it or subjecting it to critical reflection. A review of the literature shows that conservation and wildlife biologists have understood questions of credibility differently for individuals, institutions, and information. Yet, those who have attempted to define credibility have come up with wildly divergent conceptions of the word—sometimes in the same article or even in the same passage. For example, Cuarón and de Grammont

(2007) argue that the credibility of a threatened species categorization system depends on the degree to which it is systematic, explicit, objective, replicable, transparent, reliable, useful, sound, relevant, rigorous, defensible, and successful. In a single breathless paragraph, these authors mustered no fewer than a dozen of the most important and contested concepts in the entire philosophy of science.

This problem is not limited to conservation and wildlife biology. Credibility qualifies as one of the most frequently invoked, and least understood, concepts in contemporary environmental politics. What is this thing we call credibility?

The best place to search for an answer to this question is in science and technology studies (STS), an interdisciplinary field that includes the history, sociology, anthropology, geography, and philosophy of science. The concept of credibility occupies a central place in STS scholarship. Some researchers in the field even regard it as an organizing principle, without which one cannot fully understand the great diversity of social and cultural processes that shape the formation, distribution, adoption, and use of scientific knowledge. It may come as a surprise, then, that STS scholars have developed an understanding of credibility that fundamentally differs from—and in some ways directly conflicts with—that which has emerged in the literature of conservation and wildlife biology. To understand how STS scholars think about credibility, and why this should matter for conservationists, I turn to work by the historian of science Steven Shapin (1995).

Shapin begins his discussion of credibility in an unlikely place, with the Shakespearean tragedy *King Lear*. When the time comes for King Lear to give up his throne, he resolves to divide his kingdom among his 3 daughters—Goneril, Regan, and Cordelia—in proportion to the love each holds for him. The daughters must prove their devotion. Goneril and Regan use rhetoric to express the extent of their affection. But Cordelia refuses to show her love for her father by engaging in the “oily art” of persuasion, which she regards as glib and disingenuous.

I cannot heave  
My heart into my mouth: I love your majesty  
According to my bond; nor more nor less.

Cordelia expects that her father will believe her if only she tells the plainspoken truth. For Cordelia, truth and credibility are one and the same. Reality, however, proves more complicated. King Lear rejects Cordelia's frank statements of fact, and her faith that the truth will speak for itself becomes her undoing.

For Shapin, the story of Cordelia's love illustrates a key insight. In the politics of science, truth and credibility are not one and the same. Credibility is the product of complex and contingent social and cultural processes, and, like King Lear himself, it can be maddeningly fickle.

This is the point at which Shapin's account of credibility diverges from those found in the literature of conservation and wildlife biology. Conservation and wildlife biologists who have attempted to define credibility have sought to understand the factors that contribute to it or detract from it—to develop a theory of it. Yet, according to Shapin, there can be no such theory of credibility because there is no one recipe for how to produce it. The means by which credibility is developed, maintained, distributed, contested, and lost are too complex and contingent to generalize. All we can do is observe credibility in action, and then build a thick description of how it has worked in different contexts based on a rich set of case studies. So Shapin can only offer some general, speculative observations.

First, no claim of knowledge has inherent credibility. All claims of knowledge must win their credibility through social and cultural processes. Second, the conditions under which claims of knowledge achieve credibility may differ depending on the subject matter. Highly technical fields or those that require expensive instruments, such as particle physics and neurobiology, may be more insulated from external critique than those that by their nature are accessible to more people, such as psychology and ornithology. Third, within professional communities, certain markers of intellectual or methodological rigor may serve to build credibility, even among people who have never met (Porter 1995). These markers may seem arcane and unconvincing, however, to observers outside the community. The hyperquantification of contemporary economics offers one example. Fourth, credibility is relational. Credibility represents a relationship between people, and different relationships will require different ingredients to build mutual trust and confidence. Fifth, familiarity breeds credibility. We tend to trust people we have met in person, whose eyes we have looked into, whose hands we have shaken. Familiarity is essential for building credibility between people who occupy different communities, and who will not value the same indicators of quality that have significance within a community.

So what can conservation and wildlife biologists gain from an understanding of credibility informed by science and technology studies? If, as Thomas and Pletscher sug-

gest, credibility is “the alpha and the omega”—the only reason resource managers and policy makers should accept the advice of conservation and wildlife biologists—then readers of this journal would be wise to heed the lessons of Cordelia's fall from grace. Knowledge alone is not power. Statements of fact mean different things to different people. The truth does not “shine by its own light.”

Science and technology studies also provides a more specific lesson for conservation and wildlife biologists. Scientists often make the mistake of believing that credibility and objectivity are directly linked—that credibility derives from the transcendent power of unbiased science, and that the appearance of advocacy can only damage their professional reputations (Gill 2001). These beliefs have fueled a persistent debate about the role of advocacy in conservation (Shrader-Frechette 1996; Chan 2008). This debate began more than a century ago, when the first conservationists set out to build new professions that would promote rational, scientific, objective approaches to natural resource management. Today, even those conservation and wildlife biologists who believe in advocacy uphold this tradition by guarding their reputations of objectivity, and many of them hesitate to engage in the gritty politics of conservation planning (Minnis & Stout McPeake 2001).

Yet, the literature of STS offers no evidence for a clear or universal relationship between credibility and objectivity. For example, in my own studies of habitat conservation planning processes I have found that the scientists with the most public credibility are not those who have cultivated a reputation of objectivity among their peers. Rather, they are the ones who have devoted their time to public service, participated in collaborative planning efforts, articulated their biases and opinions, worked to find common ground among their fellow citizens, and respected the ideas of nonexperts who have every right to participate in a democratic decision-making process (Rigg 2001).

For readers who may doubt *my* credibility on this subject, consider the experience of Edward O. Wilson—one of the founders of conservation biology and a man of unparalleled credibility among its practitioners. Wilson has made a discovery similar to my own, and to that of Steven Shapin, in his efforts to generate support for conservation among evangelical Christians (Wilson 2006). By reaching out to evangelical leaders, Wilson has begun to build new conservation constituencies not on the basis of objective facts about the loss of biological diversity, but on the mutual trust that comes from interpersonal connections and honest dialogue. Wilson has learned that familiarity breeds credibility, and that both come more from public engagement than dispassionate objectivity.

And as for Cordelia? Cordelia was right not to compromise her principles with rhetoric. But she was wrong

to believe that the objective facts alone would persuade King Lear. If she wanted to ensure her credibility and win the kingdom, she should have sat down with her father and talked with him.

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