

## Science is simply one element out of many in public policy decision making.



*Science is often hailed as an important part of public policy decision making. In new research that looks at the role of science among state and local public policy makers in the State of Idaho, **Susan Mason** finds science's importance varies by public policy arena and type of public official (elected or non-elected). Science appears to be just one element and not always the driving force in the mix of factors affecting public policy making.*

Science is often touted as playing a significant role in public policy making. Yet, there **remains debate** (132) about what is “good” science or “sound” science. The characteristics of science are measurability, rigor, objectivity, replication, peer review and that it is non-intuitive. Science is more than these characteristics. Science involves a process which makes it a unique way of knowing. **Hoover and Donovan** argue science is a strategy with rules for formulating and answering questions so that the answers can be verified. Science has underlying assumptions that provide those who consume it with the opportunity to evaluate how scientist developed and arrived at their answers.

Alan Isaak **provides us** with a listing of these underlying assumptions (28-31). Science's first basic assumption is that of *determinism* or *causation*, the idea that “Nothing in the universe just happens” that there are certain causal relationships, such as “If A occurs, B occurs.” The search for these causal relationships defines the work of scientists.

The second assumption is that of *empiricism*, meaning all descriptions and explanations have to be based on what can be observed (directly and indirectly) in the world we live in. The third assumption is that of *objectivity*, the idea that science is value-free; that scientists can separate their professional and personal judgments. The fourth assumption is that of *replication*, the idea that all proposed scientific facts are open to inspection and the procedures used to arrive at these facts are described clearly enough to be repeatable.

To explore the extent to which policy experts use science in their public policy decision making, I conducted interviews with 30 elected and unelected, federal, state, regional and local policy experts in the State of Idaho. I asked them a series of question about the role of science in their public policy making within their statewide or jurisdictional level. Although, technically only elected officials create public policy, I included agency heads because they also can influence public policy.

If we know science is just one element in the mix of public policy decision making, perhaps we should examine how it interacts with the other factors in the public policy making process.

Susan Mason  
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These interviews revealed that policy makers overwhelmingly:

- believed science can provide answers to specific policy problems (83.3 percent);
- viewed science's reliance on processes (i.e., testable, empirical, replicable, peer-reviewed) as what makes science a unique way of knowing (86.6 percent);
- believed the support of science is important for their policies (80 percent);
- indicated science is more important for some types public policy issues than others (80 percent);
- indicated that there are other factors that influence their decision making (100 percent)

My research shows that there are times when both elected and non-elected policy makers agreed and times where there are differences in their view of the role of science in the public policy decision making domain. For instance, there was widespread belief that science is more important to their decision making on some matters such as environmental issues and less so on others matters such as social equity. There also were some differences in the opinions among elected and non-elected policy experts. For example, a majority of elected (66 percent) and an overwhelming majority of non-elected officials (86 percent) indicated it was important that their decisions be supported by science. There were also more differences between elected and non-elected officials on the importance of specific elements of science for policy making. Elected officials noted science was different from other ways knowing because it provided measurable empirical evidence, while non-elected officials noted science's testability and replicability as its most defining characteristic. Even though there was substantial support for the benefits of science providing valuable information for decision making among policy makers, it was also noted that science can confuse matters because science is can be used to support both sides of an argument. Interviewees also indicated that science was not the only source of information they used in the public policy making process nor was it the only factor that is considered. Specifically, policy makers indicated more than 17 factors could influence their public policy decision making with politics and the capacity to implement decisions being the most frequently cited factors. It is noteworthy that only 50 percent of policy makers indicated they based their decision on science 75 percent to 100 percent of the time. This suggests that for the other half of respondents those other factors are as important or more important a considerable amount of the time.

In the end, if we know science is just one element in the mix of public policy decision making, perhaps we should examine how it interacts with the other factors in the public policy making process. It may be time to step away from the ideas of "buying" or attacking science and consider

science's weight and the way it interacts with the other factors on the process of public policy decision making.

*This article is based on the paper, 'Decision Making at the State and Local Level: Does Science Matter?', in PS: Political Science & Politics. The ungated article will be available until the end of April 2017.*

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