The Projective Way of Knowing: A Useful Heuristic That Sometimes Misleads

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Abstract

For many purposes, people need a reasonably good idea of what other people know. This article presents an argument and considers evidence that people use their own knowledge as a basis for developing models of what specific other people know—in particular, that they tend to assume that other people know what they know. This is a generally useful heuristic, but the assumption is often made uncritically, with the consequence that people end up assuming that others have knowledge that they do not have.

Keywords

knowledge; projection; false consensus; expertise; egocentrism

People’s behavior is influenced in many ways by what they know about what other people know. Effective conversation, for example, depends not only on shared knowledge...
between participants, but also on each person having knowledge, or making reasonably accurate assumptions, about what the other knows.

BUILDING A CONCEPTUAL MODEL OF WHAT ANOTHER PERSON KNOWS

Over time, one can develop a detailed conceptual model of what a specific other person (spouse, sibling, friend, associate) knows, fine-tuning and updating the model with information gleaned from frequent interactions. But what does one use for a model of what a stranger knows? How does one cope with the task of communicating with a collection of people—an audience to whom one has to give a talk, or the readership of a newspaper for which one is writing an article—when one has few specifics about its composition? I assume that the basis for the construction of a default model of what a random other person knows is one’s model of what one knows oneself.

What an individual knows changes over time. It follows that if a model of another person’s knowledge is to be and remain functionally accurate, it too must change on a continuing basis. Several researchers have noted that refining one’s model of another person’s knowledge dynamically is important if communication is to be successful.

These ideas are incorporated in Figure 1, a conceptualization of how an individual develops a model of another person’s knowledge (from Nickerson, 1999). According to this conceptualization, one’s model of one’s own knowledge serves as a default model of what a random other person knows. This default model is transformed, as individuating information is acquired, into models of specific other individuals. The models of specific others are continually refined and updated as new information that is relevant to them is acquired. This article focuses on the idea that what serves as the point of departure for developing a model of another person’s knowledge is what one knows, or thinks one knows, oneself.

SELF AS A SOURCE OF HYPOTHESES ABOUT WHAT OTHERS KNOW

The notion that a basic source of assumptions or hypotheses regarding what a random other person knows is what one knows oneself has some currency among psychologists. It is closely related to the simulation view of how one individual understands another, according to which one imagines oneself in the other’s place and discovers how one would think or feel in that situation (Gordon, 1986).

The Projective Way of Knowing

The idea that we understand others by assuming that they are like ourselves is intuitively compelling, and there is much evidence to support the notion that people employ this “projective mode of
knowing,” as O’Mahony (1984, p. 58) has called it. People who engage in a particular behavior estimate that behavior to be more prevalent than do people who do not engage in that behavior. When attempting to assess the attitudes of specified groups, people tend to project their own attitudes onto those groups. People who are experiencing an experimentally induced emotional state are more likely to project that state to others than are people who are not experiencing it. People generally see their own attitudes and behavior as rational or normative, and they see attitudes and behavior that differ greatly from their own as irrational or deviant. In the political arena, extremists on both ends of the left-right continuum tend to doubt the rationality of those on the opposite end. People sometimes take their own behavior as the norm even in the light of sample-based information to the contrary.

Advantages of Using the Self as a Basis for Developing a Model

Our own knowledge of how we would behave or react in specific situations can be a useful basis, arguably the best basis we have, for anticipating how other people will behave or react in those situations (Hoch, 1987). Projecting our own feelings and reactions to others works because, in fact, people do react similarly in specific situations. The idea that we do well to assume that others are like ourselves is captured in the principle of humanity, according to which when trying to understand what someone has said, especially something ambiguous, we should impute to the speaker beliefs and desires similar to our own.

Using our own knowledge as a default model of what a random other person knows simplifies life. If we could not assume, in the absence of contrary evidence, that other people are much like ourselves, the problem of communicating effectively would be overwhelmingly difficult (Davidson, 1982).

THE RISK OF OVERIMPUTATION OF OUR OWN KNOWLEDGE

Although, in the absence of more direct information, one’s model of one’s own knowledge may be as good a basis as there is for a default assumption about what a random other person knows, evidence suggests that the tendency to impute our own knowledge to others often leads us to assume that others have knowledge they do not actually have, and this can impede communication and mutual understanding in various ways.

Failure to make sufficient allowance for the difference between one’s own subjective experiences or perspectives and those of one’s hearers or readers has been noted as a source of difficulties in communication in both spoken and written form. Teaching can be adversely affected if teachers underestimate the difference between their own knowledge and that of their students; products of technology may be designed suboptimally if designers underestimate how much difficulty people other than themselves will have in learning to use them. Piaget (1962) remarked on the difficulty that beginning instructors have in placing themselves in the shoes of students who do not know what they themselves do about a course’s subject matter, and surmised that they are likely to give incomprehensible lectures for a while as a consequence. Flavell (1977) similarly pointed out that one’s own viewpoint can work as an impediment to attaining an accurate appreciation of the viewpoint of another person, and that it may be especially difficult for one to appreciate fully the ignorance of another person with respect to something one understands very well oneself.

The False-Consensus Effect

The false-consensus effect refers to a tendency to see oneself as more representative of other people than one really is. The results of numerous studies suggest that the tendency is very common and that it manifests itself in a variety of ways. People are likely to overestimate the amount of general consensus on beliefs and opinions they themselves hold, and to underestimate the degree of agreement on beliefs and opinions that differ from theirs. The effect is illustrated by the finding that U.S. voters typically overestimate the popularity of their favored candidate in a presidential election (Brown, 1982), as well as the extent to which the positions of favored candidates correspond to their own (Page & Jones, 1979).

The Curse of Expertise

People who are experts in specific areas and who recognize themselves as such must realize, almost by definition, that they know more than most other people with respect to their areas of expertise. Nevertheless, the results of several studies suggest that although experts assume that others know less than they about their areas of expertise, they may still overestimate what others know.

The point is illustrated by a study by Hinds (1999), who found that experts in performing a task were more likely than people with only an intermediate level of expertise to underestimate the time novices would take to complete the task. Experts also proved to be resistant to debiasing techniques intended to reduce the tendency to underestimate how difficult novices would find a task to be.
In laboratory studies, participants who have been given privileged information for purposes of an experiment may behave as though other participants also have that information even when, if asked, they acknowledge that the other participants do not have the information.

Egocentric Bias in Imputing General Knowledge

The results of many studies suggest that people’s estimates of what general knowledge other people have tend to be biased in the direction of the knowledge they themselves have or think they have. When college students were asked to answer general-knowledge questions and to estimate, for each question, the percentage of other college students who would be able to answer that question correctly, they gave higher estimates for questions they thought they knew the answers to (as indicated by confidence ratings), even when their own answers were wrong, than for questions they knew they did not know the answers to, and they were more likely to overestimate the commonality of knowledge if they themselves had it than if they did not.

When students living in New York City rated their familiarity with each of 22 landmarks in the city and estimated the proportions of other city residents who would be able to identify them, students who were highly confident of being able to identify specific landmarks judged those landmarks to be more familiar to others than did students who were not very confident of their own ability to identify them. Students who could identify pictured public figures by name rated the individuals as more recognizable than did students who could not identify them by name. Students who could identify an everyday object estimated the proportion of peers who would be able to identify that object to be higher than did people who could not identify it.

When instructors attempted to answer quiz questions as they expected their students would answer them, they provided answers twice as many correct answers as did their students on average. Readers of the account of a conversation attributed to the listener the same understanding of the speaker’s utterance as their (the readers’) own, even when the utterance was ambiguous and the readers knew that the listener did not have the disambiguating information they had. When observers judged the likelihood that listeners would believe a message that contradicted the listeners’ prior belief about a situation, they judged the likelihood to be higher if they (the observers) knew the message to be true than if they knew the message to be false, even though they were aware that the listeners could not have the basis they (the observers) had for judging the message to be true.

A particularly striking example of overimputing one’s own knowledge to others comes from an experiment by Newton (1990) in which some participants tapped the rhythms of well-known songs and others attempted to identify the songs on the basis of the tapped rhythms. Tappers estimated the likelihood that listeners would be able to identify the songs to be about .5; the actual probability of correct identification was about .025. Apparently the tappers, who could imagine a musical rendition of a song when they tapped its rhythm, found it overly easy to project their own subjective experience to the listeners, who did not share it.

Illusion of Simplicity

The illusion of simplicity refers to the mistaken impression that something is simple just because one is familiar with it. It is illustrated by the findings that people are likely to judge anagrams to be easier to solve if they have been shown the solutions than if they have not and that they are likely to judge sentences to be appropriate for a lower-grade reading level if they have read them before than if they have not (Kelley, 1999). It is a short step from perceiving something to be simpler than it is, only because one is familiar with it, to assuming that someone else, who is not familiar with it, will perceive it the same way.

ANCHORING AND INADEQUATE ADJUSTMENT

This conceptualization of how we build models of what others know can be seen as a case of the general reasoning heuristic of anchoring and adjustment (Tversky & Kahneman, 1974), according to which people make judgments by starting with an “anchor” as a point of departure and then make adjustments to it. In this case, the anchor for one’s default model of what someone else knows is one’s model of what one knows oneself.

Many of the experimental results noted in this article support the idea that, in serving as the anchor for one’s model of another person’s knowledge, one’s model of one’s own knowledge is adjusted to take into account differentiating information either about one’s own knowledge or about the other person’s knowledge. However, as in other documented instances of anchoring and adjustment, the adjustment is often not as great as it should be, and one ends up assuming that another person has knowledge that he or she does not have.

CONCLUDING COMMENTS

In this article, I have emphasized the prevalence of the ten-
tendency to overimpute one’s own knowledge to other people and the fact that this can be problematic in several respects. Dawes (1989) has made the point that it is possible to err in the other direction as well, and has argued that an uncritical assumption of dissimilarity between oneself and others can also have undesirable consequences. This seems an important caution to bear in mind in interpreting the results noted here. Presumably, relatively accurate models of what others know are more useful than models that are biased either toward or away from what one knows oneself; however, on balance, the literature suggests that biasing one’s model of another person’s knowledge in the direction of one’s own knowledge is a more common problem than biasing it in the opposite direction.

What can be done to improve our conceptions of what specific other people know? I have suggested several possibilities elsewhere (Nickerson, 1999). Here, I mention only the belief that this problem, like many others relating to cognitive or judgmental biases, stems, at least in part, from a failure to be very reflective about assumptions we make—from failing to give much attention to alternative assumptions that could be made. If we generally tend to assume that a random other person knows a fact that we know ourselves, and if we give insufficient consideration to reasons why the other person might not know that fact, we are likely to overimpute our own knowledge to others as a rule.

In many cases, failure to be more critical of our own assumptions may be defended on the grounds that, although the conclusions that we settle on may not be optimal, they are usually close enough for practical purposes and finding better ones would not be worth the effort. However, if judgments of a particular type are relatively consistently biased in a specified way, as judgments of what others know appear to be, search for effective debiasing techniques seems warranted. Simple awareness of a tendency to overimpute one’s own knowledge to others may be helpful, but probably not fully corrective. How best to teach people to make more accurate estimates of what other people know, and to counteract the tendency to overimpute their own knowledge to others, remains a challenge to research.

**Recommended Reading**


**Notes**

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2. References for all the studies alluded to in the preceding three paragraphs are listed in Nickerson (1999).

**References**


