

PREDICTION AND DIAGNOSIS

More Myths of Expertise

There is no controversy in social science which shows such a large body of qualitatively diverse studies coming out so uniformly in the same direction as this one. When you are pushing 90 investigations [as of 1991 closer to 140], predicting everything from the outcomes of football games to the diagnosis of liver disease and when you can hardly come up with a half dozen studies showing even a weak tendency in favor of the clinician, it is time to draw a practical conclusion.

—Paul E. Meehl¹

Much of the success of verbal therapy is influenced by the personal qualities of therapists and how they relate to clients. Much of the success of behavioral psychotherapy is influenced by therapists' understanding of the basic principles of behavior change, which are not too difficult to grasp. Much of the success of all therapy may be influenced by the fact that the client is taking action and no longer feels helpless in the face of disruptive emotional pain. Clear findings that psychotherapy works in general and that the training, credentials, and experience of the therapist are irrelevant to its success give rise to these speculations.

Nevertheless, a well-trained and experienced professional psychologist or similar professional may better understand what people—particularly distressed ones—are like, why particular individuals act and feel as they do, and how to diagnose individual problems, however

much of a hodgepodge the resulting classification system may be. If so, then the professionalization of the mental health field, the fees, its status, and its public acceptance may all be justified.

Professional psychologists in particular behave as if they understand. Thirty-five percent of them appear in court.² Many have hospital admissions privileges, including involuntary hospitalization. They are deeply involved in diagnosing people in mental health facilities and in their offices, and they are often seen in the media providing explanations of why someone (from the latest serial killer to Saddam Hussein) did this or that, or offering advice to listeners about what to do and how to feel, and above all, when to seek psychotherapy. Moreover, they are well remunerated for such services.

The claim is that professional training yields understanding, not just about people in general but about the single individual in all her or his uniqueness. Statistical generalizations can be found in textbooks but an understanding of single individuals in all their complexity cannot.

UNDERSTANDING AND PREDICTION

To evaluate this claim, we must first decide what it means to understand another individual. Certainly, it means more than creating a "good story" about why particular people do what they do and feel as they feel, or about why this or that happened or is likely to happen. Good stories may be psychologically compelling, but they are not necessarily valid. Going beyond the good-story criterion of understanding requires some knowledge of the world and its workings. How do we obtain that knowledge? This complex philosophical question can be transformed into a slightly simpler one: How do we know that we know?

The question of establishing the validity of our knowledge may appear equally complex, but answering it does allow us to establish criteria for knowledge. If we truly know something, these criteria must be satisfied. The criterion with which this chapter will be concerned is the *ability to predict*; that is, we know something is the case if we can predict that in given situations it will hold true. Predictability is not synonymous with knowledge—a horribly complex, ad hoc system that could predict would not involve as much knowledge as a theoretically justified simpler one that didn't predict quite so well.³ Nor is predictability the only criterion we use to assess whether we have knowl-

edge. Such an aesthetic notion as "beauty in one's equations" may be a criterion. (See Dirac's discussion of Schrödinger's wave equations.⁴) But a crucial test of understanding is the ability or lack of ability to predict. Prediction need not be perfect, but it is found in all branches of science. Even sciences not involved with the future, such as paleontology, make predictions of what will be discovered when certain evidence is examined, such as new fossil evidence. Making sense of evidence already gathered is an extremely important activity in science, but it alone is not enough.

In the last chapter I discussed the crucial role of randomly controlled experiments in evaluating a treatment or therapy. A person who claims that a treatment is effective must demonstrate that it has an effect in comparison to a hypothetical counterfactual, obtained through construction of a randomly constituted control group. This "show me" criterion may have been extremely important to the development of scientific demonstration in Western civilization, beginning with the Renaissance rejection that an assertion about the universe or people could best be proved by referring to the Bible or to Aristotle. "Show me" is basically translated into "show me what will happen next" when we require prediction.

The demand to "show me" can also be quite subtle. In the late 1840s for example, Dr. Ignaz Phillip Semmelweis noted that the rate of death from "childbed fever" among mothers who had given birth in a ward serviced by physicians was almost four times as high as mothers in a ward in the same hospital serviced by midwives.⁵ The deaths tended to occur in women in the same rows of beds. Semmelweis wondered whether the reason was that they were attended by the same doctor. The doctors didn't clean their hands, even after returning from dissecting a cadaver in the morgue, because such practice was considered to be unmanly. Or perhaps the effect was psychological, since after a priest administered last rites to a dying patient, he went down the line of beds ringing the "death bell." At Semmelweis's request, the priest stopped ringing the death bell in the hospital, but the mothers continued to die in rows. Semmelweis then demanded that his colleagues and assistants wash their hands in a solution of chlorine of lime before they examined a woman or delivered her baby. Over the next fifteen months, the death rate fell from 12 percent to 1.2 percent. After participating in a republican street demonstration in 1848, however,