

Channeled Attention and Stable Errors

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Abstract

A frequent critique of recent models of ways people misunderstand the world is that people should figure out their mistakes after observing events they thought were extremely unlikely or impossible. This paper develops a framework to provide guidance in assessing when a particular error is likely to be noticed in a given environment, focusing on two criteria. First, we clarify that the notion of “unlikely” that should induce a person noticing inconsistent data to deem her mistaken theory implausible is unlikeliness *relative to* a compelling alternative theory. Second, and our primary premise, a person may ignore, disregard, or discard information her mistaken theory leads her to deem irrelevant. We propose solution concepts embedding such “channeled attention” that predict when a particular theory might persist indefinitely when a person encodes and analyzes data *if and only if* it is perceived as having positive value within that theory. For any erroneous theory, a person can selectively attend to information she deems sufficient without noticing anything she would find *impossible*. We more generally investigate when channeled attention would cause a person to notice something that she deems unlikely enough to abandon her theory. Even very costly errors can be “attentionally stable”, and a person necessarily gets a clue only through *incidental learning*: when seemingly valuable data that she notices and remembers on purpose to resolve uncertainty or predict patterns causes her to discover her mistake. We investigate which combinations of errors and situations tend to provoke incidental learning, providing comparative statics on both preferences and information that make erroneous beliefs stable. The paper applies these principles to study the attentional stability of several common errors and psychological biases. We show, for example, how a person might remain naive about her self-control problems—and why full naivete can be more stable than partial naivete. Additionally, when certain errors lead a person to overvalue advice or listen to the wrong people, rich feedback on the quality of advice can in fact increase the stability of those errors relative to cases where feedback is sparse.