Folk Psychological Predictive Methods and Inductive Reasoning

Rachel McCarthy

Eastern Michigan University

Follow this and additional works at: http://commons.emich.edu/ac

Part of the Philosophy Commons

Recommended Citation

Available at: http://commons.emich.edu/ac/vol3/iss1/2

This Article is brought to you for free and open access by DigitalCommons@EMU. It has been accepted for inclusion in Acta Cogitata by an authorized editor of DigitalCommons@EMU. For more information, please contact lib-ir@emich.edu.
FOLK PSYCHOLOGICAL PREDICTIVE METHODS AND INDUCTIVE REASONING

Rachel McCarthy, Eastern Michigan University

Abstract

That we project the past onto our predictions of the future is a commonly accepted means of behavior prediction within folk psychology and everyday life. It is also a proposed method of behavior prediction given by Kristin Andrews in her piece, *Do Apes Read Minds?* By way of John Stuart Mill’s consideration of the dilemmas that arise from induction, supplementary pieces on induction and inference, and cognitive psychology as it pertains to memory perception, I will address:

1. Prediction from the past as it pertains to folk psychology, inductive reasoning and cognitive psychology.
3. Relevant studies within the field of cognitive psychology that pertain to memory perception.
4. The confusion between prediction from the past with prediction from the situation.

I argue that prediction from the past is really just conflation with prediction from the present -- that is, as Andrews calls it, prediction from the situation. I will bring forth examples from cognitive psychology and the topic of memory perception in order to further explain the way in which our own memories predispose us in a way that leaves us unable to recall the past with certitude. There are indeed practical uses of inductive reasoning, but if our use of induction requires a proper recollection of past experiences, we really only have our present understanding of the past to make use of, which is why, as I argue, we predict from the present state of our memories rather than directly predicting from the past. To say that we are using induction, prediction from the past, would imply that we have perfect knowledge of the past when studies pertaining to memory perception seem to say otherwise.
Folk Psychological Predictive Methods and Inductive Reasoning

I. Prediction from the Past

In her book, *Do Apes Read Minds?*, Kristin Andrews proposes four methods by which an individual can predict the behavior of others (Andrews 67-93). These four methods consist of the following: prediction from self, prediction from stereotype, prediction from the situation, and prediction from traits. However, Andrews continues to affirm the commonly held view that we also predict from the past (Andrews 93). That is to say, assuming that the future will pan out in accordance to patterns and habits established in the past, we predict one’s behavior in the future.

One could certainly argue for an explanatory pluralist approach to folk psychology in which more than one predictive method is employed depending on the individual and their circumstances. For example, if one is interacting with an individual that they believe to be similar to their self, they might use the method of prediction from self to predict said individual's behavior. If one is to predict the behavior of an individual they do not know well personally, but while still having some knowledge of the individual's traits (e.g. gender, ethnicity, race, etc), it would seem that we are more likely to predict from stereotype as that is all we have to work with. However, prediction from the past does not distinguish itself as a separate predictive method. When one believes that they are predicting from the past, they are conflating their predictive method with prediction from the situation.

II. Mill on Induction

The foundations of inductive reasoning take a fairly hard hit from Hume’s proposed problem of induction. However, John Stuart Mill, presenting and acknowledging a similar problem, explains why this problem is not reason enough to cling to inductive skepticism. Rather, Mill attempts to also put forth a solution of sorts to this problem rather than just leaving the matter open ended. This attempt to present a solution of sorts is what distinguishes his writing on induction from that of Hume’s. In Uniformity and Induction, John Graves addresses both the differences between Hume and Mill, but also the solution Mill puts forth. “While Hume did wish to show the impossibility of reaching absolute certainty about matters of fact, Mill realized that theoretical skepticism was useless for science” (Graves 303).

Like Hume, Mill addresses this bold assumption about what he calls the “uniformity of the course of nature.” Mill states, “This universal fact, which is our warrant for all inferences from experience, has been described by different philosophers in different forms of language; that the universe is governed by general laws; and the like” (Mill 200). According to Mill, said assumption that general laws governing the universe will remain constant into the future, is at the heart of induction. Mill’s approach to the fallibility of inductive reasoning, however, does not give Mill reason enough to do away with inductive reasoning altogether, nor does it allow inductive
skepticism to take over. It is in this way that Mill distinguishes his stance on induction from that of Hume’s. Inductive reasoning is not only natural, but also necessary. Things become difficult when we are unable to recognize if our use of induction is justifiable or not. Mill references the weather, dreams, and other phenomena that are clearly not bound to consistency:

Nobody believes in the succession of rain and fine weather will be the same in every future year as in the present. Nobody expects to have the same dreams repeated every night. On the contrary, everybody mentions it as something extraordinary if the course of nature is constant, and resembles itself in these particulars. To look for constancy where constancy is not to be expected, as, for instance, that a day which has once brought good fortune will always be a fortunate day, is justly accounted superstition (Mill 203).

These examples pertaining to the weather and our own dreams would seem like obvious examples of inconsistency that we would be reasonable in expecting. But what about the inductive grounds of scientific reasoning? According to Mill, one of the best options available to us in the present is to assume that the scientific method and reliance on predictive success yield some sort of knowledge that is useful and reliable. To assume otherwise would leave the scientific community at a stand-still hoping for the acquisition of a less fallible means of truth acquisition, a means that might never actually materialize. We must work with what we have (Mill 204). Graves also illuminates Mill’s consideration of deduction and its uses in scientific reasoning. Mill was not trying to develop a system of logic in the modern sense of a formal system of axioms and rules of inferences for proving theorems deductively. He sought rather to provide an 'organon', in the same sense as Aristotle or Francis Bacon - an instrument for effective reasoning in the sciences, and indeed, for reasoning on moral questions. Thus he does not add to the formal theory of the syllogism, but asks instead what role syllogistic reasoning might play in science (Graves 302). Mill’s proposed approach to deductive reasoning, as a means of more accurately predicting the future, illuminates this problem of induction that must be considered by folk psychologists who assert that prediction from the past is a valid form of behavior prediction. It is these very problems posed by inductive reasoning that should be considered when evaluating our ability to not only accurately predict from the past, but our ability to accurately recall the past.

III. The Practicality of Past-Based Prediction

Established patterns of behavior seemingly make it easier to predict future behavior. It is assumed that through identifying habits and/or patterns, our predictions concerning the future will rise out of these established habits and/or patterns. This mode of prediction has a certain level of practicality to it. For instance, if a woman has been physically abused by her partner, she would most likely be advised that if she stays with said partner, she is likely to suffer physical abuse again in the future. If we understand domestic abuse to be cyclical, then it would be hard to argue that she
should stay with her partner and not hold her partner to past behavioral patterns that her partner has exhibited. Given the woman’s dire circumstances, one could easily make practical use of what appears to be prediction from the past. As we do not yet have access to knowledge of the future, we are seemingly left with only the past to guide us forward. This practicality of inductive reasoning has been brought against Hume. John Watkins, in his piece, “The Pragmatic Problem of Induction,” addresses this issue of practicality and the use of inferences while not failing to acknowledge obstacles that come with it.

Hume took it for granted that certain regularities have obtained in the past, and spoke confidently of the observation of constant conjunctions. A critic might have taken him up on this. Shouldn’t he have been more skeptical here? Do we really know that every raven so far observed has been black? Do we really know that all emeralds observed before have been green? Can we be sure that the laws of nature have held sway down to the present? Hume would no doubt have conceded that we have no perfect assurance about such matters. But he might have added that if we suppose ourselves to have some reliable knowledge about the past, then the interesting problem arises: would we be entitled to make any inductive use of that knowledge? (Watkins 20).

While one could easily explain the reasoning in their use of prediction from the past, the issue of accuracy must be addressed in order to justify the use of this predictive method. An explanation of ‘why’ should not be confused with proper justification. But we still must grapple with the question of whether or not we are really using induction, or if we are actually projecting our present and perhaps skewed knowledge of the past onto the future.

IV. The New Riddle of Induction

Nelson Goodman brought forth new concerns with inductive reasoning in what he calls, “The New Riddle of Induction.” Goodman believes that Hume only addressed one part of the problem of induction, that being the source of the inferences we make. Addressing Hume’s account of the problem of induction, Goodman states, “Hume’s account at best pertains only to the source of predictions, not to their legitimacy; that he sets forth the circumstances under which we make given predictions -- and in this sense explains why we make them -- but leaves untouched the question of our license for making them” (Goodman 60). However, Goodman, like Hume, stresses this disconnect between cause and effect that comes from a priori judgments. “The problem of the validity of judgments about future or unknown cases arises, as Hume pointed out, because such judgments are neither reports of experience nor logical consequences of it. Predictions, of course, pertain to what has not yet been observed. And they cannot be logically inferred from what has been observed; for what has happened imposes no logical restrictions on what will happen” (Goodman 59). It is here that I can present the problem and/or riddle of induction as it pertains to the folk psychological method of
prediction from the past. There is no disconnect here between Hume and Goodman’s usage of the word “prediction” and the way in which folk psychologists have employed the word - both pertain to the act of inference.

Goodman, in his writing on induction, is perhaps most well known for his distinction between lawlike generalities and accidental generalities. According to Goodman, these are features of a hypothesis and it is the features themselves that determine our ability to confirm said hypothesis (Goodman 72). He continues to provide an example of each generality. “That a given piece of copper conducts electricity increases the credibility of statements asserting that other pieces of copper conduct electricity, and thus confirms the hypothesis that all copper conducts electricity” (Goodman 73). This is an example of what Goodman would call a lawlike generality. He continues to say, “But the fact that a given man now in this room is a third son does not increase the credibility of statements asserting that other men now in this room are third sons, and so does not confirm the hypothesis that all men now in this room are third sons” (Goodman 73). Both of these examples given by Goodman are examples of generalities, but the latter example is of an accidental generality. This gives rise to our next dilemma -- how might we go about distinguishing generalities that are lawlike and those that are accidental? One could examine the qualitativeness of a predicate --- ‘qualitativeness’ meaning that which does not depend on time or space, thus making said predicate lawlike. Or we could deem a predicate to be ‘locational’ and thus accidental -- a predicate that depends on time and space (Goodman). But the line between these two becomes blurred. This is where another problem with inductive reasoning arises. It is necessary to establish whether or not the generality of a hypothesis is lawlike or not, as according to Goodman, induction only works with lawlike principles. If we are unable to distinguish the two, induction becomes useless (Goodman).

Our inability to distinguish between lawlike generalizations and those that are accidental becomes apparent with Goodman’s “grue” example. “Grue” can be defined as a color that is neither fully blue, nor is it fully green -- a mixture of the two. For instance, the statement, “all emeralds are green,” seems to be a lawlike generalization as the predicate, green, appears to be qualitative. But if we were to say, “all emeralds are green up until time t, after time t, they are grue.” This suddenly turns “green” into a locational predicate as the emerald’s color is now relative to time t. So seemingly any predicate could be used in a way that is qualitative or locational. It is through this example that Goodman drives his point home. If we cannot definitively state whether a predicate is ‘qualitative’ or ‘locational,’ we are left unable to determine whether or not the hypothesis makes a lawlike or accidental generalization, and thus we are unable to be sure of whether or not induction will work from our given hypothesis. This “riddle” of induction poses an obstacle to our ability to justify inductive reasoning and thus our ability to predict from the past.

V. Justification, Accuracy, and Memory of Perception

To predict from the past would imply that in this moment, we are fully capable of accurately recalling the past. Cognitive psychologist Elizabeth Loftus, a specialist in
memory, addresses the way in which we are prone to incorrectly “remembering” the past. From the 1970s on, cognitive psychologists have studied the way in which past events become confused with misinformation that has been received between the time that the event took place and where we are in the present (Loftus 60). Not only is it possible to partially misunderstand a past event, but entirely false memories can also be created (Loftus 60). Loftus, along with Michele Nucci, and other collaborators, ran a study in which their subjects were shown video clips from crime scenes that included a bank robbery, a warehouse burglary, a liquor store holdup, and a domestic dispute (Loftus 61). A week later, these subjects were given a quiz on the events that took place in these video clips. However, these quizzes also included questions about an event that these students did not witness, a drug bust. Loftus and Nucci came to the following conclusion:

This study shows that people can be led through suggestive questioning, to believe that they have witnessed an event two weeks before that they in fact never witnessed. Nearly two-thirds of the subjects were willing to report that they had seen a drug bust and to offer some description of it. The elements of their description can often be traced to other truly witnessed events, revealing an interesting feature of false memories -- namely, they often contain elements of “truth” (Loftus 62-63).

Given that memory serves as a bridge to our past, the complications that come with accurately remembering the past should be concerning. Daniel Schacter, a psychologist from Harvard University, established the seven “deadly sins” of memory. Out of transience, absent-mindedness, blocking, misattribution, suggestibility, bias, and persistence, he honed in on the “sin” of misattribution, as it is one of the most common “sins” faced in everyday life by the average person. He defines misattribution as something which “involves attributing a recollection or idea to the wrong source” (Shacter 1835). In this study, Schacter provides an example from the case concerning Timothy McVeigh and the Oklahoma bombings of 1995:

After the tragic 1995 bombing of an office building in Oklahoma City, law enforcement officers quickly apprehended a suspect called 'John Doe 1', Timothy McVeigh, who was eventually convicted of the crime. But the officers also conducted a failed search for a second suspect called 'John Doe 2' who, they believed, had accompanied McVeigh when he rented a van two days before the bombing. An artist’s sketch of John Doe 2 depicted a young square-faced man with dark hair and a stocky build wearing a blue-and-white cap. A witness who had seen McVeigh rent his van also recalled seeing John Doe 2 with him. But it was later discovered that the witness had actually seen a man who fit the description of John Doe 2 at the body shop the day after he saw McVeigh there. The witness misattributed his memory of John Doe 2 to the wrong episode, leading to needless confusion and wasted effort (Schacter 1836).
After examining similar cases presented by Schacter, it would seem that memory of perception poses an obstacle to those who argue that prediction from the past is not only possible, but also quite common. But it should now be clear that we do not purely predict from the past, as our memory stands less like a bridge and more like a barrier between the past and present. Novelist Jonathan Safran Foer stated that, “Everything is illuminated in the light of the past” (Foer). This is an idea that has stuck with me throughout the entirety of this project. But perhaps it is quite the opposite. Perhaps the past is seen in light of how we, and our memories, exist within the present.

VI. Present Perception and Prediction from the Situation
Andrews states, “One of the simplest ways we predict a person’s future behavior is to generalize it from that person’s past behavior in a similar situation” (Andrews 93). Andrews continues to give the example of starting her car -- from the past experience of her car starting, she can conclude that it will continue to start in the future. But whether or not the car starts, is this not dependent on a variety of variables that can and will vary from one situation to the next? For instance, given normal weather, my car will normally start up. Prior to last winter where sub-zero temperatures became the norm, my car would always start up in the cold. But I soon came to realize that I could not assume that my car would start up in February the same way that it did in November or October. Now I am required to examine the situation before I can give a more accurate prediction of whether or not my car will start.

Prediction from the situation, simply, is to predict future behavior from what we have access to observing in the present -- including our memories. I would like to think that if a friend of mine fell off of a ship, that I would dive in and attempt to save them. Surely, we would all like to think that we rise to the occasion to help our loved ones. But whether or not I would actually do that is hard to say when I am removed from such a situation. Any thoughts I have now would more or less be an idealization of who I would like to be and not necessarily be indicative of who I actually am. When removed from the situation, it is hard to perceive what that situation might be like -- how frightening the waves might look, how high up the ship’s deck is from the surface of the water, etc. I cannot perceive that situation in a way that would allow me to make an accurate prediction when I am far removed from said situation. My past habits might show that I am a loyal and reliable friend, but there is no way to guarantee this into the future as our means of induction do not yield apodictic certainty.

VII. Conclusion: Prediction from the Past as Prediction from the Situation
To say that we are predicting from the past is to misunderstand what it means to predict from the situation. Prediction from the past would entail perfect knowledge and recollection of the past. If our knowledge of causes is skewed, skewed without us possibly even realizing it, it does not seem possible to jump forward to knowledge of effects when we are standing on such shaky ground with our knowledge of the past and knowledge of the causes. The situations we predict from do not just consist of that
which is external, but also that which is internal -- the way our minds and memory exist within a situation is critical when accurately recalling the past. How we recall the past is largely dependent on the state of our memory in the present, and everything that has entered our mind from the observed past event until now.

If one agrees that induction cannot work without a hypothesis that consists of a lawlike generalization, and if we cannot, with certainty, distinguish generalizations that are lawlike from those that are accidental, we cannot properly make inferences and thus we are not justified in using inductive reasoning in a way that pertains to prediction from the past. Making use of inferences may seem useful in some situations, such as the woman facing domestic violence. But even in that case, perhaps the woman does not realize that she is being abused until much later. Her decision to eventually leave the relationship based off of past events would seem to rely on what she knows now of what abuse entails and her present ability to connect her own experiences with this knowledge. Likewise, victims of domestic violence will stay with an abusive partner out of their inability to recognize that they are being abused - they cannot recall their past abuse experiences properly and see them for what they are. Prediction from the past is just prediction from where we are externally and internally situated in the present. Everything is illuminated in the light of the present.

We must come full circle now and reconsider Kristin Andrews’ assertion that human and nonhuman primates have a theory of mind that allows them to predict from past experiences. If even humans are not capable of recalling their memories of the past in a way that is accurate, we must ask how it could be at all possible that non-human primates could be capable of doing so. That we predict from our present disposition, rather than through a complex analysis of our past, is a kill-joy hypothesis, striking down Andrew’s assertion that prediction from the past is not only common, but possible.
Works Cited


