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We Knew the Future All Along: Scientific Hypothesizing is Much More Accurate Than Other Forms of Precognition—A Satire in One Part

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Daryl Bem's 2011 article "Feeling the Future: Experimental Evidence for Anomalous Retroactive Influences on Cognition and Affect" in the *Journal of Personality and Social Psychology (JPSP)* reported evidence of precognition. Publication of this article illustrates the lack of adherence to journal standards, and anticipates the decline of psychological science. In this article, I will inspire a course correction to assert and affirm the field's treasured practices.

A prominent prior critique focuses on supposed errors in data analysis by Bem and everyone else (Wagenmakers, Wetzel, Borsboom, & van der Maas, 2011). These Bayesians completely miss the boat (but see Kievit, 2011). They take priors so seriously. All my priors are a bunch of deadbeats, losers, and ne'er do wells. I don't want anything to do with them, so I certainly won't be accounting for them in my new pursuits. The real failure in publication of Bem (2011) is that journal editors and reviewers did not follow the core evaluation standards for scientific review—the advancement of novel theory and evidence. What is new in the Bem article? Nothing. Bem's precognition article is a weak replication of a well-established phenomenon.

Review of Evidence

The evidence for precognition is psychological science itself. Just open a random issue of any psychology journal. In it, you will find dozens of *a priori* hypotheses anticipating findings that eventually occurred. For example, consider the very journal that published Bem (2011). Figure 1 presents the number of hypotheses by the authors of *JPSP* articles that were confirmed or disconfirmed. All hypotheses except for two were confirmed. In one of the exceptional cases, Denes-Raj and Epstein (1994) had a secondary hypothesis that their primary hypothesis would be incorrect. In the other, Zajonc, Heingartner, and Herman (1969) anticipated that by 1974 cockroaches would control most of the eastern United States because "it would be so easy and they inspire each other so damn well" (p. 87).¹

Further, consider the successful predictions. Correctly anticipating that people walk slower after reading the word

Florida? That people are obsessed with thinking about white bears? That people ~~have don't have have don't have~~ have personalities? It is obvious that one could not have possibly anticipated the results of most of the published studies without some form of precognition. In comparison with the paltry accuracy rates by Bem's precognition subjects (less than 60%?!), the conclusion is clear: Bem's effects are startlingly weak compared to the already published evidence for precognition in psychological science.

Skeptics may think that I have simply cherry-picked a single journal that has supportive evidence for my claim. Not so—consider the sheer magnitude of hypothesis confirmation. Sterling (1959) first documented psychologists' remarkable precognitive capacities. He showed that 97% of articles across a random selection of psychology journals reported positive results. Further, Fanelli (2012) showed that psychologists have kept up this impressive prediction rate through the present. Moreover, his evidence suggests that psychologists have more positive results than virtually every other scientific discipline. For example, biologists have excellent precognition but still not as good as psychologists (Fanelli, in press), political scientists appear to be guessing randomly (Tetlock, 2005), and economists are wrong about virtually everything (see Economics, all of it).² Psychology is number one!

Supposed Limitations

First, some might argue that high-profile examples of prediction failures by psychologists are counterevidence to the above (see Table 1). However, the occasional misprediction only serves as confirmation of the overall result. Second, it is true that psychologists are a biased sample. But I am not generalizing to all people. Such generalization is left to those that later cite this work, as is standard practice. Third, one might claim an alternative account in which psychologists are not predicting the future—they are controlling it. However, I did

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Table I. Notable Prediction Errors in Psychology

Year	Event
1961	Albert Bandura predicts that getting some kids at work to destroy his family's Bobo doll is an effective way to get rid of it without getting in trouble. Seriously misjudges his children's revenge efficacy.
1974	B.F. Skinner predicts that people could be conditioned to adopt his hairdo, abruptly ends the age of behaviorism.
1976	Langer and Rodin predict that plants would live longer if cared for by older adults. Sheepishly publish the inverse result.
1994	Spelke predicts that babies know chemical engineering too. Finds little evidence beyond methane production. Publishes it anyway in <i>Science</i> (Spelke, 1997).
1999	The <i>American Psychological Association</i> and the <i>National Institutes of Health</i> issue a joint prediction that the increasingly popular neuroscience methods will contribute new knowledge to psychology "worth their weight in grant dollars." ^a
2011	Jonathan Haidt predicts that there will someday be conservatives in social psychology. ^b



^aPerhaps a stretch to include on this list. In 2007, researchers using *fMRI* did convincingly demonstrate that psychology occurs in the brain.

^bToo soon to declare prediction failure? Come on. Like this is ever going to happen. (Editor's Note: I predict that data consistent with Haidt's prediction will appear in an upcoming issue of *Perspectives on Psychological Science*.)

not predict that. And, if you do not understand this as a refutation, then you need to look at Figure 1 again.

Finally, an audacious skeptic might counter that the authors of empirical psychology articles could have conducted the studies, found results, dismissed inconsistent data, and then written the paper as if the presented results were what they had anticipated all along.³ However, orchestrating such a large-scale hoax would require the coordination and involvement of thousands of researchers, reviewers, and editors. Researchers would have to selectively report those studies that "worked" or reengineer those that did not for other purposes. Reviewers and editors would have to selectively accept positive, confirmatory results

and reject any norm-violating negative result reports. The possibility that an entire field could be perpetrating such a scam is so counterintuitive that only a psychologist could predict it if it were actually true.

Conclusion and Next Steps

With a near 100% accuracy rate, psychological scientists have clearly demonstrated that psychological scientists already know what is going to occur. This makes the subsequent empirical confirmation superfluous. Once predicted, there is no logical justification for expending the resources to actually conduct the data collection and analysis.

There are some positive signs that the revolution away from empirical confirmation is underway. *JPSP*, for one, has adopted a policy of not publishing replications to clarify their meager importance in comparison with novel findings. Indeed, if the result was known before the first empirical test, then what possible value would there be in conducting a second empirical test? Psychological science is at the vanguard for redefining reproducibility, known as the *sine qua non* of old-fashioned science (Aristotle, Popper), as the *sine qua none* of revolutionary science.⁴ Also, revolutionaries in the *Skip Testing Actual Participants in Experiments League* have advanced methods for empirical reporting without being encumbered by real data. Without replication, these practices are easily implemented and highly effective. Impressively, a soon-to-be-published journal, *Bite-Size Psychology*, is pursuing a new reporting format to facilitate these practices: the 15-word-limit "all-headline" article format. Easy-to-read. Flashy. No data or methods. Perfect for fostering real impact—media mentions.

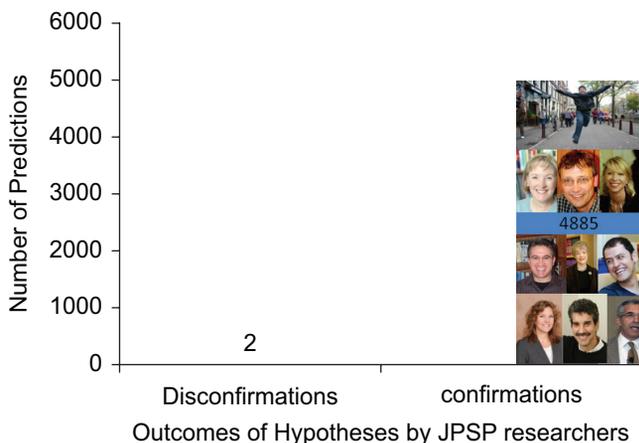


Fig. 1. Evidence for JPSP researcher precognition. Although the data for this figure were not actually collected, the evidence it presents clearly demonstrates that such data collection is unnecessary.

Finally, Simmons, Nelson, and Simonsohn (2011) have provided a useful step-by-step guide for ensuring that actual data (for those who choose to bear this burden) is certain to demonstrate the preknown effects. Their simulations illustrate the importance of maximizing researcher power by enhancing their freedom. Affording the researcher her fundamental right to freedom in sampling, exclusion criteria, measures, and analysis strategy, “allows presenting anything as significant.” In psychology, the word “significant” is the technical term for *true* which, of course, we already knew.

Author's note

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Declaration of Conflicting Interests

The author declared that he had no conflicts of interest with respect to his authorship or the publication of this article.

Notes

1. Zajonc, of course, was himself an alien with domination aspirations (Bones, 1996), as are all psychologists with last names beginning with Z (e.g., Zeigarnik; cf. Bones & Johnson, 2007).
2. It is curious that economists have not applied the Costanza transformation to their hypotheses to reverse their persistent misprediction (David, Seinfeld, & Cowan, 1994). The most likely reason for this oversight is that they are economists.
3. It is ironic that Bem himself (Bem, 2003) predicted this practice by prefuting his own position on precognition.
4. But why did they fail to adhere to this policy in the case of Bem (2011)?

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