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*RESEARCH ARTICLE*

# Stock Market Prediction Using Associative Remote Viewing by Inexperienced Remote Viewers

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**Abstract**—Ten inexperienced remote viewers attempted to predict the outcome of the Dow Jones Industrial Average using associative remote viewing. For each trial in the experiment, each participant remotely viewed an image from a target set of two images, one of which he or she would be shown approximately 48 hours from that time. Of the two images in the target set, one corresponded to whether the Dow Jones Industrial Average (DJIA) would close up, while the other corresponded to whether it would close down at the end of the intervening trading day. For feedback, the viewers were shown only the picture actually associated with the actual market outcome. In aggregate, the participants described the correct images, successfully predicting the outcome of the DJIA in seven out of seven attempts (binomial probability test, $p < .01$). Investments in stock options were made based on these predictions, resulting in a significant financial gain.

## Background and Motivation

Finding practical applications for psi phenomena will increase interest in the field. One of the more valuable applications would be the reliable prediction of future events. A form of psi that seems to offer relative dependability for predicting future events is associative remote viewing. Associative remote viewing (ARV) is a scientific protocol derived from the much-further-studied psi phenomenon known as remote viewing. The procedures for remote viewing were first developed by consciousness researcher Ingo Swann in late 1971 (Smith 2005), and further explored by Swann, Harold Puthoff, Russell Targ, and others at the Stanford Research Institute beginning

in 1972 (Targ & Puthoff 1977, Puthoff & Targ 1976). By the early 1980s, their experiments were demonstrating that remote viewing could be both reasonably and consistently successful and repeatable. However, practical applications for remote viewing were still in need of further development (Dunne & Jahn 2003). Stephen A. Schwartz developed a remote viewing protocol and pilot experiment to predict the outcome of an event with multiple discreet possible outcomes (Schwartz 2007). Puthoff and Targ independently adapted this protocol to use remote viewing to determine the outcome of a binary event. This new protocol was dubbed "associative remote viewing" (ARV).

Associative remote viewing shows promise as a practical application of psi phenomena, yet there have been relatively few published investigations into its potential uses. The research that has been carried out has in large part been successful. ARV warrants more in-depth research and the further development of a simple protocol that yields consistent and repeatable results. The intent of this experiment was to replicate previous experiments and provide additional understanding of the associative remote viewing protocol.

## Summary of Relevant Research

The first published study of ARV was conducted by Puthoff in 1982. For this study, Puthoff conducted a series of 30 ARV trials in an attempt to predict the outcome of the silver futures market. He asked several novice remote viewers to describe as precisely as possible an object that they would be shown sometime after the close of the market the following day. To avoid potential remote viewing access to a pre-established target pool, each day two objects that were as different as possible were chosen at random by Adrienne Puthoff.

One object represented the market closing higher than when it opened and one represented the market closing lower than when it opened. For example, the target set might include a pencil and an apple, with the pencil standing for a higher close and the apple for a lower one. Which object represented up and which down was determined by a random event generator after the judging was completed. A judge determined which of the two objects best matched the results produced by the remote viewers during their sessions. This outcome was then used to decide what purchasing strategy should be used to invest in the market. When the outcome became known after the close of the market the following day, the remote viewers were shown the object that matched the actual outcome (whether silver futures were up or down in reference to the starting basis) as feedback.

The results of these trials were successful. Using seven naïve remote

viewers, Puthoff's experiment yielded two different, though still statistically significant, results. The first outcome was significant at $p < 1.6 \times 10^{-4}$, calculated on the basis of percent hit-rate for all individual remote viewings (127 correct out of 202). Puthoff adapted the result to apply to the market by using a "majority vote" approach that weighted the outcomes based on how many viewing results favored one target over the other in each individual market prediction. Because of the smaller trial size this produced, the p-value was less statistically significant at $p < 2.2 \times 10^{-2}$. Financially, the trials netted a profit of approximately $250,000 for their investor, of which Puthoff's share was ten percent, or more than $25,000, which he used to help fund a new Waldorf School (Puthoff 1984).

Also in 1982, Targ and Keith Harary used ARV to predict silver futures in an attempt to raise funds for their research (Harary & Targ 1985). The results for their first experiment were highly successful, earning $120,000 and a front-page article in *The Wall Street Journal* (Targ 2012, Larson 1984). A replication attempt the following year tinkered with the protocol by, among other things, shortening the time interval between trials, thus conflating the feedback by having viewers perform a subsequent trial before receiving feedback for the preceding one, and the experiment foundered (Targ 2012, Houck 1986). In 1995, Targ returned to the original protocol and again showed highly significant results for a silver futures target (Targ, Katra, Brown, & Wiegand 1995).

Other ARV experiments continue to be carried out informally or as private research initiatives. One such example is that of Greg Kolodziejzyk. From 1998 to 2011, Kolodziejzyk undertook 5,677 ARV trials to predict the market. He arranged his trials into sets to respond to 285 "project questions" designed to predict the outcome of one or another of the futures markets. Of the trials, 52.65% were correct responses, where only 50% would be expected by chance. This produced a statistical significance of $z = 4.0$. However, using the error-correction offered by larger numbers of trials per question, project questions were answered correctly at 60.3%, which is statistically significant at $z = 3.49$. Using confidence scores as a further error-correction mechanism, Kolodziejzyk achieved an overall success rate of greater than 70%, yielding a profit of $146,587.30 (Kolodziejzyk 2012).

There have been some adaptations and improvements to the ARV protocol over the years. Puthoff and Targ each used physical objects in their ARV experiments. Subsequent researchers have substituted images in place of these objects. This makes the target set easier to perceive and easier to manage, and allows for viewers and researchers to participate while in different locations.

Furthermore, ARV researchers have been testing different hypotheses

about the feedback event and its relevance to the ARV experiment. Some researchers suspect, for example, that the more significant—referred to as "numinous" (Schwartz 2007)—a feedback event is, the more likely it is that the associative remote viewer taps into the feedback event rather than the prediction event. Therefore, by increasing the emotional and perceptual significance of the feedback event, an experimenter would likewise increase the likelihood of a subject remote perceiving that event and providing a successful session.

Kolodziejzyk used heavily automated computer-based protocols in place of some of the roles usually filled by other persons. The purpose of this was to remove human subjectivity from the process as much as possible. Other private researchers have been experimenting with feedback timing, self-judging, alternative ways of providing feedback, etc., but thus far have not provided public access to their findings.

The single largest criticism that can be said about previous research into ARV is that not enough of it has been carried out, reviewed, and published.

## Experimental Method

The experiment being reported here was conducted by ten inexperienced remote viewers: nine University of Colorado Students and one University of Colorado professor. The gender distribution was three women and seven men. Every few days, the number of which depended upon whether the next class was on a Tuesday or a Thursday, the viewers were tasked to remotely view a target during class. The target was always a photo that the viewers would be shown at the beginning of the next remote viewing period a few days later. The remote viewers were given five minutes to quickly describe on paper and sketch the image they would be shown in the future.

After the completion of the sessions, the judges (assigned to evaluate the results and decide which target the remote viewing results matched) would compare each remote viewing session to two previously selected targets. These targets were selected from a pool of pre-qualified picture files before the trials were carried out and could depict any object or scene. The only criterion for selection was that the two targets in any given trial should resemble each other as little as possible, so as to reduce the difficulty in distinguishing between targets when comparing results to them. The targets were printed and sealed in dated envelopes by an independent party (the spouse of the experimenter) after a coin toss was used to sort the targets into Up targets (indicating the market being predicted was up) and Down targets (indicating the market would be down). The judges did not know which outcome was associated with which image until after the judging was completed.

When judging, the judges would look for common elements between the remote viewing sessions and either target photo. The judgments were based on subjective interpretations by each of the judges involved, and did not follow any specific judging protocol. If the majority of the ten viewers' sessions were judged to most accurately describe the Up target, that was taken as a prediction that the Dow Jones Industrial Average (DJIA) would close up at the end of the next market day. If the majority were judged to describe the Down image, that would be a prediction that the DJIA would close down.

At the beginning of the next market day, the experimenter would make a decision to purchase DJIA options according to the prediction. Just before the close of the market, he would sell the options and actualize any loss or gains. At the beginning of the next trial period, the experimenter would close the previous feedback loop by showing the viewers only the picture that corresponded to how the market *actually* performed. This could be thought of as creating the then-future target event that the ten viewers were remote viewing during the previous remote viewing period. Closing the feedback loop was a crucial aspect of the experiment.

We repeated the above procedure for seven trials with the same viewer participants. Because of personal scheduling issues, the number of remote viewers fluctuated between nine and ten viewers. At the end of the seven trials, the results were then compiled. No sessions were thrown out and the results were exactly as presented below.

## Experimental Results and Analysis

Of the seven trials performed, all seven resulted in correct predictions. The results are provided in Table 1. The Appendix displays two sessions along with the possible target images. One shows a clear prediction and the other an ambiguous one. Using a simple two-tail binomial probability analysis to determine the p-value, it was statistically significant at $p < .01$.

Regarding the financial results, on an initial investment of $10,000 we gained approximately $16,000 with a total of $26,000 at the end of trial 5. The first five trials were conducted on days of large market swings, therefore the potential gains were very large. Trials 6 and 7 happened on days of small market changes and, despite resulting in correct predictions, produced small losses because of the mechanics of the options trading vehicle. A timing issue in the trade of trial 7 resulted in an additional monetary loss of approximately $12,000. However, it is important to stress that this was in spite of the prediction itself being correct. (Without this timing error, total cash at the end of the project would have amounted to $38,000, or a return of almost 400% on the investment in a span of about two weeks.)

**TABLE 1**

**Predicted vs. Actual Outcomes**

| **Composite Results** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Trial #** | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| **Date** | 13-Nov-08 | 18-Nov-08 | 20-Nov-08 | 2-Dec-08 | 4-Dec-08 | 9-Dec-08 | 11-Dec-08 |
| **Predicted** | Down | Down | Up | Up | Up | Up | Up |
| **Actual** | Down | Down | Up | Up | Up | Up | Up |
| **Viewer #** | **Individual Perceptions** | | | | | | |
| **1** | **D-2** | **D-1** | M-1 | – | **U-1** | **U-1** | **U-1** |
| **2** | **D-2** | **D-3** | **U-3** | **U-1** | **U-1** | **U-1** | **U-1** |
| **3** | **D-2** | – | *D-1* | **U-2** | **U-1** | **U-1** | *D-2* |
| **4** | M-2 | **D-1** | M-1 | **U-1** | **U-1** | **U-1** | **U-3** |
| **5** | M-2 | *U-2* | **U-1** | **U-1** | **U-1** | **U-2** | **U-1** |
| **6** | **D-2** | *U-2* | M-1 | **U-1** | **U-1** | **U-3** | **U-3** |
| **7** | **D-1** | *U-1* | *D-1* | **U-1** | *D-1* | **U-1** | **U-1** |
| **8** | **D-1** | *U-1* | M-1 | *D-1* | **U-1** | **U-1** | *D-1* |
| **9** | M-2 | **D-1** | **U-2** | **U-1** | – | **U-1** | *D-1* |
| **10** | – | **D-1** | **U-1** | **U-1** | **U-1** | *D-1* | **U-2** |

In the Individual Results, "U" refers to a prediction of the Up image, "D" to Down, "M" to indications of both, and "–" to the absence of the viewer. The adjacent number gives the rated degree of correlation, with 1 being low, 2 medium, and 3 high. Correct predictions are shown in larger bold font, and incorrect predictions are shown in italics with an underscore.

## Discussion

There are several possible reasons the experiment was successful. The associative remote viewing protocol has been established for years. However, one reason that this study could have yielded exceptional results was the number of viewers used in the trials. Most previous ARV experiments had access to fewer viewers per trial. We assume that this was because it is difficult to sustain the participation of a larger number of remote viewers for an extended series of trials. Our protocol made use of the classroom setting to guarantee the participation of relatively many viewers for the duration of our study.

By having access to many viewers, each trial had a built-in error

correction before making the prediction. Even in the case of low-quality remote viewing results, by choosing the target associated with the best of ten sessions per trial, we were more likely to choose the correct outcome. It is possible that if the study had access to 100 viewers, the accuracy might increase further.

Financially speaking, we learned a few lessons. Our loss on trial 7 shows us that one *must* sell at the end of the prediction period. The prediction is only for the time frame specified, so holding onto the options beyond that leaves the trade open to chance once again. It is important to strictly adhere to the protocol, which is decided in advance, or the outcomes will be unpredictable.

Because this study was carried out near the end of the school term, the number of trials was limited. It is not clear that the perfect success rate could be maintained during a longer trial. Decline effects have been found in many psi studies, such as another prediction experiment carried out in our laboratory, which showed a robust effect and then a steep fall to random behavior (Moddel, Zhu, & Curry 2011). However, even a moderate success rate extended over a long period of time would be significant.

## Conclusions

Associative remote viewing appears to be a reasonably accurate way to predict the future of binary outcomes. An ARV project is simple to perform and, with some experimentation, it may be possible to improve upon its already fairly accurate predictive ability. If the world were to embrace the fact that it is indeed possible to reliably and consistently predict a future event with consistently greater than 50% accuracy, it could have a significant impact socially and perhaps even financially. At the very least, the stock market, along with other institutions where knowledge of the future could change system dynamics, might need to change their business models with respect to ownership and participation. Moreover, ARV has dramatic implications for how we view time and our ability to perceive the future.

This study was carried out as a class project in a course entitled "Edges of Science" at the University of Colorado in Boulder. As such, its scope and the number of trials were limited. The results were presented at the Annual Meeting of the Society for Scientific Exploration on June 11, 2010.

## Acknowledgements

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## Appendix

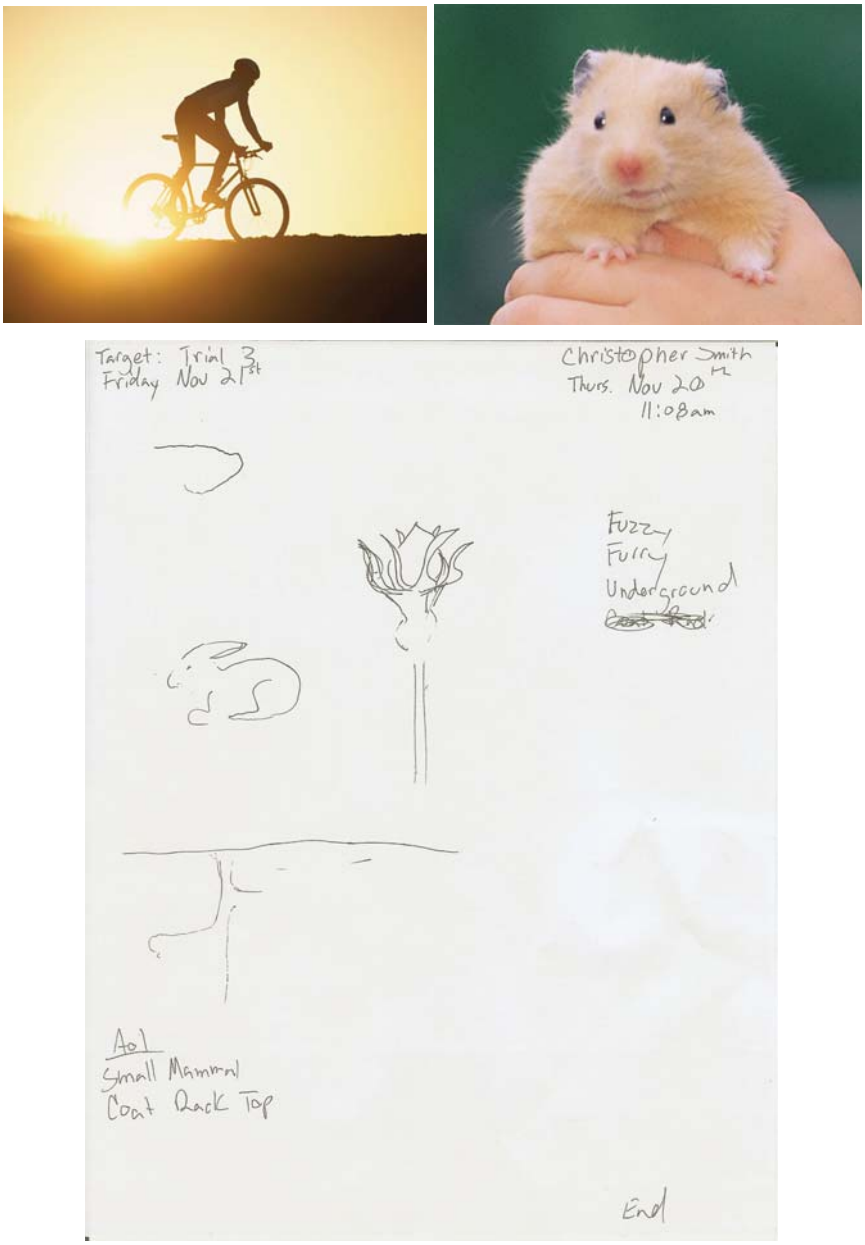


**Figure 1. Example session: clear prediction**. The photograph that corresponded to the actual outcome was the right-hand one.

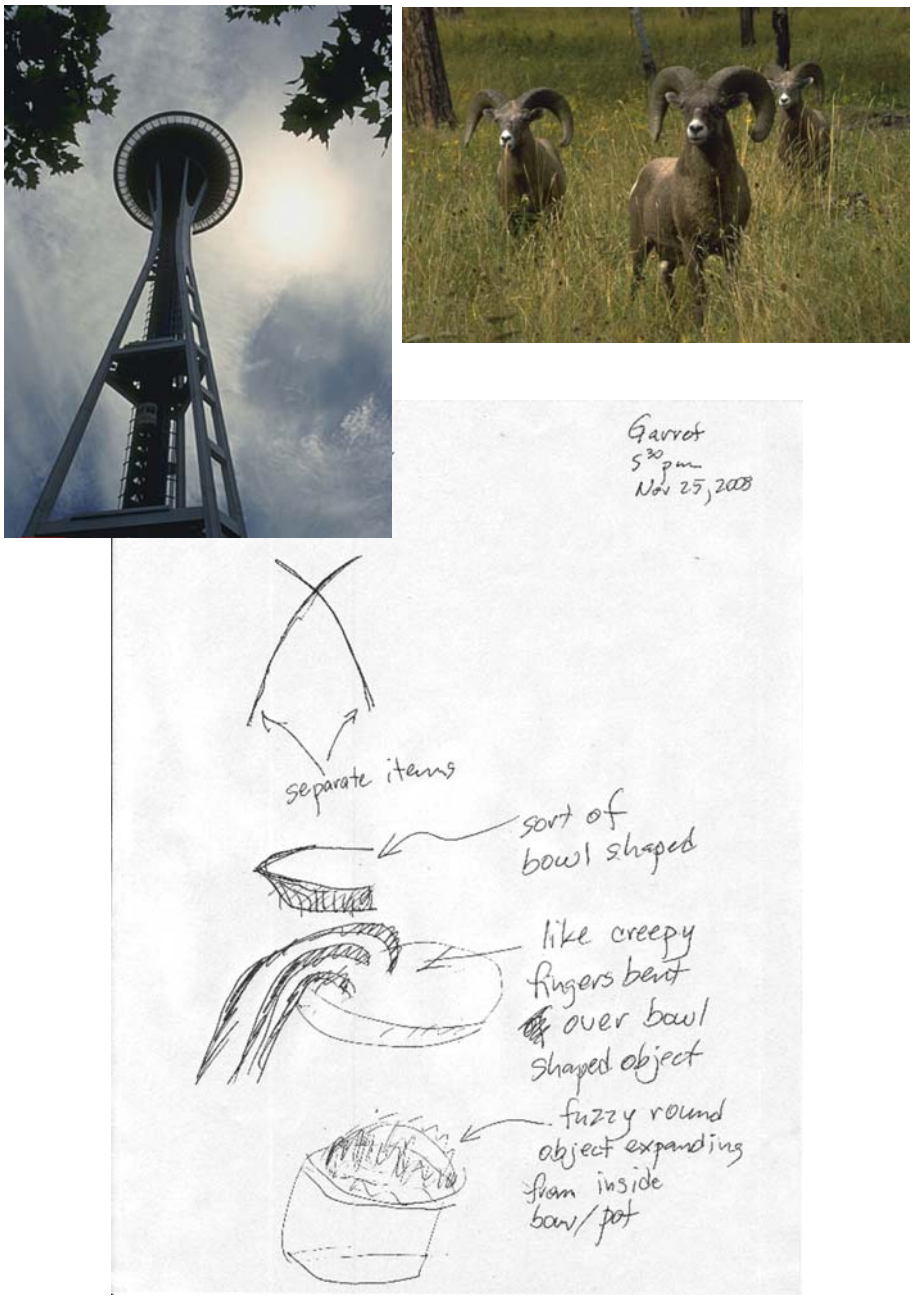


**Figure 2. Example session: ambiguous prediction**. The photograph that corresponded to the actual outcome was the right-hand one.

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