

## **A STUDY TO ASSESS THE VALIDITY OF APPLIED KINESIOLOGY (AK) AS A DIAGNOSTIC TOOL AND AS A NONLOCAL PROXIMITY EFFECT**

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Applied Kinesiology (AK) is a diagnostic technique widely used within the Integrative Medical community. In essence it posits that a question can be mentally held in a person's mind, sometimes while they are holding a substance like a vitamin, or a food sample, and by measuring relative muscular weakness an answer as to whether the substance or the condition represented by the question is good for that person can be obtained. This AK is presumed to have a diagnostic capability. That being presumed this study asks: 1. Is there a difference in muscular strength when an individual holds a substance that is inimical to life processes (a poison solution), as compared to a substance that is essential for life (normal saline)? 2. Is this effect a transaction involving input from both the person being measured, and the kinesiologist doing the measurement, or is it only the person being measured? 3. As an extension of question 2, is the result the same when different kinesiologists take the measurement, or when no kinesiologist is involved? 4. Does belief, expectation, gender, or time cognition play a role in determining the response? To answer these questions, which would help to define the parameters of the AK process, 51 participants were tested during three trials each, first by one kinesiologist, then by another and, finally, with no kinesiologist present by grip strength indicated using a hand dynamometer, grip strength being a self-administered AK test of relative muscular strength. For each trial a pair of randomly numbered sealed vials, each pair in a randomly numbered plastic bag, was used as the objects of the trial. In each bag one vial contained saline solution while the other was filled with a slightly smaller amount of saline solution to which had been added ionic hydroxylamine hydrochloride (NH<sub>3</sub>OH)<sup>+</sup>, producing a toxic solution of 9 mg/ml. Each trial consisted of a separate muscle test for each vial. All present at the trials were blind as to which vial contained the toxin. And all who prepared the vials were blind to the trials. The force used by the kinesiologists in each of their trials was measured via a pressure pad system. The hand dynamometer trials were conducted with no kinesiologist present.

Results: Of the 151 sets of trials the toxic vial was identified correctly in 80 of them (53%), resulting in a one-tailed exact binomial  $p$ -value of .258. Results for two of the kinesiologists were almost exactly at chance. For the third kinesiologist there was a one-tailed exact binomial  $p$ -value of .18 (unadjusted for multiple testing). Results for the dynamometer were also almost exactly at chance. Testing whether there was a significant difference in proportions for whom the AK test worked based on belief about whether it would work resulted in non-significant chi-square values of 0.6 ( $p = .439$ ) for the trials with one kinesiologist, and 2.222 ( $p = .136$ ) for the hand dynamometer trials. The final variable examined was gender. While there was no significant difference in performance for males and females for the trials of the male kinesiologist or the hand dynamometer, the combined data for the two female kinesiologists did reveal a difference. Of the 33 sessions with females, only 15 were successful (45%) while for the 18 sessions with males, 14 were successful (78%) resulting in a chi-square statistic of 4.96,  $p = .026$ .

However, given all of the chi-square tests performed in this section, the results must be interpreted with caution because of multiple testing. Results indicating belief in whether or not the AK test will work were not significantly related to whether or not it actually did work. A chi-square test of the relationship between time perception and correct vial choice showed no significant relationship. A chi-square test of the relationship between time perception and correct vial choice showed no significant relationships. The chi-square statistic for the relationship using the hand dynamometer data was  $0.927, p = .629$ .

The data in this study, particularly when seen in the larger context of a review of the literature from the AK field itself by Klinkoski and Leboeuf (1990), which considered 50 papers published between 1981 and 1987 by the International College of Applied Kinesiology, and the survey by Hall, Lewith, Brien, and Little, using standard evaluation criteria (QUADAS, STARD, JADAD and CONSORT), for research methodology, as well as six prior non-clinical studies, by Radin, Quintanar and Hill, Braud, Arnett, Friedenber, and Kendler, Ludtke, and Kendler and Keating, all together suggest: The research published by the Applied Kinesiology field itself is not to be relied upon, and in the experimental studies that do meet accepted standards of science, Applied Kinesiology has not demonstrated that it is a useful or reliable diagnostic tool upon which health decisions can be based.

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## **ASSOCIATIVE REMOTE VIEWING: THE NEXT CANDIDATE FOR THE PARADIGMATIC PSI EXPERIMENT?**

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Ray Hyman has issued a challenge, that parapsychology has no “paradigm experiment” that can be replicated by students and others to reliably demonstrate some core finding of the field. Though various candidate experiments have been offered, many think that we still await a full answer to his challenge. In this paper I propose a likely candidate, the little-known associative remote viewing protocol (ARV), which embodies both cognitive information transfer and predictive elements. In the ARV protocol, each of two possible outcomes of a future binary event is associated with a standard-type remote viewing target (for example, an object, a geographical location, or a photo), thus yielding a target set of two orthogonal targets. This allows the remote viewer to use typical remote viewing procedures to predict the future event without having to rely on cognitive “guessing” strategies that generally lead to only chance results. In the ARV procedure, the viewer describes which target he or she will be shown at a future time after the event outcome has been decided. Before event culmination, a judge compares the remote viewing response to the two possible targets and decides which target best matches the response. The selected target is matched to the event outcome with which it is associated, thus indicating which of the event’s outcomes is predicted. In this paper I consider the requirements a paradigm experiment should be expected to satisfy. Among these requirements are 1) that it should require as little specialized equipment and training as possible; 2) that it should be relatively simple in concept, execution, and analysis; and 3) that it should produce reasonably reliable results on a consistent basis when executed correctly. I further consider how the ARV protocol meets these criteria. In the course of my discussion, I additionally explain how the ARV protocol is executed, and examine weaknesses and vulnerabilities in the process (for example, variations in perceptual skill between judges), while further entertaining considerations of its advantages and disadvantages. I point out factors that impact the quality of ARV results, and areas where it is not vulnerable to some of the conflating factors that affect other sorts of ESP