

LABORATORY PK: FREQUENCY OF MANIFESTATION AND RESEMBLANCE TO  
PRECOGNITION

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Advancement of understanding in most science depends on quantification of the magnitude of phenomena. Parapsychologists usually test the statistical significance of findings, but seldom quantify them. As part of a theoretical modeling of whether immediate feedback training might improve PK performance, the bulk of the successful laboratory studies of PK were reviewed and quantified.

Criteria for selecting a study for this review were that the results showed above-chance PK scoring at at least the .05 level of significance, and that it have all-or-none type outcomes on each trial that could be clearly labeled as hits or misses. Studies published in JP since 1943 and JASPR since 1961 were reviewed, as well as studies of PK on electronic random number generators (RNGs) from a recent review by May, Humphrey, and Hubbard. If a study had several a priori conditions, the one yielding the highest magnitude of PK was used to represent the study outcome. Thirty-six studies of mechanical PK (usually rolling dice) were reviewed and 30 studies of electronic RNG PK. For each study, the psi coefficient (Timm, JASPR, 1973, 63, 282-294) for the best condition was computed by the formula

$$\psi_{+} = \frac{H - Np}{Nq}$$

This coefficient, conveniently expressed as a percentage, indicated the percentage of time PK was being used after hits expected by chance were subtracted out.

The distribution of psi coefficients for mechanical and electronic RNG PK did not differ significantly from each other. For the combined

66 studies, PK manifests itself less than 3% of the time in the majority (56%) of the studies, with occasional higher frequency manifestation pulling the mean psi coefficient up to 4.7%. The highest psi coefficient was 17%.

This low frequency of manifestation of PK reminded me of the low frequency of manifestation I found for laboratory precognition (RIP, 1981). Thus the psi coefficients of the 66 PK studies were compared with those for 32 precognition studies and 53 present-time ESP studies.

The proportion of times that PK is manifested in laboratory trials does not differ significantly from the proportion of time laboratory precognition is manifested. Just as precognition manifested far less frequently than present-time ESP in the previous comparison, laboratory PK manifests far less frequently than present-time ESP (Z conversion of Mann-Whitney U-test,  $Z = -5.45$ ,  $P < 10^{-7}$ , two-tailed). Many present-time ESP performances are in far higher ranges than those ever seen for PK or precognition.

Given the excellent evidence for occasional manifestations of macro-PK, I am disinclined to take the above data as any sort of ultimate limit on PK per se. However there may be more than one kind of PK, viz. macro-PK and a weaker kind that manifests as weak proportional shifts in laboratory random test situations. Following a suggestion by Ingo Swann, one way of accounting for the above findings is to hypothesize that laboratory PK affects the future rather than the present state, of an object, and thus is subject to the limitations of manifestation reported earlier for laboratory precognition. Another hypothesis is that laboratory PK tests inherently involve some precognition as part of their "guidance" mechanism, and so are again subject to the stronger limitations of laboratory precognition. Another line of investigation

worth pursuing is the hypothesis that precognition and PK may be different manifestations of some more basic factor.

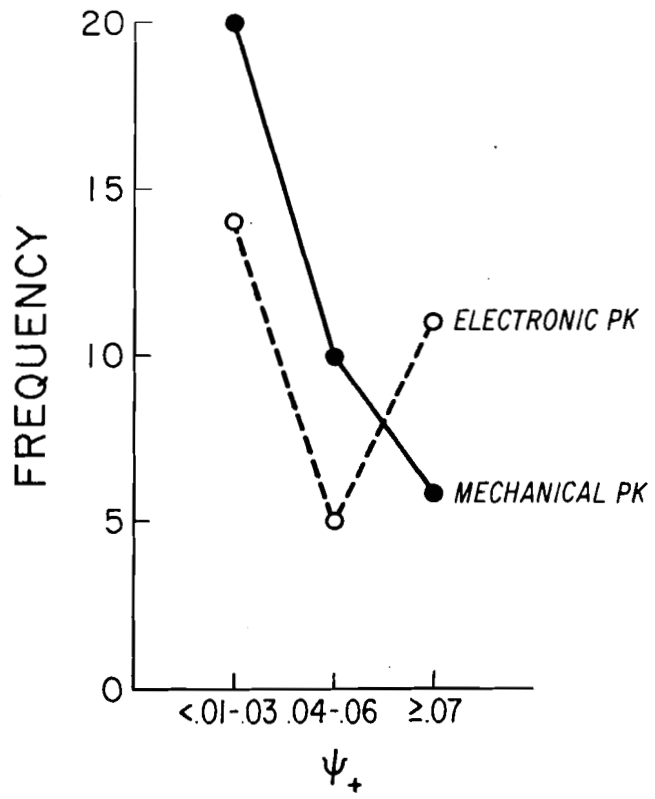


Figure 1: Distribution of psi coefficients in successful experiments involving mechanical or electronic PK effects.

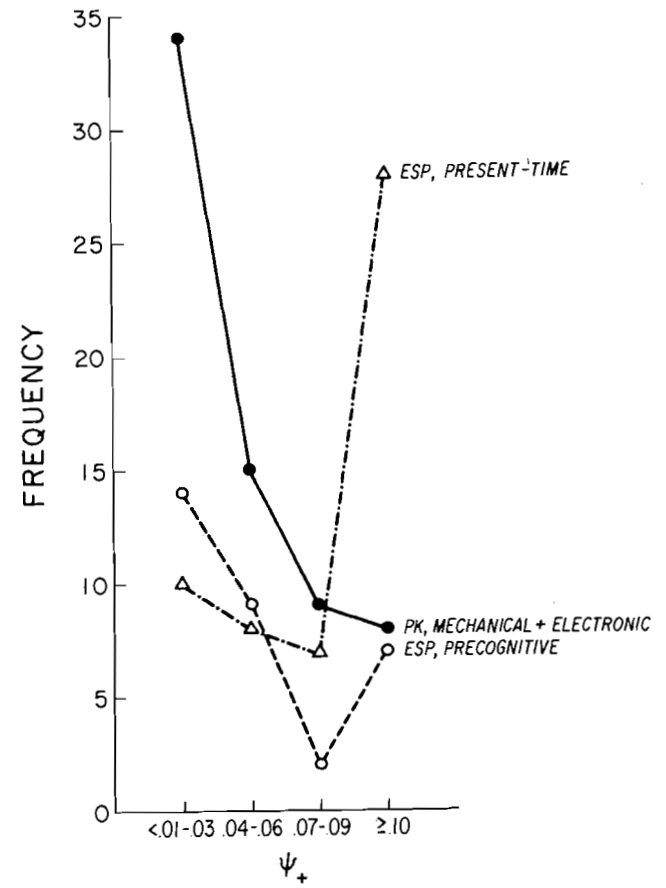


Figure 2: Distribution of psi coefficients for three groups, viz. combined electronic and mechanical PK effects, present time ESP effects, and precognitive ESP effects.