



# Psi and PK in the Laboratory



Whereas Macro-PK studies are both rare in the laboratory and often involve case studies or locations involving haunting phenomena, Micro-PK, because of its ease in studying, has been extensively researched in laboratory conditions. Devices similar to earlier precognition studies using random number generators can be used to get participants to make a certain light or buzzer occur more often than it should. When researchers focus participants to influence an electronic system, the study is no longer about predicting the outcome (precognition) but rather about affecting the outcome (Micro-PK).

## Physical Systems (Micro-PK)

Micro-PK laboratory studies started with a series of dice-rolling experiments in the J.B. Rhine laboratory. With over 600,000 trials, results of these studies turned out to be highly significant in terms of apparently influencing the roll of the dice to come up in a specific manner. However, due to methodological issues, such as participants rolling the dice by hand, the findings came under scrutiny. In the 1940s, the

Gibsons developed a motorized dice roller that kept participants from touching the dice directly. Over 30,000 trials, the results from this machine were also statistically significant.

This principal method of dice rolling continued for several decades, culminating in a post meta-analysis of dice rolling Micro-PK by Dean Radin. Radin, who examined over 52 separate investigators, found an overall significant finding of Micro-PK using dice rolling techniques (see also, Radin & Nelson, 2000).

## Random Number Generators



By the 1960s, in part influenced by Schmitt's work with precognition and using a random number generator to influence lights turning on or off, parapsychologists started experimenting with RNG equipment for the purpose of Micro-PK studies. These RNGs could guarantee no direct contact by the participant, and now the research focus was on participants making one light or switch come on more than random chance would allow. This type of Micro-PK research continued for several decades. More recently, a meta-analysis of several hundred studies conducted by Bosch, Stiencamp, and Boller (2006) found a small, but statistically significant effect of Micro-PK from the culmination of all of the previous Micro-PK work. Although these researchers claim that a file drawer effect could



account for these findings, the number of unpublished, insignificant studies necessary to negate the finding would have been very large.

### How Could the Mind Influence the Physical World?



The short answer to this question is that there is no formal answer at this time. However, several researchers have postulated a quantum mechanics model of PSI. Essentially, it is a known fact in physics that subatomic particles, when observed, will change their behavior. Without going into great detail, this is the root property that constitutes that an energy particle can be both a wave and a particle at the same time. Recent work by Radin has shown that participants paying attention to a classic double slit design for particle

physics significantly alters the degree to which particles show up within the double slit apparatus. Radin was also able to show that the effect was not due to any environmental changes, and was related to several psychological factors. (see Radin, 2006, for a review)

Long story short, there is initial evidence that PK represents some type of interaction of the brain with subatomic particles. However, much more research needs to be conducted to make this hypothesis an established theory.

### Biological Systems



Although not frequently discussed, several researchers over the decades have studied if praying for the sick actually has a significant effect. From the parapsychologist's perspective, this represents a form of Bio-PK, influencing the health of an individual from mental influence. Studies have been both significant and insignificant, leading to contrasting results. However, a more recent series of studies conducted by Astin, Harkenss, and Ernst in 2000 with strong methodological controls

showed significant health benefits for those being prayed for, without the participants being aware of who was and was not being targeted for prayer. The authors admit to some methodological



flaws, but this research certainly supports the theory that Bio-PK is a definitive possibility.

In a related vein of work, research has also been conducted on spiritual healers. Previous work has shown increased healing activity as a function of healer practices and research. Although criticized on various grounds, this work has generally found statistically significant effects from healing practices. In particular, Bengston (2010) and colleagues have demonstrated in the laboratory the ability to cure mice of cancer using a standard energy healing technique. Interestingly, the technique has demonstrated complete success, even when unbelievers, skeptics, and uninformed college students perform the healing technique, which does not involve any direct contact with the mice. Also notable is that the healing technique appears to spread to entire groups of mice, including mice in control conditions. William Braude has also conducted research and a meta-analysis over 37 various studies that attempt to affect the swimming pattern of fish, or biochemical processes in blood. His results have shown a significant overall effect.

Finally, approximately fifteen studies have been conducted on the ability of a person to sense that they are being stared at or watched intently. Overall, analysis of these studies show a small, but significant effect, suggesting that the uneasy feeling you get in a crowd might just be because of someone staring at you!

### Experimenter Effects



A growing concern within parapsychology, given the evidence of PK and PSI, is what is traditionally known as Experimenter Effects or expectancy effects. In psychology, it is common practice to be very careful how experimenters interact with participants in a study. Simple tone or body language can provide cues or unconsciously influence a participant to behave in a way that is not their natural mode of conduct. As a result, an experimenter can purposely or unconsciously affect the quality of their data.

Parapsychologists are more concerned with expectancy effects, particularly under the possibility that researchers are psychically influencing the outcomes of their participants and studies. Several psychologists are coming to believe that mood, belief, environment, and attitudes of all parties involved in PSI research can affect the outcome of the study. This explanation has also been posited as to why some phenomena studied in parapsychology do not replicate consistently. In essence, PSI occurs in a PSI-conducive environment. Evidence of this trend is apparent in ESP trials where skeptics actually do significantly worse than they should perform by chance (called PSI-missing). Other researchers have purposely paired together to conduct the exact same laboratory experiments. The difference is one researcher is a believer in PSI, whereas the other is not. The results have shown that the believer of PSI continues to generate statistically significant effects, while the skeptic of PSI, using the exact same protocol, continues to find no evidence of PSI (Palmer & Millar, 2015).