The Conscious Universe -- The Scientific Truth of Psychic Phenomena by <u>Dean Radin</u>.

Psychic Phenomena: Unquestionably Real

Dean Radin's *The Conscious Universe* forever lays to rest any question as to the experimentally demonstrated existence of at least some psychic (or "psi") phenomena. Using the statistical technique of meta-analysis, Radin methodically and forcefully examines the results from nearly a century of increasingly sophisticated experiments. Notwithstanding the possibility of thousands of researchers committing fraud in a massive decades-long conspiracy, or a complete misapplication and misunderstanding of meta-analysis, the existence of telepathy (mind-to-mind perception), clairvoyance (perception at distance), precognition (perception through time), psychokenesis (mind-matter interaction), and perhaps other psi phenomena (e.g., mental interactions with living organisms) is incontrovertible.

Now, a statement such as "forever lays to rest any question" may, to a careful audience, seem extreme. But that's just the point. If carefully read, Radin's thorough, relentless, and pointed volume will -- or should -- win over even the crustiest and most skeptical (but open-minded) mainstream scientist. The hows and whys of psychic phenomena remain unknown, but *whether* they occur is now settled. **Post-Radin, a refusal to accept the reality of psychic phenomena is itself** *prima facie* unscientific and untenable.

New Ideas are Accepted in Stages

In the Introduction, Radin describes how the acceptance of a new idea occurs in four stages.

First, skeptics "confidently proclaim that the idea is impossible because it violates the Laws of Science"; **second**, "skeptics reluctantly concede that the idea is possible but that it is not very interesting" and its effects are extremely weak:

third, the mainstream realizes the importance of the idea and "that its effects are much stronger and more pervasive than previously imagined"; and

fourth, those who were originally skeptical now "proclaim that they thought of it first."

With psi, we are currently in the most important and the most difficult of the four transitions -- from Stage 1 into Stage 2. While the idea itself is ancient, it has taken more that a century to demonstrate it conclusively in accordance with rigorous, scientific standards. This demonstration has accelerated Stage 2 acceptance, and Stage 3 can already be glimpsed on the horizon.

The book has 4 main parts:

Motivation, which discusses science, replication (or reproducibility), and meta-analysis; Evidence, where meta-analysis is applied to the various types of psi research, and the leveraging of skeptics' objections into continually improving experimental designs is described; Understanding, which presents a field guide to skepticism and skeptics, a discussion of why scientists can't "see" psi, and a comparison between "Orthodox 'Separateness' Science" and psi-friendly "Proposed 'Wholeness' Science"); and finally, Implications, a short discussion of psi theory and what it might all mean.

Motivation and Evidence constitute the heart of the book. From the beginning, Radin is clear that "persuasive scientific evidence for psi requires independently replicated, controlled experiments." If psi is real, the skeptics ask, then why can't it just be repeatedly, reliably demonstrated? The answer is two-fold: (1) although a "simple," large-effect, repeatable psi demonstration may not be possible on demand, the same thing is true of most truly interesting problems in science, and (2) with the application of meta-analysis, it becomes clear that various types of replicated psi effects have been unambiguously demonstrated. In fact, "when psi research is judged by the same

standards as any other scientific discipline, then the results are as consistent as those observed in the hardest of the hard sciences!"

Meta-Analysis: The Analysis of Analyses

Meta-analysis, the analysis of analyses, can be thought of as an integrative review or a "structured technique for exhaustively analyzing a complete body of experiments." Radin states that:

Meta-analysis has been described as 'a method of statistical analysis wherein the units of analysis are the results of independent studies, rather than the responses of individual subjects.' In a single experiment, the raw data points are typically the participants' individual responses. In meta-analysis, the raw data points are the results of separate *experiments*.

Thus, "by combining thousands of people's performances over hundreds of experiments, we can obtain very high levels of confidence about the existence of psi." Put another way, "when we combine results of many similar studies to form the equivalent of a single, grand experiment conducted by many experimenters, from many locations, over many years, we also substantially increase our confidence in the outcome. Meta-analysis has exploded in popularity because behavioral, social, and medical sciences needed a "method of formally determining whether the highly variable effects measured in their experiments were replicable." Since data from similar but not identical experiments are combined, some reevaluation of the original data is needed. This leads to criticisms of mixing apples and oranges (which is fine if what you're after is facts about *fruit*), and the "file drawer problem," which insinuates that many unsuccessful experiments go unpublished, siting in file drawers and skewing results.

A comparison to aspirin studies is useful. Individual studies on aspirin reducing heart attacks were not very persuasive, but when many studies were combined, the aspirin effect was declared to be real. This, says Radin, is exactly what meta-analysis has done for psi experiments. Considered individually, some psi experiments have been successful but the effects did not appear to be easily repeatable. This uncertainty has fueled the skeptics' doubt for over a century. But when studies are combined, there is no doubt that the psi effects are real.

Meta-Analysis Applied To Psychokinesis

As one of the clearest examples of psi meta-analysis, consider random number generator (RNG) experiments, sometimes called "micropsychokinesis," where subjects attempt to "will" the generation of more "1s" than "0s" (chance predicts equal numbers). Radin sets the stage:

Today, most RNG experiments are completely automated, including the presentation of instructions, the provision of feedback on a trial-by-trial basis, and data storage and analysis Most RNGs are technically highly sophisticated, employing features such as electromagnetic shielding, environmental fail-safe alarms, and fully automated data recording.

The results? A 1987 meta-analysis looking at 832 studies (597 experimental and 235 controls) showed overall odds against chance beyond a trillion to one. When skeptics rated the various experiments, observed hit rates were unrelated to experimental quality. As for the "file drawer" problem, "the number of unreported or unretreived RNG studies required to reduce the RNG psi effect to a non-significant level was 54,000 -- about ninety times the number of studies actually reported."

The Bottom Line

The meta-analyses presented for the other types of psi research are similarly impressive. As a consequence, "Informed opinion even among skeptics, shows that virtually all the past skeptical arguments against psi have dissolved in the face of overwhelming positive evidence," and "informed skeptics today agree that chance is no longer a viable explanation for the result obtained in psi experiments." Only time will tell, however, if the scientific establishment's acceptance of psi will really be this simple and inevitable.

The Conscious Universe is not without its problems. The book could have stood more editing: at times it rambles, is overly repetitious, or seems insufficiently integrated. Moreover, when Radin gets into subject matters that are not his expertise — he says some things about physics and mysticism that Ken Wilber, in Quantum Questions: Mystical Writings of the World's Great Physicists (1984), shows are patently not so — he occasionally falters. Nonetheless, this extraordinarily important, watershed volume should be read by every serious student of the human mind, and put into the hands of anyone who insists that "there isn't a shred of evidence for psychic phenomena." That's just not true any more.