

EDWIN C. MAY

Edwin C. May spent the first part of his research career in his chosen Ph.D.-degreed discipline, Low Energy, Experimental Nuclear Physics, which he earned in 1968 at the University of Pittsburgh. Before leaving that career he had published 16 papers in the peer-reviewed physics literature including his report of the first measurement of the singlet state of the deuteron which appeared in the prestigious journal *Physical Review Letters*.



He became interested in serious research of parapsychological phenomena in 1975 when he joined the on-going U.S. Government-sponsored work at SRI International (formerly called Stanford Research Institute—a research organization then associated with Stanford University). In 1985, he became that program's director, but in 1991, he shifted the effort to Science Applications International Corporation, another US Defense Contractor. The overall program is now known as STAR GATE and its primary mission was to gather intelligence against our enemies during the cold war for various military and intelligence community organizations. These included: the Central Intelligence Agency (CIA), the Defense Intelligence Agency (DIA), the intelligence arms of the army, navy, air force, and marines. In addition, the clients included the US Secret Service, the Department of State and the Department of Justice including the Federal Bureau of Investigation (FBI). While the primary mission of STAR GATE was to gather intelligence, Dr. May was given the responsibility of developing intelligence assessment tools, assessing foreign threats, and providing research in support of the overall mission. This research included proof-of-principle studies for extremely low observable communications systems and putative effects of mind-over-matter in order to disrupt guidance systems of in-coming enemy missiles, to name a few. Most all of the research was classified until 1989, and the existence of the program was finally declassified in 1995.

His association with government-sponsored parapsychology research ended in 1995, when the STAR GATE program was closed.

When the research was finally declassified in 1989, Dr. May was able to publish ground-breaking results and theories in the peer-reviewed literature — the latest of which appeared in an abstracted medical journal.¹ More recently Dr. May and his associates have made substantial progress toward developing a physic model to understand how it is possible to gain information from a random, unrealized future and non-inferential event. This model, which has appeared in the peer-reviewed literature, is based upon the well-known physics principle called the 2nd Law of Thermodynamics which informs us how our perception of time goes in one direction only; whereas, the underlying physics is insensitive to the direction of time.

To learn more about the STARGATE era and the research since then, including the complete set of publications, please visit www.LFR.ORG.

Dr. May's approach has earned him an international reputation for his research rigor and excellence even though the topic is considered controversial. He recently was honored to give a public talk about intelligence collection at the World War II famous site, Bletchley

¹May, Paulinyi & Vassy (2005). Anomalous Anticipatory Skin Conductance Response to Acoustic Stimuli: Experimental Results and Speculation About a Mechanism. *The Journal of Alternative and Complementary Medicine*. **11**, **4**, 695-702.

Park, in the UK. His technical presentations mostly to skeptical audiences, have been accepted worldwide where the venues include, Harvard University, the Universities of California at Los Angeles and at Davis, Stanford University, the University of Edinburgh, Trinity College—Cambridge, Eötvös Loránd University in Hungary, the University of Stockholm, and Imperial College London to name but a few.

More recently he has been invited twice to lecture to the Strategic Study Group the director of which, reports directly to the Chief of Naval Operations (CNO). Located at the Naval War College in Newport, RI, this program has contributed leading-edge ideas some of which have been incorporated into management of the US Navy and Marines. More information about the SSG can be found at www.usnwc.edu/About/Chief-Naval-Operations-Strategic-Studies-Group.aspx.

In managing complex, interdisciplinary research projects for the US federal government since 1985, Dr. May has presided over 70% of the funding (\$22 M) and 85% of the data collection for the government's 22-year involvement in parapsychological research. His responsibilities included fund raising, personnel management, project administration and planning, and he was the guiding force for and active in the technical research program.

Currently, Dr. May is the Executive Director of the Cognitive Sciences Laboratory, which now resides within the Laboratories for Fundamental Research. Since its founding in 1996, 13 of 17 research proposals to private foundations have been supported.

He accumulated over 12 years' experience in experimental nuclear physics research, which included the study of nuclear reaction mechanism and nuclear structure. Dr. May's accelerator experience includes a variety of tandem Van de Graaff generators and cyclotrons operating under 50 million electron volts. Other specialized experience includes four years of γ -ray spectroscopy, one year of trace-element analysis (x-ray, and α -particle techniques), numerical analysis, Monte Carlo techniques, digital signal processing, and cardiac blood flow research. In addition, he has conducted physiology research through the careful investigation of the efficacy of biofeedback in a clinical setting.

Dr. May is fluent in a variety of 3-G and 4-G computer languages including C, FORTRAN, IDL, Visual Basic, Matlab, SQL and various machine codes,

His Dissertation was *Nuclear Reaction Studies via the (p,pn) Reaction on Light Nuclei and the (d,pn) Reaction on Medium to Heavy Nuclei*. B. L. Cohen, advisor, University of Pittsburgh, Pittsburgh, PA (1968). He is the author or co-author of a large number of papers, reports, proposals and presentations from both of his career activities, where are available upon request.

Dr. May's extensive technical and experimental knowledge has allowed him to apply these techniques to the study of parapsychological phenomena from the utmost critical, detailed, and reductionist perspective in accordance with the rules of the scientific method. This approach has contributed to his and his colleagues' success.

The Parapsychological Association, an affiliate member of the American Association for the Advancement of Science, granted him the Outstanding Achievement Award in 1996 for his contribution and research excellence, and the Association presented him the Outstanding Career Achievement award in 2007. He was President of The Parapsychological Association in 1997 and has served often on its Board of Directors.

Bibliography

Books

1. May, E. C., Rubel, V., & Auerbach, L. (2014). *ESP wars – East and West: An account of the military use of psychic espionage as narrated by the key Russian and American players*.
2. May, E. C. & Marwaha, S. B. (Eds.) (2014). *Anomalous Cognition: Remote Viewing Research and Theory*. Jefferson, NC: McFarland.
3. May, E. C. & Marwaha, S. B. (2015). *Extrasensory perception: Support, Skepticism, And Science, Volume I — History, controversy, and research*. Praeger Publications.
4. May, E. C. & Marwaha, S. B. (2015). *Extrasensory perception: Support, skepticism, and science, Volume II — Theoretical frameworks*. Praeger Publications.
5. May, E. C., & Marwaha, S. B. (in preparation). *The Star Gate archives. Volume 1 and 2*.

Papers

1964

1. May, E. C., & Kahle, A. B. (1964). On the satellite determination of high-altitude water vapor. *Journal of Geophysical Research*, 69(19), 4141-4143.

1967

2. Cohen, B. L., & May, E. C. (1967). Detection of the singlet deuteron (d') and the reaction $\text{Be}^9(\text{p},\text{d}')\text{Be}^8$. *Physical Review Letters*, 18(22), 962-965.
3. May, E. C., Cohen, B. L., & O'Keefe, T. M. (1967). Deuteron disintegration by Au, Rh, Cu, and C from 8 to 15 MeV. *Physical Review*, 164(4): 1253-1256.

1969

4. Cohen, B. L., May, E. C., O'Keefe, T. M., & Fink, C. L. (1969). Singlet deuterons (d) from (p,d) reactions. *Physical Review*, 179, 962-971.

1970

5. Lewis, S. A., May, E. C. & Moorehead, J. B. (1970). A Fortran nuclidic-mass table with self modification feature. *Nuclear Instruments and Methods* 87(1970) 133-134.

1972

6. Bond, P. D., May, E. C. & Jha, S. (1972). Coulomb excitation of ^{99}Tc . *Nuclear Physics A*, 179(2), 389-400.
7. Jha, S., Peek, N. F., Knox, W. J., & May, E. C. (1972). Decay of ^{125}Cs , ^{127}Cs , and ^{129}Cs . *Physical Review C*, 6, 2193-2200.
8. May, E. C. & Lewis, S. A. (1972). Reaction $^{86}\text{Kr}(\text{d},^3\text{He})^{85}\text{Br}$. *Physical Review C*, 5(1), 117-119.

1975

9. Honorton, C., & May, E. C. (1975). Volitional control in a psychokinetic task with auditory and visual feedback. In J. D. Morris, W. G. Roll, & R. L. Morris (Eds.), *Research in parapsychology 1975* (pp. 90-91). Metuchen, NJ: Scarecrow.
10. May, E. C. & Honorton, C. (1975). A dynamic PK experiment with Ingo Swann. In J.D. Morris, W.G. Roll, & R.L. Morris (eds.). *Research in parapsychology*. 1975 (pp.88-89). Metuchen, NJ: Scarecrow Press.

1976

11. May, E. C. (1976). PSIFI: A physiology-coupled, noise-driven random generator to extend PK studies. In J. D. Morris, W. G. Roll, & R. L. Morris (eds.), *Research in parapsychology*, (pp. 20-22). Metuchen, NJ: Scarecrow Press.
12. Targ, E., Puthoff, H. E. & May, E. C. (1976). EEG correlates to remote stimuli under conditions of sensory shielding, *Bulletin of the APS*, 21 (1976), 1306.
13. May, E. C., & Bonewits, I. (1976). Psychic bull in India: A search for the miraculous in India reveals perceptual paradoxes, some fascinating frauds, and possible the real thing. *Psychic*, VII, 4, 56-61

1977

14. May, E. C., Targ, R., & Puthoff, H. E. (1977, April 19-21). Possible EEG correlates to remote stimuli under conditions of sensory shielding. *Paper presented at the Electro 77, Professional program of the IEEE*, New York, NY.
15. Targ, R., Puthoff, H.E., & May, E.C. (1977). State of the art in remote viewing studies at SRI. 1977 *Proceedings of the International Conference of Cybernetics and Society* (pp.519-529).

1978

16. Targ, R., Puthoff, H. E., & May, E. C. (1978). Direct perception of remote geographical locations. In Charles Tart (Ed.) *Mind at large*, New York: Praeger.

1979

17. Puthoff, H. E, Targ, R. and May, E C. (1979). Experimental psi research: Implications for physics. *Presented at the 145th National Meeting of the American Association for the Advancement of Science*. Houston, TX.

1981

18. Puthoff, H. E., Targ, R., & May, E. C. (1981). Experimental psi research: Implications for physics. In R. G. Jahn (Ed.) *The role of consciousness in the physical world*. Boulder, Co: Westview.

1983

19. May, E. C. (1983). Psychokinesis research at SRI. In *Proceedings: Symposium on Applications of Anomalous Phenomena*. November-December. Leesburgh, VA.

1985

20. Radin, D. I., May, E. C., & Thomas, M. J. (1985). Psi experiments with random number generators: Meta-analysis, Part-I. In D. H. Weiner and D. I Radin (eds.), *Research in parapsychology 1985* (pp. 14-17), Methuchen, NJ: Scarecrow Press.

21. May, E. C., Humphrey, B. S., & Mathews, C. (1985). A figure of merit analysis for free-response material. *Proceedings of the 28th Annual Convention of the Parapsychological Association*, (pp.343-354).
22. Utts, J. M. & May, E. C. (1985). An exact method for combining p-values, *Proceedings of Presented Papers. The Parapsychological Association 28th Annual Convention*, Tufts University, Medford, MA, pp.431-439 (August 1985).

1986

23. Radin, D. I., & May, E. C. (1986). Testing the intuitive data sorting model with pseudorandom number generators: A proposed method. *Proceedings of Presented Papers: The Parapsychological Association 29th Annual Convention*, 539-554.
24. May, E.C., Radin, D. I., Hubbard, G. S., Humphrey, B. S., & Utts, J. M. (1986). Psi experiments with random number generators: An informational model. In D. H. Weiner & Rodin (Eds.), *Research in parapsychology 1985* (pp. 119-120). Metuchen, NJ: Scarecrow Press.
25. Hubbard, G. S. & May, E. C. (1986). Aspects of Measurement and Applications of Geomagnetic Indices and Extremely Low Frequency Electromagnetic Radiation for use in Parapsychology. *Proceedings of Presented Papers: The 29th Annual Convention of the Parapsychological Association*. pp. 521–535 (1986).
26. Hubbard, G. S., & May, E. C. (1986). Aspects of measurement and applications of geomagnetic indices and extremely low frequency electromagnetic radiation for use in parapsychology, *Proceedings of Presented Papers, The Parapsychological Association 29th Annual Convention*, Sonoma State University, California, pp. 519-536, (August 1986).
27. May, E. C., Radin, D., Hubbard, S., Humphrey, B., & Utts, J. (1986). Psi experiments with random number generators: An informational model. *Research in Parapsychology*, 1985. Scarecrow Press.
28. Radin, D. I., & May, E. C. (1986). Testing the intuitive data sorting model with pseudorandom number generators: A proposed method. *Proceedings of Presented Papers: The Parapsychological Association 29th Annual Convention*, 539-554.

1988

29. *Walker, E. H., May, E. C., Spottiswoode, S. J. P., Piantanida, T. (1988). Testing Schrodinger's Paradox with a Michelson Interferometer. *Physics B*, 151, 339-348.
30. May, E. C., & Spottiswoode, S. J. P. (1988). A Michelson-Interferometer Schrödinger Cat: The Death of the Observational Theories. *Proceedings of the Parapsychological Association 31st Annual Convention*, Montreal (1988).
31. Humphrey, B. S., May, E. C., & Utts, J. M. (1988). Fuzzy set technology in the analysis of remote viewing. *Proceedings of the 31st Annual Convention of the Parapsychological Association* (pp.378-394).

1990

32. *May, E. C., Utts, J. M., Humphrey, B. S., Luke, W. L. W., Frivold, T. J., & Trask, V. V. (1990). Advances in remote-viewing analysis. *Journal of Parapsychology*, 54, 193–228.
33. May, E. C., Luke, W. L. W., Trask, V. V., & Frivold, T. J. (1990). Observation of neuromagnetic fields in response to remote stimuli. *Proceedings of Presented Papers of*

the Parapsychological Association 33rd Annual Convention, pp.161-185, National 4-H Center, Chevy Chase, MD.

1992

34. May, E. C., & Vilenskaya, L. (1992). Overview of current parapsychology research in the former Soviet Union. *Subtle Energies*, 3, 45-67.

1993

35. May, E. C., & Vilenskaya, L. (1993). Some Aspects of Parapsychological Research in the Former Soviet Union, *Proceedings of the 36th Annual Convention of the Parapsychological Association* (Toronto, Canada, August, 1993), pp. 57-74.
36. May, E. C. (1993). Technology: A mixed blessing for modern psi research. In L. Coly & J. D. S. McMahon (Eds.), *Psi research methodology: A re-examination*. (pp. 128-148). New York: Parapsychology Foundation.

1994

37. *May, E. C., Spottiswoode, S. J. P., & James, C. L. (1994). Shannon entropy: A possible intrinsic target property. *Journal of Parapsychology*, 58, 384-401.
38. *Lantz, N. D., Luke, W. L. W., & May, E. C. (1994). Target and sender dependencies in anomalous cognition experiments. *Journal of Parapsychology*, 58, 285-302.
39. May, E. C. & Vilenskaya, L. (1994). Some aspects of parapsychological research in the former Soviet Union. *Subtle Energies*, 3, 1-24.
40. *May, E. C., Spottiswoode, S. J. P., & James, C. L. (1994). Managing the target-pool bandwidth: Possible noise reduction for anomalous cognition. *Journal of Parapsychology*, 58(3), 303-13.
41. Vilenskaya, L. & May, E.C. (1994). Anomalous mental phenomena research in Russia and the former Soviet Union: A follow up. *Proceedings of Presented Papers: The Parapsychological Association 37th Annual Convention*, 398-410.

1995

42. May, E. C. (1995). AC technical trials: Inspiration for the target entropy concept. *Proceedings of the 38th Annual Parapsychology Association*, pp. 193-211.
43. *May, E. C., Spottiswoode, S. J. P., Utts, J. M., & James, C. L. (1995). Applications of decision augmentation theory. *Journal of Parapsychology*, 59, 221-250.
44. *May, E. C., Utts, J. M., & Spottiswoode, S.J. P. (1995). Decision augmentation theory: Toward a model of anomalous mental phenomena. *Journal of Parapsychology*, 59, 195-220.
45. May, E. C., Utts, J. M., & Spottiswoode, S. J. P. (1995). Decision augmentation theory: Applications to the random number generator database. *Journal of Scientific Exploration*, 9(4), 453-488.
46. Vilenskaya, L., & May, E. C. (1995). Anomalous mental phenomena research in Russia and the former Soviet Union: A follow up. *Subtle Energies*, 4(3), 231-250.

1996

47. May, E. C. (1996). The American Institutes for Research review of the Department of Defense's STAR GATE program: A commentary. *Journal of Scientific Exploration*, 10, 89-107
48. *May, E. C. (1996). The American Institutes for Research Review of the Dept. of Defense's STAR GATE Program: A Commentary. *Journal of Parapsychology*, 60(1), 3-23.
49. *May, E. C., Lantz, N. D., & Piantineda, T. (1996). Feedback considerations in anomalous cognition experiments. *Journal of Parapsychology*, 60(3), 211-226.

1997

50. *Spottiswoode, S. J. P., & May, E. C. (1997). Anomalous cognition effect size: Dependence on sidereal time and solar wind parameters. *Proceedings of the Parapsychological Association 40th. Annual Convention, Brighton, United Kingdom.*

1999

51. May, E. C. (1998). Response to Experiment One of the SAIC remote viewing program: A critical evaluation. *Journal of Parapsychology*, 62, 309-318.

2000

52. May, E. C. (2000). Challenges for healing and intentionality research: Causation and information. *Paper presented at the Science and Spirituality of Healing, Old Salem, NC.*
53. May, E. C. (2000). ESP and the brain. *Paper presented at the Third Symposium of the BIAL Foundation. Behind and beyond the brain. Exceptional experiences (pp. 321-352). The BIAL Foundation, Portugal, 2000.*
54. *May, E. C. Spottiswoode, J., & Faith, L. V. (2000). A search for alpha power changes associated with anomalous cognition. *Proceedings of the International Society of Psychophysiology, Sydney, Australia.*
55. May, E. C., Spottiswoode, S. J. P., & Faith, L. V. (2000). Correlation of the gradient of Shannon entropy and anomalous cognition: Toward an AC sensory system. *Journal of Scientific Exploration*, 14(1), 53-72.

2001

56. Radin, D., & May, E. C. (2001). Evidence for a retrocausal effect in the human nervous system. *Proceedings of Presented Papers: The Parapsychological Association 44th Annual Convention, New York.*
57. *May, E. C., & Spottiswoode, J. P. (2001). Methodological issue in the study of correlation between psychophysiological variables. *Proceedings of the Parapsychological Association 44th Annual Convention, New York.*
58. May, E. C. (2001). Obituary - Laura V. Faith (a.k.a. Larissa Vilenskaya) 1948-2001. *Journal of Parapsychology*, 65(3), 311-312.
59. May, E. C., & Spottiswoode, S. J. P. (2001). Global Consciousness Project: An independent analysis of the 11 September 2001 events. *Unpublished paper.*
60. May, E. C. (2001). Towards a physics of psi: Correlation with physical variables. *European Journal of Parapsychology*, 16, 41-61.

2003

61. May, E. C. (2003). Challenges for healing and intentionality research: Causation and information. In W. B. Jonas & C. C. Crawford (Eds.), *Healing Intention and Energy Medicine: Science, Research Methods and Clinical Implications* (pp. 283-291). New York: Churchill Livingstone.
62. May, E. C., & Spottiswoode, S. J. P. (2003). Skin conductance response to future audio startle stimuli. *Paper presented at the Parapsychological Association 46th Annual Convention, Vancouver, Canada.*
63. *Spottiswoode, S. J. P., & May, E. C. (2003). Skin conductance prestimulus response: Analyses, artifacts and a pilot study. *Journal of Scientific Exploration, 17*(4), 617-641.

2004

64. *McMoneagle, J. W., & May, E. C. (2004). The possible role of intention, attention and expectation in remote viewing. *Paper presented at the Annual Convention of the Parapsychological Association, Vienna, Austria.*

2005

65. *May, E. C., Paulinyi, T., & Vassy, Z. (2005). Anomalous anticipatory skin conductance response to acoustic stimuli: Experimental results and speculation upon a mechanism. *Journal of Alternative and Complementary Medicine, 11*(4), 695-702.

2007

66. *May, E. C. (2007). Advances in anomalous cognition analysis: A judge-free and accurate confidence-calling technique. *Paper presented at the Annual Conference of the Parapsychological Association, Winchester, UK.*
67. *May, E. C. (2007). Facing the challenges of parapsychology. *Acceptance speech on receiving the Career Achievement Award from the Parapsychological Association, 2007 Utrecht.*
68. May, E. C., Broughton, R., & Vassy, Z. (2007). Effect of different response encoders on success rate in a judge-free anomalous cognition experiment. *Practical presented to: European Parapsychological Association, Paris, France, 26-28 October 2007.*
69. *May, E. C., & Spottiswoode, S. J. P. (2007). Anomalous anticipatory effects in the human autonomic nervous system. *Unpublished paper.*
70. May, E. C. (2010). Guest Editorial - Technical challenges for the way forward. *Journal of Parapsychology, 74*(2), 211.
71. *May, E. C., & Lantz, N.D. (2010). Anomalous cognition technical trials: Inspiration for the target entropy concept. *Journal of the Society for Psychical Research, 74*, 225-243.
72. May, E. C., Spottiswoode, S. J. P., & Faith, L. V. (2010). A methodological issue in the study of correlation between psychophysiological variables. *European Journal of Parapsychology, 25*, 5-24.
73. May, E. C. Anomalous cognition: A replication and correlation with the gradient of Shannon entropy. (Unpublished paper).

2011

74. May, E. C. (2011a). Possible thermodynamic limits to anomalous cognition: Entropy gradients. *Journal of the Society for Psychical Research, 75.2*(903), 65-75.

75. *May, E. C. (2011b). Toward a classical thermodynamic model for retro-cognition. In D. Sheehan, P. (Ed.), *Quantum Retrocausation: Theory and Experiment* (pp. 297-307). Melville, NY: American Institute of Physics.
76. *May, E. C., Marwaha, S. B., & Chaganti, V. (2011). Anomalous cognition: Two protocols for data collection and analyses. *Journal of Society for Psychical Research*, 905, 191-210.
77. *May, E. C., & Spottiswoode, S. J. P. (2014/2011). The Global Consciousness Project: Identifying the source of psi. *Journal of Scientific Exploration*, 25(4), 663-682.

2012

78. May, E. C. (2012). PsiSpy: Recollections from a psychic spying program. In S. Kakar & J. J. Kripal (Eds.). *Seriously strange: Thinking anew about psychical experiences*. New Delhi: Penguin. (pp. 87-125).
79. *May, E. C., Faith, L. V., Blackman, M., Bourgeois, B., Kerr, N., & L. Woods (2012). A target pool and data base for anomalous cognition experiments. *Journal of Society for Psychical Research*, 76.2(907), 94-102.

2014

80. May, E. C. (2014). STAR GATE: The U.S. Government's psychic spying program. *Journal of Parapsychology*, 78(1), 5-18.
81. May, E. C., Hawley, L., Chaganti, V. K., & Ratra, N. (2014). Natural anomalous cognition targets: A fuzzy set application. *Journal of Parapsychology* (Fall).

2015

82. Marwaha, S. B., & May, E. C. (2015). Multiphasic model of precognition. In E. C. May and S. B. Marwaha (Eds.). *Extrasensory perception: Support, skepticism, and science, Volume II — Theoretical frameworks*. Praeger Publications.
83. May, E. C. (2015). Experimenter psi: An expanded view of decision augmentation theory. In E. C. May and S. B. Marwaha (Eds.). *Extrasensory perception: Support, skepticism, and science, Volume II — Theoretical frameworks*. Praeger Publications.
84. May, E. C. (2015). Entropy and precognition: The physics domain of the multiphasic model of precognition. In E. C. May and S. B. Marwaha (Eds.). *Extrasensory perception: Support, skepticism, and science, Volume II — Theoretical frameworks*. Praeger Publications.

In-preparation

85. Marwaha, S. B., & May, E. C. (under review). A critical analysis of the dualist perspective in psi.
86. Marwaha, S. B., & May, E. C. (under review). Rethinking extrasensory perception: Towards a multiphasic model of precognition.