# Extrasensory Perception-Pseudoscience? <br> <br> A Battle at the Edge of Science 

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Its silver surface gleamed in the light coming in from the window as it rested in the center of the table. If you looked directly across the table, you could just make out Eliza sitting perfectly still at one end staring at it, her nose resting on the tabletop. Eliza, who usually couldn't sit still for 10 minutes, was now completely frozen. If it weren't for the fact that she was sitting in an incredibly odd position or her attentive eyes, one might have mistaken her for being asleep. Eliza was far from sleep. She was wide awake and concentrating fully upon the silver spoon in the middle of the table.
"Eliza? Eliza, where are you?" Eliza's mother Jean came into the dining room. Startled by her daughter's stillness, Jean reached down to touch her.
"Eliza, honey, are you ok?"
"Shhhhh," Eliza whispered, refusing to move from her position.
"Eliza, what on earth are you doing?" her mother exclaimed, growing tired of her daughter's antics.
Eliza refused to respond. Maybe if she didn't talk to her mother she would leave her alone and let her get back to work. But Eliza's silence only infuriated her mother.
"Eliza, answer me!" Jean exclaimed as she grabbed the spoon from the table.
"Nooooo," Eliza squealed, leaping up from the table.
"What are you doing?" her mother demanded, holding the spoon out of her daughter's reach.
Eliza began to jump up in an attempt to retrieve the spoon.
"I'm going to make it move, or at least I was until you took it away."
"What?" her mother replied in confusion.
Eliza stopped jumping long enough to explain.
"I'm going to make it move. Matilda could do it, she moved lots of things. I can do it too. You just have to let me concentrate!"

Eliza was referring to the title character from the book Matilda by Roald Dahl, a little girl who had the ability to move objects with her mind just by focusing on them.

After a moment's hesitation, Jean returned the spoon to its position on the table.
"Thanks," was all Eliza managed to get out before resuming her position.
Jean watched her daughter sink back into concentration and then slowly backed out of the dining room. As she did, she bumped into her husband Ralph.
"Jean, is something wrong?" he asked.
"Oh, Ralph! I didn't see you there!"

Jean reached up to Ralph's shoulders and, laughing slightly, guided him back into the kitchen. Although she could deal with her daughter's eccentric behavior, she knew Ralph wouldn't allow it. They managed to get into an argument every week when Ralph found Jean reading her horoscope. "Such nonsense," he would say. Jean really wanted to keep him out of Eliza's experiment for now. She knew it wouldn't last long, none of Eliza's phases did, but she could at least let her have some fun. It was good for her.
"What is Eliza doing in there?" Ralph asked, aware of Jean's attempts to hide it from him.
"Oh nothing, she's just reading."
"But, then where's her book?" Ralph asked
"She's just playing," Jean said in response, trying to get Ralph to lose interest.
"Playing? It looks more like she's being punished. She's just sitting there."
Before Jean could say anything more, Ralph squeezed past her into the dining room.
"Eliza, what are you doing?" Ralph demanded.
"Daaadd, be quiet," Eliza whined.
"What!?" Ralph's voice rose in response to the tone of his daughter's voice.
"Ralph, come here. I'll explain," Jean said, guiding her husband back into the kitchen. Jean tried to make Eliza's behavior sound as normal as possible, hoping her husband would just see it as a game, something to amuse Eliza for a while before she got bored of it. But Ralph did not take it so lightly. He saw this as "more of the same nonsense" that was overtaking his house.
So, it was beginning, another monumental argument in the McCloud household. Jean was really dreading this one. She knew it would turn into another one of Ralph's condescending speeches, where his professional title, Ralph McCloud Professor of Organic Chemistry, would loom over the entire discussion. Jean had dubbed them Ralph's "holier than thou" speeches whenever she complained to her friends. She wasn't going to let Ralph immediately put her down with his scientific jargon. She figured if she could at least postpone the discussion long enough to jump on the Internet, she could find some information to back herself up.
"Ralph, honey, I know what you're going to say, but I don't have the time to argue about this right now. I have to get dinner started. But as soon as we're done with dinner, I promise you we'll discuss this."
Jean guided Ralph out of the kitchen, being careful not to let him get a word in. She leaned against the door and took a deep breath once he was out of sight. Then she rushed to the computer. They could eat leftovers tonight.

Jean had managed to convince Eliza to interrupt her efforts long enough for dinner. However, right after dinner, Eliza resumed her position, giving Ralph and Jean time to talk.
"Ok, Jean, I know you want to have a reasonable discussion about this, but I'm telling you right now there's no way you're going to convince me that telepathy and clairvoyance exist."
"I know I'm not going to be able to convince you, Ralph, but I would like you to just consider the possibility that people can read minds, that people can move things with their minds. There are a lot of things out there that can't be explained. Who's to deny that one of the reasons for that is that people have extrasensory perception? Moreover, what is the harm in our daughter determining for herself whether or not it exists?"

Ralph eyed his wife. "Jean, there is scientific proof for everything that happens. There are reasonable, logical explanations for everything. The only problem lies in the fact that people aren't educated enough to understand those reasons. And that's when pathetic ideas like ESP take hold, and it is those kinds of ideas we do not need filling our daughter's mind."
"Ok, ok. But what about all of the experiments that have been conducted that show that ESP can exist? Are you just going to ignore all of the work J.B. Rhine did, all of the tests he conducted? What about the Ganzfeld procedure, where six of the 10 studies had positive results for telepathy?"
Jean was surprised at how much she was getting into this conversation, and she was pretty proud of herself for remembering all of that information.
"No, Jean, I am not going to ignore any of those experiments."
Ralph was getting incredibly annoyed with the conversation and was not afraid to show it.
"Rather, I'm going to acknowledge all of the studies that have been done, including the hundreds that have shown no positive results and have been conveniently ignored. How about you show me an example of an experiment that upholds the crucial scientific principles. Show me an experiment that has been conducted that has positive results and can be repeated. Show me an experiment that has not been influenced by human bias."

Ralph paused for effect and then continued: "Jean, there are hundreds of fundamentals that have to accompany an experiment before you can go around declaring that something exists."

Jean felt frustrated. She didn't know enough. She couldn't prove her husband wrong. But she believed that he was wrong. She wasn't going to give up. It would take a lot more than a couple of scientific principles to convince her otherwise. Luckily, there was a sound in the background that cut their conversation short for the time being. It was a soft clink of some metal object falling on their dining room table. It sounded just like a spoon.

## Questions

1. Define the following terms: (a) ESP; (b) telepathy; (c) clairvoyance; (d) precognition; and (e) psychokinesis.
2. Who is J.B. Rhine? What experiments did he conduct and what did he bring to the studies of ESP?
3. What is the Ganzfeld procedure? What does it test for? What were the results of the Ganzfeld procedure?
4. What are the general criticisms of ESP? Why do scientists criticize many of the studies that have been conducted?
5. How do humans obtain information; i.e., what sense organs do we have to obtain information? How can we be sure that a person is not using these normal channels to accomplish what appear to be miraculous things?
6. Suppose we have a person who claims to have ESP. How could you possibly test such a claim and be absolutely certain that the person was not using trickery?

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