

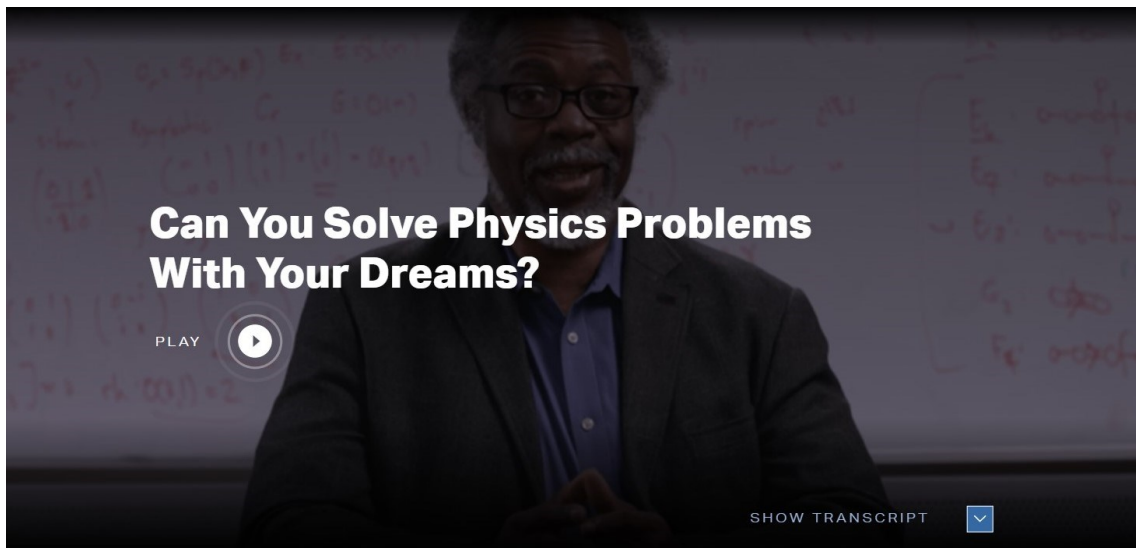
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# Can You Solve Physics Problems With Your Dreams?

Dr. James Gates, Director of the Brown Theoretical Physics Center, encountered an unsolvable problem in physics called the Unequal Force Super Gravity.

DATE PUBLISHED  
February 10, 2022

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Dr. James Gates, Director of the Brown Theoretical Physics Center, encountered an unsolvable problem in physics called the Unequal Force Super Gravity. For 14 years it was unsolvable, until Dr. Gates literally dreamed of the solution one night. Dr. Gates believes science can discredit the extraordinary too quickly, and that creativity at its deepest level can almost feel divine.

Featured Scholar:

Dr. S. James Gates, Jr. is a theoretical physicist at Brown University. He specializes in supersymmetry, supergravity, and superstring theory.

## VIDEO TRANSCRIPT

### ENGLISH

If you have a problem, you have to first of all have to have a kind of intuition that the solution can be found if it something that is of deep, emotional importance to me. That I've learned that there is another part of my brain that will continue to work on the problem, and if I'm lucky, it's like it presents an answer to me.

There's a problem in my field called Unequal Force Super Gravity is the technical term. It had been around about 14 years, unsolved. And I had 2 graduate students looking to do a PhD thesis, so I gave them a problem. Said "here's what I know about the problem. It's unsolved. It'll make a great thesis, and I have an intuition it can be solved."

And then I had a dream one night. And the answer appeared in the dream. I went into the office the next day and wrote on the blackboard "these are the things you need to check." About two weeks later they came back to me and all the things I said were valid mathematically, were valid, were verified by independent calculations.

There is this deep, subconscious desire over which our rational, logical platform functions. The fact that I had this strange interaction between parts of mine make me very conscious that emotional-rational part is there, and that it actually is of extraordinary value. Creativity, uh, when you experience it at its deepest levels, looks like it comes from someplace else.

## SPANISH

Si tienes un problema, primero que nada, debes tener algún tipo de intuición de que se puede hallar la solución si es algo de importancia emocional y profunda. Aprendí que hay otra parte de mi cerebro que continúa trabajando en el problema y, si tengo suerte, es como si me presentara una respuesta.

Hay un problema en mi campo llamado Supergravedad de fuerza desigual, ese es el término técnico. Existe desde hace 14 años y nadie lo pudo resolver. Tenía dos estudiantes de posgrado que buscaban hacer la tesis de doctorado, entonces les di un problema. Les dije: "Esto es lo que yo sé sobre el problema. No ha sido resuelto. Sería una gran tesis y tengo la intuición de que puede ser resuelto".

Y una noche, tuve un sueño. Y la respuesta apareció en el sueño. Fui a la oficina al día siguiente y escribí en el pizarrón: "Estas son las cosas que hay que revisar". Unas dos semanas después, volvieron, y todas las cosas que yo había dicho que eran válidas matemáticamente, eran válidas, fueron verificadas a través de cálculos independientes.

Existe este deseo subconsciente profundo sobre el que funciona nuestra plataforma racional y lógica. El hecho de que tuve esta extraña interacción entre estas partes me hace ser consciente de que la parte emocional está ahí, de que realmente tiene un valor extraordinario. La creatividad... cuando la experimentas en sus niveles más profundos, parece que proviene de otro lado.



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