Antique sofa finds balance through robotics

By Michelle Starr | August 28, 2013
A 170-year-old sofa is able to balance upright on a single leg thanks to orientation machinery used in satellites.

"Relationships," said artist Jacob Tonski, "are a balancing act, and a very delicate one."

He has modified a 170-year old sofa that he found in the back of a coffee shop, broken and unused, for his installation "Balance from Within", exhibited at the 2013 FILE festival in Brazil. Inside, he placed a reaction wheel, a rotating device most commonly used in spacecraft for adjusting orientation when it rotates off-centre. He added a second axis so that the wheel could correct balance in all directions.

As the sofa — balancing precariously on one leg — starts to fall, the reaction wheel applies the appropriate force in the opposite direction, allowing the sofa to stay upright, so it teeters and wobbles, but doesn't fall.

That is, until someone pushes it over — at which point the sofa, held together only by strong magnets, collapses into pieces.
It's a metaphor, Tonski said, for human relationships and the things we build to support them. "The full range of human interactions can be found on sofas," he said. "Sofas are these ubiquitous, often very humble things built by man to facilitate social interaction. Is it surprising that we construct such a solid footing to support the delicate dance of relationships, so prone to losing their rhythm and falling down?"

Via www.creativeapplications.net