

# An interesting “Proof” – Movie Review

by  
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*“It doesn’t fit”*

*“Sure it does!”*

*“You can’t prove it.”*

Proof is an extraordinary movie, not only in that it is about mathematicians, but that it is based on a play, and not just any play, but a Pulitzer Prize-winning play.

The movie begins in Catherine’s (played by Gwyneth Paltrow) house, where we find her stoning in front of a television while randomly switching channels. She falls asleep and is suddenly woke up by the words of her father, Robert (played by Anthony Hopkins). The pair then get into a conversation, through which we learn that Robert’s former student is in the house somewhere, that Robert revolutionized mathematics when he was 23 and that it is Catherine’s birthday. She is 27. Which reminds her of when her father fell sick. Her father assures her that she will be fine. After all, he says, a sure way of knowing you are not crazy is the ability to ask the question ‘am I crazy?’. But the problem is this. Robert is crazy. On top of that, Robert is dead. He died a week ago.

This is one movie that does justice to mathematicians, justice that is sorely missed in movies like Good Will Hunting and A Beautiful Mind. The movie portrays Catherine (who by the way follows her father’s footsteps and also goes into the field of mathematics) as she struggles through life not just as a mathematician but as a person. But more than that the movie is about beating the odds, about being yourself, and about trust.

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It is said that mathematicians peak at the age of 23 and from then on it’s a downhill slope. It is also said that girls cannot do math. (“there was this girl from Stanford at the conference I can’t remember her name.”) Catherine is both past 23 and female, but in this movie she comes up with a proof or at least the outline of a proof, for a very important mathematical theorem. But it isn’t just about genius, or luck, or being struck with some big ideas. “It’s work. You gotta chip away at a problem”. And we see her do that. She works at it through the night, referring to the many books she has in her book case. And she never gives up and she never quite stops. We see her reaching for some food in the refrigerator and she stops before she reaches it. The breakthrough in her proof came and she finally finished her proof then. That’s passion and hard work, and that’s how mathematics works sometimes. Something all of us could learn from her.

Then there is the legacy of her father. Her father was a superb mathematician, making breakthroughs in three separate fields of mathematics before he was 23. But her father also went crazy when he was 27. So while Catherine wants to be like her dad in his mathematical genius. Yet she doesn't want to be like her dad in that he went crazy. And through it all she is torn between what the world expects of her and how she really is. The world says girls don't do mathematics especially when they are past 23 but she just proved something monumental. Science says she might go crazy and experience says she is quite volatile, and her sister of all people thinks that she will go crazy at any time, making her think that she might too. Yet amidst all the expectations the perceptions the world has on her, she learns to listen to her own voice first and discover who she really is, for herself. But she doesn't manage to do this alone. Hal (her father's ex-student hanging out at her house) helps her and assures her, and she learns to trust him.

Trust. Mathematicians like to prove everything but as the movie pointedly shows, not everything can be proven. The main problem the movie centers on is this: Robert was a graphomaniac, and wrote compulsively in 103 notebooks. The proof was written in one of these same notebooks and in his handwriting. Yet Catherine claims that she wrote it. and the genius behind such proof is first rate. So the question is: Did she really write it? Catherine insists she did, but Hal isn't sure. And so Hal goes out on a mission to find out if the proof is credible in the first place, and finds that it really most likely is written by Catherine. Why? Because the proofs are hip. Because they use new methods that were discovered way after Robert's fall into insanity. But unfortunately, That does not really prove it says Catherine and she is right. You just cannot prove this kind of thing. It is about trust. Like did her shirt fit her? (fit as in look good on her) well it's an opinion. And she could only take his word for his opinion and maybe believe it and accept it as her own. They find that life is not about proving everything because not everything can be proven. Some things in life just have to be believed for us to exist, and this all the more in relationships we all so need.

An excellent, inspiring movie. Especially if you are a math geek. Or a wannabe. Or a trytabe (like me).

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