

The following narrative is fictional. Any resemblance to actual persons or events is probably intentional, though, and is most likely based on someone you know.

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“Well, they say that knowledge is power.”

Clark glanced over at his friend Veronica with a smile. *I suppose, although I don't know how that little tidbit of mine would exactly give anyone any power.*

He countered, “Well, if knowledge were power, librarians would rule the world, wouldn't they?” Veronica laughed. They were walking to campus together, and for once they both had plenty of time before class started. They looked around at the gorgeous spring weather—blue skies, leaves beginning to appear on the trees, warm air. They would have both agreed that life was good on such a day.

Veronica pointed to a squirrel on a nearby tree. “I think the squirrels are taking over, though,” she remarked lightly. “Pretty soon there'll be so many of them we'll have to move out.”

Clark looked to where she was pointing. He remarked, “They're so thin now! I remember back in October they were all so fat, preparing for the winter.”

His friend thought about it for a moment. “Yeah, I guess they were, huh. They're like half as big now.” Clark began thinking *I'm half the squirrel I used to be* to the tune of the song that says *I'm half the man I used to be*. Although, when he thought about it, he wasn't sure what that song was really saying. In fact, it always made him a little uncomfortable. There was an element of truth to it, if one were to believe what the researchers said about declining...

Veronica cut into his thoughts, saying, “This is a heckuva lot better than wading through two feet of snow like we did in January.”

*It was only forty centimeters of snow, but that's still a lot unless you live in Buffalo.* Aloud, he replied: “No kidding. Where was global warming when we needed it?”

Veronica gave a short half-laugh, “Yeah, global warming.”

Clark started thinking. *Let's see. Carbon dioxide levels are measured in parts per million. The atmosphere has a mass on the order of five times ten to the eighteen kilograms, I think. So one part per*

*million is ten to the twelve kilograms. If there are six billion people on Earth, six times ten to the nine, then if each person put one thousand kilograms of carbon dioxide in the air, it would raise the level one part per million. Clark raised his eyebrows in shock. Only one metric ton! No wonder we have global warming! But that can't be right...*

Veronica was speaking again: "Do you know what's on the test tomorrow? I still need to study."

Clark shrugged. "It's basically what we went over in class the past two weeks. I guess that means European exploration and the cultural and technological changes, stuff like that."

"Actually, I missed class last time. Could I borrow your notes?"

"I...don't really take notes."

Veronica looked at him. "So how do you study, or are you one of those people that doesn't need to study?"

"Well, I probably should study but I don't really know how. I usually just read through part of the book and I think, 'Yep, that's what they said in class, and that's what it said last time I read it, too.' So I don't study much."

"Hmm." Veronica reflected for a moment and then dismissed it. "So the test is basically on the Renaissance and stuff?"

They reached an intersection, one of the few busy traffic areas in town. Clark went to push the 'Walk' button and noticed that it was one of the newer kinds. It didn't have an actual button, but rather sensed that his finger was there and made an audible 'beep'. He idly wondered how it worked.

"Kind of. The test is more on technological changes and exploration. Actually, I had an Econ teacher say that there wasn't any such thing as the Renaissance, as far as he was concerned. There was kind of a cultural rebirth, but not that widespread, or something. And there wasn't really a big economic change. Economically, Europe was improving almost the whole time, from about the 7<sup>th</sup> Century until now."

Veronica looked a little surprised. "It's been getting better for that long?"

"Pretty much. And the standard of living in Europe in the 1300's was better than India's in the 1900's. They call it the European Miracle for a reason."

Veronica thought about it for a moment before admitting, "I hated Econ, actually."

"I guess a lot of people do." They began crossing the street. *Cement for sidewalks, asphalt for streets. There's probably a good reason.*

Clark motioned toward the flashing walk signal. "I like these new LED stoplights and walk signs. They're a lot cooler than the old ones."

Veronica hesitantly asked, "What's an LED stoplight?"

Clark paused to figure out how to explain them. "Nowadays they are making traffic signals that use LED's instead of light bulbs. The LED's are silicon, like computer chips. You run electricity through them and they glow." *It's a quantum mechanical effect.* "They're what

make the glowing numbers on an alarm clock. They are good for traffic lights because they don't all burn out at once. And they probably save money."

Veronica accepted this, but queried, "How do you know all that?"

Clark had no idea. "I...just do." *Who doesn't know about LED's?*

The two of them continued up a small hill to campus, chatting about plans for the weekend. A group of friends was going to make a bonfire and cook s'mores, and both Clark and Veronica planned to go as well.

Soon, they arrived at class and sat in the seats that they had chosen on the first day—Clark three rows back, next to a window, with Veronica in front of him.

Clark looked out the window, as was not unusual for him, and thought, as was also not unusual. *Knowledge is power.* Well, he did have quite a bit of knowledge. It was a good thing—he'd be bored without something to learn. But the one thing he really wanted to know still escaped him. *How do I really connect with people like Veronica?* He knew that a lot of the time he said things that seemed kind of random to other people. He hoped he didn't sound like he was trying to impress them. The things he said were simply the things that he thought about.

Veronica was smart and knowledgeable in the areas that interested her. But a lot of times when Clark tried to talk to her and to other people it seemed that they just...didn't think the same way. *I probably need to adjust to them, because they are not going to adjust to me,* he thought.

Outside, the sun was shining brightly on the green grass. Clark knew that the light energy he was seeing had spent a million years bouncing around inside the sun until it reached its surface, then had traveled for eight minutes across space to reach the grass, and then had taken a ten-millionth of a second to bounce from the grass to his eye. The one percent or so of light that the grass converted to chemical energy was captured by chlorophyll inside chloroplasts. Chloroplasts came about through endosymbiosis of cyanobacteria. The energy from light was stored in the plant as ATP, the same ATP that a human muscle cell burns at the rate of ten million molecules per second...

Clark shook his head to clear it.

*I'll go crazy at this rate,* he thought. *Knowledge is power, my foot.*