

The Speed of Dreams
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Introduction

It happens all the time: you're sitting in class, listening the best you can while Mister Waters goes on and on about atoms or sound waves or whatever, when suddenly you fall asleep. Your head lolls against your shoulder and some drool oozes from the side of your mouth. Luckily, Missy Woo kicks you in the knee to wake you up before someone notices, like Mister Waters or--worse--Austin.

What's weird is that in those few minutes of sleeping, you dream like hours of stuff. You're all hanging out or playing basketball or walking the mall while everybody else is slowly raising their hands and taking notes. They all get twenty four hours that day, but you get a little extra.

But how much extra?

Investigative Question

How much time can you fit in a dream?

Hypothesis

Time in a dream moves faster than time in real life, so you'll live more there. How much more is proportional to real world time.

Method

Unfortunately, Mister Waters says there's no way to measure time in our dreams. Since the whole idea of my project is that time is subjective, he says nobody could compare or repeat my results in relation to the real world.

That's where Patti comes in.

Patti is our dog, a retired racing greyhound. Her name used to be Patriot back a few years ago when all the bald, sweaty men at the racetrack used to bet on how fast she could run. She had to retire because she was a bumper, so competitive that she'd knock the other dogs in the race against the walls. She never bit them or anything--just shoved them. Like they shouldn't even be in her race, you know? Like they weren't even there.

Even though she's supposedly retired, Patti still likes to run. She's fast for an eight-year-old, too. When she sees squirrels or rabbits in our yard, she peels off after them in a big counter-clockwise circle. I guess habits are hard to break. She caught a bunny once and swallowed it whole, her jaws clapping together as the poor thing slid down her throat. We saw the little eroded bones in her poop.

Patti loves to run so much that she does it in her sleep. After I brush my teeth and crawl into bed, she jumps in too and flops down next to me, sometimes teetering over like a tree and sighing. Then, in the middle of the night, she'll dream about running and kick me awake with her twitching legs. She'll be breathing all heavy, snorting through her nose and sputtering her lips. She usually does it for a few seconds and then goes back to sleep.

Now, it turns out that she used to race back down at the Orange Park Kennel Club on their quarter-mile oval. The greyhound rescue people gave us her records, and her specialty was the 5/16ths mile race, which she usually finished in about 32 seconds. I know because I added them all together and averaged them.

Lots of dogs run in their sleep, but only greyhounds like Patti probably do it for a fixed length of time, right? She spent her whole life running the same stupid race over and over again, chasing that stick as it swung around the track. If anything is stuck in her head enough to dream about night after night, it'd be that race.

So there's my basis of comparison.

Procedure

I will measure the proportion of dream time-scrunch by doing the following:

1. Let Patti sleep, staying awake to watch her.
2. When her legs start kicking, start the timer.
3. When her legs stop, stop the timer.
4. Write down the number of seconds.
5. Repeat a bunch of times.
6. Get the average time it takes her to run a 32 second race in her sleep.
7. Divide that average sleep race time into 32 to get a proportion.

Assumptions

Because Mom made me take the dummy version of science this year so I wouldn't get "all stressed" like last year, my assumptions are probably stupid. But then, I'm only thirteen and a girl with "plenty of time to become a swan" as Mom likes to say.

My assumptions, dumb as they probably are:

1. Patti is running a standard race that takes her the usual 32 seconds and not some magical fantasy race that she wins in, like, 10 seconds.
2. Patti's legs start twitching when the race starts and stop when it stops, and she isn't flying or teleporting for any part of it.
3. The amount of time scrunchable into a dream is always the same proportion. Patti doesn't dream some races faster than others.
4. Dogs and humans have the same time-scrunch proportion.
5. Mister Waters won't be mad when I hand in this project instead of the model of the solar system he signed off on.

Results

Experiment One (February 4, 9:04pm): When Patti started to twitch, I was trying to get Lisa and Austin back together--I know, stupid--in instant messenger. I couldn't reach the stopwatch in time, so I didn't get any data. I did get them back together, even though Lisa is really only in love with herself like everybody else is.

Experiment Two (February 5, 3:28am): Patti started kicking like crazy, waking me up. Luckily, I was sleeping with the stopwatch loop around my wrist and I clicked it right after she started. She huffed and snorted, peeling her lips back from her teeth. Then, after 6.21 seconds, her legs slowed and stopped. I wrote down the time on my algebra book cover and went back to sleep. Now that I'm awake, though, I wonder if I dreamed that she was dreaming, and the stopwatch was just measuring scrunched time in my dream. Drat!

Experiment Three (February 6, 7:31pm): It was my turn to help with Nannah, so I had Patti come in to help. Nannah is my grandmother, and she sleeps even more these days than Patti does and sometimes twitches in her sleep the same way. While I was spooning Nannah's oatmeal between her lips, Patti started kicking under her hospital bed which made Nannah's pills go flying all over. I put down the jar and timed her at 5.2 seconds. Then I timed how long it takes to put down the jar a bunch of times and got an average of 2 seconds, so that counts as 7.2. It took me 45 seconds to pick up all the pills, but that has nothing to do with anything.

Experiment Four (February 9, 11:44pm): Patti kicked for 6.73 seconds. She also yelped, but not an angry yelp--more like a kick ass, "You want a piece of this?" kind of yelp. Nannah must have heard her back in the guest bedroom because she kind of moaned at the same time. Maybe they were running together in their sleep.

Experiment Five (February 11, 11:44pm): Patti kicked for 6.73 seconds, and it squicked me out a little that she did it at exactly the same time as before.

Experiment Six (February 12, 12:14pm): Austin came over and we sat on my old swingset waiting for Patti to fall asleep on the grass. When she finally did, he let me take his hand and use his fancy running watch to time her for 6.88 seconds, which means we were holding hands for almost ten seconds. His smelled like soap.

Experiment Seven (February 13, 2:20am): Patti and I were under the blanket, reading that note from Austin again with a flashlight. Well, I was reading the note: she's a dog. I'd just gotten to the best part, about him wanting secretly to go with me to the dance but he couldn't break up with Lisa until after she'd finished the basketball season, when Patti started to dream. I clicked the stopwatch and she stopped after 7.1 seconds. Then I read the part about my eyes again.

Experiment Eight (February 14, 5:39pm): Patti was laying on top of my dress for the dance when she started running again in her sleep, swooshing it underneath her legs. I couldn't stop her because Mom was standing there all blah-blah-blah to me about wearing her makeup. Good thing there was a clock over her shoulder so I could see that Patti wriggled for 7 seconds. Mom went on longer, but she stopped when Missy's mom came to drive me and Missy to the dance.

Experiment Nine (February 15, 1:51am): I'd fallen asleep in that stupid dress when Patti started dreaming. I grabbed the stupid timer and watched it for the time it took her to finish the stupid race, 6.34 seconds. Which happens to be about the same amount of time that Austin even bothered to look at me at the dance while he was all over Lisa like they were going to be married or something.

Experiment Ten (February 15, 4:57am): I was still up, mostly just petting Patti and crying, when she ran her second race of the night. I read somewhere that greyhounds could do eight or more races in a day, so that wasn't surprising. When she finished after 6.2 seconds, I asked her if she won and she looked at me like, "Duh, I always win." That must be nice.

Conclusions

I added up all the race times and got 60.39 seconds. Then I divided that by the number of dreams (nine) for an average of 6.71 seconds each. Significant digits, blah blah blah: because I only know Patti's real world race time to the one's digit, I've got to round that to seven. So Patti runs a 32 second race in her sleep in only seven seconds.

When I divide 32 by that, I get the proportion. We get 4.5 seconds of dream time for every second of real time.

Application

Lately I've spent a lot of time talking to Nannah. I sing to her, tell her what happened at school, read her the dumb jokes from Readers Digest she used to like. She never wakes up.

Sometimes she'll kick like Patti does. I asked Dad if she was ever a runner in the Olympics, and he looked at me like I was crazy and told me no. So I have no idea where she's running or for how long. She doesn't lick her teeth like Patti does, so I'm pretty sure she's not chasing anything she plans to eat. Sometimes I bring in flowers so she can pretend she's in a field.

Even if she wasn't in the Olympics, my Nannah did a lot of other things. She was born Flora Soehner on March 6, 1940 back in Pine Falls, Minnesota. She ran away from home when she was about my age, took a train to Hollywood to be a synchronized swimmer in the movies, and met my Grandpa five years later on a trip to San Francisco. They got married a month later. She worked as a waitress, a bartender, a secretary, a Census taker, a limousine driver, and even a cop. She went to Mississippi to ride with black people, marched against some war in Washington, and even brought casseroles to hippie kids in Haight Ashbury. She wrote a bunch of poems and songs, a couple of them sung by Jefferson Airplane. I tried to sing them back to her to wake her up but it didn't work.

She showed me how to sew, how to flip an omelet, and how to throw a hatchet into a tree, even though it always took me more tries than her. I wonder if she does that stuff now in dreams, or if she's doing new and different things like piloting a spaceship or being a tigress. Whatever she's doing, she doesn't have much time to tell me what to do better here, that's for sure. If I were a tigress, I'd be too busy, too.

Mom and Dad say she won't live much longer, but they're talking about the real world. Thinking like that, none of us lives very long, right?

But you get 4.5 times as much life sleeping as you do being awake. That's four times the chances to get things right, like the lives Mario gets if you don't make a jump. You can probably even do different things, like be a ballerina in one, the President in another, Laura Ingalls in the next, and a dolphin in the fourth. All while everybody else is just getting one stupid life.

So no wonder Nannah is stretching out her life like lots of old people do at the end. We think it's a coma, but really it's a dream--one where you're doing all sorts of cool stuff you want like winning every race, catching the rabbit, hanging out with Jefferson Airplane, and getting to dance with Austin. Maybe with four times the number of tries, I can do all those cool things too.

Experiment Eleven (February 27, 11:09pm):

1. Take the rest of Nannah's pills so I can catch up.
2. Write down when I start falling asleep.
3. Live four cooler lives, hanging out with Nannah. If we need money, we'll visit Patti's dreams and bet on her.
4. Wake up and write down all the big courageous things I did.