

THE SHAPE OF HOME



M.G. Merriami

to M. Gallopavo,
who won't be pardoned



It was a perfectly 3-dimensional morning, and Flatsy the mouse was out taking a perfectly 3-dimensional walk in his perfectly 3-dimensional neighborhood. Flatsy liked his 3-dimensional house - it had length, and width, and depth! So he was careful not to walk too randomly - he wanted to make sure that he would always come home and not become some Dutch Flying Squirrel, wandering forever.



This particular 3-dimensional morning,

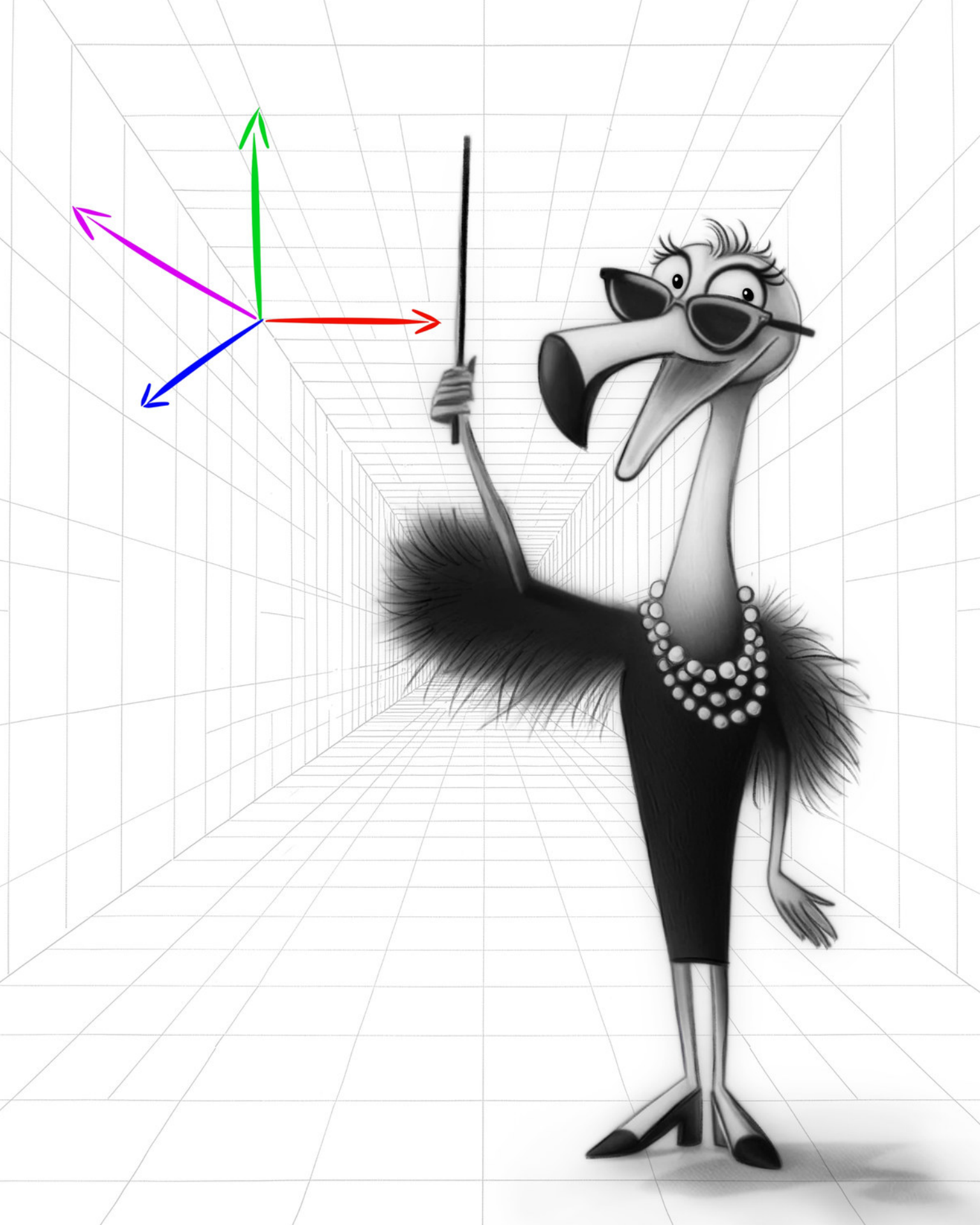
Flatsy was hoping to find a 3-dimensional piece of 3-dimensional pie. Sniff sniff! Flatsy could smell it!

There was fresh baked pie nearby - apple pie! But where was it? Was it hidden behind something? Or had it receded into the distance, so close to the vanishing point that it was too teeny tiny for Flatsy to see? Sometimes it was hard to find things in Flatsy's neighborhood. Still, pie was pie, so Flatsy set about his search.



Instead of apple pie, Flatsy found his very stylish friend Tess! Tess was having tea in the garden, and she had exciting news.

“Oh, Flatsy, have you heard?”, she chirped. “Everyone in Paris is talking about this new 4th dimension! I’m so excited to explore it. You simply must come with me! We shall have such fun!”



Flatsy was a bit taken aback by this news. “What do you mean a 4th dimension? There’s already length, and width, and depth. Where else is there to go?”

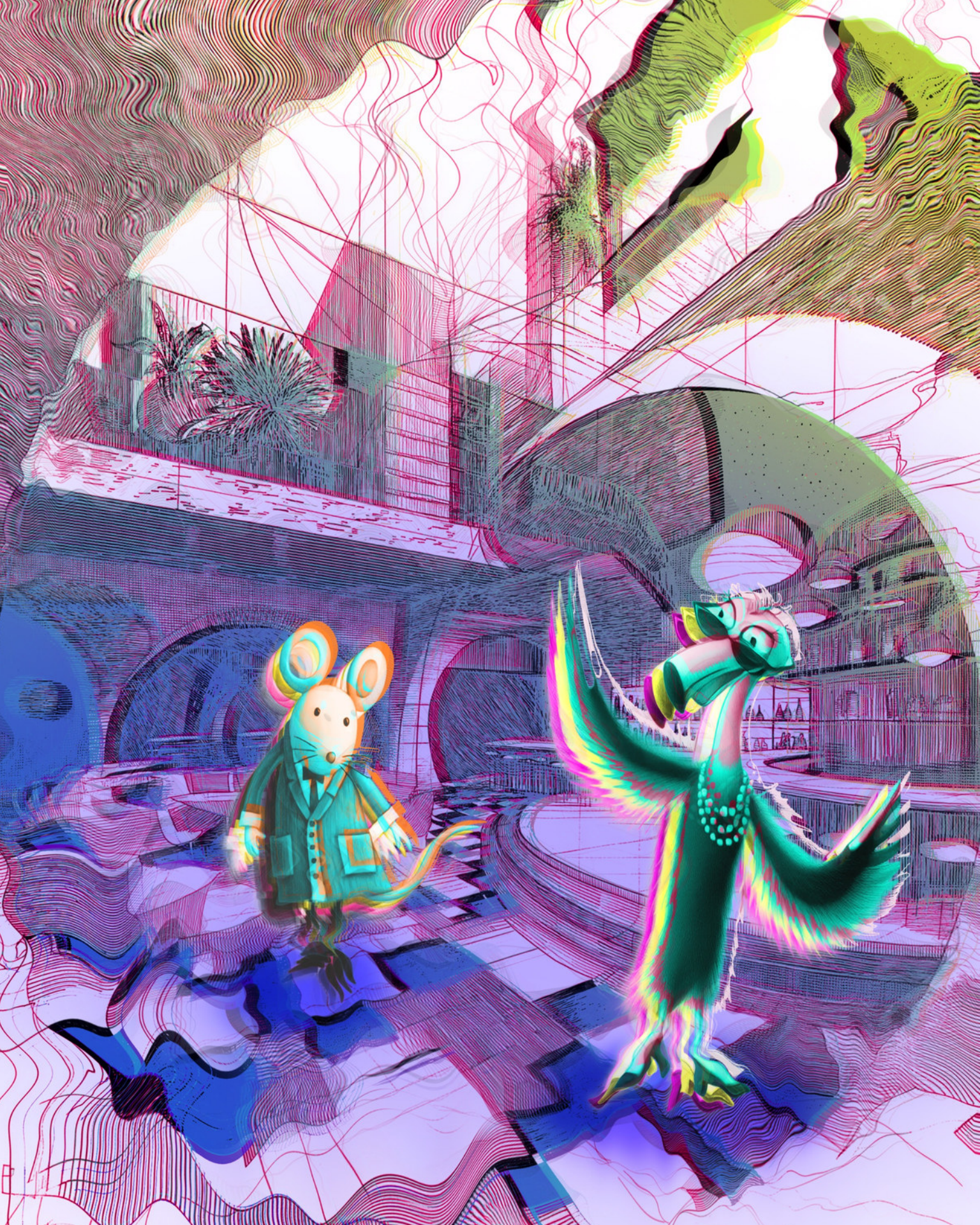
“Oh, Flatsy, don’t be such a cube!” laughed Tess. “Look, it’s easy, I’ll show you. Simply pick a new direction that’s not a combination of the first three, and go that way.”

Flatsy wasn’t convinced.
“It sure looks like it’s still a combination of the first three.”



“No, my darling goose, that’s a matter of perspective! After all, depth already looks like a combination of length and width, but it’s actually a free and different way to go. Simply make this new direction free and different as well, and voila! Now you have length, width, depth, and breadth! Here, follow me.”

Tess took Flatsy by the hand, and Flatsy nervously followed her in the new direction.



Tess was right! Flatsy gazed about with wonder. There were beautiful new shapes here that Flatsy had never seen before. Light came from more directions, sparkling and reflecting in new ways. The whole world just seemed so much bigger, so much... broader!

I'd better be even more careful not to walk too randomly here, thought Flatsy. Flatsy had always been a quick study at dynamical systems analysis.



Tess brought Flatsy a slice of 4-dimensional pie. Sniff sniff! This pie smelled so sophisticated! No wonder they liked the 4th dimension in Paris, thought Flatsy. Maybe they can fit more things inside a single pie in 4 dimensions. It smelled of raspberry and cinnamon and rhubarb and chile! If only he could figure out how to eat it... Moving his fork didn't seem to cut off a bite.



Then Flatsy had an idea.

“Tess, you were right, this is amazing. I like the 4th dimension! But, I wonder - could we go further? Is there a 5th dimension?”



“What a smart question, Flatsy!” said
a voice behind - well, not behind
exactly - perhaps just a little
upwhence of the two of them. It was
Ed Kitten, the famous scientist.
Flatsy was more than a little proud to
have impressed someone as smart as
Sir Edward Kitten with his question,
so he puffed out his cheeks and
perked up his ears.



“Mathematicians and physicists use lots of dimensions,” mewed Ed, “for lots of different things. Bosonic Yarn Theory originally used 26 dimensions, though I prefer my Meow-Theory, which uses only 11. And mathematicians have discovered that in 24 dimensions there is a special way to pack fruit together much more efficiently than in lower dimensions. They call it the Peach Lattice. Here, try a bit of their pie.”



“Wow!” enthused Tess, “That’s the peachiest peach pie that ever peached!”

“Isn’t baking in 24 dimensions difficult?” mumbled Flatsy through his impossibly full mouth.

“Yes, quite,” mewed Ed, “but it turns out that you can use the same Peach Lattice to bake an error-correcting pie.”



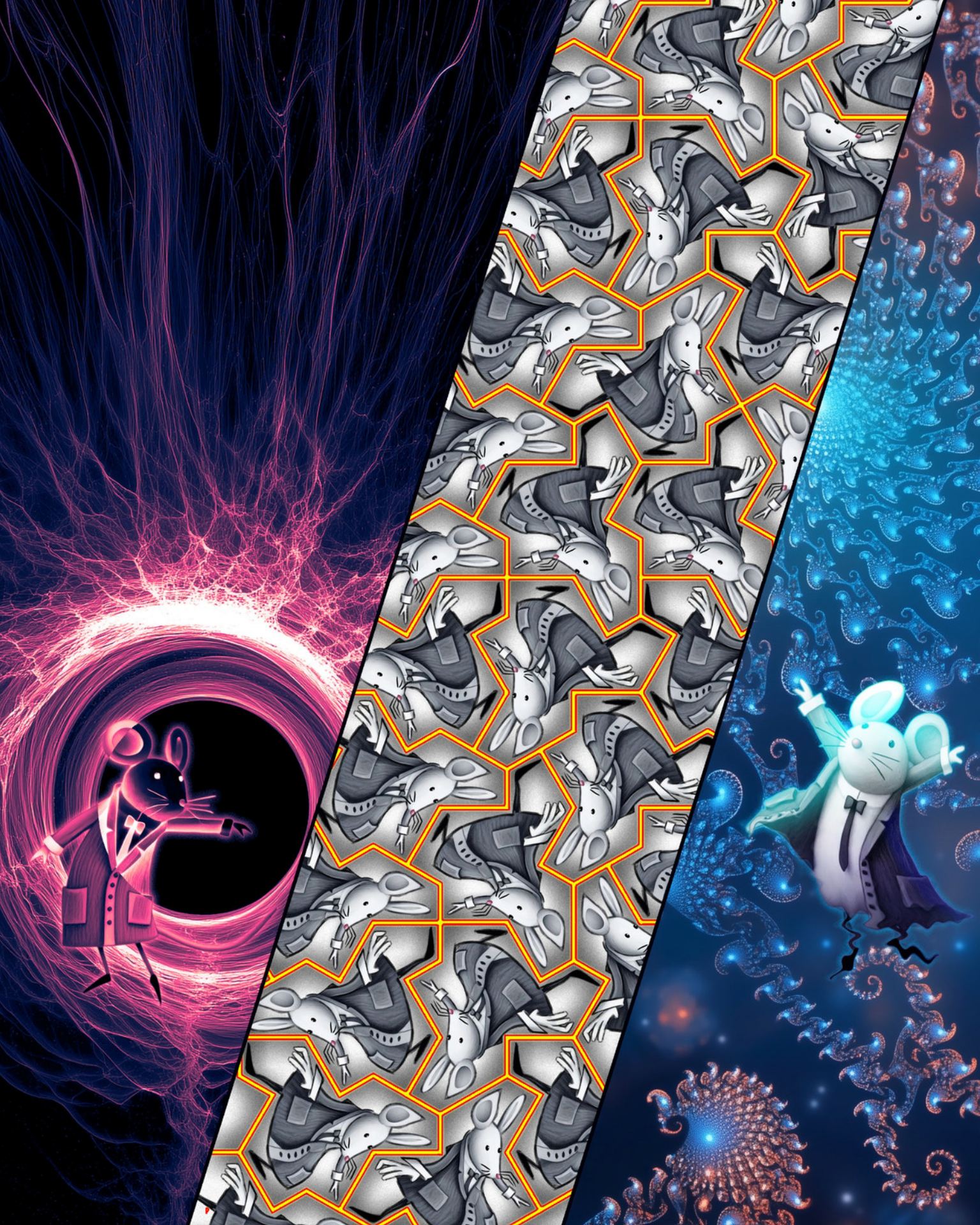
Edward was starting to explain about dimensional analysis and something called the Buckingham Pie Theorem, but Flatsy had another question.

“Edward, you were right, this is amazing. I like the 24th dimension! But, I wonder - could we go further? Is there always a next dimension?”



“WHAT A SMART QUESTION
FLATSY” boomed a voice from
inside and below and upwhence and
yonforth and all around them. It
was not Edward Kitten this time.
“LO, IN INFINITE DIMENSIONS
ALL THINGS MAY BE”

And, in fact, they were.





A while later (it was hard to say how long, as Flatsy had also moved along several different timelike dimensions in his recent adventures), Flatsy found himself sharing a slice of pie with his old friend Marie Komodo on her elegant island.

Marie was a wise old dragon, and though her beach was only 3-dimensional she saw deep within. “Flatsy,” she hissed, “do you really need all these dimensions? You must ask yourself: do these dimensions bring you joy?”



Startled, Flatsy pondered. Marie was right! Even though he had been very careful not to walk too randomly on the outside, he had started to feel like a Dutch Flying Squirrel on the inside.

“No, they do not bring me joy!”, he squeaked defiantly, and he resolved right then and there to be done with dimensions once and for all.



“Hello?

Ah, Flatsy old boy. Welcome to
Points Living, proudly dimensionless
since never and always! Martini?



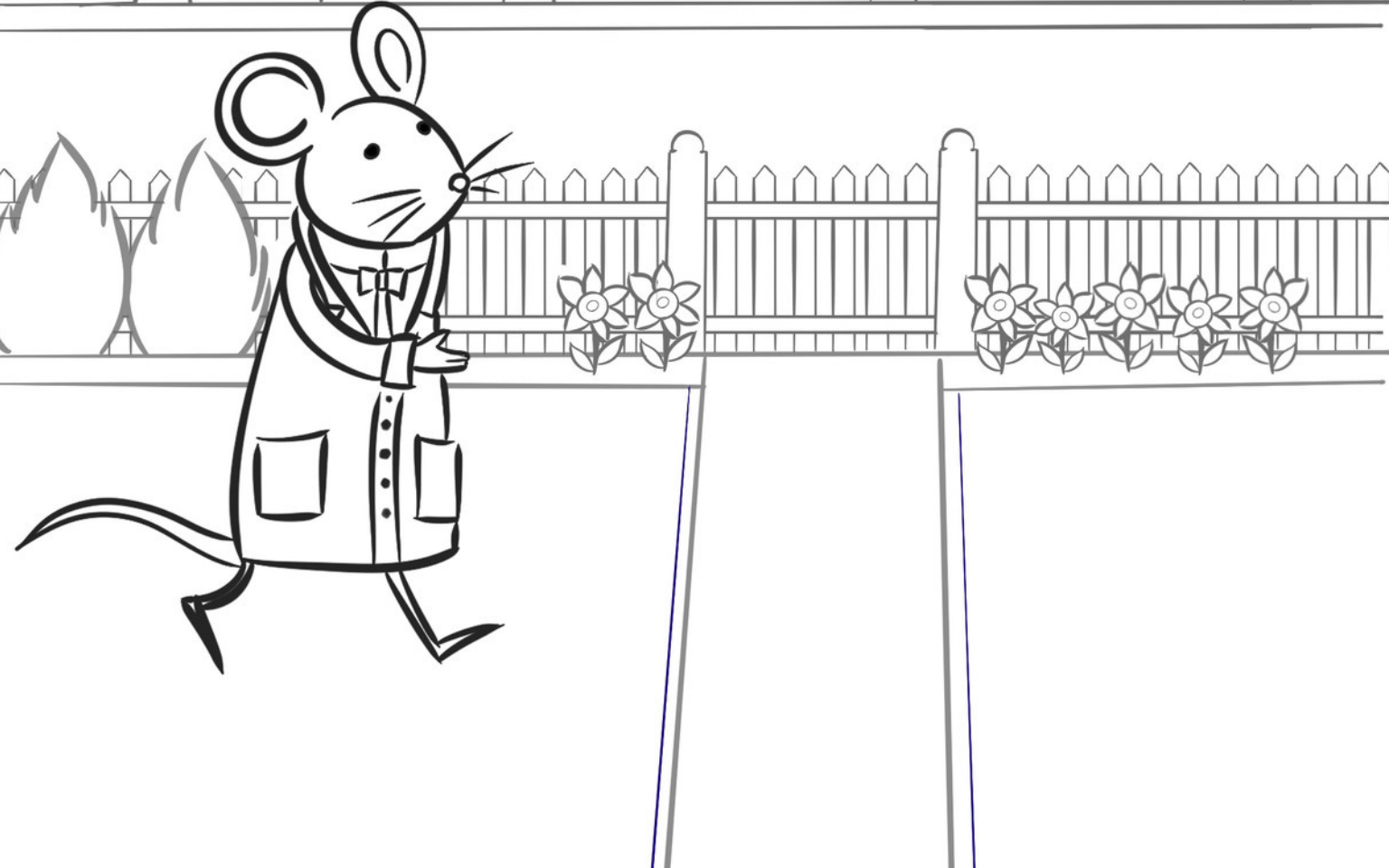
“Where - where are you?
Where am I?!”

Nowhere and Everywhere and
Now and Forever.

“Oh, pardon me! I think I just put
my elbow in your... Well, maybe not,
it’s hard to say. Um, is there any pie?”

Of course. You and the pie are one
and always have been so.

“Oh, I see. That’s not quite the same.
And, oh, dear, I think I stepped in
your... Hmm. I suppose I do need
at least some dimensions after all.”



It was a perfect 2-dimensional morning, and Flatsy the mouse was out taking a perfect 2-dimensional walk in his perfect 2-dimensional neighborhood. Flatsy loved his 2-dimensional house - it had length and width, and you could tell that they were different directions just by looking! And as much as he loved his house, he could walk randomly about his neighborhood without a care in the world, for he knew that his wandering must inevitably bring him home in the end.



This particular 2-dimensional morning, Flatsy was hoping to find a 2-dimensional piece of 2-dimensional pie. Sniff sniff! Flatsy could smell it!

There was fresh baked pie nearby - cherry pie! And sure enough, there it was! It was easy to find things in Flatsy's neighborhood - nothing was ever hidden behind anything, and things always looked just exactly as big as they were. Flatsy grabbed the pie. It looked as good as it smelled, and it never even crossed Flatsy's mind to worry about how exactly to cut into it with a fork.



Flatsy ate his pie, and he completely enjoyed every 2-dimensional bite.

The moral of this story is, don't settle for the dimensionality you are given. Find the number of dimensions that brings **you** joy!

Flatsy recommends 2.

The End

