

# Water: a memoir

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“How did you get this way?”

Nobody asked me, it just sort of happened. How do you answer that kind of a question, anyway? As the first sentient water molecule, I’ve seen a lot. Been a lot of places. But I have no earthly idea how it happened.

Hurting through the sky, at about 10 meters/second, I make splashdown in a customer’s drink on a patio in suburban Sydney. I take account of my surroundings.

A lot of old friends, some new faces, some ethanol, a bit of sugar, and a variety of hangers-on. I’m not going to have time to get to know them, or even really to get my bearings, but I’ve seen this movie before. Gut, bloodstream, maybe a brief sojourn to a few organs, and out the kidneys. Maybe a few hours. These trips aren’t the longest ones I take, nor are they the shortest, but they usually have the best music.

My nuclei – well, those of my protons – snap to attention.

Different, but familiar. I’ve encountered countless magnetic fields, but this is one of the stronger ones. The bar patron is evidently having some diagnostic work done. After some brief indignities, my protons report back on their surroundings. Thankfully for my host for a bit longer, they report some good news. This gets me thinking, though.

What is a water molecule anyway? I’ve exchanged my protons more times than I can count, been deuterated in the service of countless graduate students’ experiments, even spent some time tritiated, and yet I’m still me? Two thirds of my atoms are exchanging faster than I can count, and yet I’m still me. Sure, but the protons did most of the work, for god’s sake. It’s hard enough being a water molecule with thoughts, hopes, and feelings without trying to figure out this Ship of Theseus crap. Anyway, off to be urine.

It's so spacious.

Spending time in the troposphere is such a pleasant break from terrestrial life, and it's when I do most of my traveling. There's something nice about the slower pace of river travel, but the views up here are just phenomenal. And the space! Sure, I'm proud of everything I've accomplished in condensed phases, but it's so relaxing to be vapor. I'll make my way back down soon, but for now, I enjoy the openness.

It smells like gasoline, and I find myself jammed butt-to-gut with a bunch of familiar faces.

I often wonder if it's unique to the whole sentience thing or if other solvents would think about this if they got a chance. I'm so very alone in the universe, and yet I find myself working in teams all the time. Ammonia doesn't have to put up with this – at least like I do – and you know methane wouldn't take it. Still, there's something beautiful about being in a hydrogen-bonded clathrate around a hydrocarbon. I find myself reminiscing about it sometimes when I haven't seen anything but another water molecule in a few microseconds. Time is so bizarre.

I feel a gentle pressure, and the ratio of familiar and unfamiliar faces around me begins to shift toward the familiar.

You spend a lot of time thinking about the passage of time in my line of work. Just last month I was a blast of steam cleaning a piece of steel. Not long ago, one of my erstwhile protons became part of an ammonia molecule that became the wheat that became the president's bread that became the president. Won an award and everything.

The thing about all the work I do is it's all ephemeral. I get mixed with all kinds of friends and acquaintances, hopefully we do a good job, and a bit later I find myself purified again. Reverse osmosis is one of the more surreal experiences – as if you're at a big party, only to find that before you know it, everyone's gradually filtered out except your family. Still, it's good to be among familiar faces.

Things aren't moving as much as I'm used to. Some protons tunnel through, but it's otherwise quiet.

Ah, ice. Sometimes this feels like the only time I get anything resembling rest. Sure, I'm

still moving around a bit, but humans are when they're resting, too, right? This still counts, right?

A waitress fills a glass in a busy diner just outside Boston, spilling what she'd call "just a bit" but what I'd call my current home, along with about 1023 of my colleagues, on a customer. The customer looks back, irritated, and makes a face.

"It's just water, don't worry."

Just water. If only she knew. I evaporate, hoping to make my way into the Ogallala aquifer for a few millennia's respite.