

Remarks at the end of my lecture on June 5, 2023 at the Oxford conference “A Panorama of Homotopy Theory”

Let me tell you about the first time I met Mike Hopkins. I warn you, I won't let the facts stand in the way of a good story.

It was after 8PM in Evanston, the Whole Foods would have been about to close, except there was no Whole Foods yet. This was the year Prince released “Purple Rain.” The rain-washed streets were empty, street lights glinting off the puddles, even the sinners were keeping out of sight. I'd missed the train to Hyde Park. This meant a stop at Tommy Nevin's, Evanston's first pub since Prohibition. In those days the premium beer was Michelob and people smoked indoors. You had to shave your hair and burn your clothes when you got home.

I was at the bar, staring moodily at the bottom of that first beer. There were a few lemmas that remained just over the horizon, and even the big man himself, Mark Mahowald, didn't know where they were. This guy sits next to me. He's well put together, tweed jacket, silver hair, wire glasses, and pointy goatee. Think Eric Friedlander as a kind and gentle Mephistopheles. There's a whiff of sulfur about him, but then everyone had a hint of sulfur in that place. He was chatty. I didn't want chatty. But he bought me a beer, and he listened when I told him about the lemmas. He seemed to know all about them.

“Can't help,” he says, “but I know a guy.” I snorted, but he says, “Next week, Northwestern topology seminar, he'll be there, looks a lot like a young Bob Dylan.” He gets up. “Come back here after, tell me how it went.”

Next week, there he is. Looks more like Bruce Springsteen than Bob Dylan, but maybe your American troubadours all look alike. He's in the common room with Mahowald and Jeff Smith, going on about nilpotence, periodicity, v_n -self maps, Morava K-theory. I didn't follow a word, but it sounds great. After the seminar, we're hanging out, the guy asks me what I'm working on, and I tell him about the lemmas. He shrugs, and says “Isn't that just Dieudonné theory?” Of course it's Dieudonné theory, but it's a crazy lateral move to even think of it. But it rounds up the lemmas, gives a better theorem than I'd imagined.

Okay, people. Hands up. How many have had that happen to you? And I bet Mike doesn't even remember. Partly because this is a story. Makes up for all the times he's helped us and we're the ones who don't remember.

Back to Tommy Nevins later. Still raining. At the end of the first beer, there's pointy beard, same sulfur. I'd been watching but he still comes out of nowhere. “What'd I tell you?” he says. “You nailed it,” I reply, “even if he does look more like Bruce Springsteen.” The man signals for two Johnny Walkers over ice. “What if I told you,” he asks, “that you could be around this guy for forty years, be there at all the key moments, there'd be great theorems, some great

conversation, and real friendship? Be some of your best stuff, working with him and those around, and many others will say the same.” Tempting I think. “What’s the catch?” I ask, “Ah,” he says, “the catch.”

“What?” I ask, “Do I have to sell my soul?” He waves a hand, “No,” he says, “souls are cheap right now and they don’t work very well.” It was, after all, the greed-is-good ‘80s. “What then,” I says, “am I going to forget all this?” “Oh, no,” he says, “you’ll remember it all too well.”

He looks around, leans in, lowers his voice. “It’ll be a ritual humiliation,” he says. “After the forty years, you’ll be in front of a room.”

Come to think of it, the room he described looked a lot like this one, and he also mentioned the internet, but I had no idea what that was.

“There will be all these people,” he goes on. “Some you’ll know well, some you’ll know a little, some you won’t know at all, many will be born between now and then. You’ll be trying to say how important Mike has been to you and others, his generosity, his insight, his warmth, his humor, his collegiality, the breadth of his knowledge, how inspiring it’s been even to be the sometime bass player in his band. You’ll be trying to say this fabulous field of math would be unimaginable without him, without his ideas, and his leadership, and his spirit.”

The man holds up his whisky to me, a salute. He smiles. “Yes,” he says, “you’ll be trying to say all that, and you’ll run out of words.”

1. The original “Mean Streets of Evanston” story was in a talk by [Mike Hopkins](#). Follow the link. If the math is not for you today, the story begins a little over half-way through.
2. “Purple Rain” was released in 1984, but don’t focus on that. I’m not good with dates and remember what I said about facts.
3. Eric Friedlander did have a goatee at one point. Search the Oberwolfach photo archive. He was also, of course, a faculty member at Northwestern in 1984 and a wonderful colleague later.
4. I really miss Jeff Smith, and wish he could have been with us.
5. Dieudonné theory came later, in the work with Lannes and Morel. But “god-given” seemed apropos here.
6. The significance of Johnny Walker is for you to decide. Do not be fooled by metaphors from Murakami.
7. I was not at the Arizona Winter School, but stories have filtered out.

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