Misc.

M. O.

Oct. 2025

#### 1 Wednesday, October 1, 2025

In the morning, I read a textbook on category theory and Karatani Kojin's "The Structure of World History: From Modes of Production to Modes of Exchange" while eating breakfast at a family restaurant.

It got to be past noon, so I just ordered lunch there too.

I'm living a graceful life.

I gave my wife this month's allowance, but in contrast to the morning's elegance, the household finances are at their limit.

I made the side job's analysis of new and recent graduates so that it can run on AWS Lambda, but it's a mess and needs a major refactoring.

In the beginning of Mac Lane's textbook on category theory, it was written that groups, topological groups, and Lie groups can be understood in a unified way using the commutative diagrams of category theory, and I was deeply moved.

I can be moved by the beauty of physics, and I can be moved by the beauty of mathematics. I think I am blessed.

# 2 Thursday, October 2, 2025

I was supposed to go eat Kenyan food with a friend for lunch, but the Kenyan restaurant was closed. So, we had no choice but to go to our usual Peruvian restaurant in Gotanda. It was as delicious as always, so it turned out to be very good.

After eating, we drank coffee and talked at a cafe.

The topic came up about how much joining a sports club in my student days has helped me adapt to society.

I also heard a story that students who are bad at math that I teach at a cram school can't even copy formulas correctly before they can even understand what's written in the textbook.

My friend passed the entrance exam for a cram school specializing in medical school entrance exams, and not only did he pass, but he is already teaching three students.

After the cafe, we parted ways, and I went to work at the company in Shinjuku.

It was good to be able to talk with my friend and team members.

I stopped by a used bookstore in Shinjuku on my way home at night, and it was past 8 PM when I got back.

### 3 Friday, October 3, 2025

I spent the whole day just developing for my side job.

The Yomi Sheet analysis batch is mostly done.

I talked with the two leaders about CA operational analysis, and with another person who is developing an analysis system for CA performance.

The number of internal offers accepted is off by a digit.

I suspect it's due to the order in which we either prune the 30-day or 90-day segments first, or set the flag for the most advanced process first.

In the evening, I went out to eat with a friend in Kita-Senju.

While there are many places in Kita-Senju where you can eat biryani, many of them have irregular holidays, so you can't always get it.

Today, I ate Ton-yama, a ramen shop in the Jiro style.

I was able to give my friend some books, including one by Hannah Arendt and one on causal inference.

On our way back, we had a leisurely talk at our usual standing bar.

I talked about wanting to go back to graduate school and how I've even decided on a specific lab.

My friend seems to have become interested in corporate finance theory.

After I got back, I uploaded my notes on Keldysh Green Function.

#### 4 Saturday, October 4, 2025

A day I spent almost entirely sleeping.

Richard Rorty's "Contingency, Irony, and Solidarity" arrived. I want to read it.

At the moment the date changed, that is, when my age changed, I was studying how the comma category that becomes equal to the Grothendieck construction can be expressed using the integral symbol of a category as a category of elements. I was surprised that integrals and even Fubini's theorem show up in category theory.

## 5 Sunday, October 5, 2025

Slept a bit less than usual and felt slightly short on rest in the morning.

Spent some time revising my notes on Fermi liquids.

Currently studying limits in category theory.

It was supposed to be a birthday celebration with sushi, but my daughter was running wild around the house, and my wife was too exhausted. So we ended up buying some prepared dishes from a bento shop and eating at home instead.

Found a used copy of Ammon and Erdmenger's book on gauge/gravity duality—not cheap, but I had been debating whether to buy it for a while. Since it's my birthday, I decided to go for it.

By chance, I managed to get a copy.

Along with it, I also obtained textbooks by Altland and Simons, Nakahara's book on topology, and Xiao-Gang Wen's text. Quite lucky.

At a secondhand bookstore, I picked up Audrey Tang's "Plurality" and Milton Friedman's "Capi-

talism and Freedom" as well.

Started putting together this miscellaneous notebook.

My wife and daughter went to bed early, leaving me with a long stretch of quiet nighttime.

Enjoying the luxury of slow, peaceful reading.

Emily Riehl's textbook on category theory is turning out to be excellent; I'm thinking of summarizing the section on Yoneda's lemma in my notes.

Aside from a short walk outside for some shopping, there was no particular event today—just a calm, peaceful day. It turned out to be the best birthday I' ve ever had.

#### 6 Monday, October 6, 2025

Woke up at 5:55 in the morning after getting eight and a half hours of sleep.

Spent time until around 8 a.m. studying and summarizing the basic concepts of limits in category theory.

Around 9 a.m., went to a nearby family restaurant and enjoyed breakfast for the first time in a while.

Read a book by Hannah Arendt during the meal.

Noticed that I had forgotten my house key, but thankfully my wife had already come home, which saved me from trouble.

In the afternoon, followed the proof of Yoneda's lemma and tried to summarize it in my own words.

Although the proof was meant to be written in a way I could understand, it still felt somewhat complicated; perhaps my notes are not very good—or maybe I'm simply not yet used to category theory.

Had a boxed lunch from a local bento shop and enjoyed it together with my wife.

Later, organized tasks and, with my wife's help, submitted some company documents.

Also attended an MBA lecture.

Since I've been spending so much time in front of the computer lately, I'd like to take it easy tomorrow and go to the sauna.