

Yatsuhashi, Easter Eggs, Kūlgrindas, and Plazas

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I have a handful of recurring metaphors that shape my ideas about conversation flow, and, thus, coding. I'm sure the general concepts have other names, but these are the ones that speak to me.

“Yatsuhashi”, as well as being a sort of candy, is a generic term for zig-zag bridges and related features in Japanese gardens. The technique, which also appears in traditional Chinese gardens (and elsewhere), are designed to force a sequence of apparently spontaneous experiences. The observer walks a little way, takes in a pre-arranged view of a tree, makes a pre-arranged turn, sees a bunch of lotus blossoms, and so forth. Even if they reach a Borgesian fork in the path, they are still forced to elect between a small number of alternatives—in gardens, usually no more than two—or else they will fall off the path into the lily pond. Perhaps the yatsuhashi is not even a bridge over a lily pond, but just a pathway through some flower-beds: the point is that 99% of the “users” will follow the pre-arranged path, without even realizing that their experience is being manipulated.

A lot of human interactions follow a similar pattern. Simple conversations, as between a customer and a bank teller, occur basically on autopilot. This is why the interface of an ATM works: it is automating a very simple human interface. With a human teller, we feel that we are having a wide-ranging conversation—after all, we could ask them about the weather, or we could ask them out on a date. But 99% of the time, we don't. We are usually having the same conversation with the human teller that we'd have with the ATM: we are on the yatsuhashi.

A more impressive example of this is evidenced by language phrasebooks for tourists. They are often formatted as little collections of dialogues. If the tourist's accent isn't too far off, they can often get a few rounds into a fairly complex conversation before they step off the planks, and their

interlocutor realizes that they don't actually speak the language at all. This situation is reminiscent of Searle's Chinese Room; indeed, it's almost identical. But we do this all time in our own languages. People who lose the thread of a conversation, or never had it to begin with, are often able to pull off amazingly long dialogues without tipping their hand. We've all seen, or been part of, something like this:

Unknown: Hey, James, it's been a long time!
James: [Has no idea who this person is] Yeah, it's been ages.
Unknown: What's up with you?
James: You know, same old, same old. What about you?
Unknown: Well, I guess you heard I lost the job at the plant.
James: Oh, yeah, that sucks. What are you doing now?
[etc.]

Less brilliantly, we've all seen someone drunk or high at a party, trying to seem like a participant in a conversation that they can't follow at all, saying things like "Oh, totally, that's so true."

A.I.s are often accused, if that's the right word, of presenting a façade of understanding when they don't actually understand things—Engels' "false consciousness" in a more literal sense. This is often a fair criticism, but clearly humans do the same thing from time to time. Most chatterbox A.I.s can create the semblance of higher-level awareness with a fairly simple yatsuhashi, because that is about all it takes to mimic the bulk of human conversations. Of course, people step off the causeway immediately, because no one is interested in having a pleasant, banal conversation with an A.I. So the next line of design is to plant surprise features for people who break with the expected script.

These hidden features (today we are wont to say "Easter eggs") are another common feature of traditional Chinese and Japanese gardens, as well as video games. They have a rather specific geometry that calibrates their payoff. It is one thing to have a statue of Kwan Yin that no one will see unless they happen to step through a certain veil of lilac boughs. It is something else to have a statue of Kwan Yin that no one will see unless they happen to cut down the willow tree on the island and dig underneath it during a full moon. Comparably, in a typical yatsuhashi conversation, "How are you?" is followed almost certainly by "I'm fine" or "I'm OK". It might make sense to add some code for someone who responds "I feel terrible." That's sort of like an Easter Egg. But it makes no sense to add contingent code for the user who says "I feel like I'm slowly turning into a prawn." Easter Eggs are a cheap way to give an A.I. some personality, but they usually backfire in the long run, because they are too simplistic.

Occasionally, people build very complex, interactive Easter Eggs. Blending our metaphors a bit, I would like to note the Lithuanian term *kūlgrinda*, which is essentially a bridge hidden just underwater: a sort of secret yatsuhashi. This is now fairly common in video games, as witness notoriety like the secret duck race in *Shenmue II*. Increasingly, calling these things "Easter Eggs" is a polite fiction, much like the claim that various viral marketing campaigns were "unintentionally leaked" from the companies in question. If you go to the trouble of building a *kūlgrinda*, you want it to get accessed.

It is one of my basic quarrels with the universe that we are all carrying around fascinating *kūlgrinda* conversations that hardly ever get accessed. As a teacher, for instance, I feel very inhibited—even quietist—about spontaneously offering too much of my own experience in various fields, but I would be very happy to do so if someone asked. No one ever asks. Just as I never ask the guy on the bus opposite me about all the stories he's carrying around. It's all very tragic. And, clearly, it is inefficient to devote too much of one's resources to a conversational contingency that might never arise.

So...the extension of the metaphors above is the "plaza", where the user can walk around freely, without falling into the pond. It presupposes the ability to fully parse the user's grammar, and generate

responses from scratch, without recourse to any prior contingencies. The conversational plaza is what I *want*, but it isn't my first priority. Because even in a plaza—a real one or our conversational metaphor—the vast bulk of people follow a fairly narrow and predictable itinerary, as if they were still on a yatsuhashi. (Not to belabor the point, but I find that the inability of most architects to notice these trajectories to be endlessly aggravating...)

Moreover, it is a waste of processing resources to even *try* to parse inputs in a “plaza” fashion unless someone has stepped off the path. If Sphinx says “Hello” and I say “Hi”, it should not even cross Sphinx's mind that I might be referring to the postal code for Hawaii. So...my general priorities are to build the yatsuhashi, then the kulgrinda, then build out the plaza around them.