

THE WRITING ON THE WALL

With Earth's first Clay They did the Last Man knead,
And there of the Last Harvest sow'd the Seed:
And the first Morning of Creation wrote
What the Last Dawn of Reckoning shall read.

Omar Khayyám (ca. 1100)

Nothing is written.

T.E. Lawrence (1917, attr.)

A man never chooses for himself; his past always chooses for him.

James Jeans (1943)

Everything is 'written' and ... change is only relative to the
perception of living beings.

Olivier de Beaugard (1966)

It is not the present which influences the future ... but the future
that forms the present.

Frank Herbert (1976)

Free will is probably located in the prefrontal cortex.

Steven Pinker (1997)

Is all the world a stage as Will has Jaques, Orlando's brother, have it? Are all the men and women merely players? Fate, if fate it was, has somehow brought us here, the two of us that is, our two we-feel-distinct but here-associated clouds of sub-sub-sub-sub-atomic particles, to this place in space though place in space is just an approximation, to this moment, too, this Tock in time. At least we're sure of time, although we cannot catch which Tock it was. And too—rethinking space—*two* clouds of particles? Or maybe only one? Just thinking of the question seems to split my skull. The decision to be here and now is mine alone I think. Could I be wrong? Is it some sort of self-fulfilling prophecy? And who decided *he'd* be here?

And too, whatever she is doing, is it *written*? Is it, in reality, as good as done? His answer is more silence. In his silence I reread a passage I recall from Maugham. He retells a Talmud tale as told by Death:

There was a merchant in Bagdad who sent his servant to market to buy provisions and in a little while the servant came back, white and trembling, and said, Master, just now when I was in the marketplace I was jostled by a woman in the crowd and when I turned I saw it was Death that jostled me. She looked at

me and made a threatening gesture, now, lend me your horse, and I will ride away from this city and avoid my fate. I will go to Samarra and there Death will not find me. The merchant lent him his horse, and the servant mounted it, and he dug his spurs in its flanks and as fast as the horse could gallop he went. Then the merchant went down to the marketplace and he saw me standing in the crowd and he came to me and said, Why did you make a threatening gesture to my servant when you saw him this morning? That was not a threatening gesture, I said, it was only a start of surprise. I was astonished to see him in Bagdad, for I had an appointment with him tonight in Samarra.

No response and now I'm worried. I keep thinking that a fiction can be fragile. I reassure myself reality's no better but this doesn't help. The biggest worry is that for a while there he would keep returning to this question. That's why it's on my list and why we've come to it today.

"In each one of the first four hundred Moves there was a single Fleck that held the whole of what was to become the Solar System," is the kind of thing that he would say and I'd suppress the thought that it was all non-local.

Then, "Would *we* be here if any of the first few Moves had been a little different?"

He'd be speaking of the two of us. And he'd be right, we wouldn't be.

But then he'd press the point relentlessly: "So what about the next Move?"

I would see where he was going. I would have to answer no again, and then he'd ask about the next. Etcetera. At what point, with what reason, would I vary my response? I think of this, like picking at a sore.

And then some free-association thing brings Einstein into mind. Disclaiming credit for his work he says, like cosmic dust 'we all dance to an invisible tune, intoned in the distance by an invisible piper.' It isn't easy in the Age of I to realize how recently the public—well, at least the Western public—moved beyond predestination. In 1937, Sayers could still write that, 'in a village, no matter what village, they were all immutably themselves, parson, organist, sweep, duke's son and doctor's daughter, moving like chessmen upon their allotted squares.' Of course her village is unreal; hunger, war, disease, all had their place in her society and surely more than one in five lived by their sweat.

But more than that this picture looks a tad Teutonic, too *alles-in-ordnung* to be true. So is it all that strange that Einstein, born six decades before Sayers says this, would take a deterministic view? As does the Calvinist society in which he is a rebel but of which he is a part. Determinism founds a mental-comfort-food philosophy that is well suited to its times. And even now, for reasons that I can't pin down, just thinking of it, the idea or the *essence* of it—everything's determined and it always was—begets a comfortable feeling. Not that I believe it. It is just a pleasing, maybe childish, kind of let's-pretend relieving of responsibility. The

world may be a better place for having it, although of course it doesn't really *have* it. And it's curious that many, maybe most, of those who write of it use fiction to explore its implications and, put to the choice, they mostly seem to choose free will. If in reality they have a choice, that is.

Their champion is Dickens, using Scrooge to make his case for choice: 'Are these the shadows of the things that Will be, or are they shadows of things that May be, only?' There's that epic movie *Lawrence of Arabia* where Arab tribes in what's now Jordan are portrayed as knowing that the future's preordained; pop flesh on philosophic bones. After trekking days through deadly desert to defeat the Turkish army at Al 'Aqaba, the movie-Lawrence tells his troops, who follow him believing fate will bring them failure, nothing's written. Real Lawrence writes a record of the real adventure but he says no word of this. Muslim thought's more subtle than the film portrays. Though not written in the Qur'an, بورتكلم or *maktub*—literally, 'it is written'—does reflect Muslim philosophy. But it does *not* mean that the future's preordained; it means that Allah knows all time.

And then there's Herbert's epic post-pan-Arab *Dune* quintilogy. He chooses all sides of the question. But exactly what, then, *is* the question? What exactly is its meaning? It admits of different definitions. In a paper on determinism Eddington adopts Omar Khayyám's verse version:

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As Eddington explains, 'There is no doubt that his words express what is in our minds when we refer to determinism.' I agree. And he agrees with Omar. So do I unwitting write a chapter in a book that is already written? Could it be that Omar has it right? Philosophers who follow find it an enduring question. If the answer is affirmative then it is written that they'll find the answer, or it's written that they won't, so one would wonder why they bother trying. Is this why the great philosophers all say it's so, then talk themselves back out of it? Their answer seems to be, collectively: Well, yes! . . . But I don't think so, no!

What does physics say? Well, in the early 1900s physicists believe the world is predetermined. They are puppets all, not players, as their future is already fixed, a book that's open to whomever calculates with absolute precision. Einstein says that, in a world that's run by relativity, determinism is the order of the day. If a system's state is specified, GR describes its state at any future time, although in principle the system has to be the entire universe. Then in the '30s physics flips. No matter how precise, its QM calculations produce only probabilities. Experiments substantiate the Heisenberg uncertainty. Puppets become players overnight. Soon nearly all are of like mind. But are they *right*? Today *both* GR and QM are thought to be deterministic. This is what most physicists would say that phys-

ics says.

But what would *he* say? Does he think our presence here was preordained from the Beginning? He knows that it is random at its roots. He, of all people, must see, as I now see, that free will is just the latest level to emerge. Or rather, he must see it as he's *not* a person. So if *he* has no free will what *does* he have?

The Beginning offers me a whole new view. The only system is the universe and it needs no outside observer; measurements are made *inside* the system. They are statistical; the UC plays out physics more precisely than a physicist can measure but all physics is approximate. This undermines the notion that the future can be calculated. It's the fundamental reason why the best prediction won't stay good for long. Even the UC can calculate what happens only as it makes it so. It has a universe to run. But then, of course, it *is* the universe. In other words, it's busy being. It has no capacity to figure where it's going. So much for determinism.

As for free will, where could it come from? An answer, any answer, seemingly denies free will. Yet after all the sound and fury there's an answer here before me: The Beginning is an entropy machine; as its descent from perfect order drives new levels of complexity, new rules emerge that were not in the Rules. They rule new entities that were not entities before. So everything's emergent. 'Even life itself is considered an emergent phenomenon,' says Service.

Emerging from my thoughts into the world, I see what I've been typing on the screen. The thought that I have held at bay comes crashing in upon me. This—free will—is his obsession. Almost, it seems sometimes, it's his war. Why is he still silent? Filaments of fear stab at my gut again and run amok. Whatever causes him to be is ending and I feel alone as I have never felt before. I turn back to the world of words to stultify my desolation.