

The Architecture of Time

Bumbling our way through the fourth dimension

BY MARJORIE KELLY

In a four-dimensional world, the shortest distance between two points may be a detour.

we have barely begun to assimilate.

When we think of time, most of us function unconsciously in the old Newtonian/Cartesian worldview: imagining time to be a forward movement of orderly and unchanging cadence—hours, days, months, years—laid out like a Cartesian grid upon our lives. Trusting this to be a valid picture of time, we naturally approach time management as the task of inserting appropriate tasks into appropriate slots. And when our days fail to follow such orderly paths, unfolding instead in chaotic and unpredictable ways, we call ourselves undisciplined. We blame ourselves, rarely thinking that our worldview might be askew.

But it may be that the discomfort we feel, trying to operate in a Newtonian view of time, isn't a mistake but a clue. Instead of seeing our unpredictable days as flawed, we might look to them for the information we need to conceptualize time more accurately—much as the unpredictable behavior of subatomic particles led physicists into the new world of quantum reality. Instead of feeling guilty about our personal chaos, we might learn from it: looking to find the larger patterns that science now tells us govern even the unpredictability of chaos.

IN THINKING ABOUT my own experience of time, I've made a number of non-Newtonian observations about its behavior. The first is that it's not at all uniform, as the old clockwork view of time would have it, but instead unfolds with its own topography—unpredictable in a daily sense, but in some larger way ordered. I've come to

recognize, for example, those days that carry me forward like a stream downhill: days when every call I make connects, all my conversations are wonderful, and projects I've been working on click together effortlessly. I try to get a good deal done on such days, because I know that what I start is likely to be finished successfully. Such days, you might say, are like valleys in which time flows smoothly. And I find that when I've entered on such terrain I'm likely to be in it a while: at least for long stretches—an entire morning or afternoon, if not the entire day.

But if there are free-flowing days of rapid movement, there are also rocky and mountainous days—and I've learned to spot them too: the days I can't get anyone on the phone, bad news comes in the mail, and deals that were 99 percent done evaporate before my eyes. I consciously avoid making important calls or decisions on such days, and when I leave the office I drive with special caution—because I know these are times I'm more likely to have an accident, or get a ticket.

Why time has a topography like this, I don't know, but I've seen it often enough in my own life and the lives of others to recognize its truth. Yet our culture is ill-equipped to see such patterns in any systematic way. And this inability to recognize the differences in "identical" slots of time may be, I suspect, one reason our schedules so often fail—because in the traditional view, notions like the topography of time are utter nonsense.

A second anomaly of time struck me one afternoon, a few months back, when a fellow editor and I were editing a stack of manuscripts we needed to complete that day. We had used up well over half our time on just one article, and we stared glumly at the remaining pile—believing, instinctively, that the best way to get through them was to plow ahead without stopping. After all, as our watches told us, we had a fixed amount of time, and a fixed amount of work to fit into that slot, so taking a break should have *subtracted* from the time available. Time usage is a matter of mathematics, right? But it didn't

I'VE BEEN NOTICING, LATELY, how many of us in the professional world are completely inept at judging time. An entrepreneur trying to raise capital in six months takes twelve. A project expected to take a half day takes two days. The meeting scheduled for two hours needs three hours. I mean, really: If I and my colleagues were as bad at estimating space as we are at estimating time, we'd be crashing into the furniture and dropping coffee cups off our desks.

We seem always to err on the side of optimism: Like infants reaching for the moon, we imagine something is within our grasp when in reality it is far beyond reach. And we go crashing about as a result. "I'll write these three letters this morning," I tell myself. Crash. I get one done. "I'll have those two articles edited by the end of the day," a fellow editor tells me. Crash. It takes him into next week. Yet each day we go on making our plans (promises, predictions), with little awareness of how inaccurate they so often prove to be. We seem to believe each day anew that *this* time we'll get it all done, *this* time we'll make the hours conform to our wishes. Our faith in our ability to control the future might be touching, if it weren't so absurd.

And lately I've begun asking myself: What on earth is going on here? Why *do* so many competent professionals misjudge time? Since so many of us make the same errors so routinely, I've begun to think there's something at work beyond our own personal mistakes—something deeper, or more basic. And I suspect it has something to do with the way we conceptualize time.

In a curious way, our awkwardness at "movement" in time makes sense, if we think of ourselves as new to the dimension of time, as infants are new to spatial reality. For it's only since Einstein that we have come to speak of time as a fourth dimension added to the three dimensions of space. And the four-dimensional reality the new science shows us is vastly different from our old view of the world, in ways that

work that way. Exhausted and stiff as we were, we decided to take a walk by the creek—and though we came back feeling slightly naughty, we also felt refreshed and clear. And we flew through the rest of the editing in an hour, much to our astonishment. The moral of the story, you might say, is that in a four-dimensional world, the shortest distance between two points may be a detour.



our lives. The second is fate. We might think of fate as the unique role we play in the larger order, or the pattern that our own unfolding is following. And what the *I Ching* attempts to teach is how to sense where we are, at any point in our lives, inside these larger patterns. Originally an agricultural text when it was created thousands of years ago, the *I Ching* attempts to show us how to read time, as a farmer might read the seasons or the weather.

OBSERVATIONS LIKE THESE interest me, for they offer a glimpse of time that is quite different from the regular, predictable march of hours and days that we expect. That is not to say, of course, that linear time is no longer a useful concept—only that it is less than a complete description of time. Physicist Fred Alan Wolf, in *The Eagle's Quest*, refers to linear time as “chronos”—the clock-time that rules the world of thinking and sensation. But he points also to another kind of time, which he terms “mythos”—the seamless sense of events flowing together into the larger story of our life, which we experience in our intuitive-feeling world.

We might think of mythos as the pattern in which chronos is imbedded. And when we fail to function well in time, it may not be that we're mis-judging chronos (“I didn't plan a big enough slot for that task”), but that we're somehow mis-reading the human mythos. For while chronos has to do with hours on a clock face, mythos has to do with relationships: to each other, to our bodies, to our world.

The difference between chronos and mythos is much like the difference between the particles and the whole that we confront in Newtonian versus quantum reality. If the Newtonian world consists of isolated particles, the quantum world shows us particles that don't exist independently but come into being only in relationship to each other, and behave differently in relationship to an observer. It's a description of reality that is difficult to grasp intellectually, but even harder to integrate at an intuitive level. For it calls on us to acknowledge that, literally, nothing exists apart from the whole. Including ourselves and all our actions. And this is true not as part of some dreamy notion of we-are-one,

but as the texture of physical reality itself.

Given such a reality, we might try on a different picture of time: not as a linear path moving toward the future, but as the unfolding motion of a fluid whole. For if we think of three dimensions as the place where static matter exists, we might think of time as the fourth dimension in which it all comes alive. We might conceptualize time as the medium in which we can see the motion of the larger whole—the movement that demonstrates to us, over and over again, that nothing really is separate from anything else. Such a view of time might serve as a reminder that beneath the urgency of our machine-like days—filled with to-do lists and rigid schedules with which we “manage” time—there is something else at work: a rhythm, a movement carrying us along, and we move with it, whether we realize it or not. We never wholly create our days but enact them atop a landscape that is alive and moving, and we must learn, somehow, to move with it.

Planning out our path in an alive, four-dimensional world is more complex than planning movement in three dimensions. We often make the mistake of thinking of movement through time as being like a journey in three dimensions: like a movement down a road that takes us under trees, say, or through a tunnel. A more accurate metaphor would be a journey through a *moving* landscape: in which trees leap across the road, or a tunnel once open unexpectedly closes, or the ground beneath us disappears altogether, leaving us not on land but in deep water—or indeed, in a flowing stream that carries us suddenly and effortlessly forward.

It's a world in which a lone actor, armed only with her own will and determination, could never be entirely effective in shaping her life. For as Eastern wisdom tells us—in the ancient Chinese work, the *I Ching*—our will is just one of the two primary forces in

Or as a traveler might read the topography of the land over which he journeys.

It's a wisdom about life we might do well to embrace. For as difficult as it is for us Westerners to accept, managing our time may not in any total sense be possible. Just as in any day there is both dark and light, and in any life there is both youth and old age, in time there must be both order and disorder. Perhaps our real task is to find that balance between acceptance and control: to learn to read the times and accept what they bring us—even if that be unwelcome chaos—but at the same time to find ways within the larger order to exercise our own will.

We might also, as a kind of delightful bonus, learn to recognize the order within chaos itself—for it can bring us surprising gifts. As Nobel Prize winner Ilya Prigogine describes in his theory of “dissipative structures,” disruption may be not a sign of trouble but the stimulus that forces a system to a higher level of functioning. For when disturbances are too great to assimilate, they force a system to fall apart—which is precisely what allows it to reconfigure itself at a higher level of complexity.

Perhaps that's what's going on, as we zoom around our crazy, unpredictable world these days, trying so ineptly to manage our time: Perhaps we're being pushed—individually and collectively—into a higher level of functioning. It would be a nice part of our mythos, I should think, if this chaos so many of us feel really weren't a problem but an opening: a door onto a new relationship to time, where only half our task is getting life to do what we want it to do. The other half is discovering where life itself wants us to go. ☯

For the germ of these ideas I'd like to acknowledge Margaret Wheatley's book, Leadership and the New Science (Berrett-Koehler, 1992).