

THE SPHERE OF TIME

For L. F. and M. S.

1.

Here is Thaddeus: a tall old man, stoop-shouldered and narrow-bodied. His fingers are swollen and mottled with age. His chest is hollow, fragile as a bird's.

She – the center of his world – noticed, on the first day they met, how his ice-blue eyes (now milky) looked out of a gaunt face that belonged on an ancient coin. A great scholar from the first age of scholars. The rest of the world saw a gray-haired, myopic professor, too old for her, but she made him a cross between a hero of the Round Table and one of Michelangelo's royal patrons. Don Taddeo, she called him, and he stood up touched by her admiration like a man knighted by the flat of a sword.

2.

Here is the farmhouse: a low, spreading wooden structure. A few small square windows break up its brown faces.

In Thaddeus's study, crammed bookcases line the walls. Index cards, stray sheets of paper and pages torn from notebooks litter the old wooden roll-top desk. The same spidery but neat script covers them all.

One card, taped to the open edge of the roll-top, reads, "Working title: 'The Sphere of Time.' In summary: The nature of time is the process of *becoming*. Past, present and future are *not* discrete, but inseparable. Each always exists within the others."

One sheet of paper sits in the middle of the desk. Here the writing looks rougher, scribbled.

“The theory of time as a sphere states that past, present, and future are always rolled into one. Therefore the past does not cease to exist as it moves into the future, because all three states coexist in the mind of the individual.”

The last line on this page is thick and dark, as if the pen dug into the paper. “*But death is final.*”

The pen itself, a heavy ballpoint with a marbled black and gray shaft, sits on that last page. It is uncapped, ready to be used again, but a thin film of dust dulls its shine. The same film covers the papers with tiny grit and whitens the edge of the desk, where Thaddeus’s elbows rest when he writes.

3.

[From Price, Thaddeus, Ph.D. *The Sphere of Time: A View of Our Most Elusive Parameter*. 2005: Georgetown University Press.]

Introduction: Disputing the Model of Time

For centuries, physicists have studied the nature of Time, both our most precious and least tangible resource. The reader, and indeed my colleagues in the field of theoretical physics, may question my decision to join my voice to this already extensive, some may even say exhaustive, discussion. I reason as follows. My studies of this elusive “commodity,” if I may use such a word, have led me to the conclusion that many of our most commonly-accepted models of Time are subject to an inherent flaw.

Consider the phrases we often use to describe the passage of Time. We speak of it “passing by,” “getting short,” “running out.” The reasoning behind such phrases, and the implication of them, is that Time is a linear commodity. It moves from past to future, and we can neither grasp the future ahead of Time (so to speak) nor retain the past as it moves by us.

This view leads us to the model, commonly accepted and held for centuries, of Time as an arrow. The scientist and the lay-person alike can easily understand such a model. An arrow moves linearly through space. In each instant, it reaches a new point in space and leaves the previous point behind. Such can be our experience of the passage of Time: we must move from one moment to the next, leaving the previous moment behind forever.

4.

The farmhouse stands on the land cleared by Thaddeus's grandfather Price. Thaddeus's father did not want his son to stay there, so he sent him away to college and graduate school. Thaddeus followed abstract, crystalline lines of theory through densely-written textbooks and patterns of white chalk on blackboards, a universe apart from the smell of cow dung and the scrape of mucking shovels on the barn floor.

Even so, he never forgot the warmth of the early mornings of his childhood, the earthy smell of cows and the sweeter tang of hay. Hunched over textbooks in the university library, he called up the patch of sky through the loft window, the gray- and rose-shot clouds in it as the sun came up.

After his father died, Thaddeus went back to the farm. By then, the dairy herd and the barn were gone and the silo stood empty, with gaps in its wooden walls where boards had fallen away. Thaddeus moved into the old farmhouse. Years and neglect had spared it enough.

She was a city girl. The first time she came to the farmhouse, she looked out through the square back windows at the fields. A thin January snowfall dusted the tangled grass. She did not stretch out her arms to embrace all that space. Her eyes did it.

5.

She used to come to the study in the afternoons. After she had worked in her garden, or ironed his shirts, or put a stew on for their supper, her foot would beat a muffled tattoo on the carpet.

“Look at this beautiful day.” She said those words in misty spring or crisp fall, dry summer or after a snow. “Come on, Tad. You need fresh air.”

Five months ago, in June, they took their last summer walk. Neither of them knew it would be the last. They walked through the back fields, lush with waving grass, and looked out at the curves of the mountains far away on the horizon. Thaddeus took his camera and snapped her picture under the lone peach tree.

The photo sits on his desk now, in a thin-edged gold frame, with a plain, well-worn gold ring beside it. The frame’s dust-free glass sparkles in a shaft of sunlight.

She looks older than when he first met her, but only by a handful of years. Her head tilts back in a laugh. Sun shines through the peach tree leaves and touches her eyes and hair. Green and gold, green and gold.

6.

[From Price, p. ii-iii]

I posit that the arrow model of Time is flawed precisely because it presents Time as linear. If my colleagues will permit me, I will venture for a moment beyond the bounds of strict theory, and appeal to the more visceral nature of our experience.

Although we do perceive Time as a finite and often disappearing resource, consider the two complementary phenomena of *anticipation* and *memory*. Anticipation allows us to look ahead, at least a short distance. We are insightful enough to look forward to certain events with eagerness, or to dread others, and in this way, these events are with us ahead of their Time. We may even take action

in the present to influence the future. This contrasts with the arrow, which cannot anticipate where it is going, nor change its course once begun.

The arrow likewise experiences no lasting influence from the space through which it travels. We, however, through memory, retain connection to the events of the past. Although we cannot experience them again, in the literal sense, we may continue to feel their influence through the present and into the future.

7.

Here is another room. It looks new, even raw, against the rest of the house.

Windows stretch from the thick grass-green carpet to the painted white clouds on the ceiling. The furniture looks as new as the room itself: a broad-seated, thickly cushioned wicker rocker; an armchair with a pair of crocheted pink slippers underneath; an unvarnished bedside table holding an empty glass, three thin paperbacks and a pair of reading glasses. Close to one of the long windows, an empty hospital bed sits with its top half angled up.

Thaddeus comes into the room, holding a small wooden box. He sits in the armchair with the box in his lap and folds his hands over it. The gold band he wears has sunk into his skin.

Both chairs, like the hospital bed, look out on the farm's back fields. The mountains west of the farm are blue in the late afternoon light and dotted with the black silhouettes of bare trees. They seem unnaturally close in the cold winter air, as if the horizon creeps in to encroach on the fields and their spread of dried-out golden grass.

The first time she came to the farm, he took her for a walk in the snow. They made a circuit of the fields and a loop around the long wooden house. The glass room did not exist then. They stood outside the narrow window of Thaddeus's study and watched the sunset. Her gloved fingers, sparkling with round drops of snowmelt, closed around his hand.

Now he watches the November sun sink toward the mountains. A long time ago, almost too long to remember, he used to watch the changing light through the study window, when he lived alone in the house with his books.

The theory of time as a sphere states that past, present, and future are always rolled into one. Therefore the past does not cease to exist as it moves into the future, because all three states coexist in the mind of the individual.

The sky begins to turn pink at the edges of vision, gold toward the horizon. Thaddeus closes his eyes. The light bathes his face.

But death is final.

He sits alone with the box in his lap until the light begins to fade.

8.

[From Price, iii]

For the reasons I have stated, I posit again that the arrow model cannot fully describe either our experience or the true nature of Time. I would therefore like to propose a new model.

We may better describe Time not as a linear entity, but as a sphere. The sphere model suggests that Time is multi-dimensional, reflecting its triple nature as past, present, and future. I submit further that the sphere suggests the encompassing nature of Time, reflecting that past and future remain accessible to us from our point of reference in the present. In the following chapters, I propose to develop this model further, discuss my reasoning for it, and suggest its possible utility in the ongoing study of our experience of Time.

9.

The sun has gone behind the mountains. A red glow hovers on the horizon. In the gray sky, a handful of stars have come out.

A pale sickle moon hangs over the back fields. Thaddeus walks through the dead grass. He moves slowly, with no lantern or flashlight, holding the wooden box in both hands.

Under the bare peach tree, he opens the box. He reaches into it and brings his hand out closed. When he opens his fingers, a trickle of gray, no more than cloud on cloud, drifts out.

He moves on through the field. Twice more, he stops to open the box. The sky turns darker, the wind chillier.

By the time he comes back toward the house, the stars and the thin moon hang clear and white overhead. Thaddeus walks along the back wall of the glass room. He lets the last of the ashes fall.

Standing in front of the long windows, he closes the empty box and thinks of rose and gold light on her face. His long coat blows in the cold wind. He thinks of her ashes drifting through the tangled grass. In the dark, the horizon has disappeared. Space stretches around him without end.