

Augustana College
Chapel of Reconciliation

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Time: Gathering at the Foucault Pendulum in GSC

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PRAYER:

God of Wonder, Teach us to number our days, to appreciate the gift of time and to use it wisely. Help us to understand time as you intended and view our time as a gift, constantly sweeping from day to day. Amen.

Psalm 90

SERMON:

Welcome to the basement of the Gilbert Science Center, and the base of the renowned pendulum. If you have read the small plaque that sits upstairs, you know this pendulum is referred to as a Foucault pendulum. The Foucault pendulum demonstrates the rotation of the earth, and is named after Leon Foucault. The pendulum movement follows the rotation of the earth underneath it. If we were standing on the North Pole today, the pendulum would make a complete rotation around the base every 24 hours. While we are not located at the north pole and the pendulum here has to be assisted by a magnet to overcome air resistance, it still provides us with a constant reminder of the earth's rotation, and the 24 hour time period that passes at the conclusion of each rotation, comprising a day. With the assistance of an equation on Wikipedia and the knowledge of Dr. Viste, at the latitude of Sioux Falls, South Dakota, our pendulum should take 34.8 hours to complete a full rotation. These Pendulums are located across the world, with many famous pendulums here in the United States.

If we pause briefly, step back from the operation details, and imagine the pendulum in its current motion slowing sweeping across the circle base over a long period of time, what piece of the pendulum rotates? As we stand here with the pendulum in front of us, the pendulum is not rotating fast enough for us to see the movement, although it may have changed enough to visualize by the time our service concludes today. But when I picture this image in my head, of a pendulum making a complete rotation, I think of myself as constant while the pendulum rotates in front of me. But yet, the Foucault pendulum originated in the 1850's as a means of demonstrating the earth's rotation. The pendulum is in a constant motion back and forth while the earth rotates below it. The pendulum does not change around us. Rather, it remains at the center with a constant movement in space, while we rotate around it.

For as occupied as we are with time, I think it was sheer genius that this pendulum is here to help us see it.

As Rachel has explained, it shows us the spinning of the earth on its axis.. It seems to me its first gift to us is to know that time is not about us, it is about movement in the universe. A day is one revolution of the earth. A month is very close to one orbit of the moon around the earth and a year is one orbit of the earth around the sun.

Time is a movement beneath us that we can neither hasten nor stop. . .and I appreciate coming here to watch it. I think maybe this pendulum could help us, as the Psalmist says, number our days so that we may get a heart of wisdom.

When Dorothy Bass writes about time, the verb she uses is “receive.” Receive the day. . Receive time. There is so much more gift in that than all the economic verbs—saving time, spending time, wasting time, hoarding time, squandering time, over time.

Worship—and faith itself—are finally about receiving something greater. Perhaps they are good practice at receiving time, as receiving time is great practice at knowing the enormity, indeed the infinity of gifts.

Time is finally not about us, but about a movement beneath us which we can neither hasten nor stop. I pray we will receive it.

Receive the dawn with which the day begins. Receive the rest with which it will end, and whatever work and movement of God lies in between. And receive the Psalmist’s prayer, “Satisfy us in the morning with your steadfast love, that we may rejoice and be glad all the days of our lives.”

So how do we see time?

In an excerpt from Joseph Sittler’s *Gravity and Grace*, he comments on the role of time in today’s modern culture. “The watch that has a hand moving slowly around and marking the minutes of the hours and the hours of the day is a physical representation of the nature of time. But a watch that jumps from one second to another is a misrepresentation of the continuity. A watch calls my attention to or celebrates that character of time; a digital watch is a misrepresentation of the deep and primitive wonder before the mystery of time”

We live in a digital world, there is no question about that. And the implications of this digital technology can be seen perhaps most strongly on campus here in the Gilbert Science Center. Yet, on those days when I can’t quite drag myself out of bed before my eight o’clock class, I am comforted by the analog clocks that I pass on my way. Not only do they all show a different time (often differing by a factor of minutes), giving me a host of options from which to determine my tardy status, but the clocks bless me with the opportunity to see the time as I would like to interpret it. It is not a definite, exact late or on-time. I can “slide in on time,” be “almost late,” arrive “almost early,” or simply be “late.” The hands of time sweep across the clock, challenging me to find eight am, at 0 minutes, 0 seconds, and no uncertainty. The hands of the clock sweep, just as the pendulum continues to sweep in our midst reminding us of the continuum and infinite quality of time that the psalmist refers to in today’s text. “Before the mountains were brought forth, or ever you had formed the earth and the world, from everlasting to everlasting you are God.” “For a thousand years in your sight are like yesterday when it is past, or like a watch in the night.”

Sittler’s examination of the watch brings up a concept similar to one used throughout the Gilbert Science Center: the conversion of analog to digital signals. It is these digital signals that are at the heart of our digital world. Yet, they provide the same challenge that Sittler

discusses in regards to the digital watch. The analog signal gives a sweeping motion, like the sweeping motion of your gas gage. When converted to a digital signal, the sense of continuum, of never ending goes away. If your tank is more than half full, it all of the sudden becomes full. If it is less than half full, round down. Your tank is now empty. While this life-example may be a bit extreme and oversimplified, the concept remains. 2.6 becomes 3, as does 2.55, 2.65, 2.7, 2.8, 2.88, and so on. This feeling of an either or choice, a binary system of computer electronics, the definitive numbers popping up from your watch, is the foundation of the digital system.

In Book Ten of his confessions, St. Augustine speaks of time. As many wise teachers through the ages, he asserts that only the present is real. It is inexact to speak of past, present and future.

But he allows that it is more exact to speak of the present of the past, the present of things present, and the present of things to come. The present of the past is memory. It is here but connected to what has gone before. The present of things to come is expectation. Expectation is also in the present, but it is connected to things to come. The present of the present is immediate experience. . . . which is connected to all that has happened and all that will follow in memory and hope.

What difference does this make? A sesquicentennial is now. This year is full of the present of the past, the memory that undergirds all that we are. And the power of the celebration is expectation, the present of the future, the strength of hope.

Well Robert Grudin, in *Time and the Art of Living*, asserts that love. . . is impossible without the gift of time. We love only when we love across time, he writes, when love offered is love remembered and love promised.”

I wonder if the Psalmist encourages us to number our days, so that we get a heart of wisdom and a larger Presence. Presence of God, of purpose, of love.

Grudin continues. “The extent to which we live from day to day, from week to week, intent on details and oblivious to larger presences, is a gauge of our impoverishment in time. Deprived of the continuum, we lose not only the sole valid alternative to a present- centered existence but also the nourishing context which can give substance and value to the present itself.

Anybody here intent on details and oblivious to larger presences?

Receive the day, the sweep, and its infinite gifts. In the words of the Psalm “Let God’s work be manifest to God’s servants, and God’s glorious power to their children.” Amen.

Hymn ELW # 636: How Small Our Span of Life

Lord’s Prayer

Benediction