

SORTING OUT THE SEASONS

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Of all the people who have had a part in shaping my life I ponder most the influence of my schoolteachers. It appears to me that the patience of schoolteachers to await a reward for their labors is wondrous. Of late I have become aware of the role the seasons of the year play in my life, and the difference in the way people around the world experience the seasons. I'm confident that my schoolteacher from 5th and 6th grade gave me all the fundamentals of geography. And that she has been patiently waiting these many years for me to wake up to the significance of those fundamentals. I am delighted to say that I have recently become aware of the seasons and drawn upon that information. And though it is much belated, I want to convey my thanks to my 5th and 6th grade teacher. I decline to name her lest I embarrass her later on.

I rehearse what I think she taught me. In our solar system the earth spins like a top. The earth also falls through space. All the while the sun is exerting gravitational pull on the earth and the net result is that it orbits around the sun; falling and being pulled at the same time. The axis upon which the earth spins wobbles or tilts back and forth. This means that the portion of the earth receiving the direct rays of the sun is constantly changing. This gives us seasons; winter, spring, summer, and fall.

Because I grew up as a resident of the northern hemisphere I arbitrarily pick this hemisphere as a place to start monitoring the cycle of the seasons. There are two days in the year when the tilt cycle reaches its zenith. When this happens the earth has a solstice. We, in the northern hemisphere, experience the Winter Solstice around December 21. At that time the earth is tilted so that the southern hemisphere is getting the direct rays of the sun. We have created an imaginary line around the earth and named it the Tropic of Capricorn. This line represents the limit of the earth's tilt toward the southern hemisphere. During the Winter Solstice, we in the northern hemisphere get less direct sun and therefore we experience the cold season; winter. The shortest day of sunlight in our year is December 21, because the tilt puts those of us in the northern hemisphere in the earth's shadow.

On the day when the direct rays of the sun shine on the Tropic of Capricorn, the tilt begins to return, like a pendulum, to the other end of its cycle. The pendulum cycle is completed every 365 days. We have chosen to name the length of one of these cycles one year.

Once we have our shortest day, December 21, the days begin to grow longer. The tilt is coming our way. By March 21 the tilt has the sun shining directly on the imaginary line at the center of the earth we have named the Equator. For us this is a herald of spring. This is called an equinox. Thanks to my high school Latin teacher I know that means '*equal night*'. On that 24-

hour period the daylight and darkness are of equal length worldwide. And from that time on until June 21 the days continue to get longer.

On June 21 the earth is tilting so that the sun is shining on an imaginary line we call the Tropic of Cancer. We have the Summer Solstice. The tilt has reached its zenith once again. For us, in the northern hemisphere, this is the longest day of the year. It is the herald of summer. Then the days resume their march toward winter. The earth-tilt repeats its pendulum-like cycle. On September 21 the sun is shining directly at the equator again and we have an Autumnal Equinox. It is the herald of the season we call fall.

I might have asked, "So what?" . It was not appropriate for a 5th grader to do so when I was in school. The "So what?" is another way of asking, "What is the significance of these facts to my everyday life. How do these facts add to or subtract from the meaning of my life?"

I have talked with some who have indicated that they would like to go to Australia. Suppose you were to go to Australia and speak of Fall. You would be queried, "*Fall? What do you mean, Fall?*" The gum, or eucalyptus tree, that is native to Australia, is evergreen. Deciduous trees (trees that lose their leaves) are not common. There is nothing in the natural experience of Australians that would suggest to them that there is a season named Fall. That is because nothing is falling! They do have a season that is named Autumn. I had always called that time of the year Fall. I assumed that everyone did!

Over the course of time immigrants have imported maple, oak, and other kinds of deciduous trees into Australia. Because of that it is possible to happen upon an environment that approximates what a Northerner would regard as Autumn. The coming of the Autumnal Equinox does not bring Autumn to Australia so it is confusing to a resident of the northern hemisphere. Following the September 21 Autumnal Equinox Australia gets the direct rays of the sun. During that time the southern hemisphere has a summer season. So at Christmas time Australians dress up in short sleeves, brave outdoor temperatures of 100+ degrees F, and sing Christmas songs about snow and cold!

The variation in the length of day is another factor that I assumed was universal. As a Northerner I observe that we have seasons that alternate in temperature and length of day. The wintertime, when we are tilted away from the direct rays of the sun, brings very short days. I am told that the very northern-most part of the earth has 24 hours of darkness on the Winter Solstice. I would like to experience it for myself, but I would prefer not to live in that location. I seem to thrive on light, and grieve its absence. Medical research has identified a disorder called Seasonal Affective Disorder (SAD) that is brought on by light starvation. It affects people most often during the season associated with the Winter Solstice.

As a result of the seasons summertime brings daylight at 4:30 AM and in the wintertime it is still dark at 7 AM. The opposite is true of the nighttime. In the summertime I enjoy working in my garden until 9:30 PM. I find that I have to work in the dark after 5 PM in the wintertime.

It is not the same at the equator, however. When learning some basics of the KiSwahili language I discovered that the hours of the day are marked in a manner that is different than the way to which I am accustomed. What I think of as 7 AM is called the first hour of the day; *saa moja*. And what I think of as 7 PM is called the first hour of the night; *saa moja*. So noontime for me is called the 6th hour of the day in KiSwahili. And midnight is called the 6th hour of the night.

What happens during summer when the days grow longer, or winter when the days grow shorter? For all practical purposes that is not an issue. Those who speak KiSwahili live on or near the equator. The hours of light and the hours of darkness are practically identical year round. So the structure of the language reflects the structure of the earth's rhythm.

Where does this consideration of Mother Earth's rhythms lead us? Because this cycle of movements is taken care of by the solar system it sometimes escapes our notice. Some however, have instituted celebrations to acknowledge these cycles of the earth. When I point out that the cycles of the earth preceded the drama that was constructed around it, some label me a rabble-rouser.

The drama of salvation that the Christian Church centers around the life and death of Jesus did not happen in a single year. Nevertheless, the Christian Church symbolizes the entire drama of salvation by condensing it into the framework of one year. So, I ask do the Seasons follow the Liturgical Year? Or was the Liturgical Year invented to reflect the seasons? Which came first: the seasons or the story? It is not a surprise that the Christian year begins at the Winter Solstice in the northern hemisphere. It is a time when death has overtaken the hemisphere. All things have died away. It is cold. It is dark. We experience the desert of winter. Yet precisely when everything looks bleak; at the very moment we have come to what appears to be the end of the road, hope is born. In the month of December, the Christian Church celebrates Advent; when Jesus, the Savior, is born. If the story had originated in the southern hemisphere Christmas would have to be in June!

During the winter I find my mood is one of depression more than anything else. I do not do well without the sun. As the winter matures and the days gradually grow longer, I find myself recovering much in the same way a bear must come out of hibernation, or a tree begins to pump the sap from its roots to its branches in anticipation of the spring and summer to come.

Eventually there comes a day that has lengthened to the point where the amount of time for day and night is equal. We have arrived at the Vernal Equinox; March 21.

It is obvious that it is not a coincidence that the celebration of Easter comes during the season of the Vernal Equinox. It is a time when the northern hemisphere of the earth is coming out of the tomb of winter and participating in re-birth. So the Christian Church's rehearsal of Easter parallels the drama of death and rebirth that Mother Earth re-enacts yearly. Those who profess to be Christians might do well to re-connect with the backdrop of Earth-rhythms behind the unfolding of the Christian year.

In the North American prairie there is a wild crocus named the Pasque Flower (pasque, French for Easter). It blooms, all alone, in the deserted prairie of dead grasses precisely at the Vernal Equinox. It has the appearance of a resurrection surrounded by death. It is like the Phoenix arising out of the ashes to herald the coming of the new birth of Spring.

