http://www.geology.19thcenturyscience.org/books/1858-Whewell-HistSci/README.htm

of the water, if it point to the centre of the circle at first, does not continue to do so, but remains parallel to itself during the whole revolution. Now there is no cause to make the water (and therefore the straw) rotate on its axis; and therefore it is not a clear or convenient way of speaking, to say that the water in this case does revolve on its axis. But if the water in this case do not revolve on its axis, a body in the case of the Moon does revolve on its axis.

The difficulty, as I have said in the text, is of the same nature as that which the Copernicans at first found in the parallel motion of the Earth's axis. In order to make the axis of the Earth's rotation remain parallel to itself while the Earth revolves about the Sun, in a mechanical representation, some machinery is needed *in addition to* the machinery which produces the revolution round the centre (the Sun): but the simplest way of regarding the parallel motion is, to conceive that the axis has no motion except that which carries it round the central Sun. And it was seen, when the science of Mechanics was established, that no force was needed in nature to produce this parallelism of the Earth's axis. It was therefore the only scientific course, to conceive this parallelism as not being a rotation: and in like manner we are to conceive the parallelism of a revolving body as not being a rotation.

M. Foucault's Proofs of the Earth's Motion.

It was hardly to be expected that we should discover, in our own day, a new physical proof of the earth's motion, yet so it has been. The experiments of M. Foucault have enabled us to see the Rotation of the Earth on its axis, as taking place, we may say, before our eyes. These experiments are, in fact, a result of what has been said in speaking of the Moon's rotation: namely, That the mechanical causes of motion operate with reference to absolute, not relative, space; so that where there is no cause operating to change a motion, it will retain its direction in *absolute* space; and may on that account seem to change, if regarded relatively in a *limited* space.

In M. Foucault's first experiment, the motion employed was that of a pendulum. If a pendulum oscillate quite freely, there is no cause acting to change the vertical plane of oscillation *absolutely;* for the forces which produce the oscillation are *in* the vertical plane. But if the vertical plane remain the same *absolutely*, at a spot on the surface of the revolving Earth, it will change *relatively* to the spectator. He will see the pendulum oscillate in a vertical plane which gradually