

## **Wheels of Nature**

When our son was very small his favorite pastime was to name the different kinds of cars that we saw on the road. Of course, he also possessed a large number of models of cars that he and his friends could spend hours playing with. At that time, I used to wonder if it had anything to do with his upbringing and maybe we were subconsciously encouraging this tendency of fascination with cars.

But on a little reflection I realized that it had nothing or in any case very little to do with his conditioning. Yes, he had the opportunity to get to know the names of cars and what is more, possess their models and books about them. But I think there is an instinct of some kinds with wheeled vehicles or toys. Go to a slum cluster and you will see children running around with old cycle tires, moving them with sticks, simulating a single wheeled vehicle. Or the wooden toys with which children in the villages play or rather used to play before the advent of plastic cars models. The exquisite terracotta toy in the shape of the bullock cart that has been found in Mohenjo Daro testifies to the antiquity of this fascination.

There has to be something about the motion of a wheel, which transcends conditioning and class barriers. The exact nature that this fascination takes of course is dependent upon the availability or conditioning or advertising. But the essential fascination with the motion of a wheel in my opinion is something deeper. And I suspect cross-cultural.

The use of the wheel for transport must surely count as one of the most important discoveries of human civilization. Not only in transportation but its use for shaping clay and making pottery was important in human history. In fact, the potter's wheel probably predates the wheel of the cart. The use of the wheel for transportation is known as far back as 3500 BC in Mesopotamia. In its simplest form, a wheel is a circular disk that revolves around a central axis. Initially it must have been made of stone and later possibly of wood. Wood being lighter and easier to carve would have soon replaced stone just like radial spokes replaced the solid wheel around 2000 B.C. The wheel was possibly the second of the simple machines used by Homo sapiens. The first could have been a lever whose use by primates could have provided inspiration to the earliest humans.

Of course, once the basic wheel was in use, countless innovations made it more efficient. The spoked wheel, the axle, ball bearings, pneumatic tires, the tubeless tires and so on. Along with the innovations came its myriad uses: the potter's wheel, the grinding wheel for cereal and oil, the Persian wheel for irrigation and so on. The impact of this simple innovation on human beings cannot be overestimated. Once the yoke was designed for use with the draught animals, the mobility of humans increased several fold. This undoubtedly had an impact on early urbanization that could only sustain itself on the basis of the agricultural surplus produced in the hinterland and transported to the markets. And the

enormous effect of using a potters wheel to shape earthenware, which together with the development of firing and thus creating lasting artifacts which we can see even today.

What has all of this got to do with the cross-cultural fascination of children with wheels? Since the wheel has only been around for about 5000 years, the trait cannot possibly be hardwired evolutionarily. On the other hand, its prevalence across cultures and class boundaries leads one to suspect that there is maybe something inherent in our biology, which leads to this. This is possibly heretical for biologists but I think that we need to think about it. In any case, this is surely a conundrum that needs an explanation.

Primo Levi once wrote that there are only seven different kinds of games played by children across the world. Variations on these seven themes, ranging from catch, hopscotch, hide and seek and so on are seen around the world. Maybe one should add the “driving” of wheels whether old cycle tires or latest Bugatti miniatures. The question then is to understand why this is the case.