Indo-European Science

Overview While science and technology are hard to distinguish, in Indo-European culture itself, and we have touched on 'innovation' in discussing IE 'economics,' it is worth devoting a 'science' discussion, the present, to a particular issue in the linguistic evidence through which the very lifeblood of the IE hypothesis flows. This linguistic evidence has from early modern times on played the chief role in establishing the IE hypothesis, and it is only later than archeology and genomic analysis have greatly enlarged the scientific purview onto the Into-Europeans themselves. The science of and about the Indo-Europeans is all about language.

The linguistic range of IE From genomic testing we almost daily refine our ability to characterize large scale DNA evidence, from which we learn more about the two leading theories of the origins of the IE pastoralist sweep into the west: that it derived from the steppes of Ukraine and southern Russia, or that it stemmed from pastoralist herders in Anatolia. In any case the migrational drift was westward, though with refluxes into the East, which connected with already in- place IE residences. Whichever of these theories covers the true IE migration story, we feel confident that that story generated some 400 languages, the IE language family, and that the word correspondences among those families are arresting, and testify to many elements of a common culture.

The wheel Archeological carbon dating has enabled us to surmise a date as early as the fifth millennium B.C.E. for the effective PIE use of the potter's wheel, and from that point on, in stages, of wheeled vehicles--which of course involves the accoutrements that go with an effective transportation wheel--a yoke, an axle, a hub; as well, say, as for the making of spinning wheels, so indispensable for making clothes in Northern Europe. The lexicon of wheel-related words, in PIE, is lengthy, although we believe that the PIE's were not the original inventors of the wheel. Here's a small sequence. Wheel--*k'ek'los* in one of its two original forms--opens out into Vedic Sanskrit *cakra*, Greek *kuklos*, Old English *hweol*, Serbo-Croatian *kolo*; while *wheel*, in its other original form, *roth eh*--becomes fashioned into Vedic Sanskrit *ratha*, German *Rad*, Latin *rota*.

The reasoning about PIE In this entry our interest is in the science employed by the Indo-Europeans. It goes without saying that we are assuming that use of the above derived words, to indicate the nature of the wheel, means that the IE's were using wheels, in different functions, to serve as part of daily life. We are assuming that if you name something you know what it is, how it can be made, and what to do with it. That is what we mean by attending to the scientific capacities of the Indo-Europeans. By the same process of reasoning, we will follow other word families, in PIE, with the assumption that by writing the words for spinning, weaving, basket making, fence-making, and wall-making, the IE's were showing they were capable of carrying out those activities. Our view of the PIE's as 'early scientists' depends on the truth of that assumption.

Reading

Becker, Robert S.P., *Comparative Indo-European Linguistics,* Amsterdam, l995.

Ramat, Paolo; Ramat, *Anna Giacolone, The Indo-European* Languages, London, 1998.

Discussion questions

Does language seem to you an accurate measure of your culture's capacities and skills? How would you go about evaluating the relation between your culture's working vocabulary and its 'scientific achievements'?

What kind of innovative thinking is required, to bring the wheel into existence? When the spark of invention is ignited, does the name of the invention come near the beginning of the inventing? How does the name of the thing get applied?

There are said to be 400 IE languages. Did they primarily develop from one another, or from a common source?