

## Mesopotamian Innovation

**Overview** Small scale irrigation was being practiced in Mesopotamia in 6000 B.C.E.; by 5000 B.C.E. Mesopotamians were carrying out major irrigation projects which enabled them to turn ‘the land between the two rivers’ into a fertile plain, a plain able to support a rapidly growing population, which a millennium later will have risen to 100,000. With this fast start, and with a high instinct for cultural development, it is no surprise that Mesopotamia early introduced important innovations into our cultural bloodstream.

**Bronze (and subsequently iron) metallurgy** The wheel of culture was only to turn when, during the last millennia B.C.E-the highest development of Bronze Age culture intersected with the early stages of the Iron Age, which was being introduced into Mesopotamia by the Hittites. With each of these stages in development of material culture, the Mesopotamians were enabled to introduce innovations which facilitated their cultural development. By the fourth millennium B. C. E., metallurgists had managed to alloy copper with tin, beefing up the strength of copper, and leading into the invention of bronze. Sporadic experiments in iron metallurgy, meanwhile, were on the horizon by 4000 B.C.E., but the early products were too brittle for heavy use. It was not until the fourteenth century B.C.E. that the Hittites introduced iron technologies, into Mesopotamia, which were to serve as the foundations for weaponry, agricultural equipment, and architectural construction which would open the horizons of a new world. Mesopotamians moved stages of cultural development which were major shapers of the future of the human condition.

**Writing** Arguably the most decisive of Mesopotamian cultural innovations was writing, an act of great importance to the Mesopotamian people--first and foremost the Sumerians--for its service in book keeping and accounting. (The world historical significance of this innovation dwarfs its early record keeping role). The earliest Mesopotamian writing was based on picture-grams, like Egyptian hieroglyphics, which were a roughly contemporaneous invention, but Sumerians were able, far more rapidly than the Egyptians, to morph this early script into cuneiform--a wide shaped alphabet of some 3300 words, symbols, and phonetic markers, carved into moist clay by a pointed reed called a stylus. Later Mesopotamian Empires, Babylonian, Assyrian, continued to write with cuneiform, which thus became, in addition to a cultural gift, a unifying principle for the cultures ‘between the two rivers.’

**The wheel** By the middle of the 4<sup>th</sup> millennium B.C.E. the Sumerians had invented useable wheels, first for plows and other work equipment, later in the millennium for chariots. One can discover, any day while gardening with the wheelbarrow, the huge importance of this innovation for transporting bulky items--like the bricks, grain, and ores which were increasingly to serve as the axis of Mesopotamian development.

## Readings

Chiera, Edward, *They Wrote on Clay: The Babylonian Tablets Speak Today*, Chicago, 1956.

Kramer, Samuel Noah, *History Begins at Sumer: Thirty nine Firsts in Man's Recorded History*, Philadelphia, 1981.

## Discussion questions

Can we add the *Epic of Gilgamesh*, 3<sup>rd</sup> millennium B.C.E., to the greatest innovations of the Mesopotamians--in this case of the Akkadians? The work is often called ‘the first great work of Literature.’ And what about the Laws of Hammurabi? Were they too an innovation?

What stages of proto writing preceded Sumerian cuneiform? What kind of innovative genius was needed, to conceive of the development of the writing process into cuneiform?

Sumerian seems to have been the first written language. Where did it come from? Who spoke it? Was it spoken first, then written?