

The Technique of Weaving



mehr Information & english version

A weave is often interpreted as the course of life. The warp on the loom is predetermined and symbolises the parameters, such as place, time and family, into which we are born but cannot influence. The kind of weft we are using and the patterns we weave depend on us and there could be a thousand and one variations. These coinciding principles of weaving and life explain the frequent occurrence of the subject in mythology and fairy-tales.

The very first equipment in history that was used for making weaves was the warp-weighted vertical loom. A frame is warped vertically, the warp thread being kept taut by weights. The warp threads are separated with a rod thus forming a shed for the weft to pass through and the thread is then beaten up.

Research has told us that basic criteria of mathematics such as divisibility or our concept of odd and even (one thread lifted, one thread lowered) could have their origin in the thousands of years old technique of weaving, which has only later been abstracted and codified.

The Middle Ages saw the invention of the flat loom where the warp is horizontal and can be separated by means of treadles making various binding systems and geometrical pattern possible. For Jacquard weaves all warp threads can be individually lifted or lowered which makes free and organic patterns possible. In 1805 the Frenchman Joseph Marie Jacquard invented a machine which controls the individual warp threads by means of punched cards. Each pick corresponds to a punched card with positions for the individual weft threads. If the hooks of the Jacquard machine sense a hole in the punched card the corresponding warp threads are lifted, if there is no hole, the threads remain lowered. The idea contained in this principle i.e. that any complicated information can be coded as a combination of 0 and 1 (hole or no hole), is the basis of modern computer technology.

In the Mühlviertel the principle of 0 and 1 had been applied in shaft weaving even before the invention of the Jacquard machine. For the so-called "Bröselmaschine" small wooden blocks were pasted onto a strip of linen which then controlled the lifting and lowering of the shafts. This regional speciality was in operation as early as ca. 1750. There are two specimens still existing.