

Summary in English

Ulf Persson, Lars Hörmander
(Swedish)

A short obituary of a legendary Swedish mathematician focusing on his early rise.

Osmo Pekonen, Hur matematiken bidrog till strukturalismens uppkomst
(Swedish).

Applications of mathematics are legio, also in the social sciences, but in the latter it is mostly in the form of statistics. Thus it is somewhat remarkable that also more abstract and conceptual mathematics may enter in the so called 'softer sciences' such as anthropology in an honest way. The article discusses how group theory can clarify the sophisticated rules that govern intermarriage in certain tribes. More specifically the non-abelian group of order eight given by the quaternions $\pm 1, \pm i, \pm j, \pm k$ plays a crucial role. The central character is the legendary anthropologist and mythologist Claude Lévi-Strauss who set up his so called canonical formula, which was given a mathematical interpretation by his friend the Bourbakist André Weil.

R. Siegmund-Schultze, B. Øksendal *Johannes Lohne (1908-1993), den glemte norske nyoppdager av Thomas Harriot og frontkjemper for den tyske okkupasjonsmakten under 2.verdenskrig* (Norwegian).

Thomas Harriot (1560-1621) was a brilliant British mathematician and physicist the true scope of whose achievements only became known much later

through the pioneering efforts of the Norwegian historian of science - Johannes Lohne. The article does not only describe the work of Harriot but also more significantly explains how Lohne came to discover and interpret them, which was a highly non-trivial task. One physical example was the discovery of the law of sine that characterizes refraction and has traditionally been attributed to Snellius and Descartes. A mathematical example was the evaluation of what in modern terms is given by $\int_0^{\pi/2} \sec \theta d\theta$ and of fundamental importance for the Mercator projection. In the 16th century there were no ready methods to attack the problem, but the numerical values Harriot was able to give were surprisingly accurate indicating a deep mathematical understanding, further confirmed by his studies of stereographic projection and logarithmic spirals in connection with the above projection. Added is a biography of Lohne himself, not shying away from the less salutary aspects of his life.

Hans Thunberg, Tonsättaren Per Nørgårds "oändlighetsserie" (Swedish)

This article presents a mathematical description, in terms of recursively defined number sequences, of the algorithms devised by the Danish composer Nørgård. The ambition of the latter was to generate from a very short sequence of tones melodies rich in symmetries and self-similarities, melodies which could be aperiodic and hence infinite in length. Given the mathematical presentation a variety of results can be formulated and proved. Note that the well-known Thue-Morse sequence is essentially a special case.