LIFE CYCLES OF METALS AND PEOPLE IN THE IRON AGE - SOURCING AND RECYCLING OF COPPER BASED ALLOYS

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Exact data on trends in using materials in prehistory are solid part of the archaeological narration and their importance is indisputable. There are quite numerous studies on the provenance and production of the copper and its alloys in periods from the beginnings of metallurgy or from the areas like Mediterranean or the Alps, however, the case for Iron Age remains largely obscure. For decades there was a quiet assumption that primarily local deposits were exploited and the proximity to sources of polymetallic ores significantly influenced the settlement structure.

We would like to present first results of the project dealing with the archaeometry of coppers alloys in Central Europe (Czech Republic) between the 4th and the 1st century BC. Previous research brought to light possible sources of Mediterranean and partly also Alpine origin for the 2nd - 1st century BC. Now we need to establish a wider perspective in the use of materials spanning the periods before the founding of the oppida. Intensive and well organised bronze production seem to have developed during the 3rd century BC within the newly established agglomerations while before decentralised and possibly heterogeneous organisation of production is predicted.

Our methodology involves evaluation of bulk and trace composition, accompanied by isotopic (namely Pb) tracers. Analysed finds come from different stages of the life cycles of metals, including the technical ceramic. We would like to follow the line of introduction and standardisation of different alloys, the question possibly related to the primary acquisition and/or recycling of various sources. Even in periods when traditional provenance questions are much more difficult to answer, we believe that mixing of sources tends to follow certain trends that can be traceable by available analytical methods. By establishing these "trends" the archaeometallurgy can help to explain historical events even within a wider historical perspective.

Keywords

Iron Age, copper based alloys, recycling, isotopes, lead

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