

Forging Identities: The Mobility of Culture in Bronze Age Europe

Detailed project description

Introduction

The multi-sited ITN 'Forging Identities' wishes to enhance the success of the RTN "Emergence of European Communities" (2-2001-00366). As a result of this project several Ph.D.s have been educated and new evidence has been unearthed concerning the foundations of interaction in Bronze Age Europe between 3000 and 500 BC. This period can now be portrayed as Europe's first golden epoch with entirely new patterns and forms of social identification, specialised production in several domains, socially complex polities, and wide-reaching interaction networks.

The 'Emergence' project has evoked new challenging questions, which demand strengthened European networking and tight interdisciplinary cooperation in order to be answered:

- **How did people, animals, plants, things, ideas, and knowledge travel and on what scale?**
- **How did increased cultural mobility impact on social and economic life?**
- **How were European and regional identities forged through interaction?**

It is the *objective* of the ITN to provide answers to these and related questions, which will be researched by building on an improved European network and by using a cross-disciplinary methodology combining archaeology, natural science, and sociology. This common platform shall create new knowledge of the mobility of culture – including the new metal bronze – and insight into the responsive forging of European and regional identities that shaped this remarkable period.

During the Bronze Age societies across Europe became linked in new ways while at the same time regional traditions and histories were formed – opposing trends that continued into historical times. The Bronze Age is therefore an ideal laboratory for research in cultural mobility, including its background and those diversities and commonalities on a regional and European level that emerged from increased intercultural trafficking. The combination of archaeology with other scientific frontier approaches – notably palaeo-genetics, isotope analysis, biochemistry and geochemistry – is the methodological core point of the project, which will also incorporate new theoretical perspectives on mobility and receptivity and use front-line IT.

The ITN will enhance the career prospects of young scholars from all over Europe through a cross-disciplinary training scheme dealing with Europe-wide questions of cultural mobility and social identification. The ITN is anchored in networking between eighteen partners distributed over Europe and joined by a common platform of research training activities. Seven *network partners* will provide academic 'base camps' for app. ten ESR for up to three years and four ER over one to two years ensuring their inclusion into already strong research training environments. The fellows will participate in network-wide courses in both sociology-enabled and science-enabled archaeology and in complementary skills. Eleven *associated partners* will provide secondments, scientific lab facilities, archaeological and scientific data, field school sites and media for public dissemination. Partners have been chosen for their profiles in academia and/or industry hence supplementing each other in achieving the combined objectives of research and training. Among the associated partners are several museums (SMEs): They will enable exploitation of the project results through both new and traditional dissemination media.

The proposal's emphasis on transnational and cross-disciplinary cooperation in research and training has the potential of elevating the quality of European archaeology and of creating a supra-disciplinary field of research. The regional foundation of the project with field school excavations and the involvement of museums will have the potential of triggering new forms of dissemination, and thus tourism.

Concepts

At the beginning of the Bronze Age people in what is now Europe began to develop a cultural uniqueness, and archaeological evidence attests that societies shared cultural expressions while simultaneously developing local and regional differences. The 2,500 years of the Bronze Age is the first era where convergence – at certain times and in an apparently regular manner – frequently prevailed over divergence. We do not yet know much about these conjunctures or their underlying mechanisms, although they seem to occur relatively independently of early state-organised societies towards the south.

During the Bronze Age, cultural and social formations of an entirely new kind and magnitude came to characterise Europe: Intense and dynamic relations between local and large-scale processes of change coincided with increased mobility in different domains and forms ranging from itinerant smiths to widespread exchange of bronze and domestic animals. *From these processes new identities were forged, almost literally in bronze, and Europe emerged as a distinct cultural zone.* One could argue that due to the common use and shared values assigned to bronze an era of international trade, politics and culture truly began in the Bronze Age, which is also the first 'industrial' age. A new notion of commodity exchange in metals entered Europe and new forms of weapons and ornaments could be produced. This development of functional bronze objects, advances in metallurgy and other archaeological evidence allow the hypothesis that movement of people, goods, and ideas across the continent played an important role in this burst of development and creativity. An influential factor was, undoubtedly, the exploration of spatially restricted metallurgical sources of copper, gold, and especially tin, and the connected trade mechanisms that enabled bronze objects and associated technologies and ideas to become widespread across Europe.

These enormously innovative and explorative strategies are differently echoed in other forms of material culture showing similarly innovative developments, particularly in the field of craft production, such as ceramics, amber, glass, and woollen textiles. This suggests that there were several parallel systems of exchange and pooling of both expertise and cultural norms. Another component of this phenomenon may have been new 'management' strategies with regard to central economic resources such as specialised breeding and trade in cattle and sheep for wool production. There was also a changing emphasis on the horse in terms of both practical and symbolic uses. Finally, the adaptation of new varieties of plants for agriculture may also have been essential in making the economic basis of local communities broader with potential for specialisation and therefore new types and degrees of collaborations and dependencies between communities.

S&T state of the art

The Bronze Age was a time of close-knit local cultures and of simultaneously porous boundaries. *Archaeological knowledge production* is in spite of this still linked to national research. During the last decades new knowledge has mostly arisen from settlements and environmental data, and through innumerable rescue excavations. These have built up a good local and regional knowledge base: Extensive data, analyses, and results with a great research potential. However, knowledge about what linked European societies together through movements of goods, ideas and people is underdeveloped.

Recent years have brought revolutionary developments in a number of *natural sciences applicable to archaeology*, such as for instance palaeo-genetics. The scientists chosen for the proposed ITN are among the leading researchers in these advances. In combination with archaeological data, each method has lately produced thought-provoking results, particularly on the level of sites and regions but also in some measure beyond. Validation and substantiation of this await wider-ranging and systematic programmes of comparative analyses.

Objectives and originality

The proposed project will make it possible for scientists and archaeologists from across Europe to cooperate on historical questions, which transcend national boundaries, and in this way we will begin to create a new body of publicly available knowledge that is relevant regionally and to Europe as a whole.

The project is expected to achieve radically improved knowledge about:

- The Bronze Age as an influential period in the making of Europe
- Movements of people, animals, plants, things, ideas and techniques, and local responses to their spread
- Social and economic impacts of, as well as reasons for, increased transcultural flows in marginal communities, in gateway societies, and in economic hotspots
- Ways in which European and regional identities were formed
- Causes behind specific historic constellations of cultural diversity, commonality and interaction, and thereby new insights into processes of Europeanisation

The project is expected to foster:

- Promotion of the career prospects of young scholars from all over Europe through a cross-disciplinary training scheme
- Front-line research results by combining archaeology with new advances in the natural sciences, and through that provide a model for future research & training programmes
- Elevation of archaeological research in Europe from best to excellent through inter-disciplinary and cross-European collaborations
- Creation of a supra-disciplinary field of research into ‘what constitutes a European past’

Originality characterises the research programme at three levels:

- Application of front-line analytical methods in the natural sciences where archaeology forms a natural bridge between science and humanities
- Its intrinsic comparative and transnational scope
- Its theoretical and interpretive framework inspired by current sociology

The research programme will investigate the forging of European identities by exploring in depth the associated mobility and receptivity of people, knowledge, ideas, things, animals, and plants. It will likewise address the reverse processes of regionalisation that also characterised this decisive period in the history of Europe. On a more general level, the aim is to increase awareness and information about these topics and to build a knowledge bank of value to future inquiries. It is in response to this challenge that the research programme has been designed, aiming at the

clarification of a number of problems central to these processes. The observed intensification of mobility during the Bronze Age raises the pivotal questions:

- How did the movement of people, animals and plants and the movement of things, ideas, and knowledge promote new patterns of identification and socio-economic change?
- In which way and on what geographical and historical scale did this take place?
- In this respect, what exactly was the role of the new pliable metal called bronze, and how did this major technological advance trigger or interact with other innovations?

As a step towards approaching these big historical questions the ITN research objective is subdivided into two parts:

People, animals and plants across Europe. The project plans to investigate how, why and to what extent people, plants and animals moved. This will involve studies of the distances involved and of local socio-economic reasons for moving between communities. The project also aims to investigate who moved and why, e.g. marriage, alliance, war, status-travel, trade, or knowledge exchange. Parallel questions will be posed regarding the simultaneous movement of plants and animals. Comparative investigations will be undertaken of local patterns of responses to these movements. Such questions can be pursued through the combination of archaeological methods and data with other scientific frontier methods, notably palaeo-genetics (aDNA) and strontium isotope analysis of human and animal bones. In addition, osteology and pathology will provide information about gender and age variability, disease, health, and traumata. Biochemistry will – in combination with established archaeobotanical methods – be employed to track the transfer of agricultural resources such as new cereals (e.g. rye).

Things, ideas and knowledge across Europe. The project plans to investigate how, why and to what extent things, ideas and knowledge also moved. This will involve studies of cross-cultural as well as regionally limited distribution of things (raw materials, finished bronzes, amber beads, and ceramics etc.) and the attempt to trace social responses and wider socio-economic and political implications locally of these movements. Were bronzes, for instance, mere commodities or did they have added value that could be utilised in identification: Were they invested with specific ideas and became a means of expressing social status? Similarly, how did the radically improved knowledge-base – observable in the exploitation and development of new techniques such as the copper-tin alloy – spread through Europe? Were individual agents, groups or processes of emulation involved? Archaeological and scientific methods such as typology, spectroscopy and isotope geochemistry will be employed to provide additional data about the movements and receptions of raw materials and things, exploring details such as ornamental style, metal composition and the ‘recipes’ for the paste used in pottery inlays.

Methodology

The overall research strategy is built upon five methodological core points.

1. Engagement of scientific front-line technologies is a key integrative idea of the project, which is multidisciplinary in that it necessitates and optimises close collaboration between archaeology and science. The science technologies selected are the following five:

- *DNA & isotope science* will in combination with archaeological methods and data provide new information on the mobility and origin of humans, animals, and plants. As regards human

ancient DNA, it is possible to trace male and female lineages. Stable isotopes, such as notably strontium and oxygen, will in addition to questions of origin and movement provide data on diet and the subsistence economy. Labs in Copenhagen (P.8), Stockholm (P.11), Aarhus (P.1), Cambridge (P. 5), Vienna (P. 10).

- *Human osteology and pathology* will in combination with archaeological methods and data provide new information about patterns of age, sex, disease, trauma, and health. New insights will also be gained by applying cutting edge imaging techniques, e.g., CAT-scanning of bones, applying them in comparative investigations. Labs in Vienna (P. 10), Copenhagen (P. 8), Bratislava (P. 14).
- *Biochemistry, archaeobotany & archaeozoology* will in combination with archaeological methods and data provide new information about the variability of human diet and cuisine. Refined biochemical techniques, GC-MS, will enable studies of cuisine differences down to the family level in terms of food residues on ceramics such as milk, cereals, vegetables, and meat, alcohol (ingredients indicating the presence of beer, mead, or wine). Labs in Stockholm (P.11), Kiel (P. 4), Umeå (P.16), Cambridge (P. 5), Aarhus (P.1), Southampton (P.7), Bratislava (P. 14).
- *Archaeometallurgy* will, in combination with archaeological methods and data, provide new information about the origin, advances, and transfer of metallurgical knowledge. A vast database of metal analyses already exists with large potential for further processing. Primary extraction and analysis of data (Electron Microprobe Analysis EMPA, Inductively Coupled Mass Spectrometry ICP-MS, and similar methods) are needed from the later Bronze Age and from eastern and southern Europe. Lead Isotope analysis will enable studies of the provenance of metals. Lab in Bochum (P. 9) and further expertise in Berlin (P. 3) and Aarhus (P.1).
- *Geochemistry* will, in combination with archaeological methods and data, provide new information about the origin, advances, and transfer of technological knowledge (other than metal and especially for ceramics). Using modern analytical techniques such as Fourier Transform Infrared Spectroscopy (FT-IR), Inductively Coupled Mass Spectrometry (ICP-MS & ICP-AES), X-Ray Diffraction (XRD), Scanning Electron Microscopy (SEM) and Ceramic Petrology, high-quality characterisations of ceramic vessel pastes and inlays will be obtained. Labs in Southampton (P.7), Bochum (P.9), and Umeå (P.16); further expertise in Bratislava (P.14).

2. Data extraction from six geo-regions is another key methodological component, since the project is dependent on knowledge available on a local and regional level. Research efforts will concentrate on the following regions:

- Northern Greece (nw partner 6)
- Carpathian Basin (ass. partners 12, 18)
- The Pontic region (ass. partner 13)
- The East Alpine region (ass. partner 12)
- Central Germany and Poland (ass. partner 15 and nw partner 3)
- Southern Scandinavia (nw partners 1-2 and ass. partners 16 - 17)

These regions form a north-south corridor along the main arteries of cultural contact in Bronze Age Europe, enabling a new knowledge base about the way that people and new culture were received locally and how they were transmitted and/or migrated between societies in Europe.

From each geo-region, data will be extracted and processed using modern archaeological methods: systematic documentation techniques (Intrasis platform), typo-chronological classification (C.A.), processing through GIS-mapping (MapInfo), Analytical processing through

multivariate computerised statistics (Archaeo-Info), and archaeological contextualisation through analogical thinking and relational comparison. Excavation (ArchaeoInfo platform) will take place at the summer field schools (see below). The archaeological and scientific data will consist of non-organic finds such as weapons, tools and ornaments of bronze, gold, stone/flint and amber in addition to pottery and organic remains such as human and animal bones and plants preserved as microscopic or macroscopic evidence. Data sets will be selected from houses and settlements, cemeteries and burials, and ritual depositions – so-called hoards.

3. A comparative approach and integration of different scales of analysis are likewise methodological core points. The same research design underscores teams and work packages. This will facilitate comparisons of cases within and between packages, and across geo-regions, and thus the analytical and interpretive integration of data. Comparative analyses will also draw upon case studies from both the innovation centres or hotspots, gateway communities, and the cultural margins of Bronze Age Europe. The approach will furthermore throughout be shaped by the importance of integrating different scales of analysis: the macro-scale network of inter-societal flows can only be properly understood alongside and in comparison with micro-scale practices at the level of households and settlements, of people and their constitution of society.

4. Integration of the newest methods in computer documentation and technology will also be employed. This will facilitate quick knowledge transfer as well as being required in order to 1. regulate and analytically organise complex archaeological and scientific sets of data, and to 2. record and simulate movements of materials, agents, and processes over geographical space.

5. Engagement of a novel theoretical framework in data pattern interpretation is the ultimate methodological core point, to be activated at all levels of research. In brief, the theoretical platform insists on the dialectics of local and super-regional forces conferring equal importance to local strategies of identification and transcultural flows of people, techniques and materials in the making of history. The inseparability of the global and local analysis is echoed in the perspective, organisation, and methodology of the proposed project: it is built upon the realisation that global flows of culture enter into local situations and that intersocietal relations are in turn articulated through local identities and cultures. These two main theoretical entries of Mobility and Receptivity refer to the above posed objectives and to the planned research:

Overall Approaches

The above five methods will be coupled to two thematic fields of teamwork, Team Mobility and Team Receptivity each enclosing two work packages and each combining archaeology with science and referring to the ITN objectives. The teams will frame the research training, including the half-yearly workshops in connection with training gatherings in January and at summer schools. They will furthermore decide which sets of data will be appropriate to solve particular sets of the problems. The two teams of initial, experienced and senior researchers and associated work packages will contribute equally to the overriding theme of Forging Identities – Europeanisation and regionalisation – tracing and explaining periods with overall regionalisation versus periods of more shared and hybridised culture. Each team will make optimal use of the resources of the home institutions, including their archaeological and scientific staff, but will also integrate the resources of other network partners and of associated partners, who will notably be exploited for secondments and supervision. There will be international advertisements of ESR and ER positions within each field taken into consideration the programmes of the work packages.



Work packages

Work Package	no. 1	Duration of teamwork	Month 1-48
Work Package Title	Cultural interaction: modes and channels of transmission		
Objectives: Tracking how new and innovative styles of culture – connected to the movement of people, animals, plants, things, knowledge, and techniques – became widespread with particular emphasis on accounting for the means and directions of culture transmission across Europe			
Specific training events: January RT module & summer schools (including workshops)			
In charge: Svend Hansen (nw partner no. 3) & Joanna Sofaer (nw partner no. 7)			
Description of work			
<p><u>First</u>, the teamwork will uncover <i>movements of people, animals, and plants across Europe</i> (science labs at partners 1, 4, 5, 7, 8, 10, 11, 14, 16, 17)</p> <ul style="list-style-type: none"> • Migratory patterns of people, animals and plants, including studies of origin, direction and distances. Species of moving animals and plants and degree of mixture with local species. Mixture between migrant groups and indigenous people, genetic and isotopic science playing a leading role: • Sociology of migration: the question of who moved and why. Social composition of migratory groups. <p><u>Second</u>, the teamwork will uncover <i>movements of things, ideas, and knowledge across Europe</i> (science labs at partners 7, 9, 13, further scientific expertise at partners 1, 3, 14):</p> <ul style="list-style-type: none"> • Itinerant patterns of novelties: styles of metalwork, pottery, amber, glass, and stone and innovations such as tin-copper alloying and processing of particular copper ores. Origin, directions, distances. • Means of transport: mobility systems and forms of networking and exchange. • Sociology of culture exchange; the question of who was in charge of intercultural networking • Were <i>metal objects</i> commodities or things with added value which was also transmitted? Transfer of metallurgical knowledge will be studied through chemical compositions and depositional patterns in the corridor from Greece to Scandinavia, with the Carpathians as a likely hotspot (expertise at partners 1, 3, 9). <i>Encrusted pottery</i>: the technique of pasted decoration may illustrate innovation at a different level than metal as it is linked to domestic life in settlements. Scientific analysis will investigate paste ‘recipes’ and whether spread of this style was based on a transfer of knowledge (expertise at partner 7). 			

Work Package	no. 2	Duration of teamwork	Month 1-48
Work Package Title	Geo-political configurations, boundaries, and transformations		
Objectives:	locating and explaining changing geo-political constellations through time of marginal communities, hotspots and gateway societies in Europe in relation to mobility patterns and systems.		
Specific training events:	January RT module & summer schools (including workshops)		
In charge:	Kristian Kristiansen (nw partner no. 2) & Helle Vandkilde (nw partner no. 1)		
Description of work			
<p>Using mapping and computer simulations of major configurations of culture and of major changes through time, the teamwork will work towards uncovering:</p> <ul style="list-style-type: none"> • <i>Geo-political positions</i> of examined sites and regions, i.e. their status as economic hotspots, gateway communities, and nodal, marginal or end points in intercultural mobility at different periods in time. Tracking shifting boundaries. • <i>Geographical extension of cultural similarity</i> across Europe in different periods. Searching for regularities in material culture and social institutions determining which elements changed. Tracing regional and supra-regional groups and their persistence. Comparison with early historical language groups and Neolithic and Iron Age situations. • <i>Scale of intercultural interaction</i> in Europe, in periods of commonality and periods of diversity. • <i>Intrusion of cultural similarities on the social life</i> of singular societies differently positioned in the geo-political and cultural landscape of Bronze Age Europe. Micro-scale events, everyday-practices and structures of mobility – cp. WP 1, 3-4 – will be connected to macro-scale conjunctures and disjunctures. • <i>Rules of change</i> through studying the interrelationship of opposing processes; searching for reasons for specific constellations of cultural diversity and commonality and the role herein of the movements of people, plants, animals, ideas, technologies and things. 			

Work Package	no. 3	Duration of teamwork	Month 1-48
Work Package Title	Economic & political foundations of interaction		
Objectives: Pursuing the questions, Did increased cultural mobility force or inspire people to widen their economic and political practices? How did trends towards Europeanisation impact on daily life and the social environment of local communities? Did increased intercultural mobility emanate from periods of crisis or wealth? Did it impact positively or negatively on day-to-day-activities?			
Specific training events: January RT module & summer schools (including workshops)			
In charge: Johannes Müller (nw partner no. 4) & Kostas Kotsakis (nw partner no. 6)			
Description of work			
<p><u>First</u>, teamwork will uncover the local <i>economic and political background for the mobility of people, animals and plants</i> (science labs at partners 1, 4, 5, 7, 8, 10, 11, 14, 16, 17).</p> <ul style="list-style-type: none"> • Agricultural growth in terms of animal and plant domesticates – especially introduction of new resources of cereals (e.g. rye) and livestock for herding; notably sheep and cattle. • Technological developments in secondary production such as weaving, dairying, horse breeding and their potentials as objects of trade. Likewise, technological developments in traction and other forms of transport, chariots, wagons, ships, roads, and horsemanship. • Reproduction and change of political power, in particular leadership, coupled to analyses of life style conditions as observable through variable patterns – through time and space – of diet, mortality, disease, health, and trauma. <p><u>Second</u>, teamwork will uncover the local <i>economic and political background for the mobility of things, ideas and knowledge</i> (science labs at partners 7, 9, 13, further scientific expertise at partners 1, 3, 14).</p> <ul style="list-style-type: none"> • Production, craft specialisation (potting, metalworking, etc), and consumption of goods and valuables. Coupling to analyses of life style conditions as mirrored in ritual practices (hoarding and funerals). • Reproduction and change of political power, in particular leadership. Coupling to analyses of life style conditions as mirrored in ritual practices (hoarding and funerals). 			

Work Package	no. 4	Duration of teamwork	Month 1-48
Work Package Title	Materiality & the construction of identity		
Objectives:	locating patterns/modes of responses to transcultural flows and pursue how they fuelled construction of identities at various levels of societal complexity in marginal and central communities.		
Specific training events:	January RT module & summer schools (including workshops)		
In charge:	Marie-Louise Stig Sørensen (nw partner no. 5) & Helle Vandkilde (nw partner no. 1)		
Description of work			
<p><u>First</u>, focus will be upon <i>material culture, people and their construction of identity</i> (science labs at partners 1, 4, 5, 7, 8, 10, 11, 14, 16, 17).</p> <ul style="list-style-type: none"> • Within-group relationships as formulated by the specific contexts: How material culture was used in, and affected, formation of social stratification. Research will use selected time-slices to compare how <i>the individual</i> is visible archaeologically. The materiality of <i>social personae</i> will be assessed against the evidence of their life conditions in terms of diets, pathologies, <i>etc.</i>, in order to investigate correspondences between living conditions and identity. • How material culture is integrated in the expression of identity, and how identities are formed within and in response to tradition. Inter-group differences will be assessed against life conditions. <p><u>Second</u>, focus will be upon <i>foreign forms of material culture and the construction of identity</i> (science labs at partners 5, 7, 9, 13, further scientific expertise at partners 1, 3, 14, 15, 16).</p> <ul style="list-style-type: none"> • Incorporation of metal objects: Large-scale change, development of new metalwork styles throughout Europe, and regional variations in the ‘grammar’ of how novel objects were used. How this technological innovation was drawn into other social arenas and how it differed from other innovations. • Impact of ideological innovations: Analysis of how abstract aspects of cultural life affect the construction of social identity. The spread of the bird-sun-ship motive will be investigated. The ways in which this motive were used and the degree of similarity and explicitness does suggest cosmological changes, which would affect society’s understanding of itself and its membership; including construction of new roles, changing foundations for leaderships, and new ‘knowledge-systems’. 			