

CELTS ON THE MARGIN

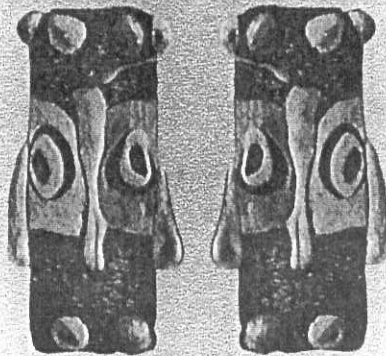
Studies in European Cultural Interaction

7th Century BC – 1st Century AD

Dedicated to ZENON WOŹNIAK

Edited by

HALINA DOBRZAŃSKA, VINCENT MEGAW, PAULINA POLESKA



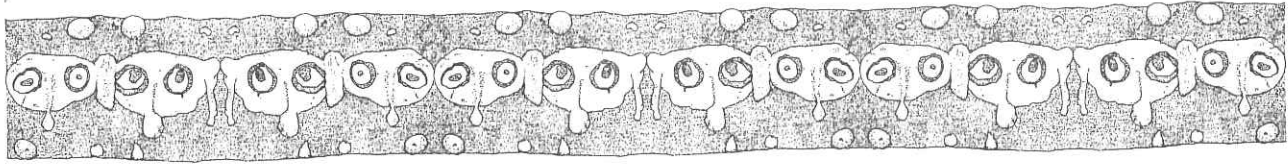
Institute of Archaeology and Ethnology of the Polish Academy of Sciences
KRAKÓW 2005



Contents

Foreword	7
Bibliography of Zenon Woźniak	9
BETTINA ARNOLD, Mobile men, sedentary women? Material culture as a marker of regional and supra-regional interaction in Iron Age Europe	17
OTTO-HERMAN FREY, The human figure in Late Hallstatt and Early La Tène art	27
VINCENT MEGAW, Early Celtic art without Scythians? A review	33
MITJA GUŠTIN, Celts on the margin of the northern Adriatic	49
MARKO DIZDAR, HRVOJE POTREBICA, The Late La Tène culture in central Slavonia (Croatia)	57
NIVES MAJNARIĆ PANDŽIĆ, Investigations into the La Tène period in northern Croatia: 1970–2003	67
PETAR POPOVIĆ, '...cum a Scordiscis Dacisque premeretur...'	77
NIKOLA THEODOSSIEV, Celtic settlement in north-western Thrace during the late fourth and third centuries BC: Some historical and archaeological notes	85
JAN BOUZEK, Celtic campaigns in southern Thrace and the Tylis kingdom: The Duchcov fibula in Bulgaria and the destruction of Pistiros in 279/8 BC	93

JULIJ EMILOV, Changing paradigms: Modern interpretations of Celtic raids in Thrace reconsidered	103
AUREL RUSTOIU, The Padea-Panagjurski Kolonii Group in south-western Transylvania (Romania)	109
MIRCEA BABEȘ, The brooch from Horodnica: Dacian, Celtic or Germanic?	121
MILOŠ ČIŽMÁŘ, Contacts between Moravia and the territory of the Scordisci	131
PAVEL SANKOT, Finds of La Tène weapons from Detva, central Slovakia	135
MAREK OLĘDZKI, 'Anarti' and 'Anartophracti': Transcarpathian cultural and settlement relations of the Celts	145
KÁROLY TANKÓ, 'Horn-handled' bowls of the Central Europe Iron Age	153
MACIEJ KARWOWSKI, The earliest types of eastern-Celtic glass ornaments	163
MIKHAIL TREISTER, La Tène elements in the fine metalwork of the north-western Pontic area in the first century AD: Some characteristic features of ornaments of the Petriki-Porogi type	173
MAREK BEDNAREK, La Tène settlement in Upper Silesia: An outline	179
PAULINA POLESKA, The Celtic settlement microregion in the area near Kraków	187
MARCIN RUDNICKI, A Late La Tène inhumation grave from Pełczyska: Comments on the cultural situation in the upland area of Little Poland (with an analysis of the anatomical remains by Karol Piasecki)	195
HALINA DOBRZAŃSKA AND JAN PIEKARCZYK, Celtic grey pottery from Poland: thrown or not thrown?	207



Mobile men, sedentary women? Material culture as a marker of regional and supra-regional interaction in Iron Age Europe

BETTINA ARNOLD

The Celtic mercenaries of the La Tène period have been the quintessential symbol of male mobility in the European Iron Age at least since an amused and impressed Alexander the Great reported his negotiations with a group of them in 335 BC. Celtic helmets, swords and shields have been found across the ancient world, from Canosa di Puglia in south-eastern Italy to Egypt, testimony to the initiative and military prowess of this subgroup of the Celtic population. At the same time, there is evidence in La Tène western Germany and eastern France of a decline in the population due to a large extent to male out-migration (Arnold 1995, 1996; Arnold, Murray 2003). Individual mobility during the Iron Age has traditionally been presented as a primarily male affair, but recent analyses of gender patterns in the material culture record of Iron Age Celtic mortuary ritual, combined with genetic evidence, suggest that mobility patterns varied by gender throughout prehistory (Gibbons 2000: 1081; Rosser *et al.* 2000: 1528; Seielstad *et al.* 1998; Wilson *et al.* 2001: 5082–5083). A re-examination of Iron Age mobility seems warranted. While a small subset of men appear to have traveled extremely long distances, mainly to acquire prestige items, from at least the late Hallstatt period until the Late La Tène, large numbers of women may have moved shorter distances to marry outside their natal communities during this time, thereby establishing and maintaining crucial trade contacts and alliances. In short, both men and women were mobile, but women appear to have been primarily involved in moving between territories within regions, whereas a selected group of men appear to have extended their peregrinations outside their own regions. Mobility in prehistoric societies, including those of Iron Age Europe, was gender-specific and mortuary assemblages should be analyzed accordingly.

Based on ethnographic data, most societies that express gender distinctions tend to be sedentary and food producing, live in large, relatively compact settlements, and exhibit patrilineal descent and patrilocal residence. Recent studies suggest that gender-specific mobility patterns vary according to a number of factors, including the complexity of the society, its subsistence strategy and degree of sedentism. In foraging societies, population density appears to most strongly influence the distance traveled by individuals to find mates and the natal community is defined socially rather than spatially, while in complex sedentary societies with large populations an individual's natal population can be located spatially as well as socially and more variables influence mating effort. For example, elite individuals in complex societies generally contract marriage alliances involving much greater geographic distances than non-elites. In most foraging and simple horticulturalist societies for which ethnographic data exist, males on average traveled considerably further than females in the course of their lifetimes (MacDonald, Hewlett 1999), an observation that appears to directly contradict genetic studies suggesting that female mobility over the millennia has been greater than that of males. However, this apparent discrepancy is due to the fact that the two approaches actually involve different scales of analysis. The genetic data reflect the cumulative mobility of generations of women at the level of the population while studies like those of MacDonald and Hewlett compare female mobility to male mobility at the level of the individual.

Three levels of individual mobility are defined by MacDonald and Hewlett:

- 1) micromovement, which involves individual and group mobility related to subsistence, possibly including the acquisition of mates;
- 2) mesomovement, involving

travel at intermediate distances to visit friends and relatives, including the creation of long-term marriage links; 3) macromovement, involving mobility to explore exotic sites for potential or exceptionally scarce resources, which may include mates. Not everyone participates in this last category of movement because of the greater risks and energy expenditure involved, but significantly MacDonald and Hewlett (1999: 511) found that "males with few kin resources or individuals with unusual backgrounds...are likely to travel these long distances", an apt description of Celtic mercenary activity in the early La Tène period. The motivations MacDonald and Hewlett propose for individual mobility in their study are limited to what they call "reproductive or somatic efforts" (*ibid.*: 512), which reflects the biological determinism that characterizes many studies of foraging societies. In this paper the categories of individual movement proposed by MacDonald and Hewlett will be utilized, but the motivations will include extra-somatic and extra-reproductive catalysts for mobility, including ideological, socio-economic and political incentives. For the purposes of this paper, mating distance is defined as an approximation of the distance between the birthplaces of parents and children (Cavalli-Sforza 1999: 515). The distance between the natal community and the community of residence at the time of an individual's death may or may not be the same as the distance between the parent's natal community and that of his or her child. The mortuary record can potentially provide information on both forms of distance based on relationship analysis of skeletal remains as well as the patterned distribution of material culture (Alt 1997; Alt *et al.* 1995; Muller n.d.).

Recent genetic studies clearly indicate that individual and group mobility must be taken into consideration when interpreting patterns of grave good assemblages in mortuary populations. In a recent study by Rosser *et al.* (2000), Y-chromosomal diversity in Europe was shown to be clinal and influenced primarily by geography rather than language. The Y chromosome exhibits a high degree of geographic differentiation in comparison with other parts of the human genome, and the study conducted by Rosser *et al.* identified clear clinal variation in five of the six major lineages in Europe, in spite of the sensitivity of the Y chromosome to genetic drift. They remark on the contrast between the clinal variation of Y-chromosomal lineages and the lack of clines in mtDNA data (*ibid.*: 1539), although they note that even taken together geography and language account for only 16.8% of the observed genetic variance, suggesting that other forces have significantly affected current patterns of spatial variation (*ibid.*: 1540).

Genetic studies have only recently begun to take into consideration the possibility that male and female mo-

bility patterns might have been different enough consistently enough through time to have an effect on the patterns seen in the European mtDNA and Y chromosome data (Gibbons 2000). Research in areas like Polynesia that have experienced historically documented sex-specific migration episodes supports this hypothesis. A recent study of European Y-chromosomal lineages in Polynesians by Hurles *et al.* (1998) demonstrated the differential input from males and females, with the predominantly paternal route for European admixture explained by the exclusively male composition of the postcontact groups, which consisted of sailors, whalers, traders, and missionaries (*ibid.*: 1802). The study conducted by Wilson *et al.* (2001) in the British Isles came to a similar conclusion: the Neolithic and Iron Age transitions in that region occurred without large-scale male movements, whereas the more recent Viking incursions apparently did leave a significant paternal genetic legacy (*ibid.*: 5078). By contrast, the authors argue that "female-mediated gene flow between the Celtic-speaking populations and other North European populations has homogenized the variation, not only for mtDNA but also for other parts of the genome affected by female migration... In other words, at least one of the Neolithic or Iron Age cultural transitions in the British Isles involved some female immigration" (*ibid.*: 5082–5083).

Clearly, differences in the migration rate of males and females should influence the geographic patterns and relative level of diversity on the Y chromosome, autosomes and mtDNA (Seielstad *et al.* 1998: 278). According to Seielstad *et al.*, most of the discrepancy between Y chromosome and mtDNA and autosomal variation can be explained by a higher female than male migration rate due to patrilocality, the tendency for a wife to move into her husband's natal household (*ibid.*). If, therefore, smaller numbers of men in Iron Age Europe moved longer distances (macromovement) while larger numbers of women moved shorter distances (micromovement) on a regular enough basis, this should produce different patterns of genetic variation for males and females. Presumably some of the 83.2% of the genetic variation in the data analyzed by Rosser *et al.* (2000) not affected by geographic or linguistic barriers might be explained by such culturally determined, sex-specific mobility patterns. The fact that the language data and the genetic data tend to contradict one another could also be due in part to the fact that sex-specific differences in mobility would not be expected to significantly affect the former but can be assumed to have influenced the latter.

As Seielstad *et al.* (1998: 279) correctly point out, "the conclusion that males migrate less than females is not immediately obvious, as men do travel more than

women in many societies," citing the Biaka Pygmies as a case study, among whom the exploration range of men is 1.8 times greater than women. However, the distance traveled by an individual over a lifetime matters less than the distance from their natal community of the final resting place of that individual. In other words, "the most important parameter from a genetic perspective is the distance between the birthplace of parents and children, and this is largely determined when one spouse leaves the natal household to join the other" (*ibid.*). Approximately 70% of ethnographically documented societies are patrilocal, "thus women tend to be more mobile than men with respect to transgenerational movements" (*ibid.*).

Migration as a variable in the interpretation of culture change has been much debated among archaeologists lately after several decades of neglect (Anthony 1990, 1992, 1997; Burmeister 1997, 1998, 2000; Campbell 2001; Chapman, Hamerow 1997; Clark 1994; Gebühr 1997; Härke 1998; Renfrew 1993; Snow 1995, 1996; *et al.*). Most of the emphasis has been on large-scale, long distance migration, which up until recently has been assumed to be more visible in archaeological terms. However, the movement of large numbers of individuals over shorter distances for long periods of time has not received much attention even though from a diachronic perspective such mobility should have a significant cumulative effect genetically as well as in material culture terms. Several forms of frequent movement by individuals over shorter distances can be proposed, much of which may have been age and gender-specific. The following categories of individual mobility in the Iron Age must be considered:

- 1) Male — exogamous, matrilocal residence patterns; mercenaries; armed retainers; itinerant metalworkers; slave raiding.
- 2) Female — exogamous, patrilocal residence practices; wife-raiding or wife-exchange; slave raiding.
- 3) Children — Fosterage; slave raiding.

The problem with most artifact distribution studies is that they do not separate "male" from "female" categories of personal ornament or possessions. Comparing such distributions to one another for the Iron Age might prove instructive, since as the preceding discussion has attempted to demonstrate, we can assume that the distance traveled as well as the mechanisms by which movement was effected were different for men than for women during this time, and could be expected to present distinct distribution patterns. Several assumptions must be made regarding Iron Age costume and burial practices in order for mortuary analysis to be used as a possible vehicle for decoding gender configurations and their relationship to individual mobility.

- 1) Gender was differentiated in the society in question (Arnold 2003).
- 2) Costume, particularly personal ornament, was used to mark gender as well as other aspects of the social personae of individuals in regulated and consistent ways that included regional and ethnic distinctions (Arnold 1991; Balzer 1997; Lenerz-de Wilde 1989; Schönfelder 1998).
- 3) These regulated patterns of material culture, particularly personal ornament, were "bound to the body" after death as well as in life (Oeftiger 1984: 74), in the form of grave goods and other material expressions of mortuary ritual. All three of these preconditions are documented in the archaeological record of the early Iron Age in west-central Europe (Arnold 1991, 1996, 2002, 2004; Burmeister 2000; Müller 1994a: 210, among others). Temporal and geographic variability must also be factored in, in addition to age and status differences (Burmeister 1997: 178).

The analysis of gender-specific mobility on the basis of archaeologically recoverable material culture patterns rests on a number of assumptions, among them the possibility of identifying "regional" patterns in the material marking of other social categories (including age, marital status and occupation) — which could be interpreted as mapping ethnic distinctions — as well as gender differences in mortuary practices, and the material culture associated with such differences (MacBeth 1993). For example, one would expect to see greater variability in female mortuary assemblages than in male assemblages in patrilocal societies in which gender was strongly marked in life as well as in death and where regional differences were reflected in costume and personal ornament, assuming that the newly married woman was permitted or required to retain the costume of her natal community. Whether women retained the material culture markers of their natal community or reproduced them in their husband's community (in the form of pottery or textiles, for example) would affect the archaeological visibility of such movement, and the patterns should vary depending on whether female mobility was restricted to certain social strata or not. The degree to which mortuary costume mirrored the costume of the living is also a factor (Brandt 1998: 277). Archaeologists must develop methods of distinguishing these various forms of material culture marking from one another to avoid conflating the different archaeologically documented forms of intercommunity contact (Olausson 1988: 19; Schier 1998: 510).

Patrilocality will not necessarily be identifiable on the basis of personal ornament in cases where women leaving their natal communities upon marriage stay within the geographic boundaries of their ethnic group, in which case the genetic and archaeological data would suggest contradictory degrees of mobility. Status differences could

affect both mobility rates and the distance traveled, as elite women in patrilocal societies often constitute a mechanism for creating and maintaining inter-regional alliances. In such societies female burials characterized by above-average grave wealth (measured in terms of the numbers of grave goods as well as their material and place of origin) should also contain objects and exhibit variations in costume that are more commonly found in neighboring regions and are not typical of more modestly outfitted female burials in the same mortuary sample. A good example is a richly outfitted burial in the late Hallstatt cemetery of Niedererlbach in Bavaria (Koch 1992; Schier 1998: 511). The grave contained the double interment of a woman and child and the woman's costume included a so-called Vierpassfibula of a type found in western Bohemia and the upper Pfalz region. She also wore jet bracelets and an elaborate collier made up of more than 400 amber spacers and beads, the richest burial in the cemetery. Wolfram Schier concludes that mechanisms other than trade or even gift exchange were operating in this case, and argues that individual mobility — in this case presumably some sort of marriage alliance — is a more likely explanation (*ibid.*).

Such imported pieces can pose interpretive difficulties, as in the case of an Iberian belt hook found in a female grave in the late Hallstatt Magdalenenberg tumulus on the eastern edge of the Black Forest. Such belt hooks are part of Iberian male burial costume, but as the Magdalenenberg example was found face down between the left elbow and the ribcage, it may not have been part of the woman's burial costume. Since there was evidence of post-depositional disturbance, this cannot be conclusively stated, however. Burmeister (1999: 257) suggests that in this case "marriage migration" is not the best explanation for the presence of an exotic import, since women do not wear such belt hooks in Iberia. The class of object in this case is qualitatively different from that of the Niedererlbach case, where several ornament elements in the same grave were from contiguous regions. The Magdalenenberg belt hook seems more likely to be an example of material culture movement rather than individual mobility.

Women in most ethnographically and archaeologically documented cultures, including those of the European Iron Age, appear to have been more visible carriers of ethnic identity as manifested in terms of costume-related material culture than men (Brandt 1998: 275; Burmeister 2000: 73; Grünert 1988: 252; Müller 1994b: 233), whose burial assemblages tend to mark gender mainly in terms of the presence or absence of weapons, which simultaneously may mark age and individual status. Female mobility as a result of marriage might be

archaeologically visible: 1) If personal ornament and costume varies between communities within a region and if women retain the costume of their natal group when they move in with their husband's family. 2) If women are responsible for the production of certain forms of material culture, such as pottery, learn the production techniques while still residing in their natal communities and are then permitted to produce objects in the style of their place of origin after marriage (for examples of this type of pattern, see Gosselain 1992: 564; for exceptions, see Dietler and Herbich 1989 and Herbich 1987). The resulting stylistic heterogeneity in those forms of material culture produced by women would be related to inter-group marital alliances (Gosselain 1992: 583). 3) If skeletal preservation and cemetery sample sizes are sufficient to allow for bioarchaeological or genetic kinship analysis.

Recent research by Stoodley (1999), supported by the earlier work of Brush (1993) and Härke (1992, 1997), demonstrates that in early Anglo-Saxon burial populations in Britain a larger number of females (60%) were buried with gender-signaling artifacts than males (45%) (Stoodley 1999: 136). Stoodley concludes 1) that masculinity in early Anglo-Saxon England was signaled by a smaller number of artifact types than femininity in mortuary ritual and 2) that the marking of femininity was expressed in a larger number of artifact combinations that reflected a correspondingly larger number of female roles across the life-cycle (*ibid.*: 117–118). The degree to which women's and men's bodies were used to mark ethnicity and gender apparently was also determined by their social status, since "a large proportion of the adult population were without a gender identity" (*ibid.*: 188), at least as reflected in the archaeologically recoverable burial record. In societies where restricting female mobility and female sexuality is an important aspect of social control (Ortner 1981), conformity is especially clearly marked in female personal ornament and costume (Burmeister 1997: 183). Burmeister goes so far as to state that women in such contexts become the carriers of group identity in the form of regional costume (*ibid.*), and also argues that such signaling is generally more likely to occur in elite contexts (*ibid.*: 185). However, he ultimately concludes that the concept of ethnic identity is of limited utility in the archaeological investigation of migration (*ibid.*: 197).

The archaeological correlates of inter-community marriage exchange, particularly with respect to gender-specific patterns that might be present and their impact on cultural transmission (Anthony 1997: 21; Wicker 1994, n.d., among others), have not been systematically explored to date with respect to the continental Iron Age, where most of the emphasis has been on large-scale migration at the tribal or sub-tribal level or in the form of

primarily male mercenary and activity (Arnold 1995; Arnold, Murray 2003). This has implications for interpretations of Iron Age social organization, since in fact female mobility as a result of marriage exchanges is suggested quite strongly by the selective distribution of personal ornament during the early as well as late Iron Ages. Examples include three brooches of related form at Manching of what Megaw and Megaw describe as an "Alpine" type. They interpret this particular example as "the property of a woman foreign to the region. This may have been a case of intermarriage in the period just before the Roman conquest between a local Celtic tribe, the Vindelici and more southerly communities, the Lepontii of the Ticino, who probably spoke a form of Celtic or even proto-Celtic, or the problematic group known from Classical sources as the Raeti" (Megaw, Megaw 1995: 61). Megaw and Megaw argue that "similar arguments have been advanced particularly for the thin-walled rilled bowls associated with the so-called «Fritzens-Sanzeno group» and found both on the Dürrenberg bei Hallein in funerary and domestic contexts and in Lower Austria in the large La Tène flat cemetery of Mannersdorf am Leithagebirge" (*ibid.*).

Another La Tène female burial that may be an example of individual migration as a result of elite marriage exchange is a richly outfitted female individual in a central burial from the tumulus cemetery of Gündlingen in the Black Forest. In addition to numerous amulets, fibulae, ankle rings and bracelets she wore a distinctive bronze bracelet decorated with four bearded male heads. This design is unknown in the region, but does appear in the central Rhineland, where the bracelets are typically made of gold (Brandt 1998: 294). Megaw and Megaw likewise draw attention to coral- or glass-inlaid *Scheiben-halsringe* known from La Tène burials along the Upper Rhine, which Felix Müller (1989) believes were produced in two workshop areas, possibly in Hungary and north-western Romania, "perhaps brought there and preserved as heirlooms of western-originating womenfolk" (1999: 50). Similarly, the silver pendant and chain found in a woman's grave in the La Tène cemetery of Pottenbrunn-Ratzersdorf in lower Austria belongs to a stylistic tradition found further west in the Champagne-Ardenne area of France (Neugebauer *et al.* 1997: 730). Neugebauer *et al.* conclude the following: "Whether the similarities of material across much of Europe in this period are due to migration of major population groups, to mercenary activity, to the movement of small groups, to renewed and extended trade connections or to internal evolution due to changed economic circumstances cannot be established as yet from the archaeological evidence" (*ibid.*: 731).

The La Tène period appears to have been characterized by increased mobility, initially apparently prima-

rily on the part of male mercenaries, later on the part of whole tribes. The Classical sources (Arnold 1996; Arnold, Murray 2003) reinforce the perception of Celtic mobility as mainly male or large-scale in nature while neglecting other possible forms of mobility, including that of women and children. The emphasis has also tended to be on the late Iron Age, although certain forms of individual mobility are archaeologically documented in the early Iron Age as well. The degree to which contact with other areas of Europe, including the Greek and Etruscan cultures, may have affected Iron Age social organization, and by extension individual and group mobility, has been much debated. One hypothesis that has not so far been proposed is that as a result of this contact and the concomitant movement of male mercenaries during the Early La Tène, west-central European residence patterns in some regions may have changed from patrilocal to matrilocal. A cross-cultural analysis of the relationship between trade and matrilineality/matrilocality carried out by Peter Peregrine (1994, 2001), building on the research of Mary Helms (1970) and Bruce Trigger (1978), strongly suggests that "when cultures are put into contact with representatives of more complex societies through trade, raid, warfare or wage labor" matrilocal residence is fostered because "cores of consanguineally related women... help to maintain cultural identity and continuity, especially under conditions of cultural stress" (Peregrine 1994: 103 quoting Helms 1970: 198). Peregrine (1994: 104) concludes that "it seems clear from both Helms' and Trigger's examples that matrilineal forms of residence and descent are, in some cases linked to the absence of males from base communities", something that I have argued was occurring during the Early La Tène period at least in some parts of the Continental Celtic world (Arnold 1996).

Elite women in the Early La Tène in the Rhineland and Marne regions may have been transformed from "women sojourners" — i.e. destined ultimately to leave their natal communities when they married — to "base-men of the place" (Josephides 1985: 41–67), or more accurately, base-women of the place. Whether this shift occurred across social strata is unclear, as is the duration of the change, which may in fact not have been a permanent one (Peregrine 1994: 108). It may be reflected in the relatively sudden appearance of wealthy women's burials that contain exotica not from neighboring areas, as in the late Hallstatt period when women appear to have brought their group costume with them into their affinal community, but from the same distant sources as the male elite status items. By comparison, when elite male burials in the late Hallstatt and Early La Tène periods contain objects from outside their regions, they are virtually exclusively from distant sources.

This is exemplified by the helmet plume clamp and bird-head-handled iron sword discovered in Tumulus 17 Grave 1, one of two mounds (Tumulus 17 and Tumulus 18) recently excavated in the vicinity of the Heuneburg hillfort (Arnold *et al.* 2001; Arnold, Murray 2002). Helmets, like other forms of defensive armor, are virtually unknown in the West Hallstatt zone, and are generally considered an East Hallstatt characteristic (Potrebica 2001), while the sword from Tumulus 17 Grave 1 has no local parallels but suggests a connection to Iberia or Greece. On the other hand, the bronze cauldron also found in this grave is of a type found in two contemporary burials closer to the hillfort (Arnold *et al.* 2001), and the two spear points from this burial are a common local male burial good. The women's burials from these two contemporary late Hallstatt/Early La Tène mounds, on the other hand, clearly suggest ties to the neighboring Black Forest region (Arnold *et al.* 2003), and none of them contain exotica. The bioarchaeological analysis of a late Hallstatt cemetery from the site of Dattingen (Alt 1997: 224–239; Alt *et al.* 1995) supports the idea that at least some groups were matrilocal as well as matrilineal at this time (Pauli 1972), and a bilateral system of descent and residence cannot be ruled out.

Wife-raiding is known to have impacted material culture patterns in some archaeologically and ethnographically documented contexts (Arabagian 1984; Hayden 1995: 42–44; Helms 1998: 126–138, 102–108; Josephides 1985; *et al.*; Snow 1995: 73). Wife-raiding or bride abduction is not specifically mentioned in the Classical sources on the Continental Celts, but the insular Celtic literature certainly suggests that the practice existed:

Abduction is the major source of shame-induced deaths... The *dinnsenchas* tales offer further examples. Thus the *dinnsenchas* of Ailenn tells how Crem Marda carried off a daughter of Lugaid, the king of Leinster. Ailenn was her name...and Ailenn died because of her sense of shame with him... In one of the stories related to Carmun, we learn of the death of Mesca, daughter of Bodb, after her abduction by Sengarman. In the Ulster Cycle tale *Tochmarc Ferbe*, the deaths of Ferb, her mother, and 150 other female captives are attributed to grief for their fallen men; in light of their predicament as prisoners, shame seems a more plausible cause for their demise (O'Leary 1987: 41–42).

There are no documentary records of prehistoric Continental Celtic marriage practices, but the extant written sources from the British Isles clearly indicate that patrilocal residence was the norm, i. e. the woman moved in with her husband's kin in Ireland (Rees, Rees 1989: 267–268; Patterson 1994: 291), Wales (Rees, Rees 1989: 268) and Brittany (Rees, Rees 1989: 270) in historic times.

In Ireland, the ride of the bridal party was referred to as "dragging home the bride" (Rees, Rees 1989: 268), an obvious reference to wife-raiding, albeit symbolic by the time the practice was recorded. On the other hand, uxorilocal residence (in which the husband resides with his wife's kin) is not unknown in Celtic mythology, notably in the Arthurian romances, in which avunculocal residence (the husband and wife move in with his mother's brother's family) is also documented (Birkhan 1997: 1025–1026).

In the later Celtic world residence patterns varied significantly. In early medieval Ireland, for example, women did leave their natal communities to live with their husband's families but did not change kin after marriage, i.e. they were still affiliated with their father's kingroup after marriage (Davies 1983: 154). The fact that there were heavy penalties for rape and abduction in the Irish laws suggests that women were, at least occasionally, removed from their natal communities by force as well (*ibid.*: 156). Seielstad *et al.* (1998:278) suggest that polygyny or higher rates of male mortality, both of which can be postulated to have existed for certain social groups in Iron Age Europe, may explain some of the discrepancy between Y-chromosomal variation as compared to mtDNA and autosomal variation. They point out that very few males in any given society can afford to maintain more than one wife, and indeed polygyny among the Iron Age Celts as documented in the Classical sources appears to have been restricted to elites.

Caesar describes elite polygyny among the Celts of Gaul as a means of creating political alliances, with such strategic unions representing exceptions to the otherwise normative monogamous and endogamous marriage practice among these peoples (BG 6,19 and 1,3.8; Grünert 1988: 254). This suggests not only that elite women may have been especially likely to marry a considerable distance from their natal communities, but also that they may have been one of the primary mechanisms involved in creating and maintaining the remarkably geographically and temporally uniform suite of Iron Age status markers (Arnold 1999: 85).

The exchange of human beings in the Celtic world for political purposes was not restricted to women. High status male as well as female children are known to have been used to create and maintain close ties between elite families, a distinctive feature of early Celtic society that is documented in Ireland's Brehon Laws and survived in Gaelic Scotland until the 18th century (Hubert 1980: 183–184; MacKillop 1998: 213). Children were fostered as early as the age of seven until they reached their majority at 14 (girls) and 17 (boys). The ties between foster-parent and foster-child were not surprisingly often very close, and as adults, foster-children could be useful al-

lies to their former patrons (*ibid.*). Hubert describes this process as follows:

In the history of Munster two royal houses appear, Clanna Deirgthene and Clanna Dairenne, which hold the power generation about, intermarry, and put their children out to board with each other. These two lines stand in the relation of two exogamous clans belonging to different phratries, especially if we suppose that descent went by the distaff side... For the child belonged to his mother's clan, but she lived in the clan of his father; he was sent to his mother's clan, at least for a considerable time (Hubert 1980: 201).

Based on the frequency of descriptions of male fosterage in the mythology and other written sources (King Arthur, who was fostered by Sir Ector in the various permutations of the Arthurian legends, is perhaps the most obvious example), this form of individual mobility occasionally included female children but most often involved boys. There is of course no reason to suppose that fosterage existed in the early Iron Age on the Continent, although the Classical sources seem to imply something of the sort for Gaul. Nor would there be archaeological correlates of such a practice unless foster children were buried with their foster families if they died before reaching maturity, something for which there is no evidence in the written records, although it cannot be ruled out entirely. Nevertheless, it should be mentioned as a form of individual mobility that has the potential to complicate Iron Age mortuary patterns as reflected in personal ornament and costume. Slave raiding is similarly difficult to demonstrate archaeologically, at least for the early Iron Age, but was certainly a factor in individual mobility in the La Tène period on the Continent as well as in the British Isles (Arnold 1988).

What are the implications of the results of recent genetic studies for archaeological interpretations of Iron Age mobility? Several hypotheses suggest themselves based on studies like those carried out by Seielstad *et al.* (1998), Rosser *et al.* (2000) and Wilson *et al.* (2001). D. Anthony (1997: 24) explicitly states "Because information-exchange networks may be represented archaeologically by shared artifact styles and raw material exchange systems, it may be possible in some cases to reconstruct portions of the prehistoric information networks that constrained and enabled prehistoric migratory behavior". He also argues that "archaeologists might profitably distinguish between short-distance and long-distance migrations, because the constraints that regulate migration and the social effects of migration are different in these two cases" (*ibid.*: 26; Anthony 1990, 1992). The archaeological and written evidence suggests that at least three types of migration are present during the European Iron

Age: local migration, in which migrants move within a home region or range while remaining within a social network of familiar kin, marriage exchange systems, and shared economic and geographic knowledge (Anthony 1997: 26); circular, or tethered, migration, in which migrants move out of their home ranges to achieve a specific goal but intend to return, although circular migrants sometimes remain at their destination and become first-comers in a system of chain migration (*ibid.*); and chain migration, in which migrants follow earlier migrants to a specific destination in an otherwise unfamiliar territory with the intention of residing there for an extended time (*ibid.*). "Exotic trade goods discovered in archaeological sites may have been carried in by circular migrants" (Anthony 1997: 26), *cf.* the imported exotica found in male graves of the Early La Tène period in the Marne region and the Rhineland (Arnold 1996; Arnold, Murray 2003).

It is neither possible nor desirable to make generalizations on the subject of gendered individual mobility in all areas of Iron Age Europe during both the Hallstatt and La Tène periods. Regional patterns are clear within and between the two main temporal divisions of the Iron Age, and the only possible approach to this subject is through regional analyses (Burmeister 2000; Pauli 1972). This may reduce the sample size, but it should increase the reliability of the results. In addition, while there seems to be an unhappy tendency to view male mobility as primarily active as compared to largely passive female mobility (Grünert 1988: 254), this association is belied by the existence of a handful of late Hallstatt and Early La Tène female burials such as Mitterkirchen, Niedererlbach, Vix, Reinheim and others which suggest rather that at least elite women on occasion were power brokers actively participating in their own political arenas (Arnold 1996). Perhaps more significant is the extent to which individual movement can be tracked archaeologically as well as in the form of genetic, non-metric or epigenetic traits, and linguistic data. The multiple sources of evidence available are greater now than ever before, but we must develop ways to cope when the different strands of evidence appear to contradict one another. Bioarchaeological studies seem to represent one of the more promising areas of research with respect to identifying some of the less well-understood forms of migration (Blom *et al.* 1998: 254), especially gender-specific micromovements on an individual level such as those discussed here.

Bettina Arnold
 Department of Anthropology
 University of Wisconsin-Milwaukee
 P.O. Box 413
 Milwaukee, WI 53201
 USA
 e-mail: barnold@uwm.edu

Bibliography

- ALT K., 1997. *Odontologische Verwandtschaftsanalyse: Individuelle Charakteristika der Zähne in Ihrer Bedeutung für Anthropologie, Archäologie und Rechtsmedizin*. Stuttgart.
- ALT K., MUNZ M., VACH W., 1995. Hallstattzeitliche Grabhügel im Spiegel ihrer biologischen und sozialen Strukturen am Beispiel des Hügelgräberfeldes von Dattingen, Kr. Breisgau-Hochschwarzwald. *Germania* 73(2), 281–316.
- ANTHONY D., 1990. Migration in archaeology: the baby and the bathwater. *American Anthropologist* 92, 895–914.
- ANTHONY D., 1992. The bath refilled: migration in archaeology again. *American Anthropologist* 94 (1), 174–176.
- ANTHONY D., 1997. Prehistoric migration as social process. In: J. Chapman and H. Hamerow (eds.), *Migrations and Invasions in Archaeological Explanation*. 21–32. Oxford (BAR International Series 664).
- ARABAGIAN R., 1984. Cattle raiding and bride stealing. *Religion* 14, 16–32.
- ARNOLD B., 1988. Slavery in late prehistoric Europe: recovering the evidence for social structure in Iron Age society. In: M. N. Geselowitz and D. B. Gibson (eds), *Tribe and Polity in Late Prehistoric Europe: Demography, Production and Exchange in the Evolution of Complex Social Systems*. 179–192. New York.
- ARNOLD B., 1991. The deposed princess of Vix: the need for an engendered European prehistory. In: D. Walde and N. D. Willows (eds) *The Archaeology of Gender: Proceedings of the 22nd Annual Chacmool Conference*. 366–374. Calgary.
- ARNOLD B., 1995. The material culture of social structure: rank and status in early Iron Age Europe. In: B. Arnold and D. B. Gibson (eds), *Celtic Chieftdom, Celtic State: The Evolution of Complex Social Systems in Prehistoric Europe*. 43–52. Cambridge.
- ARNOLD B., 1996. „Honorary males” or women of substance? Gender, status and power in Iron Age Europe. *Journal of European Archaeology* 3(2), 153–168.
- ARNOLD B., 1999. „Drinking the Feast”: alcohol and the legitimation of power in Celtic Europe. *Cambridge Archaeological Journal* 9(1), 71–93.
- ARNOLD B., 2002. „Sein und Werden”: Gender as process in mortuary ritual. In: S. Nelson und M. Rosen-Ayalon (eds), *In Pursuit of Gender: Worldwide Archaeological Approaches*. 239–256. Walnut Creek.
- ARNOLD B., 2003. Landscapes of Ancestors: Early Iron Age Hillforts and their Mound Cemeteries. *Expedition: The Magazine of the University of Pennsylvania Museum of Archaeology and Anthropology* 45 (1), 8–13.
- ARNOLD B., 2004. Machtbeziehungen und Geschlechterdifferenz in der vorgeschichtlichen Eisenzeit Europas. In: B. Heining, S. Böhm and U. Sals (eds), *Machtbeziehungen, Geschlechterdifferenz und Religion*. 9–34. Münster: LIT Verlag.
- ARNOLD B., MURRAY M. L., 2002. A landscape of ancestors in southwest Germany. *News & Notes. Antiquity* 76(292), 321–322.
- ARNOLD B., MURRAY M. L., 2003. „Put out the geese, the Celts are coming!” Iron Age migration and social change in central Europe. In: C. Allum, J. Kahn, C. Cluney and M. Peurakmak-Brown (eds) *Ancient Travelers*. Proceedings of the 27th Annual Chacmool Conference. 111–118. Calgary.
- ARNOLD B., MURRAY M. L., SCHNEIDER S. A., 2003. Untersuchungen an einem zweiten hallstattzeitlichen Grabhügel der Hohmichele-Gruppe im „Speckhau”, Markung Heiligkreuztal, Gemeinde Altheim, Landkreis Biberach. *Archäologische Ausgrabungen in Baden-Württemberg* 2002, 78–81.
- ARNOLD B., MURRAY M. L., SCHNEIDER S. A., 2001. Abschließende Untersuchungen in einem hallstattzeitlichen Grabhügel der Hohmichele-Gruppe im „Speckhau”, Markung Heiligkreuztal, Gemeinde Altheim, Landkreis Biberach. *Archäologische Ausgrabungen in Baden-Württemberg* 2000, 67–70.
- BALZER I., 1997. Von Haubennadeln und Knöchelringen: Zur Rekonstruktion und Präsentation einer Frau und eines Mädchens aus der späten Hallstattzeit im Museum für Ur- und Frühgeschichte Freiburg. In: S. Karlisch, S. Kästner und E.-M. Mertens (eds), *Vom Konchenmann zur Menschenfrau: Feministische Theorie und archäologische Praxis*. 103–123. Münster.
- BIRKHAN H., 1997. *Kelten*. Vienna.
- BLOM D.E., HALLGRIMSSON B, KENGL L., LOZADA M.C., BUIKSTRA J.E., 1998. Tiwanaku «colonization»: Bioarchaeological implications for migration in the Moquegua Valley, Peru. *World Archaeology* 30(2), 238–261.
- BRANDT H., 1998. Frauen in der keltischen Eisenzeit. In: B. Auf-fermann and G.-C. Weniger (eds), *Frauen — Zeiten — Spuren*. 271–301. Mettmann.
- BRUSH K.A., 1993. *Adorning the Dead: The Social Significance of Early Anglo-Saxon Funerary Dress in England (Fifth to Seventh Centuries BC)*. Unpublished doctoral dissertation. Department of Archaeology, University of Cambridge.
- BURMEISTER S., 1997. Zum sozialen Gebrauch von Tracht. Aussagemöglichkeiten hinsichtlich des Nachweises von Migrationen. *Ethnographisch-Archäologische Zeitschrift* 38, 177–203.
- BURMEISTER S., 1998. Ursachen und Verlauf von Migrationen: Anregungen für die Untersuchung prähistorischer Wanderungen. *Studien zur Sachsenforschung* 11, 19–41.
- BURMEISTER S., 1999. Innovation, ein seliologisches Abenteuer — Das Beispiel der Hallstattzeit in Südwestdeutschland. *Archäologische Informationen* 22(2), 241–260.
- BURMEISTER S., 2000. *Geschlecht, Alter und Herrschaft in der Späthallstattzeit Württembergs*. Tübinger Schriften zur

- Ur- und Frühgeschichtlichen Archäologie Band 4. New York–München.
- CAMPBELL E., 2001. Were the Scots Irish? *Antiquity* 75(288), 285–292.
- CAVALLI-SFORZA L., 1999. Comment on MacDonald, D.H. and B.S. Hewlett "Reproductive interests and forager mobility". *Current Anthropology* 40(4), 514–515.
- CHAPMAN J., HAMEROW H., (eds), 1997. *Migrations and Invasions in Archaeological Explanation*. Oxford (BAR International Series 664).
- CLARK G. A., 1994. Migration as an explanatory concept in Paleolithic archaeology. *Journal of Archaeological Method and Theory* 1, 305–343.
- DAVIES W., 1983. Celtic women in the early Middle Ages. In: A. Cameron and M. Kuhrt (eds), *Images of Women in Antiquity*. 145–166. Detroit.
- DIETLER M., HERBICH I., 1989. Tich Matek: the technology of Luo pottery production and the definition of ceramic style. *World Archaeology* 21, 148–164.
- GEBÜHR M., 1997. Überlegungen zum archäologischen Nachweis von Wanderungen am Beispiel der angelsächsischen Landnahme in Britannien. *Archäologische Informationen* 20, 11–24.
- GIBBONS A., 2000. Europeans trace ancestry to Paleolithic people. *Science* Nov. 10 Vol. 290, 1080–1081.
- GOSSÉLAIN O. P., 1992. Technology and style: Potters and pottery among Bafia of Cameroon. *Man N. S.* 27(3), 559–586.
- GRÜNERT H., 1988. Zur Bedeutung und zum Bild der Frau in den keltischen und germanischen Stammesgesellschaften. In: F. Horst and F. Schlette (eds), *Frühe Völker in Mitteleuropa*. 247–274. Berlin.
- HÄRKE H., 1992. *Angelsächsische Waffengräber des .-7. Jahrhunderts*. Cologne-Bonn.
- HÄRKE H., 1997. Early Anglo-Saxon social structure. In: J. Hines (ed.), *The Anglo-Saxons: Towards an Ethnography*. 125–70. Woodbridge.
- HÄRKE H., 1998. Archaeologists and migrations: a problem of attitude? *Current Anthropology* 39, 19–45.
- HAYDEN B., 1995. Pathways to power: principles for creating socioeconomic inequalities. In: T. D. Price and G. Feinman (eds), *Foundations of Social Inequality*. 15–86. New York.
- HELMS M., 1970. Matriolocality, social solidarity, and culture contact: three case histories. *Southwestern Journal of Anthropology* 26, 197–212.
- HELMS M., 1998. *Access to Origins: Affines, Ancestors and Aristocrats*. Austin.
- HERBICH I., 1987. Learning patterns, potter interaction and ceramic style among the Luo of Kenya. *African Archaeological Review* 5, 153–204.
- HUBERT H., 1980. *The Greatness and Decline of the Celts*. New York.
- HURLES M.E., IRVEN C., NICHOLSON J., TAYLOR P. G., SANTOS F. R., LOUGHLIN J., JOBLING M. A., SYKES B., 1998. European Y-chromosomal lineages in Polynesians: a contrast to the population structure revealed by mtDNA. *American Journal of Human Genetics* 63, 1793–1806.
- JOSEPHIDES L., 1985. *The Production of Inequality: Gender and Exchange among the Kewa*. London.
- KOCH H., 1992. Grabfunde der Hallstattzeit aus dem Isartal bei Niedererbach, Lkr. Landshut. *Bayerische Vorgeschichtsblätter* 57, 49–75.
- LENERZ-DE WILDE M., 1989. Überlegungen zur Frauentracht der Späthallstattzeit an der oberen Donau. *Fundberichte aus Baden-Württemberg* 14, 251–272.
- MACBETH H., 1993. Ethnicity and human biology. In: M. Chapman (ed.), *Social and Biological Aspects of Ethnicity*. 47–91. Oxford.
- MACDONALD D. H., HEWLETT B. S., 1999. Reproductive interests and forager mobility. *Current Anthropology* 40(4), 501–523.
- MACKILLOP J., 1998. *Dictionary of Celtic Mythology*. Oxford.
- MEGAW J.V.S., MEGAW M. R., 1995. From the Tyrol to Texas: Lost and found in the Middle La Tène. *Acta Archaeologica Lovaniensia, Monographiae* 8, 59–66.
- MEGAW J.V.S., MEGAW M. R., 1999. Celtic connections past and present: Celtic ethnicity ancient and modern. In: R. Black et al. (eds), *Celtic Connections*. East Linton.
- MÜLLER F., 1989. *Die frühlatènezeitliche Scheibenhalsringe*, Römisch-Germanische Forschungen 46. Mainz.
- MÜLLER J., 1994a. Zur sozialen Gliederung der Nachbestattungsgemeinschaft vom Magdalenenberg bei Villingen. *Prähistorische Zeitschrift* 69, 175–221.
- MÜLLER J., 1994b. Altersorganisation und Westhallstatt: ein Versuch. *Ethnographisch-Archäologische Zeitschrift* 35, 220–240.
- MULLER D., n.d. *Relative Wealth: Kinship, Biodistance, and Social Structure in Early Iron Age Europe*. Unpublished Ph.D. thesis, University of Chicago.
- NEUGEBAUER J.-W., MEGAW J.V.S., MEGAW M. R., 1997. Notes on a silver pendant and chain from Pottenbrunn-Ratzersdorf, Niederösterreich, and its wider European implications. *Germania* 75(2), 717–735.
- OEFTIGER K., 1984. Hallstattzeitliche Grabhügel bei Deislingen, Kreis Rottweil. *Fundberichte aus Baden-Württemberg* 9, 41–80.
- OLAUSSON D., 1988. Dots on a map: thoughts about the way archaeologists study prehistoric trade and exchange. In: B. Hårdh, L. Larsson, D. Olausson, and R. Petré (eds), *Trade and Exchange in Prehistory: Studies in Honor of Berta Stjernquist*. 15–24. Lund.
- O'LEARY P., 1987. The honour of women in early Irish literature. *Ériu* 38, 27–44.
- ORTNER S., 1981. Gender and sexuality in hierarchical societies: the case of Polynesia and some comparative implications.

- tions. In: S. Ortner and H. Whitehead (eds), *Sexual Meanings: The Cultural Construction of Gender and Sexuality*. 359–409. Cambridge.
- PATTERSON N., 1994. *Cattlelords and Clansmen: The Social Structure of Early Ireland*. Notre Dame.
- PAULI L., 1972. Untersuchungen zur Späthallstattkultur in Nordwürttemberg. Analyse eines Kleinraumes im Grenzbereich zweier Kulturen. *Hamburger Beiträge zur Archäologie* 2(1), 1–166.
- PAULI L., 1975. *Keltischer Volksglaube: Amulette und Sonderbestattungen am Dürrnberg bei Hallein und im eisenzeitlichen Europa*. München.
- PEREGINE P., 1994. Trade and matrilineality: a hypothesis based on world-systems theory. *Cross-Cultural Research* 28(2), 99–110.
- PEREGINE P., 2001. Matrilocality, corporate strategy, and the organization of production in the Chacoan world. *American Antiquity* 66, 36–46.
- POTREBICA H., 2001. Some aspects of the warrior concept in the eastern Hallstatt circle. *Prehistoria* 2000 1(1), 62–81.
- REES A., REES B., 1989. *Celtic Heritage: Ancient Tradition in Ireland and Wales*. London.
- RENFREW C., 1993. *The Roots of Ethnicity, Archaeology, Genetics and the Origins of Europe*. Rome. Unione internazionale degli Istituti di archeologia storia e storia dell'arte in Roma.
- ROSSER Z.H., ZERJAL T., HURLES M. E., ADOJAAN M., ALAVANTIC D., AMORIM A., AMOS W., ARMENTAROS M., ARROYO E., BARBUJANI G., BECKMAN G., BECKMAN L., BERTRANPETIT J., BOSCH E., BRADLEY D. G., BREDE G., COOPER G., CÔRTE-REAL H. B. S. M., DE KNIJFF P., DECORTE R., DUBROVA Y. E., EVGRAFOV O., GELISSEN A., GLISIC S., GÖLGE M., HILL E. W., JEZIOROWSKA A., KALAYDJIEVA L., KAYSER M., KIVISILD T., KRAVCHENKO S. A., KRUMINA A., KUČINSKAS V., LAVINHA J., LIVSHITS L. A., MALASPINA P., MARIA S., MCELREAVEY K., MEITINGER T. A., MIKELSAAR A.-V., MITCHELL R. J., NAFA K., NICHOLSON J., NØRBY S., PANDYA A., PARIK J., PATSALIS P. C., PEREIRA L., PETERLIN B., PIELBERG G., JOÃO PRATA M., PREVIDERÉ C., ROEWER L., ROOSTSI S., RUBINSZTEIN D. C., SAILLARD J., SANTOS F. R., STEFANESCU G., SYKES B. C., TOLUN A., VILLEMS R., TYLER-SMITH C., JOBLING M. A., 2000. Y-chromosomal diversity in Europe is clinal and influenced primarily by geography rather than by language. *American Journal of Human Genetics* 67, 1526–1543.
- SCHIER W., 1998. Fürsten, Herren, Händler? Bemerkungen zu Wirtschaft und Gesellschaft der westlichen Hallstattkultur. In: H. Küster, A. Lang und P. Schauer (eds), *Archäologische Forschungen in urgeschichtlichen Siedlungslandschaften. Festschrift für Georg Kossack zum 75. Geburtstag*. 493–514. Regensburg.
- SCHÖNFELDER M., 1998. Männer mit goldenen Ohrringen: Zu insignienhaften Gegenständen in der späten Hallstatt- und frühen Latènekultur. *Archäologisches Korrespondenzblatt* 28, 403–422.
- SEIELSTAD M. T., MINCH E., CAVALLI-SFORZA L., 1998. Genetic evidence for a higher female migration rate in humans. *Nature Genetics* November 1998 Vol. 20, 278–280.
- SNOW D., 1995. Migration in prehistory: the Northern Iroquoian case. *American Antiquity* 60, 59–79.
- SNOW D., 1996. More on migration in prehistory: accommodating new evidence in the northern Iroquoian case. *American Antiquity* 61, 791–796.
- STOODLEY N., 1999. *The Spindle and the Spear: A Critical Enquiry into the Construction and Meaning of Gender in the Early Anglo-Saxon Burial Rite*. Oxford (BAR British Series 288).
- TRIGGER B., 1978. Iroquoian matriliney. *Pennsylvania Archaeologist* 48, 55–65.
- WICKER N., 1994. On the trail of the elusive goldsmith: tracing individual style and workshop characteristics in Migration Period metalwork. *Gesta* 33, 65–70.
- WICKER N., n.d. Women and agency: a gendered re-visioning of early Medieval Scandinavian bracteate jewellery. Manuscript.
- WILSON J.F., WEISS D. A., RICHARDS M., THOMAS M. G., BRADMAN N., GOLDSTEIN D. B., 2001. Genetic evidence for different male and female roles during cultural transitions in the British Isles. *Proceedings of the National Academy of Sciences* 98(9), 5078–5083.