Can we reconcile individualisation with relational personhood? A case study from the Early Neolithic

John Chapman and Bisserka Gaydarska
Department of Archaeology, Durham University, UK
j.c.chapman@dur.ac.uk; bisserka.gaydarska@dur.ac.uk

ABSTRACT – *In this article, we seek to discuss the tension between relational personhood, characterised by 'dividuals', and the individualisation of persons whose driving force was the creation of new embodied skills learnt to perform the wide range of new tasks which defined the farming way of life. This is, in effect, an exploration of the consequences of a vivid new world itself created by the interactions of a wider variety of individuals with different skills than had ever been seen before, including those required for domesticating animals, potting, building rectangular houses, growing cereals and pulses and polishing stone tools and ornaments.*

IZVLEČEK – *V članku bomo razpravljali o tenzijah med sestavljivim sebstvom, določenim z 'dividualnostjo', in individualnostjo oseb, ki jo določajo nova znanja in spretnosti, povezane s poljedelskim načinom življenja. Gre za raziskovanje posledic dinamike novega sveta, ki so ga ustvarile interakcije posameznikov z različnimi novimi spretnostmi, vključno z znanji o udomačitvi živali, izdelavi lončenine, gradnji pravokotnih hiš, gojenju žit in stročnic ter poliranju kamnitih orodij in okraskov.*

KEY WORDS – *individualisation; personhood; Early Neolithic; Balkans*

Introduction: the absence of individuals

In her contribution to the ground-breaking 'Engendering Archaeology' (*Gero and Conkey 1991*), Ruth Tringham (*1991.94*) famously diagnosed the way she conceptualised people in her earlier accounts of Balkan prehistory as "*...a lot of faceless blobs...*". Tringham's confession had generic application to a wide range of interpretations of the past, including much culture history, most processualist scholarship and not a little post-processualist writing.

The writing of archaeological narratives paying due attention to women has stimulated closer attention than hitherto about persons of different genders and ages (*Gero and Conkey 1991; Gilchrist 1994; Díaz-Andreu, Sørensen 1998; Adovasio* et al. *2007*). One strand of gender theorisation concerned the gendering of task differentiation (*Spector 1991; Sørensen 2000*), although this interest has faded owing to its weak foundations in cross-cultural ethnography. In particular, over the last decade, there has been an explosion of concerns about the principles and practice of being a person – in short, personhood. This debate has generated famous disagreements concerning the forms of personhood proper to studies of the past and the relationship between notions of personhood and modernity (*Thomas 2008; Knapp, van Dommelen 2008*). Nonetheless, the productivity of this debate can be assessed by the large number of new approaches to what is significant about personhood in the past (*Brück 2001; Whittle 2003; Fowler 2004; Kirk 2006*).

A close reading of all of the key papers concerning personhood in prehistory over the last decade has led us to a very similar conclusion to that of Tringham, but in respect of debates over personhood – namely, that very few individuals figure in the debate. Just as post-processualists have blind spots

DOI: 10.4312/dp.38.3

in their considerations of identity – in particular status and religion (*Díaz-Andreu, Lucy 2005.8*) – so the blind spots in discussions of personhood hitherto have been social roles and embodied skills. We offer a few examples of the problem.

In Dobres and Robb's (*2000*) collection of essays on agency, the only author who characterises and focuses attention on individual persons is Shackel (*2000*) in his discussion of power relationships in early capitalist communities in 19th century – workers (craftsmen, pieceworkers and wage labourers) and managers. In Whittle's excellent work on Neolithic people, we are encouraged to explore "*a fuller sense of the range of values and goals that motivated different people in different ways, of what bound people together and* what individuals were like *(our italics), of the detail of daily lives...*" (*Whittle 2003.xv*). But the range of individuals mentioned is narrow: ancestors, farmers, foragers, male warriors and women with bad teeth. In Chris Fowler's innovative account of personhood, three examples are given of types of individual – shamans, mothers and priests and the only other type of person mentioned was the 'high-ranking warrior' (*Fowler 2004.4, 95*). In a collection of essays on plural and changing identities, the authors (*Casella and Fowler 2004.2*) list their studies of "*how various axes of race, ethnicity, sexuality, age, class, personhood, health and/or religion contribute to ... material expressions of social affiliations*" – with an obvious gap being roles and personae. Types of individual are discussed in only one chapter – Jamieson's review of caste in AD 17th century Cuenca (*Jamieson 2004*). In parallel to caste, Jamieson discusses the role of the 'chola' – the group of urban, working-class women, including market vendors, domestic servants and washerwomen, *etc.* Otherwise, a random selection of types of individuals mentioned but never discussed includes slaves, prostitutes, berdaches, chiefs, a mining millionaire, workers, swimmers and miners and quarrymen (implied from mines and quarries). In the Durham book on identity (*Díaz-Andreu* et al. *2005*), there is no chapter devoted to roles and skills, although Díaz-Andreu (*2005.27–35*) discusses the gendering of tasks and skills in subsistence and production without ever considering the significance of the tasks themselves. Andrew Jones (*2005*) summarises, but never exploits, the approach termed 'dynamic nominalism' that we shall utilise later in this chapter, mentioning incoming farmers, indigenous hunter-gatherers, kin groups, people with enchained social relations and ancestral populations (*2005.201*) but never discussing types of person in greater detail. A final example comes from Jones' (*2008*) edited volume on 'Prehistoric Europe', in which Borić's (*2008.134*) chapter on households defines the household as 'a collective moral person', but fails to discuss what kinds of social practices went on in those houses and which individuals carried them out. Equally, there is but one reference to a 'potter' – a quotation of K. D. Vitelli's (*1995*) work – in Gheorghiu's (*2008*) chapter on the emergence of pottery, while Ottaway and Roberts (*2008*) give somewhat more detail about individuals engaged with metalworking: mining usually by men; ore processing by women and children; and specialist smelting knowledge retained by specialist males. Hanks' (*2008*) chapter on later prehistoric burials is completely dominated by debates over high-status warriors, while, returning to the Neolithic, Hofmann and Whittle (*2008.287*) hint at the kind of missing person we wish to discuss in a consideration of age, gender and skill differentiation: "*... and indeed any other category of person that there (may) have been.*"

In these and many other recent accounts of relational personhood, the focus is on a narrow range of types of individual, as well as on very general types of individual, without careful consideration of what differentiated one Neolithic woman from another or the difference that living in small homesteads, larger metropolitan tell villages or Tripolye megasites of thousands of persons made to particular persons (*Chapman 2010*). The historical and theoretical reasons for this absence of a vital form of evidence – types of individual – cannot be discussed at length here (but see *Chapman and Gaydarska in prep.*). But overlooking the burgeoning skills of people in the past not only removes a potent source of change from the debate, but also over-simplifies the debate over the creation of relational personhood in prehistory. Here, we identify three key aspects of personhood:

- A whole-life process, changing from birth to death;
- The embodiment of identities based upon relations with places, things and other persons – the creation of 'dividuals';
- The grounding of individual identities in linguistic, social, creative and task-based skills and capacities – the creation of individualised persons.

The twin aims of this chapter are, first, to re-instate the kinds of skills that created individuals at the heart of the personhood debate; and, secondly, to explore the tensions between 'dividual' and 'individualised' personhood in a way that goes beyond the

approach of LiPuma (*1998*). Fortunately, approaches that can help this task have been at hand for over a decade. In this article, we seek to combine dynamic nominalist theory with the operational chain method.

The dynamic nominalist approach

The approach termed 'dynamic nominalism' is, broadly speaking, a form of agency theory developed in the writings of Michel Foucault (*1973; 1979*). The aim is to reconcile structure and agency within a single mechanism through the attribution of a more active role to identity. Ian Hacking (*1995.247–8*) defines the core notion: categories of people come into existence at the same time as kinds of people come into being to fit these categories in a two-way interaction. An example which Hacking draws from Foucault (*1973*) is the way that, owing to the development of new institutional forms of discipline and uniforms, soldiers in the Early Modern period 'became' different kinds of people from Medieval soldiers'. If social change 'generates new kinds of people' (*Hacking 1995.248*), this underlines the essential role of history in nominalism. This approach has recently been used in a study of Sardinian nuraghi by Emma Blake, who maintains that the generative power of self-categorisation means that it is not only a type of agency, but also a structuring device; it is a process which individuals engage in, as well as a framework for other practices (*Blake 1999*). This means that agency and structure come together in the formation of identities, which may be described as the practice of self-description through categorisation. Identity, then, cannot simply be reduced to a function of habitus, but is rather a way of coming to terms with the world and the Other. As Mary Beaudry *et al.* (*1991.154*) note, cultural identity is a public act of mediation between the self and others, through any sign or object that allows a person to 'make his self manifest'. This concept approaches that of Marx' notion of objectification, which has been refined and expanded by, *inter alia*, Danny Miller (*1987*). Miller demonstrates that the object that forms an extension of the person re-introduces the values and status of the object back into the person, through a process termed 'sublation'. These twin concepts clarify the close relationships between persons and objects and their relative status. When we come to discuss the objects characteristically associated with new types of person, it becomes clear that an object of high status can, and often does, transfer its own status to that of its maker or user, while low-status foods cannot but transfer their low status to their consumers.

At the level of the group, identities become a selection of defining characteristics, insofar as to define a group is to map its limits and define it in terms of what it is not, and statuses, insofar as there is a constant re-negotiation of the status of both persons and objects in any cultural milieu. A key cultural resource to which selection is applied is the material world and the places where this is displayed; these storehouses of cultural resources (*Barrett 1988*) provide material for the re-writing of group origins, a process of locating, and valuing, the Other in the past (*Blake 1999*). The self-definition of a group is a selection from one's own history and origins – a narrative of inclusions and exclusions.

This approach differs in two main ways from the agency theories of Anthony Giddens, Pierre Bourdieu or John Barrett. First, in agency theory, agency and structure are distinct, while, in dynamic nominalism, self-categorisation can work only if structure and agency are coterminous. Here, structures are constituted by ingrained practices, which define self and group in quotidian action, but are open to change. This position is consistent with Raewyn Connell's (*1987.94*) criticism of Giddens' ahistorical agency, namely that, where the link between structure and agency is a logical one, the form of the link cannot change through history. Secondly, whereas theorists such as Barrett see human subjects defining themselves through a continuous process of rediscovery of practical knowledge, Blake argues that self-definition channels the process of knowledge acquisition, providing actions with a description which is already part of the process of self-definition. Thus, people and groups are constituted by a reflexive historical process – the creation of categories of people, which leads to the emergence of people who fit the new categories (*Chapman 2000*).

Since terms such as 'social role' (*e.g., Binford 1971*) and 'personhood' (*e.g., Meskell 1999*) have generally been used in rather different archaeological research traditions, it is important to theorise the relationships between these key terms. Lynn Meskell's (*1999.34–36*) differentiation of five aspects of the term 'person' include two aspects of direct relevance to this paper: (1) individuals as distinguished through their actions as artists or craftspeople, or through their use of technological styles (as in *Hill and Gunn 1970*); and (2) representations of individuals in iconography, architecture or documentary evidence (*e.g.*, lists of weavers or metalworkers). Chris Fowler (*2004.4–6*) differentiates 'social identity' – the roles which people held (*e.g.*, shaman, priest, moth-

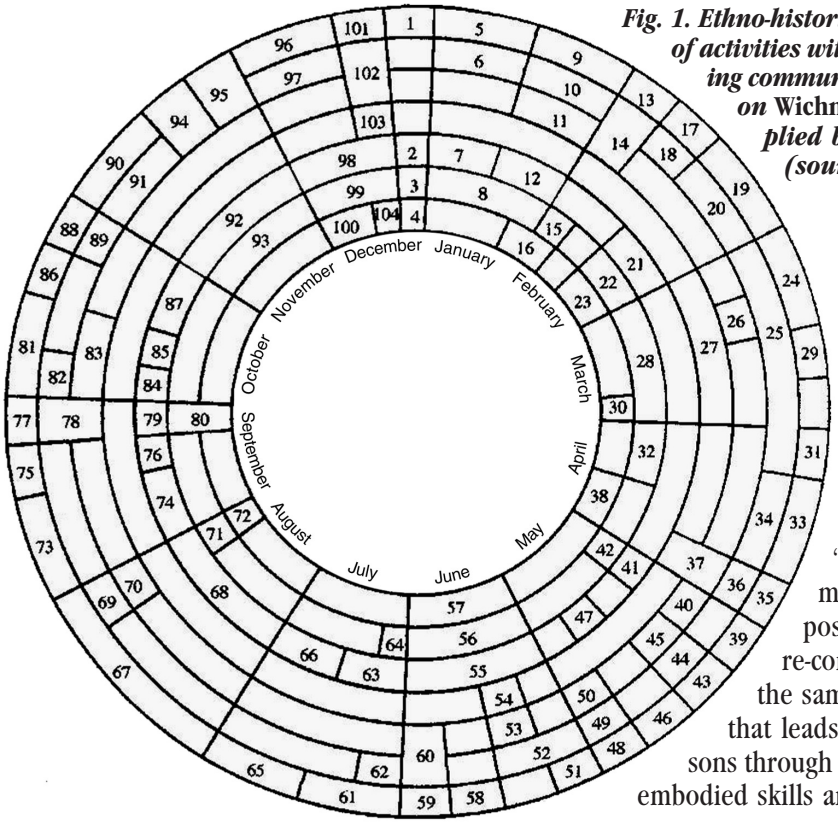

Fig. 1. Ethno-historical account of the annual cycle of activities within a seventeenth-century farming community in Jämtland, Sweden (Based on* Wichman 1968 *and information supplied by L. Rathje, Umeå University) (source* Sørensen 2000.Fig. 6.1*)

distance travel, these practices are the very life-blood of the social relationships through which persons emerge and grow. It is important to underline that we do not adopt an exclusive approach to skills and competences, viz., that an Early Neolithic 'potter' does little other than make Early Neolithic pots. It is the possibility of the combination and re-combination of different skills in the same person, family or community that leads to the individualisation of persons through their distinctive combinations of embodied skills and competences.

er) from 'social personae' – the presentation of any combination of these roles in a specific interaction. His characterisation of personhood as "*the generation of people alongside their social worlds through social technologies*" does not, however, refer to the social identities and personae he discusses at the outset; indeed, what Fowler calls 'social identity' and 'social personae' play little further role in his otherwise excellent book, apart from a mention of "*high-ranking warriors*" (*2004.95*). Nonetheless, the importance in generating personhood that Fowler attributes to the role of bodies, substances, objects and the fields of social relations in which they actively participate indicates that a person's diverse and embodied roles, set within a nexus of quotidian relations, have a significant contribution to make to personhood. Indeed, it is claimed here that it is impossible to draw a complete and nuanced picture of personhood in the past without including the individual skills acquired through the successful performance of social practices.

It is well recognised that the acquisition and development of embodied skills and competences, the linking of actions to knowledge through memory and the effects of training and apprenticeship are key facets of a person's participation in social life. Whether individuals learn from their family, their peer groups, specialists or personal contacts in long-

An example of the proliferation of social practices, each of which required social relationships and individual competences, is Stig Sørensen's ethno-historical account of the annual cycle of activities connected with food production within a 17th century farming community in Jämtland, Sweden (*Sørensen 2000.110–111, Fig. 6.1*; based on *Wichman 1968* and pers. information from L. Rathje, Umeå University) (here reproduced as Fig. 1 and Tab. 1). This list of 104 activities suggested the involvement of different people at different times of the year and at different levels of technological complexity. Many tasks could have been completed only with the shared labour of more than one person, with socially determined agreements on the age- and gender-based division of labour. Sørensen notes that most tasks could have been performed by any adult, whatever their gender.

These Swedish data on agricultural activities reminds us of the importance of technological information from archaeological sources on the operational chain (from the French *chaîne opératoire*). André Leroi-Gourhan (*1964*) introduced the term "*chaîne opératoire*" to lithic studies in the 1960's – at the time, the field was dominated by typological studies, but with new approaches competing for attention. After numerous developments, not least by Jean-Michel Geneste (*1985*), Nicole Pigeot (*1987*)

1 transporting hay	2 shearing sheep	3 teasing wool
4 sewing	5 transporting firewood, fodder and spruce twigs	6 cutting spruce twigs
7 spinning wool	8 preparing hemp and spinning	9 threshing
10 driving for the ironworks	11 working on wagons, wooden containers and nets	12 threshing
13 to the annual Candlemas market	14 transport and cutting spruce sprigs and bark	15 spinning
16 weaving cloth	17 bringing home fodder	18 cutting timber
19 threshing (1-2 days per week)	20 transporting iron ore and coal	21 threshing (1-2 days per week)
22 spinning, reeling and winding	23 weaving cloth or frieze	24 travel to Norway
25 driving for the ironworks	26 hay and wood transporting	27 binding nets and seine
28 hemp spinning	29 travel to the Gregory market	30 flax spinning starts
31 transporting hay and fodder	32 spinning flax	33 end of threshing
34 cutting and transporting firewood	35 transporting manure	36 cutting fence poles
37 sand and ash spread on remaining snow	38 cloth weaving	39 preparing tools for farming
40 grinding grain	41 drying seed grain	42 baking
43 spreading manure	44 ploughing	45 enclosing pastures
46 sowing	47 enclosing pastures	48 weeding the fields
49 enclosing pastures	50 sowing flax and hemp	51 drying and grinding
52 carpentry of hay barns *etc.*	53 weeding the fields	54 closing the field fence
55 linen weaving and bleaching	56 baking summer bread	57 weaving and sewing of different cloths
58 boat repairing, fishing	59 harrowing the fallow	60 preparing scythes, rakes *etc.*
61 harvesting the starrbog in the mountains	62 birch bark collecting	63 harvesting the starrbog in the mountains
64 birch bark collecting	65 harvesting horse hay	66 harvesting horse hay
67 harvesting on hardvalls meadow	68 harvesting on hardvalls meadow	69 leaves harvest
70 possibly harvesting the starrbog	71 leaves harvest	72 possibly harvesting the starrbog
73 collecting the harvest	74 collecting the harvest	75 leaves harvest
76 leaves harvest	77 bringing home the harvest	78 turnips and Swedish turnips harvesting, roots collecting
79 bringing home the harvest	80 turnips and Swedish turnips harvesting, roots collected	81 ploughing of the fallow and fields with straw on
82 threshing and drying	83 grinding grain	84 shearing sheep
85 baking	86 slaughtering	87 knitting socks and gloves
88 clearing of meadows	89 cutting spruce twigs	90 wood, timber and pole cutting
91 cutting wood for handicrafts	92 teasing and spinning wood	93 winter clothes preparing
94 transporting firewood and spruce twigs	95 transporting timber and building timber	96 bringing home starr fodder
97 handicraft	98 spinning wool	99 baking and making food for Christmas
100 cutting spruce twigs	101 travel to Norway	102 transporting and cutting firewood
103 threshing	104 travel to market	

Tab. 1. Ethno-historical account of the annual cycle of activities within a seventeenth-century farming community in Jämtland, Sweden. (Based on* Wichman 1968 *and information supplied by L. Rathje, Umeå University) (source* Sørensen 2000.110–111, Fig. 6.1*)

and Nathan Schlanger (*1996*), the approach is now the mainstream approach to developing rigorous interpretations of Palaeolithic lithic assemblages. In essence, the *chaîne opératoire* seeks to define stages in the fabrication of a product, each of which can be recognised by diagnostic débitage. The refitting of lithic pieces is a fundamental part of this research. Erwin Cziesla (*1990.9–10*) has distinguished three kinds of lithic re-fits: (1) re-fitting artefacts in a production sequence, *i.e.* the reconstruction of core reduction sequences; (2) re-fitting broken artefacts, possibly including non-intentional bre-

Kind of personal skills	Archaeological evidence	Site example
Hunting	projectile points; wild animal bones	Schela Cladovei
Shellfish collecting	shellfish as food debris	Trieste caves
Fishing	fish bones as food debris; fish-traps; hooks; harpoons; carp-stunning batons	Lepenski Vir
Plant gathering	plant food remains; pollen of edible sp.	Ezero pollen diagram
Building	house remains	Lepenski Vir
Plastering	remains of plastered floors	Lepenski Vir
Basket-making	???	???
Grater-board making	high densities of microliths	Lepenski Vir
Bow-and-arrow making	arrowheads	Pobiti Kamani
Flint-knapping	production debris;	Pobiti Kamani
Stone-carving	boulder sculptures	Lepenski Vir
Resource collecting	resources from all zones outside the immediate site locale	Cuina Turcului
Long-distance resource	exotic materials or finished objects procurement	Lepenski Vir
Warring	weapons, weapon-tools and tool-weapons; defensive structures	Ostrovul Corbului
Shamanic practices	totemic rituals	??? but *cf.* Star Carr (UK)

Tab. 2. Kinds of personal skills in hunter-gatherer – fisher societies.

akages; and (3) re-fitting the products of artefact modifications such as axe re-sharpening. The breadth of insights offered by this approach is amply demonstrated in the massive corpus of studies edited by Cziesla *et al.* (*1990*): some of the best technical studies derive from the long-term study of the Upper Palaeolithic, Magdalenian campsites at Pincevent, near Paris (*Bodu* et al. *1990*).

In this study, the operational chain approach is used to identify activities carried out by a person or a group of persons. Using the list of Swedish agricultural activities as a baseline for comparison, it becomes clear that only some of these practices would have been carried out by foragers in the Near East and Europe, while others were more appropriate to Eurasian farmers. In this complex and multi-faceted transition from foraging to farming, the new types of skills and competences developed within the context of unfamiliar social relationships produced new types of individual in this bi-directional process of categorisation. It is now time to turn to the identification of key skills in the Mesolithic and Early Neolithic of South East Europe.

Social roles and categories of individuals I: the Mesolithic

The following series of social identities related to key tasks represents the distillation of the literature on the Mesolithic of South East Europe in successive conference reports on "The Mesolithic in Europe" (*e.g., Kozłowski 1973; Bonsall 1989; Larsson* et al. *2003*). A minimal suite of 15 types of personal skills can be identified (Tab. 2), indicating that individualising forms of personhood were present, if not well-established, in foraging communities.

In the following comments, there will be no attempt to make an essentialising characterisation of such and such a role, nor any claim to a full discussion of persons with such skills as 'hunters' or 'fisherwomen'. These comments are simply pointers in the direction of a whole gamut of complex cultural worlds at which we have space only to hint.

Hunting required long training in the ways of the forest, the behaviour of prey and the co-ordination of individual hunters if working in groups. The reward for success could have been the acquisition of a high reputation, insofar as they were associated with high-status foods (*Sørensen 2000.117*). Their importance was underlined through the sharing of meat back at camp (*Isaac 1978*). Hunters tended to be male and often featured in story-telling, as part of community origin-myths (*Parkington 2002*).

Shellfish-collecting led to the gathering of a sedentary food which was often regarded as tasty if low-status, with the main training relating to its location. This led to the ascription of shellfish-collectors as low-status persons, especially by males in their community (*Claassen 1998*). They rarely featured in community-wide story-telling, but their own group activity often included story-telling. Usually, women and children collected shellfish (*Claassen 1991; 1998*).

Fishing required training in the places where to fish, the habits of the fish and, above all, in patience. The significance of fisher-folk varied with the difference between sea-fishing and river-fishing. Sea-fishing was altogether a much more complex practice, with the construction of seaworthy boats a complex task in itself (*e.g.*, implicated in the Greek Mesolithic by the discovery of Melian obsidian and large fish bones at Franchthi Cave: *Jacobsen 1976*; but see *Perlès 2003*). River-fishing required far less complex equipment. The species of river fish caught made a difference to the prowess of the fisherman: contrast the Lepenski Vir sturgeon, with its large body weight, availability of caviar and symbolic significance (*Radovanović 1997*), with small cyprinids caught in nets from a sluggish stream or dead meander in the Great Hungarian Plain (*Bartosiewicz 2007*).

Plant-gathering was an important practice for the community, because most of a group's food was produced by gathering plants (*Conkey, Spector 1984*). A deep knowledge of local ecology was important in this task (*Watson, Kennedy 1991.184–185*). Nonetheless, the often low status of plant foods could lead to the categorisation of plant-gatherers as low-status persons, again if males dominated processes of social categorisation. These tasks were often performed by women and children (*Zihlman 1989*).

Building gained in importance with the rise of sedentary foragers, although even the construction of seasonal shelters required certain embodied skills which were not shared by every member of a forager community. The importance of builders lay in their creation of the very physical framework of a dwelling – the most intimate place of forager life. The classic Palaeolithic example concerns the mammoth-bone structures made by Gravettian hunter-gatherers in Central and Eastern Europe (*Soffer 2003*). Even more pertinent examples, from the Central Balkans, are the trapezoidal structures of Lepenski Vir, Vlasac and Padina in the Iron Gates Mesolithic (*Radovanović 1996*), whose unusual forms cited the Djerdap landscape in the form of a trapezoidal mountain opposite Lepenski Vir, as well as coeval mortuary practices (*Srejović and Babović 1983.drawings 17–19*). Over a period of 600 years, generations of builders maintained an extraordinary dimensional stability for the trapezoidal house, approaching the harmonious length/width ratio of the Golden Mean, or Fibonacci's series (*Chapman, Richter 2009*). It is inconceivable that each new generation of builders was not inculcated into the symbolic significance and geometric harmonies of the dimensions of the trapezoidal house, as well as the ways in which they were best constructed. A particular mention should be made of the Lepenski Vir plasterers, who were the first foragers in Europe to construct solid, flood-resistant floors using sand mixed with ground limestone heated to over 600° C (*Nandris 1988*).

Basket-making and string-bag-making comprised tasks with long and complex *chaînes opératoires* which involve multiple authorship and where the technology can be seen as a metaphor for society (*Finlay 2003*).

Grater-board making required composite raw materials, including wood, gum and lithic points, indicating long and complex *chaînes opératoires* as with basket-makers (*Finlay 2003*).

Bow and arrow making needed a suite of skills for making arrows and another for constructing bows. Once again, there are long and complex *chaînes opératoires* which involve multiple authorship and where the technology can be seen as a metaphor for society (*Finlay 2003*).

Flint-knapping can, through the *chaîne opératoire*, be differentiated as skilled knappers, novices (children) and moderately skilled workers (*e.g.*, the Magdalenian site of Les Étiolles: *Bodu* et al. *1990*). To the extent that they were capable of making high-quality products, knappers could become high-status persons. Their gender is not clear.

Stone-carving was not common in the Mesolithic period anywhere in Europe, and perhaps the greatest surprise of the Lepenski Vir excavations was the discovery of large boulder sculptures representing humans, fish, the flowing currents of the Danube, meandroid patterns imitating coeval early farmers' pintaderas, and a range of other less decipherable motifs (*Srejović and Babović 1983*). The limestone and sandstone boulders were brought several kilometres from the adjoining Boljetin Gorge, and indicate flaking for approximate shape before grinding, polishing and engraving on the final shape and the motifs.

Resource-collection focussed on a variety of raw material resources, whether local resources or resources from further afield, collected during other foraging or hunting trips. The status of these resources was often positively correlated with distance and degree of exoticity. Once again, the gender of resource collectors is uncertain, but almost certainly varied.

Long-distance resource acquisition represented the extreme of the spatial spectrum of resource acquisition. The persons involved would have been skilled in negotiation and languages and prepared to make long, dangerous trips outside the community territory. If successful, they would have returned with high-status exotics and exotic experiences, cementing their importance as high-status persons who could control sacred resources (*Helms 1993*). The gender of long-distance specialists is unclear, but most prehistorians assume a male identity.

Warring was characterised by the warriors' personal strength and skills and, for that reason, are usually gendered as male. The high concentration of weapons in the Iron Gates Mesolithic, together with the evidence for 'Mesolithic' bone points used to kill other 'foragers', indicates the probability of males designated as 'warriors' along the Danube Gorges (*Chapman 1999; Roksandić 2004*).

Ritual practices involving shamans was an important form of social practice among foragers, with a ritual specialist with powers of shape-shifting and moving between media such as the heavens, the earth and the underworld (*Vitebsky 2001*). There is little doubt that the role of shaman was vital to the social reproduction of the group through the maintenance of proper relations with the ancestors and deities.

This set of types of person is not an exhaustive list of the categorisation of individual skills in the European Mesolithic. Nonetheless, those persons who were identified with the progressive development and ultimate mastery of such skills would have gained a reputation for what they managed to achieve, whether through episodic practices (*e.g.*, making grater-boards), more frequent activities (*e.g.*, food-gathering and shell-collecting), or the construction of enduring frameworks for life (builders and plasterers). To the extent that most individuals in a Mesolithic community would have learnt several of these skills, their social identities would have represented a complex integration of a range of diverse embodied skills. In this sense, foragers would have begun the road to individualising personhood which, later, became more elaborated in Neolithic societies. In the same way, the inter-personal links implicit in all of the multi-authored objects and the enchained links objectified in the biographies of every single artefact would have created and reinforced relational personhood and relational community structures with each day of labour.

Social roles and categories of individuals II: the Early Neolithic

It is widely accepted that the emergence of farming was a fundamental social change in South East Europe (*Whittle 1996; Tringham 2000; Spataro and Biagi 2007*). The emergence of new kinds of social practices arising simultaneously with their definition was therefore of major importance in these times of widespread change (for the emergence of different kinds of skills with diverse individual persons in the 'Climax' Copper Age, see *Chapman and Gaydarska 2006.Ch. 7*). New individual persons of each period would have been created within expanded forms of relational personhood through the impact of new kinds of social groupings, new embodied skills and new raw materials.

A comparison of the types of embodied skills listed in Tables 2 and 3 shows that most of these continued in existence in the early farming period, even if in variant form. An exception appears to be those stone-carvers who produced larger-scale sculptures; smaller-scale ornaments tend to typify the early farming period. Without wishing to go into the detail represented by Sørensen's (*2000*) list (see above, Fig. 1 and attached Tab. 1), it is clear that early farming depended on a far wider range of skills and competences than in the foraging period. These new embodied skills – probably not exhaustive in scope – can be identified as follows (Tab. 3).

Farming consists of a complex set of practices involving new concepts of time and place and new relationships to the land, the soil and often the forest (*Ingold 2000*). Farming requires the co-ordination of intensive labour to produce new resources. These various tasks involve the making and use of new tools (*e.g.*, hoes, sieves, sickles) and new containers (*e.g.*, storage-jars, cooking vessels, serving vessels and, possibly, also baskets and textile bags), especially with the development of brewing (drinking sets). Many of these practices constitute multi-person tasks, each with a long *chaîne opératoire* – only one person of which is the farmer. This set up complex relations of inter-dependency between those participating in the *chaînes opératoires*. Comments follow on only a few selected examples of the most varied of these roles.

Cereal cultivation required experience of a variety of places to select the areas best suited for field cultivation, involving training from an early age; knowledge of the ecological meaning of vegetation on a

Kind of personal skills	Archaeological evidence	Site example
Farming	cultivated grain	Azmashka mogila
Ditch-digging	field boundaries	Ceithi Fields (Ireland)
Hoeing	stone hoe-blades; soil micro-morphological traces of hoeing	Linearbandkeramik
Ploughing	stone or antler plough-shares; soil micro-morphological or macro-traces of ploughmarks	Căscioarele Belgian LBK South Street (UK)
Fence-making	lines of post- or stake-holes round fields	Dubravica
Weeding	purity of archaeo-botanical sample	Chavdar
Baking	domestic ovens	Sofia – Slatina
Brewing	isotopic traces of alcohol; traces of pollen of sweet plants (mead)or honey	???
Animal keeping		
Cow-herding	animal bones	Ovcharovo-Gorata
Swine-herding	animal bones	Ovcharovo-Gorata
Goat-herding	animal bones	Ovcharovo-Gorata
Shepherding	animal bones	Ovcharovo-Gorata
Dairy producing	isotopic traces of milk lipids	Ecsegfalva 23
Cooking	cooking vessels	Schela Cladovei
Potting		
Clay preparing	clay vessels; stored piles of raw clay	???
Vessel forming	clay vessels	Pernik
Pot-painting	decorated clay vessels	Rakitovo
Pot-decorating	decorated clay vessels	Kardzhali
Other crafts		
Figurine-making	fired clay, bone and stone figurines	Azmashka mogila
Figurine-knapping	deliberate fragmentation of figurines	Anza
Spinning	spindle-whorls	Rakitovo
Weaving	loom-weights, mat impressions	Divostin I
Ornament-making	finely made stone and shell artifacts	Kardzhali
Basket-making	basket-impressions in pottery	Endrőd 119

Tab. 3. Additional kinds of personal skills in early farming societies.

potential field in terms of soil conditions and fertility; the observation of flood patterns over time; the growth of previous crops in different places, and a sense of the required duration of the growing season (*Watson, Kennedy 1991*). Small-scale horticulture transferred these locational decisions to the place of settlement, where intensive fertilising and weeding could mitigate any problems of 'natural' fertility. The accumulation of experience and training and observation was not necessarily gendered, although women may well have taken the lead in these tasks.

Hoeing depended on the production of a suitably heavy stone hoe-blade, firmly attached to a wooden handle, and the expenditure of considerable physical energy in breaking the ground for sowing (*Spector 1983.148–153* and Tab. 1). There is no reason to suppose that females and males would not have developed effective hoeing skills.

Ploughing symbolised the integration of herding and farming, with new relations between persons and animals and the potential for cattle to increase their status as never before. Ploughmen required years of training to co-ordinate their actions with their draught animal(s) and the plough itself (*Lewthwaite 1985*), with the castration and training of the draught animal perhaps the most complex task. The making of the plough, using different types of raw materials (*e.g.*, leather, wood and antler / stone / metal), was in itself a specialist task with a complex *chaîne opératoire*: a woodworker working with a stone-worker and a leather-worker, and only then a ploughman. An effective plough-team constituted an important resource that could be shared between households or used in exchange arrangements (for the 'capitalist investment' potential of Bronze Age plough-teams, see *Gilman 1981*). There is a widespread, but not altogether secure assumption that ploughing teams were led by males (*Díaz-Andreu 2005*).

Fence-making required a contrasting range of skills, combining woodland management with carpentry

skills. The coppicing of hazel was a common method of producing the thin, straight rods needed for fencing (*cf.* for Somerset Levels, *Coles, Orme 1977; Rackham 1977; Orme, Coles 1983*). The use of a polished stone axe for reducing the coppiced rods to equivalent lengths, and their insertion into the ground, were less specialised skills. There is no obvious gendering of this task.

Ditch-digging in a range of different soil and subsurface geological conditions (especially abrasive sands and gravels) needed a steady supply of fresh scapula shovels, as well as containers (probably baskets) to remove the loose fill. The year-on-year stockpiling of scapulae tools was therefore essential for this work, unless many head of cattle were butchered as part of related ritual practices. The irregular alignment of ditch segments in British enclosed sites (the so-called 'causewayed camps') has been interpreted as a sign of multiple groups of ditch-diggers, possibly organised at the family level (*Startin, Bradley 1981*). Thus, although the digging of ditches was not necessarily a good way to gain reputation, it required family co-ordination and careful advanced planning (future-orientation) to maintain stocks of tools.

Weeding played an important role in the agricultural cycle; yet the frequent archaeobotanical discoveries of crop-weeds (weeds of cultivation) indicates that they were often only partly successful. The repetitious and physically demanding nature of this task has led (often male) archaeologists to suggest that this work was performed by women and children – often with no real justification (but see *Spector 1983.148–53, Tab. 1; Wright 1991*).

Baking was attested in the majority of, if not all, Neolithic households and was responsible for early and simple forms of bread. Before the so-called 'bread wheats', the Neolithic norm would have been unleavened bread that rose little, if at all, in baking (*Wood 2000*). The significance of invariably carefully constructed ovens in Neolithic houses may have related as much to the heating of the home as it did to the baking of bread and other foods. This role may not have been recognised as anything but one additional household task, with the assumption that it was mostly performed by women.

Brewing depended on the production of cereals for their own task – the creation of alcoholic beverages of widespread use for individual and social pleasure, as well as ritual concoctions and medicinal potions (*Braidwood* et al. *1953; Sherratt 1987*). The key reliance on potters capable of producing large coarse ware containers, as well as small fine ware cups and mugs, shows the close linkage between brewers, farmers and potters. The gender of brewers is not obvious, but was probably linked to household production.

This brief summary of the requirements of a few selected farming practices suffices to show that almost every individual task could be sub-divided into further sub-tasks without whose accomplishment the 'main' task could not be completed. All of these tasks, with the exception of weeding, required the prior production of tools or facilities, each in turn with the implication of raw material procurement from near or far. It is the scale of coordination that puts the growing of crops and their varied usage at the heart of a mixed farming economy.

Animal husbandry was part and parcel of a new kind of relationship with animals – their inclusion within households as something more than hunks of dead meat from the wild wood (*Jones, Richards 2003*). Their herding involved long-term relationships with shepherds, goatherds, cowherds or swineherds. The main element of a herder's life was the devotion of a lot of time to their animals, leaving them free to collect resources, knap flint, grind stone, carve wood, *etc*. If the keeping of animals involved even limited seasonal mobility, the herder would have travelled to a wider range of places than most of the rest of the community. The use of secondary animal products – especially milk – would have increased the significance of the herder, linking them to other members of the community (ploughmen, dairy producers, *etc.*, *Sherratt 1981*). The high-status products that animals yielded were not necessarily correlated with high reputations amongst herders, whose gender was variable.

Dairy production, which included cheese-making as well as the production of milk, yoghurt, curds, *etc.*, (*Sherratt 1981*) constitutes a good example of quite new types of person, performing new daily tasks (milking and dairy production) which depended on the secondary products of potentially three animals – cattle, sheep and goats. The production of high-quality cheese would have been dependent upon regular supplies of salt from near or far (*Chapman, Gaydarska 2003*). While most dairy products would have formed local networks of consumption, there was the potential for the exchange and transportation of cheeses. The gender of dairy producers is hard to determine, but these tasks were linked

to the home and often assumed to have been performed by women.

Cooking was a vital part of Neolithic life styles, which were characterised by the production of a wider range of edible foods and an expanded range of culinary techniques than previously (*Wood 2000*). These changes added to the potential for food-sharing and hospitality in the early farming period, when cooking both outdoors and indoors was often linked to other social strategies (*Halstead 1999*). Each new foodstuff offered the opportunity for new combinations of foodstuffs in a single dish, whether based on cereals, pulses, wild plants, meat or fish. The gender of cooks is not clear, and it may be assumed that both males and females cooked for both domestic meals and feasts (*cf. Spector 1983.148–53, Tab. 1*).

The picture from animal husbandry and the use of animal products reinforces the pattern of multiple, overlapping tasks performed more often than not by groups of related persons. The accomplishment of such tasks was coterminous with the creation of social structure itself through daily interaction.

Pottery-making

At the beginning of the Neolithic, pottery-making was a new craft skill for most regions in Europe. Vitelli (*1995*) has argued that the high status of these new objects connoted high status for the persons who made them. However, the *chaîne opératoire* is bulk-dependent. The production of a few vessels *per annum*, as in the Greek Early Neolithic at Franchthi Cave may required one high-status person (*Vitelli 1995*), while the preparation of many vessels *per annum*, as in the Balkan Early Neolithic (*Chapman 2003*), would have needed the collection of much larger quantities of clay, temper and pigment, as well as the shaping, firing and painting of many more vessels. This *chaîne opératoire* could potentially have benefited from co-operation between different persons of varying status (for a discussion of production stages, see *Wright 1991; Gheorghiu 2008*). The analysis of many Balkan pottery samples has shown that, without exception, local clay sources were used in the Early Neolithic (*Spataro 2007*). Thus, increased production would have led to complex relations of inter-dependency (as with farming), which were interwoven with local consumption links to other social practices (*e.g.*, ritual, farming, *etc.*). There was a high potential in pottery-making for the materialisation of broader exchange networks and links to other worlds.

Figurine making and knapping were almost certainly performed by part-time craftspersons in the early farming period, because of the low incidence of figurines, whether anthropomorphic or zoomorphic (*Nanoglou 2008*). Spataro's (*2007*) results on the use of local clay for pottery were replicated for the sources of clay for figurines. It is possible that household production was the norm, given the combination of little standardization of either major category of image and the small numbers produced. The equivalence of potters and figurine-makers is not necessarily certain, since the shaping of the two types of object is clearly very different. The deliberate breaking of Early Neolithic figurines has been well attested (*Chapman 2000a; Chapman and Gaydarska 2006*) – a task that is not necessarily much easier than their making. Experimental studies showed that the accidental breakage of figurines was rare, since the lightweight nature of the objects meant that the impact from falling was minimal (*Chapman* et al. *n.d.*). The making of some anthropomorphic figurines in three parts – one lump of clay for the body and one for each leg – reinforced the cyclical process of making, using, breaking, reusing and deposition; breaking along the lines of weakness was therefore highlighted. The roles of the makers and breakers of figurines were probably performed at the household level, with household ritual the main context for figurine use and re-use.

Spinning and weaving have now been attested from the Upper Palaeolithic (*Soffer* et al. *2000*), so that their 'appearance' in early farming communities can more accurately be termed a 're-appearance', although there is scant evidence for Mesolithic spinning and weaving. The symbolism of spinning and weaving in Post-Classic Mexico "*defined female identity as one source of control over reproduction and thus as a basis of female power*". Such symbolism "*created a set of meaningful associations that united women as an interest group*". The tools of spinning and weaving (spindles, spindle-whorls and battens) acted as symbols of this female power (*McCafferty, McCafferty 1998.213, 223*). It has been demonstrated for the Iron Age that spectacular amounts of 'free' time were required for spinning enough yarn for household clothing (*Tuohy 2000*), and there is no particular reason to discount this requirement of time in early farming households. Lines of loom-weights within Early Neolithic houses (*e.g.*, Tiszajenő: *Selmeczi 1969*) suggest that many households would have made their own cloth and/or clothing. There is still a debate – embedded in the secondary products issue – over the materials

used for early clothing – whether linen and leather (*Sherratt 1981*) or linen, leather and wool (*Chapman 1982*). Whatever the solution, it is agreed that the more elaborate the clothing, the higher its status. The problems with assessing the quality and ornateness of early clothing make it difficult to assess the date at which the high potential for the exchange of cloth was realised. The ethnographic data favour the gender of spinners and weavers as more probably female, but there is no reason that this should apply to the Balkan Early Neolithic.

Stone ornament-making was effected by persons whose skills were high, but not often employed, suggesting that there is a high probability that they were part-time specialists. Almost by definition, the prestige goods that were made meant that the ornaments created high-status persons in the process of making. The exotic nature of the materials used meant that ornament-makers were heavily dependent on regional, if not inter-regional, exchange networks and, most likely, on long-distance specialists. It is also possible that they were long-distance specialists themselves. Their finely-tuned skills were not found in every household and possibly not even in every community; it seems improbable that there was more than one person in a community (*e.g.*, the Early Neolithic Galabnik community in Western Bulgaria, where exquisite nephrite ornaments were made (*Kostov, Bakamska 2004; Kostov 2008*)). The links between ornament-makers and figurine-makers rarely overlapped; an exceptions include the marble anthropomorphic figurine from Azmashka mogila (*Georgiev 1965; Kalchev 2005.photo on p. 37*) and the marble figurines from Kovachevo (Blagoevgrad Museum). There is no evidence as to the gender of ornament-makers – rather a high level of training, probably in the family of older ornament-makers.

Traditional skills in the Early Neolithic

The quantity and diversity of new roles and potential statuses in the early farming period should not cause us to overlook the traditional skills inherited from the Mesolithic period. At least 15 categories of skills can be identified.

The role of **hunting** was only partly replaced by that of herding. In a recent evaluation of the status of hunting in the Körös culture of Eastern Hungary, Bartosiewicz (*2007a*) observed that those sites with high counts of wild animals in their faunal spectra had the smallest bone assemblages and that, in assemblages comprising over 10 000 bone elements, there was a high proportion of domestic animals – upwards of 90%. Nonetheless, the prey that hunters captured were still valued foods, converting hunters into persons of repute. We should also not forget the significance of specific wild animal parts for some of the most intimate aspects of domestic life: auroch metapodia for spoons in Hungary (*Nandris 1972a*) and wild boar bristles for painting the finest pottery decoration in Bulgaria (*Chapman 2011*). There were probably groups of hunters who were part-time specialists, requiring the integration of one or two members from any given household.

As with hunting, the skills required for **plant-gathering** could have only partly contributed to those necessary for farming, leaving a generalist practice of variable status effected by each household.

Fishing and shellfish-collecting continued to play the same role as in the Mesolithic, as producers of different food for special occasions. The seemingly ubiquitous decline in marine and freshwater protein contributions to the diets of early farming communities (*Bonsall* et al. *2000; Milner* et al. *2004; Honch* et al. *2006; Smits* et al. *2010*) means that fish and shellfish consumption was limited to once per week for the dietary signal to be absent. The status of such fisher(wo)men and shellfish-collectors, which were embedded in household practices, is more difficult to estimate than the gender – probably female for shell-collectors and male for fisher-folk (see above).

Building formed another suite of different embodied skills requiring collective mobilisation and coordination. Although the houses of the Iron Gates Mesolithic demonstrate that building was already a skilled activity among sedentary foragers, with particularly innovative skills in floor-plastering, there is a great expansion in the scale of building, and in the size of buildings, in the Neolithic. Dušan Borić (*2008*) has viewed the Neolithic as a change from dwelling to building. Experimental work studies on Neolithic house building (*e.g., Cotiugă, Cotoi 2004*) shows that the time taken is equivalent to that required to build a small megalith (viz., 800 people/hours for a single-roomed 8 x 6m house: *Startin 1978*; *cf.* 6900 people/hours for the earthen long barrow of Fussell's Lodge: *Startin and Bradley 1981*). This task is a multi-stage process, beginning with the assembling of materials (clay, water, temper, wood), the choice of place, and all the necessary pre-building rituals, and only then proceeding to the actual construction by a team of persons. At a minimum, this includes woodworkers, wattle-makers or reed-

workers, plasterers and painters, and thatchers, as well as *their* helpers.

Woodworking depended upon the collection of both large timbers from ancient trees for main structural members and smaller (? coppiced) posts for internal and external fittings. The range of polished stone tools available for these tasks included axes, adzes, wedges and chisels. However, the almost total absence of large woodworking tools in the Balkan Early Neolithic may have hindered the use of really heavy timbers[1]. This technical issue may relate to the prevalence of low clay wall settings supporting thin posts in Bulgarian Early Neolithic houses (*Nikolov 1996*). The creation of larger tools from the Mature Farming period onward, and in the Linearbandkeramik further to the North-West – notably the *Schuhleistenkeil* (*Burnez-Lanotte 2001*) – facilitated the manipulation of large tree-trunks for house construction.

The construction of exterior walls for early farming houses was effected in one of two ways. For longer-term structures, **wattle-making** was a critical part of the house-building effort, for the infilling of wall area between timber uprights depended on the cutting of thin poles and their vertical and horizontal interweaving (*e.g.*, the illustration of later Neolithic wattle walling from Divostin Phase IIb: *Bogdanović 1988.Fig. 5.25*). The making of these poles on any large scale would have involved the coppicing of such species as hazel (*Corylus* sp.) as one form of woodland management. Both of the rare pollen diagrams with detailed vegetational information for the vegetation of early farming communities – Ecsegfalva – Kiri-tó and Sarló-hat, both in Hungary – indicate that hazel was an increasingly frequent component of the lowland vegetation (*Willis 2007; Magyari 2002*).

Despite the ready availability of hazel at Ecsegfalva 23, the main exterior walls of these light structures were constructed through **reed-working** by the insertion of bunches of reeds into the spaces between small timber uprights (*Carneiro, Mateiciucová 2007*; *cf.* the use of reeds in the houses at Early Neolithic Nea Nikomedia, Northern Greece: *Rodden 1962*).

Plastering made an important contribution to the solidity and impermeability of exterior and interior walls of early houses, as well as their floors. The role of the plasterer was closely related to that of the potter, at least in terms of the early stages of the potting *chaîne opératoire*. The analysis of floor plasters at Ecsegfalva 23 showed the use of dung as well as clay for reed-tempered plaster (*Carneiro, Mateiciucová 2007*). These materials would have been mixed with water to provide the correct consistency. Application proceeded by hand to all of the treatable surfaces. The insulation of the house against rain, snow and wind, as well as the retention of heat generated by cooking, fireplaces and body warmth – whether human or animal – were all important effects of plastering. In addition, the creation of a smooth, regular floor surface was a marked improvement over a stamped mud floor, not least in enabling the cleaning of the house and the removal of elements that contributed to air pollution (*Roberts n.d.*). This role was not a particularly specialist task and could probably have been completed within the household.

House-painting was probably achieved by pot-painters who applied their skills, in particular the collection of the pigment and its mixing with a binder, to the interior and perhaps exterior walls of houses. This may have been a more specialist role than that of plastering, because of the exotic nature of some of the pigments.

Thatching would have completed the in-filling of the roof of the house by the insertion of thatch or reeds between the roof timbers. The work required the construction of light ladders for access to the upper roof space, as well as the collection and bundling of large quantities of thatch or reeds. Once again, this was not a specialist role and could have been performed by members of the household (for an account of Medieval and later thatching, see *Moir and Letts 1999*).

These complex tasks demonstrate that building is, above all, a collective practice involving perhaps all or at least half of the community. This major task required a single co-ordinator – perhaps the builder, per-

1 With only a few exceptions, there is a general lack of large working axes in the Greek, Balkan and Dalmatian Early Neolithic. The excavated material from Early Neolithic settlements displayed in the Town Museum, Vratsa (N. W. Bulgaria) includes the largest collection of working axes longer than 15cm known to us. It is possible that a proportion of the large working axes in the reserve collections in the Regional Museum of Haskovo (S. E. Bulgaria) date to the Early Neolithic, but these axes are almost entirely surface finds. In addition, the large polished stone axes from Early Neolithic Nea Nikomedeia have virtually no wear traces and were likely to have been special deposits (*Rodden 1962*). The implication is that most activities involving breaking ground prior to sowing would have been carried out using wooden digging-sticks or hoes. It is only after the start of the Middle Neolithic in Greece, the Balkans and Dalmatia that large working axes become more common and were clearly used for heavy agricultural and/or woodworking activities.

haps the village leader or household leader – who ensured that the design of the house complied with traditions. Christopher Alexander (*1964*) has shown that designs in vernacular architecture were based on copying previously successful structures. This indicates that the successful builder – coordinator was experienced in construction, having observed and participated in the erection of many other structures.

Flint-knapping continued to play a key role in tool production in early farming communities, although the forms of the tools in this period stood in marked contrast to those of the Mesolithic. The key innovation of the Early Neolithic was macroblade technology, in which raw materials of excellent quality – usually honey-coloured flint from Bulgaria – were used to produce macroblade cores from which long blades were pressure-flaked using a fixed, heavy-duty wooden facility, perhaps as large and complex as a rural olive-press (*Perlès 2001; Gurova 2004; Manolakakis 2005*). Such a facility was restricted to one per village, if not one for a network of villages, indicating a productive specialisation which created high-status persons. Medio- and micro-lithic production was also part and parcel of early farming lithic technology, but was clearly far less specialised. It is unlikely that either category of lithic producer was a full-time specialist in the Early Neolithic.

Resource collecting was, if anything, more important in the Early Neolithic than in the preceding period, by dint of the much wider range of materials needed for tools, ornaments, weapons, clay objects and building materials. It is likely that more people, rather than higher-status persons, were needed to accomplish this vital task.

Long-distance acquisition of resources also increased in significance in the Early Neolithic, given the greater importance of exotic raw materials, especially ornaments (*Chapman 2008*). The context of their travels comprised the inter-regional network of stylistic connections materialised in coarse wares, vessel shapes and technologies, and a wide range of non-ceramic traits such as rod-head figurines, pintaderas, slotted antler sickles, bone spoons and tomato-shaped loom-weights (*Nandris 1972; 1972a*). Such multiple, specific traits indicated a widespread sharing of lifeways (*Chapman 2003*), with kinship links and exchange networks representing the most obvious means of sustaining these stylistic similarities.

Warfare has been less well attested in the Early Neolithic of the Balkans, in general, than in the Mesolithic of the Iron Gates gorge (*Chapman 1999*), with a marked reduction in the frequency and diversity of tool-weapons and weapon-tools. But this category of person was still present, probably related to specialist hunters.

This review of the traditional skills that were found in early farming communities suggests three conclusions: (1) the practices which were materialised in these roles and skills show a considerable degree of continuity in *habitus* between the Balkan Mesolithic and the Balkan Early Neolithic; (2) the formation of individualised personhood in the Neolithic was not inherent in the Neolithic alone, but, rather, an elaboration of Mesolithic forms of individualised personhood; and (3) the combined total of traditional and new skills is a substantial figure. What are the implications for relational personhood, for households and for early farming communities of this striking diversification?

Discussion

The tension between relational personhood and increasing individualisation growing out of a wider range of individual embodied skills is highly relevant to Hernando's general, social evolutionary model for the growth of what she terms 'independent individuality' for persons of either gender (*Hernando n.d.*). Hernando proposes a three-stage model: a first stage, which is dominated by relational personhood; a later, second stage, conventionally dated to the Metal Ages, with the emergence of hierarchical relations and complementary gender roles; and a third, even later stage, not dated by Hernando, in which 'individual personhood' gradually increases for males, while females maintained relational identities for a much longer period. While at pains to emphasise that this is a general social evolutionary model, and not necessarily characteristic of any specific time/space development, Hernando stresses the importance, in male individuality, of datable innovations such as the beginning of writing. She also maintains that each culture has a different blend of degrees of individualisation, on a scale ranging from strongly relational to strongly individualising.

For the present authors, there are two obvious issues for what is an attractive general model with genuine insights into long-term social processes: (1) there is no real attempt to anchor the model in specific time-space processes, developments, and historical contexts; and (2) the shift from relational to individualising personhood is never explained. Neither

of these weaknesses is necessarily fatal for the overall model, since it is possible using the approach outlined in this article to provide some robust chronological pointers for the emergence of individualising tendencies. This emergence does not, indeed, date to the Metal Ages, but can be related to the late foraging period (Mesolithic and probably Upper Palaeolithic), with an elaboration in the early farming period.

In terms of the relationship between personhood and the creation of new skills, it is important to recall that there are approx. 25 new categories of skills in the Early Neolithic – far more than in the Mesolithic – as well as at least 15 traditional skills. This provides an impressive range of close to 40 types of embodied skills and social roles for the creation of a new range of individualised persons. It thus seems obvious to us that an important aspect of each individual's sense of personhood consists of these combinations of embodied skills. We should emphasise that this is not automatically an argument for early forms of specialisation – rather that few persons would have been considered exclusively as a shepherd or as a milkmaid or as a warrior. Here, in this complex world of social and physical skills, personhood should be considered as multifaceted and subject to a wide range of relationships and embodied skills, both of which contributed to an individual's *persona*. We seek to reconcile the *modus operandi* of relational personhood (dividuals) with the encapsulation of new skills and practices in specific human bodies (individualizing results).

The child's development of new skills would have depended upon training by the members of the family and the household, in which gradual increases in body strength, linguistic competence, and hand-eye co-ordination, as well as greater experience of the task in hand, would have led to improved performances (*e.g.*, in making small pots). These improvements would, in turn, have strengthened the relations with other members of the family and household, emphasising the key kinship elements of the child's relational personhood. With time, the family and household would have identified in the child those skills that had further potential for growth (*e.g.*, keen interest in plant-gathering) and those where little could be done (viz., little talent for flint-knapping). Doubtless, households with individual adults with skills in stone figurine-making or bone-working would have led to vertical transmission of similar skills (*Shennan, Steele 1999*). But, at the same time, those children with similar talents would probably have begun to be more closely associated with each other, forming an additional field of peer-based learning (horizontal transmission) with important implications for dividuality. In the teenage years, the increasing spatial range and complexity of the person's social world would have led to greater variations in personal mobility, with a tendency for greater male than female mobility and therefore a tendency for gendered contrasts in the creation of relational personhood through different exposure to types of person both near and far from the home settlement (*Hernando* et al. *2011*).

In the case of cultural norms where the marriage of two young adults led to the setting-up of a new home, this creation formed the starting-point for a new cycle of skills-acquisition. The building of the house and the emergence of a new economy at least partially based on that household, as well as relations with other households, both raised the question of how the young couple could possibly acquire the wide range of requisite skills for the development of a successful household. The cultural transmission of these new, and often highly diverse, skills led to multiple new social relationships, which became increasingly important in the further development of relational personhood. In some cases, the adult members of the household did indeed develop their own embodied skills (*e.g.*, in cooking, dairy production, animal keeping, and flint-knapping), while other persons with skills not acquired within the household were brought into close relations with the family (*e.g.*, figurine-makers and nephrite ornament-makers) and the new couple's own families added their own experience and skills base (*e.g.*, weaving, potting and thatching). The successful recreation of the previous generation's knowledge and skills base may have been a critical factor in the survival of the new household. Both enchained relations with many other persons and the development of embodied skills within the new household had important contributions to make.

The average age of death for Neolithic persons meant that only certain individuals reached the age of biological maturity (*e.g.*, 40 years). Joanna Appleby (*2010*) has discussed the many different life-processes affecting older persons, including the illnesses from which they suffered, the physical changes characterising degeneration, but also, more positively, the earlier relationships and community histories that they embody. However, she does not discuss (at least in this paper) the ways in which degeneration may have hindered or prohibited the continuation of tasks requiring a certain level of bo-

dily skill and/or strength. The survival of individuals to over 60 years (*e.g.*, in Vlasac: *Nemeskéri 1978*) may have required new forms of enchained relations of care and food provision in which the wider families took responsibility for the aged. The physical completion of many tasks may not have been possible, even if discussion of the strategy and tactics of social practices may have been welcomed.

In summary, the most productive time for the acquisition and honing of new embodied skills was the period between 10 and 40 years of age. The acquisition of most skills through either vertical or horizontal transmission co-existed with, and relied upon, a greater development of dividual relations in this age-span, especially for horizontal transmission involving peers.

The settlement context of skills acquisition was a key element in embodied skill-building. At the household and community level, there would be an equal diversity of skills combinations, with some dispersed homesteads operating with an unavoidably narrow range of skills. This restriction on lifeways skills was as vital a reason for dispersed homestead participation in widespread exchange networks as the importance of finding an appropriate mate (*Chapman 1989*). By contrast, the communities living in agglomerated villages would have had at their collective disposal a much wider range of skills combinations – perhaps the larger tell villages of the Early Neolithic period may have boasted the full range of individualised persons.

However, it would have been extremely improbable that each household in a nucleated village would have had access to an identical range of skills. In a community of 20–30 houses, every household may start off attempting all of the new skills mentioned, but there will soon come a realisation that not everyone has the same talents and skills. This differentiation had a temporal component. Training a child in the special skills of the household was likely to lead to higher levels of inter-household skills differentiation after several generations. Thus inter-household contrast in skills was one means of generating enchained relations to ensure access to rare but important skills. The emergence of relations based on accumulation rather than enchainment would have been one route toward which inter-household specialisation led. This is not to claim that specialists were inevitable, but merely that the emergence of different skills in different persons each related to their own social value. Only the *sustained absence* of any special skills in a household would transform a context of potential skills differentiation into low-level social ranking.

We should also recall that the Early Neolithic period in the Balkans and Central Europe covers a long period of time – perhaps as much as 800 years, or 25+ generations, in any single region – and a wide area. We do not envisage the development of the full range of all of the identified types of person over the totality of the time-space distribution of the Early Neolithic. Rather, it is highly probable that particular skills and roles co-emerged with specific social practices in certain places and not in others, or perhaps not for a century or two or more in other places. The recent emphasis on small, flat sites at the start of the Neolithic in Greece and the South Balkans (*Kotsakis 2005; Bailey, Whittle 2005*) has overlooked the narrow range of embodied skills available at these sites in comparison with larger, nucleated tell villages; this narrow range of skills may have selected against the smaller sites which certainly existed in these regions. Moreover, there will have been a particular focus of innovation in the role-linked creation of personhood in nucleated settlements, with later diffusion across networks of dispersed homesteads. As communities developed and embodied skill levels reached higher levels, it is plausible that a wider range of types of individuals developed, with new categories of individualised person co-emerging with new forms of objects and structures.

Thus, the two weaknesses in Hernando's model – dating the stages of the model and explaining the shift from dividual to individualising personhood – can be addressed by proposing that settlement nucleation – whether in the Upper Palaeolithic (*e.g.*, East Gravettian: *Soffer 2003*), the Mesolithic (the Iron Gates Gorge: *Radovanović 1996*) or the tell villages of the Neolithic of Greece or the South Balkans (*Chapman 2008a*) – led to a wider diversity of persons with different skills and a greater likelihood of new skills combinations leading to more individualised identities. The second factor involved the wider range of embodied skills requisite for the major technological changes at the start of the Neolithic and during the long-drawn-out secondary products scenario. These transformations brought a far larger range of completely new skills into existence, providing a range of skills combinations much wider than those of forager groups.

While the development of new skills was an individual matter, generally relying on the creation of an

embodied skill, the acquisition of these skills relied on a vertical (family) or horizontal (peer-based) transmission of skills which enhanced dividual relations at every stage of skill acquisition. A high proportion of the skills that appeared for the first time in the Neolithic were composite skills, single parts of complex *chaînes opératoires*, such as farming or potting, in which it was impossible to complete the making of an object without careful integration of one's own labour with that of others – another sense in which increases in individual skills went hand-in-hand with dividual relations. There would clearly have been social occasions where it was more important to emphasise one's own individual skills (*e.g.*, exchange of prestige goods), while, at other times, the relationship between every person contributing to collective labour would have been highlighted (*e.g.*, a lineage ceremony).

One of the major debates in European prehistory – the balance between 'indigenous' and 'exogenous' contributions to the emergence of farming – may be reformulated in a skill-focused approach. The *chaînes opératoires* of farming and animal-keeping were so complex, involving the successful integration of many persons, that such organisational successes were by no means guaranteed in every community. One reason for variations in the pace of the spread of farming may well have been the greater or lesser ability of groups to learn all of the requisite new skills and then integrate all of the key persons in such complex tasks.

Summary and conclusions

It is far too simplistic to state that farming involved 'much more work' than foraging (*e.g.*, discussion in *Cohen 1977.33–40*). The transition to farming was a process in which the entirety of a community's social relations was transformed into a network of inter-locking tasks – in many ways much more complex a network than in foraging societies. The scale of materialisation of these new social roles and relations was a major factor in the explosion of material culture found in the earliest farming cultures in general and in South East Europe in particular. There is also an emphasis on the categorisation of persons in terms of their skills at certain social roles, as a way of reinforcing a system of values for different social practices through their linkages to material culture.

The core idea of this paper, which seeks to link persons to things, is basically simple: because of the major increase in the number of skills in the Neolithic, there is a concomitant rise in the diversity of personal identities. While some *chaînes opératoires* are relatively self-contained, others require considerable interdependency, and therefore co-ordination, between different persons. The picture that we wish to paint of Neolithic social life is based on a rich and varied palette, with much personal and household differentiation. The period of the emergence of farming provides some background examples of the processes of change involved. During these generations, new types of skills were created, in particular farming and herding skills, but also potting, polished stone tool-making and perhaps brewing skills. A term such as 'potter' does not necessarily imply a full-time occupation or specialisation, nor even the only, or essentialist, identity of a particular person, but emphasises the kind of activities through which persons were recognised through the possession of distinctive embodied skills. These new types of skills co-emerged with new foodstuffs and objects, such as flour, bread, lamb chops, barley beer, pottery and axes – the one could not have occurred without the other. Notions of personhood would have been influenced by the wide range of new relations, not least gendered relations, based on these identities, as well as by their interplay with those with traditional skills – hunting skills, shellfish-collecting skills, flint-knapping skills and leather-working skills. The communal values of the new products went hand in hand with the status of their creators. It is probable that, while those dwelling in dispersed homesteads would have included some of these new classes of skills, meeting persons with other skills seasonally, tell villagers would have included the full range of types of skills, with everyday contacts for most people. The discovery of secondary products would have ushered in new episodes of skill-creation, with the production of milk, cheese and yoghurt; while ploughing involved the harnessing of animal traction, as well as the diversification of traditional skills such as weaving, now making woollen textiles, and carpentry, now shaping wooden wheels, planks and complex joints for carts. The values assigned to the new things transformed the traditional system of communal values, itself confirming new statuses for new types of skills. In Gordon Childe's (*1956*) telling (if gender-biased) phrase, 'man/woman was making himself/herself'. The period of the emergence of farming was a time of particular innovation in this making process.

ACKNOWLEDGEMENTS

We are grateful to the organiser of the Ljubljana Round Table on the Neolithic, Professor Mihael Budja, for his kind invitation to attend the 17th meeting and his invitation to publish this paper in the proceedings of this meeting. We are also indebted to the co-organisers of the EAA session "Identities of the Early Neolithic", held in Zadar, September 2007 – Drs. Maria Gurova, Dušan Borić and Preston Miracle, for their kind invitation to present a paper at their session – a paper which was the inspiration for this article. We appreciate discussions with Andy Jones, Preston Miracle, Alasdair Whittle, Jo Brück and Chris Fowler in our continued explorations of Neolithic personhood. We applaud Almudena Hernando's research on the development of individualising tendencies in long-term social evolution that she presented in the Barcelona Gender Workshop, May 2010. We acknowledge the kindness of Bernie Knapp in sending us a PDF of his Cambridge Archaeological Journal *paper on personhood (co-authored with Peter van Dommelen). We are grateful to Marie Louise Stig Sørensen for agreeing to our use of her illustration, reproduced here as Figure 1.*

∴

REFERENCES

ADOVASIO J. M., SOFFER O. and PAGE J. 2007. *The invisible sex*. Harper-Collins. New York.

ALEXANDER C. 1964. *Design. Notes on the synthesis of form*. Harvard University Press. Cambridge, MA.

APPLEBY J. 2010. Ageing as fragmentation and dis-integration. In K. Rebay-Salisbury, M. L. S. Sørensen and J. Hughes (eds.), *Body parts and bodies whole*. Oxbow, Oxford: 46–53.

BAILEY D., WHITTLE A. 2005. Unsettling the Neolithic: breaking down concepts, boundaries and origins. In D. Bailey, A. Whittle and V. Cummings (eds.), *(un)settling the Neolithic*. Oxford: Oxbow Books, 1–7.

BARRETT J. 1988. Fields of discourse: reconstituting a social archaeology. *Critique of Anthropology 7(3): 5–16*.

BARTOSIEWICZ L. 2007. Fish remains. In A. Whittle (ed.), *The Early Neolithic on the Great Hungarian Plain. Investigations of the Körös culture site of Ecsegfalva 23, County Békés*. Varia Archaeologia Hungarica XXI. Institute of Archaeology, Budapest: 377–394.

2007a. Mammalian bone. In A. Whittle (ed.), *The Early Neolithic on the Great Hungarian Plain. Investigations of the Körös culture site of Ecsegfalva 23, County Békés*. Varia Archaeologia Hungarica XXI. Institute of Archaeology, Budapest: 287–326.

BEAUDRY M. C., COOK L. J. and MROZOWSKI S. A. 1991. Artifacts and active voices: material culture as social discourse. In R. H. McGuire and R. Paynter (eds.), *The archaeology of inequality*. Blackwell, Oxford: 150–191.

BINFORD L. R. 1971. Mortuary practices: their study and their potential. In J. Brown (ed.), *Approaches to the social dimensions of mortuary practices. Memoir of the Society for American Archaeology 25: 6–29.*

BLAKE E. 1999. Identity mapping in the Sardinian Bronze Age. *European Journal of Archaeology 2(1): 35–55*.

BODU P., KARLIN C. and PLOUX S. 1990. Who's who? The Magdalenian flintknappers of Pincevent (France). In E. Cziesla, S. Eickhoff, N. Arts and D. Winter (eds.), *The big puzzle*. International symposium on refitting stone artefacts. Holos, Bonn: 143–164.

BOGDANOVIĆ M. 1988. Architecture and structural features at Divostin. In A. McPherron and D. Srejović (eds.), *Divostin and the Neolithic of Central Serbia*. Ethnology Monographs 10. Department of Anthropology, Pittsburgh: 35–141.

BONSALL C. (ed.) 1989. *The Mesolithic in Europe*. John Donald, Edinburgh.

BONSALL C., COOK G., LENNON R., HARKNESS D., SCOTT M., BARTOSIEWICZ L. and MCSWEENEY K. 2000. Stable isotopes, radiocarbon and the Mesolithic-Neolithic transition in the Iron Gates. In M. Budja (ed.), *7th Neolithic Studies. Documenta Praehistorica 27: 119–132*.

BORIĆ D. 2008. First households and 'house societies' in European prehistory. In A. Jones (ed.), *Prehistoric Europe. Theory and practice*. Blackwell, Oxford: 109–142.

BRAIDWOOD R. J., SAUER J. D., HELBAEK H., MANGELSDORF P. C., CUTLER H. C., COON C. S., LINTON R., STEWARD J. and OPPENHEIM A. L. 1953. Symposium: did men

once live by beer alone? *American Anthropologist 55: 515–526*.

BRÜCK J. 2001. Monuments, power and personhood in the British Neolithic. *Journal of the Royal Anthropological Institute 7: 649–667*.

BURNEZ-LANOTTE L. (ed.) 2001. *Production and management of lithic materials in the European Linearbandkeramik*. International Series 1200. Archaeopress, Oxford.

CARNEIRO A., MATEICIUCOVÁ I. 2007. Daub fragments and the question of structures. In A. Whittle (ed.), *The Early Neolithic of the Great Hungarian Plain. Investigations of the Körös culture site of Ecsegfalva 23, County Békés*. Varia Archaeologica Hungarica XXI. Institute of Archaeology HAS, Budapest: 255–286.

CASELLA E. C. and FOWLER C. (eds.) 2004. *The archaeology of plural and changing identities*. Springer, New York.

CHAPMAN J. 1982. The secondary products revolution and the limitations of the Neolithic. *Bulletin of the University of London Institute of Archaeology 11: 119–141*.

1989. The Early Balkan village. *Varia Archaeologia Hungarica 2: 33–53*.

1999. The origins of warfare in the prehistory of Central and Eastern Europe. In J. Carman and A. Harding (eds.), *Ancient warfare*. Archaeological perspectives Alan Sutton, Stroud: 101–142.

2000. *Tensions at funerals. Mortuary archaeology in later Hungarian prehistory*. Archaeolingua. Budapest.

2000a. *Fragmentation in archaeology: People, places and broken objects in the prehistory of South Eastern Europe*. Routledge. London.

2003. From Franchthi to the Tiszazug: two Early Neolithic worlds. In E. Jerem and P. Raczky (ed.), *Morgenrot der Kulturen*. Archaeolingua, Budapest: 89–108.

2008. Approaches to trade and exchange in earlier prehistory (Late Mesolithic – Early Bronze Age). In A. Jones (ed.), *Prehistoric Europe. Theory and practice*. Blackwell, Oxford: 333–355.

2008a. Meet the ancestors: settlement histories in the Neolithic. In D. Bailey, A. Whittle and D. Hofmann (eds.), *Living well together? Settlement and mobility in the Neolithic of South-East and Central Europe*. Oxbow Books, Oxford: 68–80.

2010. Houses, households, villages and proto-towns in South-Eastern Europe. In D. W. Anthony and J. Y. Chi (eds.), *The Lost Worlds of Old Europe*. Exhibition Catalog. Institute for the Study of the Ancient World, New York: 74–89.

2011. Enchantment and enchainment in later Balkan prehistory: towards an aesthetic of precision and geometric order. In A. Hadjikoumis, E. Robinson and S. Viner (eds.), *The Dynamics of Neolithisation in Europe: Studies in Honour of Andrew Sherratt*. Oxbow Books, Oxford: 153–176.

CHAPMAN J., GAYDARSKA B. 2003. The provision of salt to Tripolye mega-sites. In A. Korvin-Piotrovsky (ed.), *Tripolian settlement-giants*. The international symposium materials. Institute of Archaeology, Kyiv: 203–211.

2006. *Parts and wholes. Fragmentation in prehistoric context*. Oxbow Books. Oxford.

in prep. *Dairy producers, miners and herders: towards a new characterization of personhood in the Balkan Neolithic and Copper Age*.

CHAPMAN J., PRIESTMAN S. and GHEORGHIU D. n.d. The Experimental Fragmentation Project – the 2000 Field Season at Vadastra, Romania (unpublished project report).

CHAPMAN J., RICHTER É. 2009. Geometric order and scientific principles: a view from the Mesolithic, Neolithic and Chalcolithic of Central and South East Europe. In G. Bodu (ed.), *In media res praehistoriae. Miscellanea in honorem annos LXV peragentis Profesoris Dan Monah oblata*. University of Iaşi Press, Iaşi: 21–58.

CHILDE V. G. 1956. *Man makes himself*. Watts & Co. London.

CLAASSEN C. 1991. Gender, shellfishing and the Shell Mound Archaic. In J. M. Gero and M. Conkey (eds.), *Engendering archaeology*. Blackwell, Oxford: 276–300.

1998. *Shells*. Cambridge University Press. Cambridge.

COHEN N. M. 1977. *The food crisis in prehistory*. Yale University Press. New Haven.

COLES J. M., ORME B. J. 1977. Neolithic hurdles from Walton Heath, Somerset. *Somerset Levels Papers 3: 6–29*.

CONKEY M. W., SPECTOR J. 1984. Archaeology and the study of gender. In M. B. Schiffer (ed.), *Advances in Archaeological Method and Theory 7*. Academic Press, New York: 1–38.

CONNELL R. W. 1987. *Gender and power: society, the person and sexual politics*. Polity Press, Cambridge.

COTIUGĂ V., COTOI O. 2004. Parcul arheologic experimental de la Cucuteni. In M. Petrescu-Dîmboviţa and M-C. Văleanu (eds.), *Cucuteni – Cetăţuie. Monografie arheologică*. Bibliotheca Memoriae Antiquitatis XIV. Muzeul de Istorie, Piatra-Neamţ: 337–350.

CZIESLA E. 1990. On refitting of stone artefacts. In E. Cziesla, S. Eickhoff, N. Arts and D. Winter (eds.), *The big puzzle*. International symposium on refitting stone artefacts. Holos, Bonn: 9–44.

DÍAZ-ANDREU M. 2005. Gender identity. In M. Díaz-Andreu, S. Lucy, Š. Babić and D. N. Edwards (eds.), *The archaeology of identity*. Routledge. London: 13–42.

DÍAZ-ANDREU M., LUCY S. 2005. Introduction. In M. Díaz-Andreu, S. Lucy, Š. Babić and D. N. Edwards (eds.), *The archaeology of identity*. Routledge, London: 1–12.

DÍAZ-ANDREU M., LUCY S., BABIĆ Š. and EDWARDS D. N. (eds.) 2005. *The archaeology of identity*. Routledge, London.

DÍAZ-ANDREU M. and SØRENSEN M. L. S. (eds.) 1998. *Excavating women: a history of women in European archaeology*. Routledge, London.

DOBRES A-M. and ROBB J. (eds.) 2000. *Agency in archaeology*. Routledge, London.

FINLAY N. 2003. Microliths and multiple authorship. In L. Larsson, H. Kindgren, K. Knutsson, D. Loeffler and A. Åkerlund (eds.), *Mesolithic on the move*. Papers presented at the Sixth International Conference on the Mesolithic in Europe, Stockholm 2000. Oxbow Books, Oxford: 169–176.

FOUCAULT M. 1973. *Madness and civilization: a history of insanity in the Age of Reason*. Random House, New York.

1979. *Discipline and punish: the birth of the prison*. Vintage Books. New York.

FOWLER C. 2004. *The archaeology of personhood. An anthropological approach*. Routledge. London and New York.

GENESTE J. 1985. *Analyse lithique d'industries moustériennes du Périgord: une approche technologique du comportement des groupes humains au Paléolithique moyen*. Unpublished doctoral dissertation, Université de Bordeaux. Bordeaux.

GEORGIEV G. I. 1965. The Azmak mound in southern Bulgaria. *Antiquity 39: 6–8*.

GERO J. M. and CONKEY M. (eds.) 1991. *Engendering archaeology*. Blackwell, Oxford.

GHEORGHIU D. 2008. The emergence of pottery. In A. Jones (ed.), *Prehistoric Europe. Theory and practice*. Blackwell, Oxford: 164–192.

GILCHRIST R. 1994. *Gender and material culture. The archaeology of religious women*. Routledge. London.

GILMAN A. 1981. The development of social stratification in Bronze Age Europe. *Current Anthropology 22(1): 1–23*.

GUROVA M. 2004. Evolution and retardation: flint assemblages from Tell Karanovo. In V. Nikolov, K. Băčvarov and P. Kalchev (eds.), *Prehistoric Thrace*. Institute of Archaeology, Sofia: 239–253.

HACKING I. 1995. Three parables. In R. B. Goodman (ed.), *Pragmatism: a contemporary reader*. Routledge. London: 237–249.

HALSTEAD P. 1999. Neighbours from hell? The household in Neolithic Greece. In P. Halstead (ed.), *Neolithic society in Greece*. Sheffield Studies in Aegean Archaeology 2, Shefield: 77–95.

HANKS B. 2008. The past in later prehistory. In A. Jones (ed.), *Prehistoric Europe. Theory and practice*. Blackwell, Oxford: 255–284.

HELMS M. W. 1993. *Crafts and the kingly ideal. Art, trade and power*. University of Texas Press. Austin, TX.

HERNANDO A. n.d. Men, women and individuality throughout History. Paper presented to *ICREA Workshop on Europe's Gendered Present. New Reflections on Cultural memories of the Past*, May 2010. Barcelona.

HERNANDO A., POLITIS G., GONZÁLEZ RUIBAL A. and BESERRA COELHO E. 2011. Gender, Power and Mobility among the Awá-Guajá (Maranhão, Brazil). *Journal of Anthropological Research 67(2): 189–211*.

HILL J. N. and GUNN J. (eds.) 1977. *The individual in prehistory: studies of variability in style in prehistoric technologies*. Academic Press, New York.

HOFMANN D., WHITTLE A. 2008. Neolithic bodies. In Jones A. (ed.), *Prehistoric Europe. Theory and practice*. Blackwell, Oxford: 287–311.

HONCH N. V., HIGHAM T. F. G., CHAPMAN J., GAYDARSKA B. and HEDGES R. E. M. 2006. A palaeodietary investigation of carbon (C–13/C–12) and nitrogen (N–15/N–14) in human and faunal bones from the Copper Age cemeteries

of Varna I and Durankulak, Bulgaria. *Journal of Archaeological Science 33: 1493–1504*.

INGOLD T. 2000. *The perception of the environment: essays in livelihood, dwelling and skill*. Routledge. London.

ISAAC G. I. 1978. Food sharing and human evolution: archaeological evidence from the Plio-Pleistocene of South Africa. *Journal of Anthropological Research 34: 311–325*.

JACOBSEN T. W. 1976. 17,000 years of Greek prehistory. *Scientific American 234(6): 76–87*.

JAMIESON R. W. 2004. Caste in Cuenca: colonial identity in the seventeenth century Andes. In E. C. Casella and C. Fowler (eds.), *The archaeology of plural and changing identities*. Springer, New York: 211–232.

JONES A. 2005. Lives in fragments? Personhood and the European Neolithic. *Journal of Social Archaeology 5(2): 193–224*.

JONES A. (ed.) 2008. *Prehistoric Europe. Theory and practice*. Blackwell, Oxford.

JONES A., RICHARDS C. 2003. Animals into ancestors: domestication, food and identity in Late Neolithic Orkney. In M. P. Pearson (ed.), *Food, culture and identity in the Neolithic and Early Bronze Age*. BAR. International Series 1117. Archaeopress, Oxford: 45–52.

KALCHEV P. 2005. *Neolithic dwellings, Stara Zagora town*. Exposition Catalog. Regional Museum of History. Stara Zagora.

KIRK T. 2006. Materiality, personhood and monumentality in Early Neolithic Britain. *Cambridge Archaeological Journal 16(3): 333–347*.

KNAPP A. B., VAN DOMMELEN P. 2008. Past practices: rethinking individuals and agents in archaeology. *Cambridge Archaeological Journal 18(1): 15–24*.

KOSTOV R. I. 2007. *Arheomineralogiya na neolitni i halkolitni artefakti ot Bulgaria i tyahnoto znachenie v gemologyata*. Publising House 'Sv. Ivan Rilski'. Sofia.

KOSTOV R. and BAKAMSKA A. 2004. Nefritovi artefakti ot rannoneoloitnoto selishte Galabnik, Pernishko. *Geologia i mineralni resursi 4: 38–43*.

KOTSAKIS K. 2005. Across the border: unstable dwellings and fluid landscapes in the earliest Neolithic of Greece. In D. Bailey, A. Whittle and V. Cummings (eds.), *(Un)settling the Neolithic*. Oxbow Books, Oxford: 8–15.

KOZŁOWSKI J. K. (ed.) 1973. *The Mesolithic in Europe*. Warszaw University Press. Warszaw.

LARSSON L., KINDGREN H., KNUTSSON K., LOEFFLER D. and ÅKERLUND A. (eds.) 2003. *Mesolithic on the move*. Papers presented at the Sixth International Conference on the Mesolithic in Europe, Stockholm 2000. Oxbow Books, Oxford.

LEROI-GOURHAN A. 1964. *Le geste et la parole. I. Technique et langue*. Albin Michel. Paris.

LEWTHWAITE J. 1985. Social factors and economic change in Balearic prehistory, 3000–1000 bc. In G. Barker and C. Gamble (eds.), *Beyond domestication in prehistoric Europe*. Academic Press, London: 205–231.

LIPUMA E. 1998. Modernity and forms of personhood in Melanesia. In M. Lambek and A. Strathern (eds.), *Bodies and persons: comparative views from Africa and Melanesia*. Cambridge University Press, Cambridge: 53–79.

MCCAFFERTY G. G., MCCAFFERTY S. D.1998. Spinning and weaving as female gender identity in Post-Classic Mexico. In K. Hays-Gilpin and D. S. Whitley (eds.), *Reader in gender archaeology*. Routledge, London: 213–230.

MAGYARI E. 2002. Climatic versus human modification of the Late Quaternary vegetation in Eastern Hungary. Unpublished doctoral dissertation. University of Debecen. Debreceb.

MANOLAKAKIS L. 2005. *Les industries lithiques énéolithiques de Bulgarie*. Internationale Archäologie, Band 88. Verlag Marie Leidorf GmbH. Rahden.

MESKELL L. 1999. *Archaeologies of social life: age, sex, class et cetera in Ancient Egypt*. Blackwel. Oxford.

MILLER D. 1987. *Material culture and mass consumption*. Oxford. Blackwell.

MILNER N., CRAIG O. E., BAILEY G. N., PEDERSEN K. and ANDERSEN S. H. 2004. Something fishy in the Neolithic? A re-evaluation of stable isotope analysis of Mesolithic and Neolithic coastal populations. *Antiquity 78: 9–22*.

MOIR J. and LETTS J. 1999. *Thatch: thatching in England, 1790–1940*. James & James. London.

NANDRIS J. G. 1972. Relations between the Mesolithic, the First Temperate Neolithic and the Bandkeramik: the nature of the problem. *Alba Regia XII: 61–70*.

NANDRIS J. 1972a. Bos primigenius and the bone spoon. *Bulletin of the Institute of Archaeology, University of London 10: 63–83*.

1988. The earliest European plaster pyrotechnology. The red floors of Lepenski Vir. *Rivista di Archeologia 12: 14–15*.

NANOGLOU S. 2008. Representation of humans and animals in Greece and the Balkans during the Earlier Neolithic. *Cambridge Journal of Archaeology 18(1): 1–13*.

NEMESKÉRI J. 1978. Demographic structure of the Vlasac Epipalaeolithic population. In D. Srejović and Z. Letica (eds.), *Vlasac. Mezolitsko naselje u Djerdapu. Tom II*. Srpska Akademija Nauka I Umjetnosti, Beograd: 97–133.

NIKOLOV V. 1992. *Rannoneolitno zhilishte ot Slatina (Sofia). Razkopki i Prouchvania 25*. Bulgarska akademia na naukite. Arkheologicheski institut i muzei. Sofia.

ORME B. J., COLES J. M. 1983. Prehistoric woodworking from the Somerset Levels: 1. Timber. *Somerset Levels Papers 9: 19–43*.

OTTAWAY B., ROBERTS B. 2008. The emergence of metalworking. In A. Jones (ed.), *Prehistoric Europe. Theory and practice*. Blackwell, Oxford: 193–225.

PARKINGTON J. 2002. Men, women and eland: hunting and gender among the San of Southern Africa. In S. M. Nelson and M. Rosen-Ayalon (eds.), *In pursuit of gender: worldwide archaeological approaches*. Altamira Press, Walnut Creek: 93–117.

PERLÈS C. 2001. *The Early Neolithic in Greece*. Cambridge University Press. Cambridge.

2003. The Mesolithic at Franchthi: an overview of the data and problems. In N. Galanidou and C. Perlès (eds.), *The Greek Mesolithic. Problems and perspectives*. The British School in Athens, London: 79–87.

PIGEOT N. 1987. *Magdaléniens d'Étiolles: économie de débitage et organisation sociale*. Gallia Préhistoire Supplément 25. CNRS. Paris.

RACKHAM J. 1977. Neolithic woodland management in the Somerset Levels: Garvin's, Walton Heath and Rowland's tracks. *Somerset Levels Papers 3: 65–72*.

RADOVANOVIĆ I. 1996. *The Iron Gates Mesolithic*. International Monographs in Prehistory. Ann Arbor. Michigan.

1997. The Culture of Lepenski Vir: A Contribution to the Interpretation of its Ideological Aspects. In M. Lazić (ed.), *Antidoron Dragoslavo Srejović completis LXV annis ad amicis, collegis, discipulis oblatum*. Center for Archaeological Research, Belgrade: 87–93.

ROBERTS C. A. n.d. *You are what you breathe – living with poor air quality in past homes and wider environments*. Paper presented to the High-Level Symposium on Home, settlement and dwelling in temporal perspective, Saturday 14/III/2009. Durham University. Durham.

RODDEN R. J. 1962. An Early Neolithic village in Greece. *Scientific American 212: 82–92*.

ROKSANDIĆ M. (ed.) 2004. *Violent interactions in the Mesolithic: evidence and meaning*. Archaeopress, Oxford.

SCHLANGER N. 1996. Understanding Levallois: lithic technology and cognitive archaeology. *Cambridge Archaeological Journal 6(2): 231–254*.

SELMECZI L. 1969. Das Wohnhaus der Körös-Gruppe von Tiszajenő. Neuere Angaben zu den Haustypen des Frühneolithikums. *A Mora Ferenc Múzeum Évkönyve 1969 (2): 17–22*.

SHACKEL P. A. 2000. Craft to wage labor: agency and resistance in American historical archaeology. In A-M. Dobres and J. Robb (eds.), *Agency in archaeology*. Routledge, London: 232–246.

SHENNAN S. J., STEELE J. 1999. Cultural learning in hominids: a behavioural ecological approach. In H. O. Box and K. R. Gibson (eds.), *Mammalian social learning: comparative and ecological approaches*. Cambridge University Press, Cambridge: 367–388.

SHERRATT A. 1981. Plough and pastoralism: aspects of the secondary products revolution. In I. Hodder, G. Isaac and N. Hammond (eds.), *Pattern of the past: studies in honour of David Clarke*. Cambridge University Press, Cambridge: 261–305.

1987. Cups that cheered. In W. Waldren and R. C. Kennard (eds.), *Bell Beakers of the Western Mediterranean. Vol. ii*. International Series 331. BAR, Oxford: 81–114.

SMITS E., MILLARD A. R., NOWELL G. and PEARSON D. G. 2010. Isotopic investigation of diet and residential mobility in the Neolithic of the Lower Rhine Basin. *European Journal of Archaeology 13(1): 5–31*.

SOFFER O., ADOVASIO J. M. and HYLAND D. C. 2000. The "Venus" figurines. Textiles, basketry, gender, and status in the Upper Palaeolithic. *Current Anthropology 41(4): 511–537*.

SOFFER O. 2003. Mammoth bone accumulations: death sites? kill sites? dwellings? In S. A. Vasil'ev, O. Soffer and J. K. Kozłowski (eds.), *Perceived landscapes and built environments. The cultural geography of Late Paleolithic Eurasia*. International Series 1122. Archaeopress, Oxford: 39–46.

SØRENSEN M-L. S. (2000) *Gender Archaeology*. Polity Press. Cambridge.

SPATARO M. 2007. Everyday ceramics and cult objects: a millennium of cultural transmission. In M. Spataro and P. Biagi (eds.), *A short walk through the Balkans: the first farmers of the Carpathian Basin and adjacent regions*. Quaderno 12. Societa per la Preistoria, Trieste: 149–160.

SPATARO M. and BIAGI P. (eds.) 2007. *A short walk through the Balkans: the first farmers of the Carpathian Basin and adjacent regions*. Quaderno 12. Societa per la Preistoria, Trieste.

SPECTOR J. 1983. Male/Female task differentiation among the Hidatsa: towards the development of an archaeological approach to the study of gender. In P. Albers and B. Medicine (eds.), *The hidden half*. University Press of America, Washington: 77–99.

1991. What this awl mean: towards a feminist archaeology. In J. M. Gero and M. Conkey (eds.), *Engendering archaeology*. Blackwell, Oxford: 388–406.

SREJOVIĆ D. and BABOVIĆ L. 1983. *Umetnost Lepenskog Vira*. Jugoslavija. Beograd.

STARTIN W. 1978. Linear Pottery houses: reconstruction and manpower. *Proceedings of Prehistoric Society 44: 143–159*.

STARTIN W., BRADLEY R. 1981. Some notes on work organisation and society in prehistoric Wessex. In C. Ruggles and A. Whittle (eds.), *Astronomy and society in Britain during the period 4000–1500 BC*. B–88. BAR, Oxford: 289–296.

THOMAS J. 2008. Comment on Knapp A. B. and van Dommelen P. 2008. Past practices: rethinking individuals and agents in archaeology. *Cambridge Archaeological Journal 18(1): 26–28*.

TRINGHAM R. 1991. Households with faces: the challenge of gender in prehistoric architectural remains. In J. M. Gero and M. Conkey (eds.), *Engendering archaeology*. Blackwell, Oxford: 93–131.

2000. Southeastern Europe in the transition to agriculture in Europe: bridge, buffer or mosaic. In T. D. Price (ed.), *Europe's first farmers*. Cambridge University Press, Cambridge: 19–56.

TUOHY T. 2000. Long-handled weaving combs: problems in determining the gender of toll-maker and tool-user. In M. Donald and L. Hurcombe (eds.), *Gender and material culture in archaeological perspective*. Palgrave-Macmillan, London: 137–152.

VITEBSKY P. 2001. *Shamanism*. University of Oklahoma Press. Norman, OK.

VITELLI K. D. 1995. Pots, potters and the shaping of Greek Neolithic society. In W. Barnett and J. Hoopes (eds.), *The Emergence of Pottery*. Smithsonian Institution, Washington: 55–63.

WATSON P. J., KENNEDY M. C. 1991. The development of horticulture in the Eastern Woodlands of North America: women's role. In J. M. Gero and M. Conkey (eds.), *Engendering archaeology*. Blackwell, Oxford: 255–275.

WHITTLE A. 1996. *Europe in the Neolithic and the creation of new worlds*. Cambridge University Press. Cambridge.

2003. *The archaeology of people. Dimensions of Neolithic life*. Routledge. London.

WICHMAN H. (ed.) 1968. *Norrländskt arbetsliv under 1700-talet: Länsmännens beärttelser 1764 om allmogens årliga arbeten i Medelpad, Ångermanland och Jämtland*. Nordiska museets handlingar 65. Nordiska museet, Stockholm.

WILLIS K. J. 2007. The impact of the Early Neolithic Körös culture on the landscape: evidence from palaeoecological investiogations of the Kiri-tó. In A. Whittle (ed.), *The Early Neolithic of the Great Hungarian Plain. Investigations of the Körös culture site of Ecsegfalva 23, County Békés*. Varia Archaeologica Hungarica XXI. Institute of Archaeology HAS, Budapest: 83–98.

WOOD J. 2000. Food and drink in European prehistory. *European Journal of Archaeology 3(1): 89–111*.

WRIGHT R. P. 1991. Women's labour and pottery production in prehistory. In J. M. Gero and M. Conkey (eds.), *Engendering archaeology*. Blackwell, Oxford: 194–223.

ZIHLMAN A. 1989. Woman the Gatherer: the role of women in early hominid evolution. In S. Morgen (ed.), *Gender and anthropology: critical reviews for research and teaching*. American Anthropological Association, Washington: 21–40.