Migrations and Intercultural Relations in the Levant during PPNB

Les migrations et les relations interculturelles dans le Levant au Néolithique précéramique B (PPNB)

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Migrations and Intercultural Relations in the Levant during PPNB

Gaëlle Le Dosseur

Before tackling the question of migrations and intercultural relations in the Levant during PPNB, we must discuss the concept of culture and explain why archaeologists prefer the term “material culture” which better fits the kind of reconstructions they are able to make.

In anthropology, “culture” refers to any ethnographic group which presents significant differences with other groups (in its values, its behavior, its knowledge, whose limits coincide approximately) (Lévi-Strauss, 1958). The identified cultures are therefore not data but results of investigations and comparisons. Now the terms of comparisons never vary all at the same time from one culture to another, and the ones that vary in a concomitant way don’t always vary with the same intensity (Izard, 1991, p. 191). We must therefore be cautious in our use of the term “cultures” and remain aware that the limits of these cultures are all relative.

This being said, can we identify cultures in archaeology? If defining culture is difficult for anthropologists who study all aspects of living societies, it is all the more so for archaeologists who deal with dead people. Indeed, archaeologists only have at their disposal material traces of a small part of technical, social, and symbolic activities. Thus, they limit themselves to identifying “material cultures,” which can be defined as coherent associations of characteristics whose traces are material. Archaeologists know that these “material cultures” don’t necessarily correspond to anthropological realities (Leclerc and Tarrête, 1995).

This article will deal with populations of the Levant (fig. 1) who produced different material cultures and whose relations intensified at one specific moment of the Neolithic: the Pre-Pottery Neolithic B. These relations will be investigated through one activity little studied in this perspective until now: the exploitation of bone materials. My goal is to determine whether the intensified contacts between the different populations had an influence on bone working. Furthermore, I will see if it is possible to clarify the kind of relations between the various populations of the Levant according to the data collected in bone industry.

The prehistoric context and the state of the debate about the relations in the Levant will first be presented. I will then explain the method of work and the results gathered from my study of the bone industry before concluding.

Le contexte

In the Levant, the Neolithic age extends from 13,000 to 5,000 cal BC. It is characterized by the transition from a nomadic way of life based on hunting and gathering to a sedentary way of life based on breeding and agriculture. Five major periods have been identified in the whole Neolithic era in the Levant. During the Natufian period (13,000-9,600 cal BC), nomadism declines. The first agricultural experiments take place during the Pre-Pottery Neolithic A (PPNA: 9,600-8,700 cal BC). The Pre-Pottery Neolithic B (PPNB: 8,700-6,900 cal BC) sees the beginning of livestock farming, an activity that increases during the Pre-Pottery Neolithic C (PPNC: 6,900-6,500 cal BC). Finally, in the Pottery Neolithic (PN: 6,500-5,000 cal BC), people use the ceramic technique for the first time in the south while they develop it in the north.

Different material cultures were identified in the Levant over all the Neolithic period. In PPNB, the period this article deals with, the populations of the north (Middle-Euphrates) and of the south (Palestine, Jordan) develop specific characteristics on a shared basis.

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1 Identifying cultures thus cannot lead to their being reified (Izard, 1991).
As for the shared characteristics, people from both the Northern and the Southern Levant domesticate and raise caprids then aurochs while they strengthen agriculture. They develop villages, in which they commonly build quadrangular houses. They place storage structures in private houses rather than in common spaces (Lebreton, 2003; Byrd, 2000). In the flint production, the very sophisticated naviforme debitage technique is favored and the resulting blanks are used to produce typical big points. Their production is increasingly standardized. Finally, in iconography and symbolism, more and more importance is given to the human being, to male attributes, and to the image of the bull… (Cauvin, 1997).

Beside those shared characteristics, some others can only be found in the south, and part of them is found in Damascene as well. These southern characteristics include the statues made of plaster, the plastered skulls, the stone masks, the fan-shaped cutting tools made out of stone or bone, the points of Jericho, the use of naviform debitage on big blocks of stone, the two types of basketwork called “vanneries cordées” and “à nappes superposées” (Stordeur, 1989), the persisting circular constructions and livestock farming – goat farming, for the most part.

Painted walls, funeral groupings in special constructions (Coqueugniot, 2000), the type of basketwork called “nattes,” and polished axes and adzes, as for them, are only found in the north.
The populations behind these two different material cultures were in contact. The presence in the south of obsidian coming from Anatolia is one of the best evidence of this (Cauvin, 1997). The relations between the north and the south, which started in fact as soon as final Natufian, reached a particularly high intensity during PPNB. During that period, many characteristics that apparently appeared in one of the two regions spread all over the Levant. For a long time, archaeologists thought that most of these characteristics had been passed on from the north to the south (Cauvin, 1997). These characteristics include the quadrangular architecture, the naviforme debitage technique, sheep farming, engrain growing, the representation of bulls...

Several hypotheses on the kind of relations between the Northern and the Southern Levant have then been put forward.

According to J. Cauvin (1997) and P. Edwards (Edwards et al., 2005), only migrations of populations from the north to the south and their settlement in the PPNB could explain the sudden and durable introduction of northern characteristics in the south. J. Cauvin (1997) calls upon anthropological arguments; according to him, “slender Mediterranean [people]” coming from the north were found in Jericho next to the typically southern “robust Mediterranean [people].”

According to another hypothesis, characteristics did not get passed on from one region to another because people migrated; rather, they were passed on because people borrowed objects and ideas within the framework of intensified contacts and exchanges. A. Gopher (1989, 1994) calls upon the frequency of flint points in space and time: such frequency reveals that the flint points were not suddenly introduced in the south by a new population but rather gradually spread through contacts and transfers of ideas. One must note, however, that Gopher’s spatiotemporal study uses data from Aswad in Damascene and that the dates for this site have recently been corrected (Stordeur, 2003). Supporting Gopher’s point of view, the anthropologists G. Kurth and O. Röhrer-Ertl (1981), who worked on Jericho skeletons, didn’t notice any change between the populations of PPNA and PPNB, therefore contradicting Cauvin’s argument (cf. supra).

At the end of the 90s, those were the two main ways of understanding the populations’ relations in the Levant during PPNB. Today, new excavations in the south (Khalaily et al., 2007) and in Damascene (Stordeur, 2003) have renewed the debate.

The main discussion focuses on the northern origin of some characteristics that spread in the Levant in PPNB, as well as on their being passed on in a unidirectional way from the north to the south. Recent excavations in Aswad in Damascene revealed that some of these characteristics may have actually been passed on from Damascene to other regions. This is the case of a very sophisticated kind of naviform debitage, which was previously thought to have appeared in the north (Abbès and Stordeur, personal communication).

It is too early to suggest a new model for the populations’ relations in the Levant. But we will most probably have to tend towards a model of multidirectional transmissions more complex but also more realistic than the one that has been suggested until now. Common characteristics found all over the Levant may have gradually emerged from innovations and evolutions which took place in various regions and which then spread thanks to intensified contacts and exchanges during PPNB.

I will now present the information gathered from my analysis of the bone industry.

**Bone industry: the method**

I will first explain the method I used to study bone industries.

My research on past societies is based on my understanding how they worked and used bone materials. For each studied collection, the produced forms are described and the “chaînes opératoires” are reconstructed, from the acquisition of raw materials to the use of objects, both from a technical and from an economical point of view. The reconstructions are done with the help of mental refitting, a refitting method adapted to the properties of bone materials (Averbouh, 2000).

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2 Obsidian from Anatolia is found in small quantity in the south as soon as final Natufian (Valla et al., 1998).
Bone industry: the results

The following results are based on the direct study of five PPNB sites in the Southern Levant (fig. 1) and on the published literature about sites in the north. Considering the small amount of sites investigated here, the inequality between the studies undertaken in the north and in the south, and the lack of published data on the renewed excavations in Damascene so far, the work presented here must be considered preliminary.

In PPNB, a large amount of bone objects and of technical practices is spread all over the Levant. Everywhere, equipments include numerous awls (fig. 2: a, b, d), flat knives (fig. 2: c, g), cutting tools, needles, tubular beads (fig. 2: e, f)…. More exceptional productions like big hooks (fig. 3: a, b, c) or hafts made out of antler (fig. 3: d, e) are found in the north and in the south as well during PPNB.

All the basic techniques and methods of bone working (shaving, abrasion, grooving, sawing, chopping, percussion, bipartition...) are mastered in the whole Levant. More particular processes, like perforating by longitudinal grooving, are found both in the north and in the south during PPNB (fig. 4).

In the case of ordinary objects (awls, flat knives), at the basis of equipments since the Natufian period, these similarities obviously result from very old diffusion processes or from convergence. In the north and in the south, similar simple tools are used for similar basic activities (skin working, basketry...).

The same phenomena explain the wide use of basic techniques and methods (shaving, abrading, bipartition...), which are part of the technical “repertoire” at least since the Natufian.

In the case of more exceptional objects like the big hooks, like the hafts made out of antler, or in the case of new and original processes like perforating by longitudinal grooving, one wonders whether their
appearance all over the Levant in PPNB resulted from contacts between populations at this time rather than from convergence. According to current data, these characters first appeared in the north.3

![Fig. 3: PPNB objects found both in the Northern and in the Southern Levant.](image)

a: big hook from Nahal Hemar (MPPNB/LPPNB) (Bar Yosef and Alon, 1988, fig. 13, p. 18, Courtesy of the IAA); b: big hook from Abu Hureyra (LPPNB) (Sidéra, 1998, fig. 10:6, p. 230); c: big hook from Çanfer Höyük (EPPNB/MPPNB) (Stordeur, 1988b, fig. 3: 6, p. 213); d: haft made out of antler from Abu Gosh (MPPNB) (drawing G. Le Dosseur. All right reserved - Israel Antiquities Authority); e: haft made out of antler from Çanfer Höyük (EPPNB/MPPNB) (Stordeur, 1988b, fig. 2: 4a, p. 212).

Most of the time, the northern object or technique was modified in its new southern environment. The shape of the object, the way it was made, or its function changed; or the new technique originally from the north was used differently once it was introduced in the south. The “foreign” object or technique was thus adapted to a new environment, to a new system.

Such was the case of a haft made out of cervid antler, found in Abu Gosh (fig. 3: d). While in the north, hafts have the very regular shape of small cups (fig. 3: e), the haft from Abu Gosh has a peduncle (fig. 3: d), which means that in the south, hafts didn’t have the exact same function or functioning as the hafts in the north.

It is also the case of the process of perforating by longitudinal grooving. In the north, this process is systematically and almost only used to produce a specific kind of needle called « needles of Mureybet » (fig. 4: b) (Stordeur and Christidou, 2008; Stordeur, 1988b). In the south, the same process is used in a very different context of production: it is used to perforate flat pointed tools or flat knives (Motza, Nahal Hemar) (fig. 4: c). The process was thus taken out of its initial technical system in order to be adapted to a new technical system. This process has been identified on a small number of sites so far; it was used for the production of a very small variety of objects; and it seems to have been used in a closed system (Roux, 2007). It mustn’t have been widely spread.

Two working hypotheses are put forward to explain the modification in the south of these northern elements

According to the first hypothesis, people from the north settled down in the south and adapted their equipment and their technical system to the new context (to a new “milieu extérieur” and “intérieur”; Leroi-Gourhan, 1945, 1973).

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3 Hafts and perforation by longitudinal grooving can be found in the north as soon as PPNA. Big hooks can be found as early as Early/Middle PPNB.
Fig. 4: The process of perforating by longitudinal grooving.

a: the process of perforating by longitudinal grooving, from two sides; b: the process used to make “needles of Mureybet” in the Northern Levant in Çafef Höyük, EPPNB/MPPNB (Stordeur, 1988b, fig. 2.1a, p. 212); c: the process used to make flat pointed and cutting tools in Nahal Hemar MPPNB/LPPNB (drawings and pictures G. Le Dosseur. Courtesy O. Bar Yosef).

The industries in which the adapted northern elements were found show certain similarities with more ancient southern traditions. We could think, therefore, that populations from the north came to the south before the time during which the adapted northern elements appear, in the very beginning of PPNB or even in PPNA. Since their arrival, the new populations would have had the time to modify their initial material culture and to integrate the one that preexisted in the south by mixing with local populations. So far, however, no site in which northern elements would have first been introduced without any change have been found. According to the data at hand, therefore, the following second hypothesis should be favored.

According to this second hypothesis, populations from the south were in contact with people from the north during PPNB and the former adopted some of the latter’s objects and techniques. By doing so, the southerners adapted these objects and techniques to a new context. Why did southerners borrow from northerners? What is the advantage of the process of perforating by longitudinal grooving, compared to the pre-existing processes? Is it easier to get a chisel or any cutting flake and groove a hole than to get a borer and make a hole by rotation? Is it technically safer to perforate by longitudinal grooving than by rotation? In the south, longitudinal grooving is almost always used on blanks coming from flat bones. Experiments could help demonstrate if, in this case, grooving is indeed better suited than rotation. Finally, if the adoption of northern processes couldn’t be explained by material advantages, could it be understood as a mean of social distinction?

4 Heavy cutting fan-shaped tools and flat pointed tools found in these industries from PPNB are very similar to objects found in the south during PPNA and even during the Natufian (Stordeur, 1988a, 1992, and 1994; Le Dosseur, 2006). Flint choppers, basketry works and persisting round houses found on some PPNB sites (Jericho, Beidha…) are also typical of what was done in the south during PPNA (Cauvin, 1997).

5 Some of the northern characteristics that were found in the south during PPNB existed in the north as early as PPNA.
The hypothesis that populations from the south borrowed objects and techniques from northerners without the latter’s necessarily settling in the south during PPNB could be supported by the fact that in the south, new technical habits appeared gradually rather than abruptly. For example, during the Natufian, people from the south primarily used proximal ends of metapodials to make awls; they then tended to use distal ends of metapodials and finally used the latter almost exclusively during PPNB (fig. 6).

Besides the similarities in the bone industries found in the Northern and in the Southern Levant, differences also exist. Despite the intensification of contacts within the Levant, some objects and technical processes did not reach the south (sectioned bones used as cutting tools, (fig. 5: a); needles of Mureybet, (fig. 4: b)) while others were not used in the north (fan-shaped cutting tools (fig. 5: c); flat pointed tools, (fig. 5: d, e); rings, (fig. 5: b)). Either migrant populations didn’t want or didn’t need to
reproduce all their equipment in a new environment, either populations in contact with foreign elements were not able to adopt them or didn’t need to do so for economical, technical, social, symbolical reasons.….

Fig. 6: In the Southern Levant, the new choice of using distal ends of metapodials to make awls appears gradually.

Conclusion

The study of bone industries in the Levant sheds light on exchanges of objects and techniques from one region to another during PPNB. These bone industries – like many others – illustrate the relations developed and sustained between the populations at this time in this area. Bone industries, however, are very inconspicuous: related to everyday life and to the domestic sphere, the bone industry is not one of those rare and prestigious productions that usually spread in a visible way during intensified exchanges. However, thanks to the few identified exchanges from the north to the south, was it possible to clarify the kind of relations between people in the Levant during PPNB?

Northern elements introduced in the south were usually modified in the new environment. In addition, these elements appeared in a general context often strongly connected to past traditions from the south. It can’t be excluded that northern people settled in the south, binging new elements with them and mixing with southern people, some time before modifications became noticeable. However, unless we find the sites where northern people settled before modification and mixing took place, another hypothesis should be favored. According to this second hypothesis, the populations that had long lived in the south adopted and adapted northern characteristics which probably spread thanks to intensified contacts and exchanges during PPNB.

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agriculteurs éleveurs au Levant Sud» directed by F. Valla (CNRS, UMR 7041), H. Khalaily (IAA), and F. Bocquentin (CNRS, UMR 7041). gledosseur@hotmail.com

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