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MANUFACTURING TECHNIQUES OF CHIBCHA SPINDLE WHORLS

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The Chibcha of northern South America are known to Americanists primarily for their high level of political organisation. Before their conquest by the Spanish and subsequent acculturation during the late sixteenth and early seventeenth centuries, the Chibcha militarily dominated much of the eastern cordillera of the Andes in what is today Colombia. Through their control of valuable salt sources on the Sabana de Bogotá, they were also involved in far-reaching trade networks. Unfortunately, the Chibcha left very little archaeological evidence suggestive of their relatively great political developments. This is due to the fact that their settlements mostly consisted of hamlets and dispersed homesteads and their method of construction only rarely utilised stone or other relatively durable materials.

Archaeological sites in Chibcha territory typically are middens of 1–2 metres depth compactly laden with pot sherds, simple manos and metates, crudely flaked stone scrapers, burins and drills, attractive ground and polished stone spindle whorls, and small gold and copper alloy ornaments. Not surprisingly, the metallic artefacts have had the widest archaeological interest (Heller 1971). However, Broadbent (1969, ms 1) has recently begun an extensive ceramic analysis in Chibcha territory which has already provided valuable chronological data. Chibcha spindle whorls have attracted very little attention to date. They occasionally appear as illustrations in books dealing with Colombian archaeology such as Reichel-Dolmatoff's (1965: 166) fine summary. Broadbent (ms 2) has also taken notes on spindle whorls in the Museo Nacional de Colombia (Bogotá). The present report is intended to provide data concerning diagnostic Chibcha spindle whorls. First, a commonly encountered type will be briefly described. Second, probable manufacturing stages of this type as reconstructed from archaeological examples will be suggested.

Chibcha spindle whorls were most frequently made from a high grade of grey to black slate. They are found in a wide variety of shapes from flat cones to spheres or plummets (fig. 1). In diameter they range from c. 2 to 5 cm. Their surfaces are quite often decorated with incised designs usually forming geometric patterns of straight and curled lines and triangular or square cross-hatched areas. More rarely, the patterns also include shield-shaped faces and zoomorphic figures. It is generally assumed on the basis of historical descriptions and ethnographic analogy that these whorls were intended to be used in the production of mainly cotton fibre thread for weaving textiles (Kroeber 1946, 899–901).

Perhaps the most common type of spindle whorl found in Chibcha territory has the form of a comparatively flat disc with one side slightly concave or flat and the *Man* (N.S.) 9, 480–484.

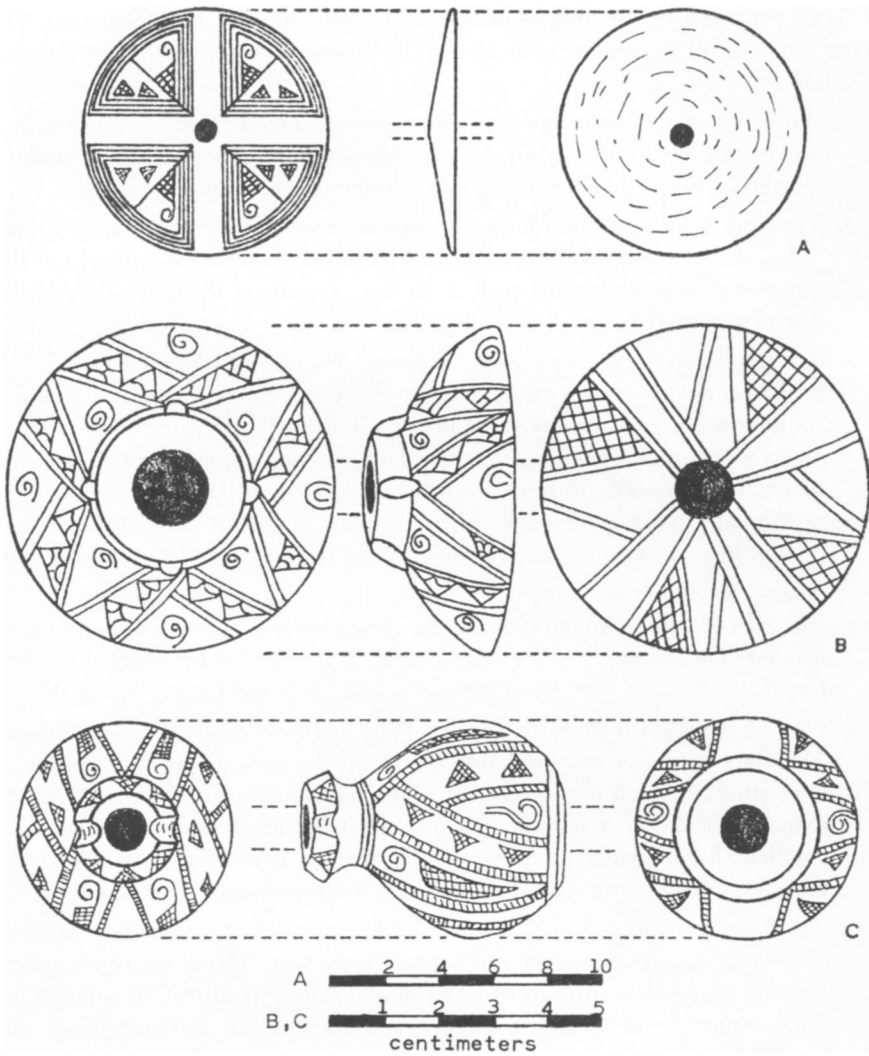


FIGURE 1.

other convex (fig. 1a). These whorls have single, conically drilled, central holes for inserting the staff. Incised decorative patterns may be present on the flat side or, more rarely, on both sides (O'Neill 1972: 107). This type of spindle whorl corresponds to Broadbent's (ms 2) type 5 (i.e., flat cone).

During the author's 1970 excavation of the San Jorge site, near Suba on the Sabana de Bogotá, seventy-six fragmentary specimens of this flat type of whorl were uncovered. All but eight of these appeared to have been discarded at an unfinished stage of manufacture due to irregularities of the material or breakage. This collection has provided a golden opportunity to discover by induction the probable techniques employed in manufacture. In addition to providing insights into Chibcha technology, these data will be of use to field archaeologists in interpreting similar finds.

Based primarily on an analysis of flake scars and abrasions, the seventy-six San Jorge site specimens appear to represent nine manufacturing stages as follows (O'Neil 1972: 110-15):

1. *A crude disc-shaped flake considerably larger than the finished product is removed by a heavy percussion blow to a cubical slate nodule along its fracture plane.* The slightly weathered original cortex may show on one side (one specimen; fig. 2.1).
2. *The edges of the unmodified flake are trimmed by moderately heavy blows until the desired diameter and roundness of the disc are achieved.* Blows are struck on the non-cortex side so that the large flake scars appear on the cortex side at the disc perimeter (two specimens; fig. 2-2).
3. *The jagged edges of the disc are smoothed and further rounded by grinding.* Parallel, straight scratches appear on the edge in this stage, suggesting that a granular abrading stone was employed mainly in a back and forth rather than circular or erratic motion. The easiest method would have been to move the disc manually back and forth across a stationary abrading surface such as a boulder, occasionally rotating the disc. The beginning slope for the convex side is present in every case on the abraded areas of the edges (eight specimens; fig. 2-3).
4. *The sides of the disc are smoothed by the same process as in stage 3 until they are relatively flat and parallel planes.* Little work is required in this stage since slate fractures normally along near parallel planes (two specimens; fig. 2-4).
5. *One side of the disc is ground to a concave shape and the other side to a convex shape.* The convex surface was probably shaped in the same manner as in stage 3 since similar scratch patterns are present. The concave surface was probably shaped in a different fashion. Since its scratches are deeper and no longer parallel, a hard, pointed gouging tool may be indicated. Any small rock harder than slate would have served the purpose (two specimens¹; fig. 2-5).
6. *The dome top of the convex side is removed by percussion.* Accidental destruction of the artefact was common at this precarious stage. The dome top removal may be intended as a means of providing a drilling platform. In some cases, dome removal was not necessary. Thin intermediate (i.e., between dome and base) flakes were common by-products (twenty-three specimens; fig. 2-6).
7. *A central hole is drilled conically through the disc from either side.* Considerable destruction was common at this stage also. Probably a stone drill was employed. Functionally, the spindle whorl is finished after stage 7 since all remaining work only improves the attractiveness of the piece (four specimens; fig. 2-7).
8. *The disc is carefully ground to a symmetrical shape and then smoothed and polished on its concave surface until all scratches are removed.* The scratch patterns on the convex side are more or less parallel, circling the disc as if the disc were held concave side down and slowly rotated on a stationary abrading stone. On the concave surface, scratches become increasingly short, narrow, shallow and more intersecting as if a small abrading stone had been rubbed back and forth carefully in small strokes. The convex surface is slightly polished in one specimen also (two specimens; fig. 2-8).

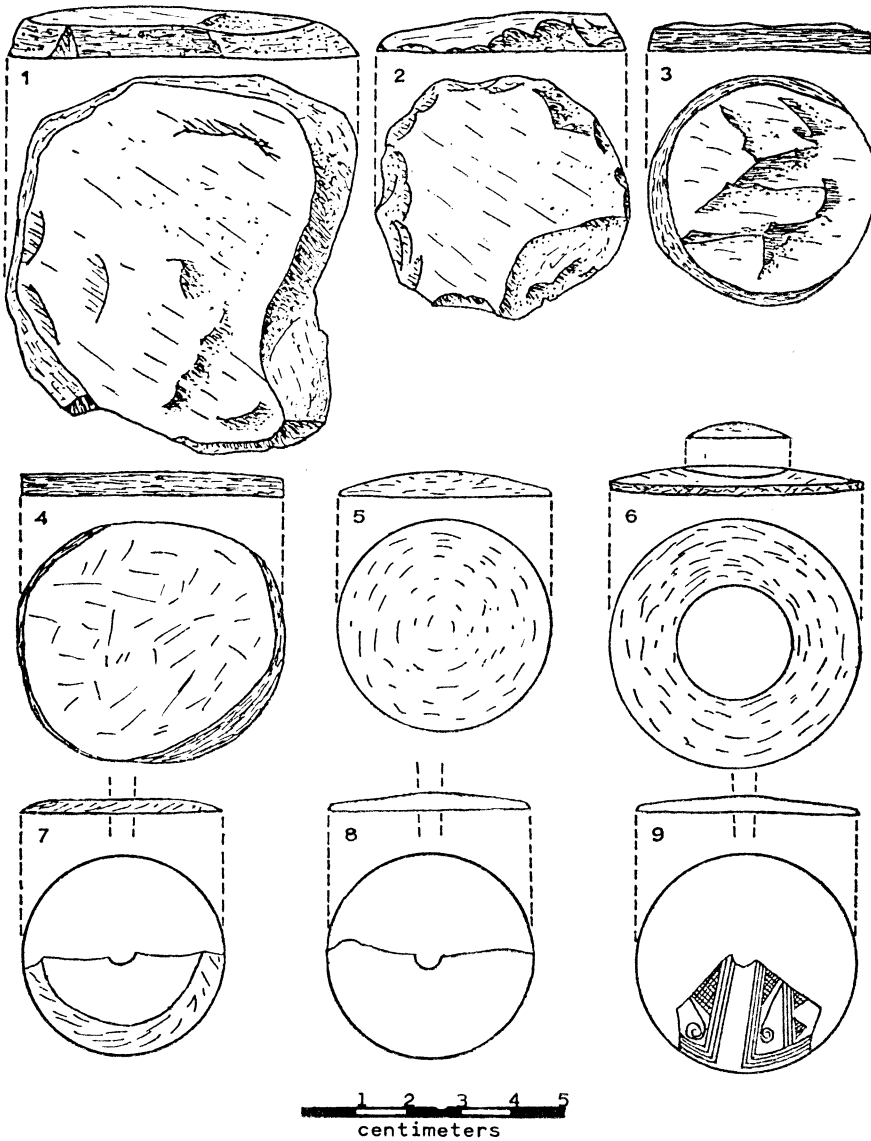


FIGURE 2.

9. Finally, the concave and more rarely the convex sides are incised in fine line geometric designs over their entire surfaces. A very hard, sharp instrument must have been employed in this stage (eight specimens; fig. 2-9).

On a re-examination of the San Jorge assemblage, it was found that the types of specialised tools required for the suggested manufacturing process were indeed present. There were three small chicken egg shaped sandstone cobbles each with up to four slick zones formed through abrasion. These could have more than adequately served as precision abrading tools. Second, there was a large quartz crystal fragment with one end flaked into a chisel tip 0.8 cm wide. This working edge

could have been used to perform the operations requiring gouging and incising in stages 5 and 9. The Sabana de Bogotá is not a locale where quartz is found. Therefore, the San Jorge crystal must have been brought a considerable distance for the purpose. Finally, there were two chert drill points of a size and shape capable of making the necessary holes in the whorls.

It is apparent from this brief look at selected aspects of spindle whorls from Chibcha territory that their range of forms and stages is far greater than most archaeologists realise. This general misconception is no doubt mainly due to the fact that such artefacts have not heretofore been subject to the same degree of scrutiny that ceramic and metallic artefacts have. The archaeological potential of spindle whorls as temporal and spatial diagnostic markers in northwest South America is yet unrecognised. However, the variety of forms and decorative motifs are tantalisingly suggestive. Now that the chronological and geographical relationship of ceramic wares from the Sabana de Bogotá is better understood, we have the opportunity to anchor spindle whorls in relative time and space. The answers that we seek could be revealed through systematic excavation over the next decade.

NOTE

- ¹ Twenty-four fragmentary specimens could be identified only as being stages 5 to 7.

REFERENCES

- Broadbent, Sylvia M. 1969. Prehistoric chronology in the Sabana de Bogotá. *Kroeber anthrop. Soc. Pap.* 38-51.
 ——— ms 1. Description of pottery types from Chibcha territory.
 ——— ms 2. Notes on non-pottery artifacts in the Museo Nacional, Bogotá.
 Heller, Joyce 1971. *Bibliografía de orfebrería prehispánica de Colombia* (Mus. del Oro Estud. 1). Bogotá: Banco de la Republica de Colombia.
 Kroeber, A. L. 1946. The Chibcha. In *Handbook of American Indians*, vol. 2 (ed.) Julian H. Steward. Washington: Smithsonian Institution.
 O'Neil, Dennis H. 1972. San Jorge, a Late Terraced site on the Sabana de Bogotá, Colombia. Thesis, University of California, Riverside.