
Techno-functional Analysis on the Lithic Tools from the Wolseong-dong Site in Daegu, South Korea

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Abstract

The excavation of the Wolseong-dong site in Daegu revealed a number of lithic tools made of hornfels and obsidian. Of these tools, this article selects 169 pieces of selected lithic tools for conducting use-wear analysis to identify such questions: What materials were these tools used on and how were they used?

In spite of the ratio of detected use-wear pattern is low, in the cases of poorly preserved hornfels tools, the wear patterns of the surfaces of end-scrapers, scrapers, and blades show that these tools were used for processing smooth animal materials, such as skin, while these of the surfaces of burins, micro-blades and burin spalls exhibit that these artifacts were used for processing harden animal materials, including bones and antlers. The use-wear analyses of obsidian tools suggest that most of these tools were used for processing harden animal materials. Notably, all analyzed obsidian burins were used for processing harden animal materials. In these tools, use-wear patterns can be observed various parts, which include cutting points and both edges. The locations of remained use-wear of obsidian burins exhibit the different functions of these tools, such as piercing, cutting, and scraping. It can be detected the pattern that the lower part of burin was attached to a handle made of bone or antler. In the cases of obsidian burin spalls, it can be observed the polished pattern that might be formed during the making tools, and re-used pattern of their edges. In addition, the surfaces of obsidian burin spalls show the complex patterns related to the function of these tools and the equipment of a handle. These patterns suggest that these tools had the same function with obsidian micro-blades, because the latter shows the identical pattern with the former. Particularly, obsidian micro-blades can be classified into blades and projectiles in accordance with their sizes.

Obsidian was less plentiful than those of hornfels, semi-processed materials, including blades and flakes, were brought into this site. These materials were made into various tools, such as burins produced by two methods, border debitage (Type I) and upper side debitage (Type II), burin spalls, and micro-blades. These facts suggest that the Paleolithic people made these obsidian tools with different strategy from hornfels tools.

Keywords: Use-wear Analysis, Technology, Function, Experimentation, Hornfels, Obsidian, Burin, Burin spall, Micro, blade

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