30). However, with the craze for Birmingham steel jewellery that had begun in 1760 at an end (F. Buckley, 1933, Old English Glass, *Glass* 10:322-323), the number of metal beadmakers began to decline and by mid-century they are no longer listed in the directories. During this same time period the number of glass-beadmakers remained relatively constant; bird's (and doll's?) eyes seem to have been one of their principal products.

Makers of gold and silver beads appear in the directories in the 1870s and are pretty well a constant thereafter. A manufacturer of steel beads appeared briefly in the directory listings in the 1890s, apparently prompting one of the precious metal beadmakers to announce that he could also provide beads of the base metals. Glass beads cease to be mentioned after 1895, suggesting that they were no longer being made or at least not in significant numbers.

Beads of gold, silver, and other metals were the principal products of the Birmingham bead industry in the present century although "crinoid and Galalith* beads and necklets" were apparently also produced around 1925 (*Kelly's Directory*, p. 1036). (*Galalith was a type of black casein plastic.) At least one manufacturer of gold and silver beads was still active in 1973 but has since apparently discontinued production.

While the directories reveal what materials were used to produce beads in Birmingham and when, they are mute when it comes to such questions as what specific types of beads were made, in what quantities, and where were they marketed? Can anyone provide the answers or help flesh out the aforegoing history?

38. SOME COMMENTS ON MULBERRY AND TWISTED SQUARE BEADS, by Karlis Karklins (1987, 11:12-14)

Despite years of research on Dutch beads, the answer to Peter's query, "mulberries and twisted squares—who made them?," remains a big question mark. Actually, both bead types have been found in and around Amsterdam in archaeological contexts that date to 1670-1750, and a few have been found in association with bead manufacturing waste. Unfortunately, it is waste derived from the production of drawn beads, not wound beads. Thus, there is no archaeological evidence for the manufacture of wound beads in Amsterdam. However, this does not necessarily mean that they were never made there; the archaeologist's trowel may yet unearth the evidence.

The fact that there is no record of a glass bead factory in The Netherlands during the 18th century is not relevant as the factories produced drawn beads; the wound mulberry and twisted square beads would have been the products of a cottage industry, with workers scattered all over Amsterdam or some other center. Neither does the absence of mulberry and twisted square beads at such North American Dutch sites as Fort Orange negate a Dutch origin for the beads. Holland ceded New Netherland to England in 1664 and the final Dutch occupation of Fort Orange was in 1674, just at the beginning of the temporal range for the bead types under discussion. In fact, twisted square beads are relatively common in archaeological contexts on the Caribbean island of St. Eustatius which the Dutch retained (personal observation).

Although the Dutch no longer governed New Netherland, they continued to live and trade there. There is solid historical evidence that the Dutch were also supplying beads to the English and French during 18th century (Karklins 1982:113), and it is highly likely that at least some of the beads described by Brain (1979) and Good (1972) were supplied by the Dutch. The question that arises here is: "Were the beads that came from Holland made there, or was Holland just a warehouse for the beads produced by other countries?" Unfortunately, this question will remain unanswerable until we have comparative material from 17th-19th-century bead-production sites elsewhere in Europe, especially Venice.

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39. BEADS FROM THE WRECK OF THE DUTCH EAST INDIAMAN *DE LIEFDE* (1711), by Karlis Karklins (1988, 12:11-17)

Introduction

In October of 1711, the Amsterdam chamber of the Dutch United East India Company or Vereenigde