The New Beadwork
by Kathlyn Moss and Alice Scherer
Published by Harry N. Abrams, Inc.

127 full-color photographs of the work of 80+ artists from the United States, Europe and Africa. Foreword by Lois Sherr Dubin, essay by Kathlyn Moss on contemporary beadwork, appendices on beadmaking technology and beadworking techniques, a glossary of terms used in the book, and selected lists of exhibitions, resources and publications.

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Bead Expo is a biennial event sponsored by the Center for Bead Research and Recursos de Santa Fe, nonprofit, educational organizations.
The New Beadwork.


It's hard to think of a better way to spend $24.95. To open this book, to browse through the pictures of the new beadwork, is to open a door into a magical new world. The familiar is transformed, mysterious, dangerous, breathtaking, whimsical. To see "in the flesh" Jeanne Leffingwell's Sky Curtain sweeping and shimmering across a huge architectural space is a compelling reason to visit Anchorage, Alaska. Her immense, complex beaded curtains banish forever the tawdry image of the bead curtain guarding the doorway to the back room. Through ornamentation and encrustation, Sherry Markovitz transforms animal heads into powerful totems, symbols of life beyond death. Jacqueline Lillie makes beads from beads, turning tiny beads into cool elegant jewelry while Pam Saporta makes her beaded beads in vibrant colors, recreating familiar bead designs. There are beaded paintings: Jimoh Buraimoh and his Bata Drummers, Susan Anniskett's Tidal Pool Bag: A Tribute to Prince William Sound, and Marcus Amerman's Trailing-the-Enemy and His Wife. There is whimsey in Sylvia Pomeroy's Frogs' OXO Tic-Tac-Toe Game Set and Setsu Ueno's wonderful miniature hats. There is anger and violence in Joyce J. Scott's The Sneek. These are just a few of the visual treasures that await you in this book. Can we see them for ourselves? In the discussions on beadwork in the context of modern art, the introductory essay provides some hope that we can. Several gallery and museum exhibitions held in the 1980s on the east and west coasts suggest that beadwork is beginning to move into mainstream art, in the way that quilts and other needle arts have done in the past 25 years. Jacqueline Lillie, for example, received a 1992 Rakow Commission from the Corning Museum of Glass.

What appeal lies in bits of glass, wood, stone, bone and plastic with holes in them? What do beads have to offer an artist or a crafts person? The introduction by Kathlyn Moss and the brief notes accompanying the color illustrations provide some hints from the artists on the appeal beadwork has for them. On the surface, the beads are uncompromising, their shape, size and color are unchangeable and almost always determined by someone else. And that someone else is often halfway around the world and may even be from another century. The artist must conform to the bead. The artist can also be inhibited by traditionalists accustomed to ethnographic and fashionable beadworking techniques and designs. In spite of these constraints, as the works illustrated in this book show, in the hands of an artist beads offer a versatility and richness that no other medium offers. Suspended on thread they hang in the air, moving with the breeze. Resting against a body they follow the body's motions, like Flora Book's Birds I or Margot Marcotte's Power Vision Shirt, or the fringed jewelry. Beads can be sewn onto a backing, to carry or wear whenever you want. They can be woven into a solid self-supporting mass, they can be stitch around objects. Gretchen Newmark's Snake—beads wrapped around a stick of wood—has changed my view of driftwood bits forever. One of the few traditional techniques missing from the book is wirework. It would be fun to see what some of these artists would do with beaded bouquets or beaded baskets.

The best beads work together en masse and the ones chosen by most of the artists whose works appear in this book are glass seed beads. Mass produced, they come in a wide range of colors and sizes and are relatively controlled in size. Older beads can be reused, adding to the repertoire available from modern manufacturers. As a material, glass offers a complex relationship with light, from transparency to translucency to opacity. Juxtaposing these qualities against one another, as in Collaboration's Blue Sky Kimono or Carlos Cobos' embroideries, gives richness and depth to the beadwork. These light relationships change as the bead or the viewer moves.
Straight on the beads glow, taking the eye into the object. On a sharp angle the same beads take on a mass glitter, like sunlight on water.

Beadwork is not fast; it is the slow and patient building of many small objects to make a large object. Some of the artists compare it to meditating. Beadwork is also time-consuming because it is so hard to get materials. Finding the right color and the right size in the quantities needed can be as difficult as making the finished piece. Beadworkers do not have the service they need from bead manufacturers. Modern colors are strident and seldom come in the shade variations we need. Where in the local craft stores are hanks of beads in the subtle colors offered by DMC embroidery floss? Instead we are offered pricey little packages of beads in miserly quantities in too large sizes and nasty colors. As some of the artists commented, the collecting of beads was a long-standing personal passion. Acquiring beads is itself a quest: the secret supplier, the bead cards from the mail order company, the furtive guilty robbing of older pieces, the happy accident. Where, for example, did Sherry Hart find the subtle shadings she needed for the snakes in *In Light and Mint* or Virginia Blakelock the beads for her incredible *Daphnis Nerii*? Certainly not overnight or on one shopping trip to New York.

*The New Beadwork* offers more than pictures of artists' work. It challenges anyone working with beads to stretch their imagination and their traditional ways of working and thinking. The book offers inspiration for the simple and the complex, for elegant and chaotic, for inspired traditional and excitingly innovative bead art. The appendices comment on the modern bead industry and provide clear illustrations of basic beadwork techniques. There is a glossary, a bibliography and a list of addresses of bead societies and bead suppliers. My own personal challenge is to attempt a bowl, like Jeannine Goreski's *Red Bowl*, and to try my own version of Connie Wyatt's *Winter Dreams: A Trilogy*, small curtain-fringes hanging in a three-part screen. After looking through this book, all other bead books currently on the market are banal and stultifying.

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*Trade Ornament Usage Among the Native Peoples of Canada: A Source Book.*


The use of trade ornaments among Native Peoples is a well-established fact. However, the extent, ingenuity, cultural preferences, popularity, and social and ceremonial uses of such ornaments are less well known. Karklins attempts to remedy this situation by extensively studying journal accounts, photographs, paintings, ethnographic reports, ethnographical specimens and archaeological information, and evaluating and compiling these data into one source book. The result constitutes a work both informative and readable, thereby extending its prospective audience beyond the academic or interested researcher.

The book begins with an introduction discussing the sources, their biases, and the arrangement of the material chronologically by tribe as defined by Diamond Jenness. Each of the seven identified cultural regions merits a chapter, beginning with the Eastern Woodlands and progressing west and north. Chapter eight acts as a summary with no formal analysis or interpretation.

Each chapter follows a similar format. First the cultural area is defined geographically along with a brief discussion of the cultural and linguistic groups within the area. Depending on the information available and the similarity in trade ornament usage among a number of the tribes, a few are discussed further in detail. For each group, Karklins begins with the earliest known contact or access to European trade goods and chronologically documents the uses, preferences and changes in trade ornament usage into the early 20th century. While the firsthand descriptive accounts provide accuracy and historical flavor, the inclusion of numerous illustrations of people and objects helps depict practices which are difficult to visualize or create by words alone. A table at the end of each chapter provides a quick reference by listing the various ornaments employed by individual tribes on gender and age criteria.

In this study, trade ornaments include not only items directly or indirectly obtained from white
traders, but also gifts from explorers and missionaries, government annuities, items sold in stores, and native-made ornaments fashioned from non-indigenous materials (e.g., bracelets fashioned from brass kettles) and unique items of non-native origin (e.g., pocket watches). As Karklins notes, all these items played an important part in Native adornment. It becomes readily apparent that three groups of trade ornaments — shells, metal items, and glass beads — were favored to varying degrees through time by the Indians to adorn themselves and their belongings.

Shell usage as a decorative item continued from precontact times. Three types of shells — wampum primarily in the east, dentalia west of the Great Lakes, and *Haliotis* (abalone) on the West Coast — were sought after for necklaces, collars, bracelets, belts, ear and hair ornaments, garment decoration and, in the case of *Haliotis*, for inlay work in wood, ivory and horn. In the first half of the 19th century, the Pacific Coast and Cordillera-Plateau Indians employed commercially produced mother-of-pearl buttons to elaborately decorate blankets used as capes or cloaks.

Copper/brass ornaments had the greatest appeal, even though silver became popular around 1750. However, around 1830, the trading companies withdrew silver ornaments from the market because they were too expensive. The standard metal items included finger rings, buttons, bells, thimbles, tinkling cones and variously shaped pendants. Except for the finger rings, these served multiple purposes, being affixed to ears, hair, clothing and sundry items. Based on personal preference or restricted availability of other ornaments, metal items such as awls, nails, bottle labels, fishhooks, and musket side plates also served as personal adornments. One advantage of metal ornaments was that the Native Peoples could produce their own from broken hardware, kettles, wire and sheet metal.

Despite the popularity of shell and metal ornaments, glass beads had not only the broadest appeal and impact, but also the greatest number of decorative applications. Large beads were fashioned into necklaces, pendants or lip ornaments (labrets), while small "embroidery" or "seed" beads served a variety of decorative needs. The latter beads were formed into earbobs, necklaces, bracelets, hair garnitures, or were sewn, wrapped around or suspended from garments or other articles, or were woven into sashes and decorative bands. All groups incorporated these beads into their material culture — some more so than others. The popularity of "seed" beads, the intricate embroidery designs, and the aesthetic impressions of the different cultural groups becomes clearly evident in the book’s accounts and many illustrations.

Beyond decorating garments or individuals, beads were also used for inlay work in wood and pottery, for eyes in ceremonial or human effigy dolls and zoomorphic fishing lures, and as decorative fill in birchbark bitings.

This book clearly demonstrates the importance of various trade ornaments among the different Native groups across Canada, and the speed with which European goods were incorporated into their existing culture. In certain instances these goods entered tribes prone to ornamenting their person whereas other groups possessed little personal adornment — a situation soon modified by the arrival and availability of trade ornaments. The use of these ornaments often reflected status, gender or age differences, and at times served as currency. However, material culture is not static and Karklins’ chronological presentation shows the development of unique cultural expressions based on the combination of Native and European elements.

Although the book is confined to Native groups in Canada, the homelands of many extended into the United States. This book should appeal to anyone interested in inter-cultural contact or the cultural expression of people through their material culture.

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*Bijoux berbères d’Algérie.*


H. Camps-Fabrer, Research Director at the National Center for Scientific Research (CNRS) in
France, is a specialist in North African adornment from prehistoric times to the present. In this, her newest publication, the author presents a comparative study of ethnic jewelry from two distinct regions of Algeria: Aures and Grande Kabylie. Both are rural, isolated, mountainous and inhabited by Berber-speaking people.

Camps-Fabrer begins by situating these two areas geographically. She goes on to describe the jewelry makers, the different techniques, how the jewelry is assembled, and how it is worn. She then describes the evolution of enameled jewelry in the Maghreb. Throughout, the text is clear, understandable and accurate.

Despite the fact that this jewelry is well known and easily recognized, its provenience and fabrication methods are not. The pieces from the Aures are either molded or cut and styled with fretwork and embellished with a profusion of silver chains. Cabochons are almost always composed of colored glass; rarely red coral.

Jewelry from the Grande Kabylie is more sumptuous, made up of decorated and enameled silver pieces. Filigree work frames the blue, yellow and green enameled areas at the center of which are set red coral cabochons. The Grande Kabylie is one of the most important centers of enameled jewelry in the Maghreb. However, contrary to Tunisia and Morocco where Jewish artisans traditionally controlled the trade, the jewelry makers of the Grande Kabylie are Muslims. In fact, it was in the 19th century that the principal Kabyle tribes involved in jewelry making inexorably forbade access to their territory in order to preserve the secrets of their techniques from Jewish jewelers.

Camps-Fabrer offers a series of photographs (pp. 32-38) which precisely illustrate the fabrication of a Kabyle earring made of enameled silver with a red coral cabochon.

The excellent color photographs, the remarkable illustrations that complement them with greater detail and the historical photographs that appear throughout the book amply demonstrate how the jewelry was worn. Spectacular examples of diadems, jugulaires (silver chains attached to the hair on either side of the head and hanging just under the chin), earrings, necklaces, belts, bracelets, fibulae and anklets illustrate Camps-Fabrer’s work.

Kabyle necklaces (pp. 93-100) are particularly interesting because of the diverse ways in which they are assembled using numerous enameled pendants based on different traditional forms (p. 45) attached to silver chainwork often accompanied by red coral and silver beads. Enameled silver amulet boxes also occasionally appear in these assemblages, as do perforated silver coins.

Very long necklaces also exist, made up of perfumed paste beads, red coral beads and enameled silver elements and beads (p. 100). Silver beads, whether they are enameled or not, are also used as interposing elements on chains joined to fibulae. Red coral, once having been found in profusion along the Algerian coast, is formed into tubular beads, some of them quite massive. Perfumed paste beads are pyramidal in form and made by women from crushed odoriferous seeds, clove spikes, saffron, musk and gum benzoin (p. 99). Scented paste necklaces are reputed to have aphrodisiac properties and were worn only by certain women. Today, Kabyle women no longer wear them, as they have fallen out of style. In the Aures, where there are no enameled elements, multi-stranded necklaces using scented, coral and silver beads are still worn.

Camps-Fabrer ends with the origins and evolution of the jewelry made in the two Algerian regions. In the Grande Kabylie, the old, traditional, massive silver elements have become extremely rare. Many of these pieces have been melted down in order to recuperate the silver and make new elements that are currently popular. Kabyle jewelry production now focuses on miniaturized versions of the traditional models and is thus oriented toward the creation of small elements and jewelry. Only necklaces made up of small, round, enameled silver beads are reminiscent of those that served to interpose fibulae suspended on silver chains in the past. Besides the fact that the older traditional jewelry is no longer in style, jewelry makers are also restricted by the limitation imposed on them by the Algerian government of being able to acquire a maximum of only one kilogram of silver per month.
It is clear from this comparative study that the origins of jewelry-making methods are distinctly different between the two regions. Those in the Aurès derive from antique and protohistoric techniques, whereas those from the Grande Kabylie are supposed to be of Andalusian origin, brought to North Africa by Jewish and Moorish artisans expelled from Spain after the fall of the Kingdom of Granada in the 15th century.

H. Camps-Fabrer’s book demonstrates how well grounded she is in her subject. Nothing is left to chance, and her information is precise and clearly presented. The bibliography is complete, and all photographs and illustrations are informative and impressive at the same time. This book truly represents the work of a professional researcher. Its contents are such that they merit the interest not only of researchers, but also of collectors and of those who enjoy quality art books. Written in French, the text finally corrects a certain amount of error and confusion previously written about the subject, especially the notion that this jewelry is of Moroccan origin. Lois Sherr Dubin, in The History of Beads (1987: 149, no. 146), does not hesitate to locate the “town of Kabylia” in southern Morocco, where Jewish artisans make enameled jewelry. In fact, there is not now and never has been a town called Kabylia in this or any other region of the Maghreb. Kabyle enamel work, as we have already seen, is made by Muslim and not Jewish craftsmen. Dubin is probably referring to the town of Tiznit in southeastern Morocco.

Robert K. Liu, in his short critique of Camps-Fabrer’s book in Ornament (1992, Vol. 15, No. 4, p. 84), is ambiguous and leads one to believe that the massive enameled Kabyle jewelry is also made in the Aurès. Enameling techniques are unknown there. Liu also infers that this type of jewelry is made “in a very similar form by the Berbers of adjoining Morocco,” which is inaccurate. The production of traditional enameled jewelry in Morocco is practically non-existent since the departure of Jewish silversmiths earlier in this century. Also, even though the technique of cloisonné enameling may be similar, the forms, colors (yellow and green from Tiznit) and assemblages are quite different. Red coral is not used in Moroccan enamel work, being replaced by variously colored glass.

One interesting aspect not mentioned by Camps-Fabrer concerns the current existence of an enormous production of imitation Kabyle-style enameled jewelry in Morocco. White metal is used instead of silver, making these pieces relatively inexpensive. Red coral is replaced by cheap porcelain beads. These imitations are mass produced with an emphasis on quantity rather than quality. The relatively poor craftsmanship and use of poor quality materials distinguish them from real Kabyle jewelry. This extensive production is centered in Marrakech, and is destined for the tourist trade. The Moroccan imitations are often sold erroneously as real Kabyle jewelry to an unsuspecting foreign clientele.

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Glass has long been the most important material for making beads. This book, while discussing beads only casually, has a wealth of information on the early history of glass, which is essential to an understanding of the history of glass beads.

The book can be read on at least two levels. For those not familiar with research into glass history, it is an instructive introduction to this subject. For those already acquainted with the basics of glass history, the focus of interest will be the case that Kurinsky makes concerning the nature of glassmakers in the formative period.

Kurinsky alerts his readers from the outset to his major tenets. He begins by saying that glassmaking is an extremely complex operation and as such was invented only once, unlike many other human innovations (p. xiii). For glassmaking and the production of glass objects to spread, therefore, he postulates that the inventors of this admirable material kept the secrets of their art to themselves and passed it down only to their descendants. The people
he identifies as having done this are the Jews, and he makes no apology for this book being a frank protagonist of that position (p. xiv).

His Introduction sets up the cultural climate of Judaism. He rightly asserts that there is considerable intellectual freedom within the religion, widespread literacy among its practitioners, and no doctrinal fear of or repulsion from hard work or artistic achievement. God is seen as the principal artificer, and, as the stewards of God, humans also create from the raw materials at hand.

In Chapter 1 Kurinsky argues that the origin of glass is to be found in Mesopotamia (modern Iraq). To do this, he expends considerable energy disputing the now-discredited theory that glass was an Egyptian invention. Although no glass historian today defends this hypothesis, it is still with us in much of the popular literature. Moreover, the persistence of academic certitude which the debate reveals is instructive.

Chapter 2 discusses the complex steps needed to make glass and the relationship between glass and glaze. Readers not familiar with this technology may be surprised to learn that several steps are usually required to form glass. The raw ingredients do not immediately produce it upon heating, but only make frit which must be broken up and reheated with some preexisting glass in order to make new glass.

The next three chapters are concerned with glassmaking in Egypt and Canaan/Israel. The Hyksos of Canaan are identified as the carriers of glassmaking to Egypt. The valid point is made that glassmaking requires considerable fuel in the form of wood, and Egypt had rather little wood. Canaan/Israel is seen as an exporter of raw glass, Kurinsky citing the cargo of a ship sunk during the 13th-14th century B.C. The emergence of the Israeli state is traced, with ample indication that the Israelites had iron technology. This is relevant because glassmakers and iron smelters have similar needs in the form of the furnaces used.

Chapter 6 is largely based on historical documentation, with a discussion of the Jews' role within the Roman Empire. The Romans and Greeks did not take well to heavy work, leaving that in the hands of slaves, including Jews. An edict of Diocletian mentioned the glass of Judea and of Alexandria. Kurinsky contends that glassmaking in both centers was in the hands of Jews.

Chapter 7 is one of the more interesting parts of the book. Kurinsky relates his experiences during a tour of Israel, particularly visiting the inland mountainous region. There he surveyed many sites which have evidence of glassmaking in the form of frit and other imperfect glass, as well as evidence of glassworking. The author makes the valuable distinction between the making of glass and the making of objects from glass, though the standard term "glassworking" is better than his "glassware-making," as the latter only refers to certain end products.

The sites he discusses are impressive, and they demand more scientific archaeological work. His thesis is that glass was produced inland in the forested mountains by Jews and exported (and perhaps worked) by the coastal dwellers, the Canaanites. Kurinsky prefers the term Canaanite to Phoenician, with which we are perhaps more familiar as the name of the people long considered the great ancient glassmakers.

The remaining chapters are devoted to the spread of glassmaking elsewhere. Chapter 8 covers Asia, particularly China and India. The vector that Kurinsky identifies for spreading glassmaking is again the Jews, this time following mercantile routes. Chapter 9 covers the introduction of glassmaking to Persia by the same means, and presents further remarks on India.

Chapter 10 sees the spread of glassmaking into the Caucasus, Russia and Eastern Europe. This is identified with the conversion of the court of the Khazars to Judaism. The Khazars, a fairly peaceful people who flourished on trade, migrated from Central Asia to settle the region between the Black and Caspian seas. They were socially tolerant, and considered important allies by Byzantium.

The final chapter is concerned with glassmaking in Byzantium, the eastern remnant of the Roman Empire. Following the fall of its capital, Constantinople, Jewish glassmakers are traced into Europe and, of special interest to us, into Venice.

Kurinsky has amassed a great deal of data to demonstrate his contention that glassmaking was a Semitic invention and virtually always in the hands of the group that gave rise to the nation of Israel. His purview is truly global, covering nearly the whole world. He draws upon several lines of evidence:
history, archaeology, glass technology and linguistics.

But, is his central thesis correct? Since it is virtually impossible to attach ethnic origins to archaeological materials, and since historical materials are scanty — suppressed or otherwise — we must look at the arguments that Kurinsky puts forward.

He begins by asserting that glass was invented only once in Mesopotamia. This may or may not have been so. There is at least as good a case to be made for glass having been invented and developed by the non-Semitic Hurrians to the north in the Caucasus region. Kurinsky mentions them in conjunction with the advanced furnaces they built, but regards the invention as taking place to the south. However, others disagree. Engle (1973) has long been a proponent of the Hurrian origin of glass, though she equates later developments with the Jews. Recent excavations in the old Hurrian homeland (McGovern, Fleming and Swann 1991) have strengthened this idea. The importance of glass at the ancient city of Nuzi, which Kurinsky (pp. 18-23, etc.) stresses, also lends weight, for Nuzi was a Mitanni; i.e., a Hurrian city, not a Semitic one.

The idea that glass was invented only once is a statement of belief, not of fact. Independent glass production, using local raw materials and producing glass which differs from other types, apparently happened several times. Glass was made in Europe, perhaps first in the region of Switzerland or northern Italy, as early as the 13th century B.C. (Henderson 1988a, b). This glass differs from that of the Middle East, and though its production may have been inspired by imported beads, nothing suggests Jewish glassmakers in that area at the time. Glass production is also much older in Asia than Kurinsky indicates. The earliest glass in China, of the distinctive lead-barium type, dates to the 11th century B.C. (Yang 1985: 16). In India, the origins of glass are now dated to at least as early as 1000 B.C. (Francis 1984).

While glassmaking is not especially easy, it is not quite as difficult as Kurinsky would have us believe. Experiments have shown that glass could be made in furnaces similar to Roman pottery kilns, even without forced drafts (Brill 1963: 127-8). The raw materials of glass will melt over a wide range of temperatures, depending upon the precise mixture used (Morey 1936). The mastering of pottery making, glazing and/or metallurgy could have lead to glassmaking.

One other important element in the process of the invention of glass is overlooked by Kurinsky: faience production. Faience is similar to glass, with the same ingredients of silica (sand) and an alkali and coloring matter. It is unlike glass in that the sand particles do not completely melt with the help of the alkali, but only at their surfaces, where they touch (this is called sintering). The alkali on the surface of a faience bead or other object does melt the silica and a glaze or thin layer of true glass is formed. Faience production was widespread in the ancient world, and has been documented at places like Scotland and Hungary, Crete and India, as well as Egypt and Mesopotamia. Faience production very likely lead to glassmaking in some cases; Henderson (1988a: 436-8) suggests that happened in Bronze Age Europe. I believe that such a development took place in northern India as well.

Even so, what of Kurinsky’s evidence for the spread of glassmaking through Europe and the Middle East? Could he be correct about the Jewish role in these cases? In some, he certainly is. In others, perhaps not. Much of his documentation is circumstantial. He can point to scraps of evidence, but they do not necessarily add up to the conclusions he draws. Just by showing that some glassmakers were Jews or that there were Jews living in a place where glass was made is not enough to establish conclusively that all glassmakers were Jews.

In some particulars, his assertions do not bear scrutiny. Glassmaking in China and India has already been mentioned; the evidence that Kurinsky cites is outdated. The claim of the newly converted Jewish Khazars bringing glassmaking to the Caucasus, Russia and Eastern Europe is undermined by the existence of glassmaking houses in these areas prior to the conversion of the Khazars around A.D. 740. Glassmaking existed in Armenia, Georgia and the Ukraine before this time (Bezborodov and Zadneprovsky 1965: 128, 133).

One may also take exception to some other lines of Kurinsky’s arguments. On several occasions he asserts that because a given language has no special word for glass, the people who spoke the language did not make glass. This is spurious. For one thing, the histories of some of the languages he cites are not well known. For another, we do not always know what
words may have been used for glass. The Chinese, for example, were making glass for a thousand years before the first record of their name for glass appears. Moreover, a special word is not necessary. There are languages spoken by many people with no special word for “bead” (“pearl” being the most common substitution), but there are beadmakers among them, some producing beads for centuries (the Italians, for example) and some for millennia (such as Indians).

There are also minor points which are not fatal, but throw doubt on various arguments. Glaze and glazed pots are said to date to 6000 and 4000 B.C. in Mesopotamia (pp. 42-3), some 1500 years too early. Claiming that socketed tool heads (those with a hole to insert the handle) were “virtually unknown outside of Canaan and Mesopotamia” in the 14th century B.C. (p. 86) ignores the earliest such tool recorded, from Non Nok Tha in Thailand which dates to before 3000 B.C. (Solheim 1972: 8). I also find the high estimate of 8,000,000 Jews in the Roman Empire hard to believe (p. 150), nor is a reference cited. In 1800, they were estimated at only about 2.5 million in the whole world (Loewe 1942: 62).

Finally, though this is a handsome volume, it lacks many editorial and scholarly refinements. Illustrations are not numbered, nor is a list of them provided. The index is long but don’t bother looking for “bead,” though they are mentioned all through the book; there is not even a cross reference to “eye bead.” The index would have been made much more useful by having subentries to major entries that have many page references.

In some cases, material is discussed but not referenced. For example, the documents of the Cairo Geniza are noted twice and conclusions drawn from them (pp. 272, 279), but no footnotes are used in the text. The pioneering work of S.D. Goitein on this material, consisting of numerous articles and several volumes, is never mentioned, even in the bibliography. Though these documents, many of which deal with glassmaking and trade, concern a period somewhat later than the scope of the book, their use to bolster arguments calls for citations.

The worst offender is the slipshod bibliography. The translations or editions of classical works are not cited. Some titles have languages inappropriately mixed. Journal articles are never furnished with page numbers. Often no publishers are listed, sometimes no dates, sometimes both are omitted, and in a few cases even titles are absent. Whole journals, encyclopedias or collected works are cited without any further indication of more precise sources.

Given these misgivings and correctives, does this mean the book under review has no worth? Not at all. It is, in fact, a valuable and important addition to our understanding of the history of glass and glass beads. Bead research does not stop with the beads. A bead can be admired on the aesthetic level, it can be superficially valued for its presumed age or intrinsic price, but bead research goes beyond these concerns.

Bead research is humanistic. It seeks to understand the motives, lives and actions of the people who made, moved and used beads. This is precisely what this book is all about. It attempts to uncover the social history of the most important bead material, though it is admittedly prejudiced in favor of a particular point of view.

Certainly, the children of Israel have been glassmakers for a long time in many places. Even if it can never be proved that they invented glass, and even if it is demonstrated that not all glassmaking traditions can be traced to them, their contribution has been tremendous. This was clear even before Kurinsky’s book from the work of various scholars and documents well known to specialists, such as those of the Cairo Geniza. But to Kurinsky goes the prize for stating the case most forcefully and eloquently.

Hence, even if the book is not correct in all details, there is much to be gained from it. It should serve as a treasure house of information for a long time to come. More importantly, it is provocative. It will confirm its worth if it inspires further investigation into the questions it asks. Even though it may not be provable that all glassmakers descended from Mesopotamian Semites who eventually became part of the House of David, it certainly serves as a reminder that Jews have played a central role in the development of this wondrous material.

A second work has already been promised and will explore the development of glass from more recent centuries. It is eagerly awaited.
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Solheim, Wilhelm

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This attractive and well-constructed book fills a niche in glass studies that has been empty since before Liberation. Brill and Martin and The Corning Museum are to be congratulated for obtaining funds from the Woodcock Foundation and the National Science Foundation for the publication of this "Symposium sponsored by TC17: The Archaeometry of Glass, a Technical Committee of the International Commission on Glass." Officially this work represents and is subtitled the "Proceedings of The Archaeometry of Glass Sessions of the 1984 International Symposium on Glass, September 7, 1984 with Supplementary Papers." It is also A Publication of The Corning Museum of Glass.

The original symposium had seven papers listed, two of which were not delivered, yet eleven papers were presented. The two papers not read are included in Part I. Part II contains seven Supplementary Papers.

In their Introduction, the editors present an impressive list of sixteen research questions, a list worthy of further discussion and research. As they point out, the symposium has resulted in the emergence of some answers but also new questions. When this research is applied to modern bead research, even more questions come to mind. They also explain that the delay in publication is the result of the success of the meeting. Too many papers resulted in the need for a new source of publication funds.

In the Introduction to the Symposium Papers, Gan Fuxi sets the tone of the symposium in his major interest, the chemistry of Chinese glass. He also presents a brief but well-done summary of the major arguments on the origins of Chinese glass.

Gan sets up four major dated periods for the production of Chinese glass:
1. From the Western Zhou Dynasty (ca. 1100-771 B.C.) to the Spring and Autumn Period (770-476 B.C.).
2. From the Warring States Period (475-227 B.C.) to the Sui Dynasty (A.D. 581-618).
3. From the Tang Dynasty (A.D. 618-907) to the Yuan Dynasty (A.D. 1271-1368).
4. From the Ming Dynasty (A.D. 1368-1644) to the Qing Dynasty (A.D. 1644-1911) [p. 2].

Scientific Research in Early Chinese Glass.
Robert H. Brill and John H. Martin, editors. The Corning Museum of Glass, One Museum
These dates are followed by a description of the typical glass products and the major chemical formulas used in glass manufacture. For the readership of Beads, it should be noted that both during the earliest period of glass or faience production in the Western Zhou and the earliest true-glass production in the Warring States Period, beads were a major part of that production.

An Jiayao, the author of Chapter 1, is a second-generation archaeologist with the Institute of Archaeology of the Chinese Academy of Social Sciences. She is one of the first, if not the first, Chinese glass researchers to appreciate the value of observing modern glass production for an understanding of ancient glass. Since the symposium, she has done research at The Corning Museum of Glass and other museums in North America. Her excellent article is a summary of the early periods of Chinese-produced and imported wares. The value of the chapter is enhanced by numerous illustrations, a listing of glass vessels excavated since Liberation, and a listing of chemical analyses of selected specimens.

The brief chapter by Cheng Zhuhai and Zhou Changyuan on a garment made of glass pieces is of interest to bead researchers because of the early date (late Western Han: 206 B.C.-A.D.24) for what are essentially "mold-pressed" (p. 21) beads, some of which contained gold foil. Included are a table of shapes, sizes, and number of perforations (3 or 4); chemical analysis; and illustrations of the pieces.

"Investigations of Some Ancient Chinese Lead Glasses" is the brief Chapter 3. It mentions beads, lists two cases of bright green beads in the inventory, and shows a cross-section of a badly weathered bead but says nothing more about the manufacturing technique of specific beads.

Chapter 4, "Chemical Analyses of Some Early Chinese Glasses," by Robert H. Brill, Stephen S.C. Tong and Doris Dohrenwend, is the longest and a major contribution to this volume. Some of the questions listed in the Introduction are again posed. One of the more interesting interpretations is the suggestion that barium is high in Chinese glass in contrast to Western glass because it gives the glass a turbidity that is jade-like in appearance. Most of the conclusions are based on chemical analysis and a real effort to begin a chronology of Chinese glass based on chemical content. The illustrations, which include several beads, are excellent and are keyed to the Catalogue of Glass Samples.

An Appendix by Brandt A. Rising and Stephen S.C. Tong lists the analytical methods with a full table of sample results. An Addendum to Chapter 4 by Philip M. Fenn, Robert H. Brill and Shi Meiguang is of interest because one of the additional samples is illustrated and described thus: "3344 Medium-sized, flattened ellipsoid bead; date uncertain, poss. 'Peking glass.' Dk. blue transparent glass, unweathered, but with wear. Purchased by R.H.B. in Lhasa, 9/30/90" (p. 62).

Chapter 5, the second-longest chapter, like Chapter 3, is concerned with lead in early Chinese glass. Brill is again the lead author with J. Lyrus Barnes and Emile C. Joel. The first sentence tells it all: "Isotope analyses of lead extracted from ancient objects can be used to determine from which mining regions the leads could or could not have come" (p. 65). The usefulness of such information is obvious to any archaeologist. Several of the samples, both in the main chapter and in the Addendum by Brill, Shi, Joel and Robert D. Vocke, were beads but little more is said about them specifically. The basic conclusions are that the leads found in China are very different from leads found in other parts of the world, and there are two very distinct districts represented in the Chinese material.

One bead illustrated in the Addendum is interesting because it comes from "Botago Tobago Island or nearby in the Philippines" and "is said to be similar to those worn by 'Formosan mountain aborigines'" (pp. 85, 89). This is the kind of cultural statement that bead researchers appreciate. The data on the history of studies of this kind of bead with silver foil are also interesting because familiar names like Beck and van der Sleen are mentioned. To fully grasp the meaning of Chapter 5, samples that are found in both must be compared to the results in Chapter 4.

Chapter 6 by Kazuo Yamasaki and Masayo Murozumi has a strong bead emphasis simply because beads are one of the more common artifacts recovered from tombs of the Tumulus Period (ca. A.D. 200-600). A map and a time chart comparing Chinese and Japanese cultural periods is a nice addition, although the chart will be difficult to use by those culture-
bound archaeologists who expect time charts to go from the bottom to the top in age. As with the preceding chapters, the bead-oriented cultural data quickly become overwhelmed by chemical data.

The chapter on “Chinese Glass Technology in Boshan around the 14th Century” by Yi Jialiang and Tu Shujin describes the results of excavations in 1982 at the site of a glass factory dating between the late Yuan and early Ming dynasties. Boshan, now incorporated into the modern city of Zibo, is even today known as a place of glass and ceramic manufacture. It was in Zibo, in 1987, that I was royally shown the sites of the city with a driver and interpreter, but was never able to obtain a straight answer concerning the modern manufacture of glass beads.

While no beads are mentioned, the technology suggested includes “tube-drawing, molding, and various types of off-hand processing” (p. 101). This chapter is also helped by the use of footnotes and references.

Chapter 8 is concerned with the chemical analysis of glass vessels from the Qing period. As is typical of this volume, the black and white photographs are all of excellent quality. In contrast to the preceding chapters, Chapter 9 is not concerned with the chemical composition but the Physical Properties of Early Chinese Glasses. Among the properties discussed are density, refractive index, viscosity-temperature curve and several lesser-known properties.

Chapter 10 is a discussion of glass sword decorations and bi, a flat ring placed with the dead. The objects date from the Warring State Period and were excavated in Hunan Province. While they are never described as beads in function, a bi could be classified as a large disk-shaped bead. Again the discussion leaves the area of cultural function and enters the chemical arena.

Chapter 11 is a three-paragraph summary that only whets the bead researcher’s appetite by reciting historical sources concerning the fabrication of beads by the Marquis of Zeng. Chapter 12 is also just a summary concerning lead-barium glass from India. Again, the glass objects are beads which author H.C. Bhardwaj suggests are imported from China based on their chemical composition.

Part II, Supplementary Papers, contains seven papers not presented at the original symposium but...
the use of notes, a defect in many of the previous chapters.

Chapter 16, a translation of a Chinese work, contains one page of text, two maps, and ten pages of tables on lead isotope ratios in mostly galena ores in China. As such it will be of great value to future researchers involved in the chemistry of glass but will not excite the average bead enthusiast.

Chapter 17, by Xiong Zhuanxin, concerns "A Han Dynasty Glass Spearhead from Changsha." Based on both the style of the spearhead and the composition of the glass, it is suggested that it represents a trade item from the West. The caption for Fig. 2 appears to be in error as no coin is shown.

"A Preliminary Study of Han Dynasty Glass in Guangxi" by Huang Qishan (Chapter 18) is presented in much the same way as several previous chapters. However, Huang has taken a very specific time and space limit and attempted to list the major finds with tables and good illustrations, as well as presenting much of the pertinent documentation. All of this is also footnoted. He has also drawn valid and well-described conclusions from his research. Because of the importance of this part of China to the later importation of glass beads into the New World, this early work is of special interest to North American researchers.

The final chapter is by Fan Shimin and Zhou Baozhong on "Some Glass in the Museum of Chinese History." Specific items in the museum in Beijing that date to several different periods have been analyzed. The conclusions are well summarized and tend to differ (especially in regard to item number 3 below) from many of the views expressed in this volume:

1. Typical Chinese lead-barium-silicate glass technology was already in use during the Warring States Period.
2. Glass objects made in western countries have been imported into China since the Western Han Dynasty. Chinese glass manufacture was influenced by advanced Western production technology.
3. The beginning of glass manufacture in China was later than its beginning in the West. However, the use of lead and barium as fluxes was a forerunner of the modern manufacture of lead glass [p. 199].

This difference of opinion among several glass researchers in China is one of the major points of interest in this volume. Only a few years ago, any scientific work coming out of China would have presented a monolithic point of view with no room for intellectual disagreement. Let us hope that the trend seen in this volume will continue.

At the end of the volume is a photo album of participants in the seminar, other authors, and historical figures in glass research. Perhaps this was done for purely historical reasons but it is also of immeasurable help to western researchers who are invariably mistaken about the gender (in the real meaning of that currently misused word) of Chinese names.

While there was a fair amount of history at the beginning of each section, as a behavioral scientist, I would like to see future work on Chinese glass tackle such subjects as the cultural meaning of the objects, the social system that resulted in one group of innovators and craftsmen making objects for another group, or the reasons for the trade systems that developed.

Typographical errors are rare and, in spite of a claim that the editors did not change the various authors' rendition of Chinese, the use of Pinyin appears to be universal. The lack of footnotes and references for some of the chapters is understandable but nonetheless detracted from their usefulness. In this age of computers and public-domain software, an index would have added a lot for very little extra cost.

In summary, Brill and Martin are to be congratulated for bringing together an invaluable set of works in a pleasing format and with excellent editing under difficult conditions. Anyone with an interest in Far Eastern glass or beads must have and use this volume. It is not only a classic in a specialized field where more work is needed but will become a road map of where that work needs to be done.

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