School of American Research

Southwest Indian Arts Series

DOUGLAS W. SCHWARTZ, GENERAL EDITOR

MIMBRES PAINTED POTTERY

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MIMBRES PAINTED POTTERY

J. J. Brody

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Absence of information about the site from which a pot was recovered indicates that the site location is unknown. Almost certainly, every Mimbres vessel pictured was recovered from a site within the drainage system of the Mimbres River. When available, dimensions of a pot are included.

Abbreviations:

ASM: The Arizona State Museum, University of Arizona, Tucson, Ariz.
CSF: The College of Santa Fe, Santa Fe, N.M.
DMNH: Denver Museum of Natural History.
HM: The Heard Museum, Phoenix, Ariz.
HMWC: Historical Museum and Institute of Western Colorado, Grand Junction, Colo.
HP: Peabody Museum, Harvard University, Cambridge, Mass.
MF: The Mimbres Foundation, Los Angeles, Calif., and Mimbres, N.M.
MMA: The Maxwell Museum of Anthropology, University of New Mexico, Albuquerque, N.M.
MNA: The Museum of Northern Arizona, Flagstaff, Ariz.
MNM: Museum of New Mexico, Santa Fe, N.M.
MRMM: Millicent Rogers Memorial Museum, Taos, N.M.
NPS: National Park Service, Gran Quivira, N.M.
PAM: Princeton University Art Museum, Princeton, N.J.
SAR: The School of American Research, Santa Fe, N.M.
SAR/MNM: The School of American Research collections deposited at the Museum of New Mexico.
SWM: The Southwest Museum, Los Angeles, Calif.
TM: The Taylor Museum of the Colorado Springs Fine Arts Center, Colorado Springs, Colo.
TMM: Texas Memorial Museum, Austin, Tex.
UCM: University of Colorado Museum, Boulder, Colo.
USNM: United States National Museum, Smithsonian Institution, Washington, D.C.
WNMUM: Western New Mexico University Museum, Silver City, N.M.

Foreword

Mimbres pottery painting represents a powerfully inventive and expressive climax in the traditional Indian arts of the American Southwest. Using elegant lines and dynamic masses, the artists placed complex nonfigurative, representational, and narrative compositions on the interiors of hemispherical bowls. The resulting paintings communicate authority, skill, and a remarkable perception of reality.

These anonymous Mimbres artists lived between about A.D. 1000 and A.D. 1200 in what is now southern New Mexico, contemporaneously with Pueblo peoples to the north in Mesa Verde and Chaco Canyon. In several hundred small villages of no more than 200 inhabitants each, with a subsistence culture based on the growing of corn, beans, and squash, they developed an art style that has become a symbol of "primitive" sophistication.

In this volume J. J. Brody, with great thoroughness and grace, traces more of the story of their ceramic art than has ever before been told. He begins by a comprehensive review of the history of Mimbres discovery and interpretation. The reader is next given the context in which Mimbres art was made: the physical environment; the cultural milieu, reflected in the life of a typical village as archaeologically reconstructed; and the regional influences from throughout the Southwest that influenced the Mimbres culture over time. The author then examines the pottery itself in exquisite detail, progressing from the potters who made it, through the form and structure of the pots, and finally to a comprehensive discussion of the representational paintings.

But listing the major topics of this volume gives little insight into the heuristic questions that run like threads through its pages: How could art of this consequence have arisen in these cultural circumstances? Who were the nonspecialist artists who for two centuries made this stable, high-quality product, and how were they motivated? To what extent was the art a radical

innovation, and to what extent a local evolution? What was the nature of the complex ritual system reflected in the paintings? Does the focus in the paintings on economic activities and food production suggest a demanding religious system in a period of trouble? While the answers to many of these questions, like the iconography itself, are beyond the present limits of anthropology, their consideration makes this study one of the most stimulating yet written on a single facet of prehistoric southwestern Indian art.

Mimbres Painted Pottery is a combination of art and archaeology. As such it is an appropriate vehicle for School of American Research sponsorship, since the School has long had an interest in both. The first publication in the School's monograph series in 1931 reported on Wesley Bradfield's pioneering Mimbres excavations at Cameron Creek Village. And from the earliest part of this century the School has participated in the revitalization of southwestern Indian arts and the support of their detailed anlaysis through the work of researchers like Kenneth Chapman and H. P. Mera.

This book grows out of that tradition and launches a major new publication series that will continue it. In 1972 the School concluded a feasibility study, generously funded by the Weatherhead Foundation and the New Mexico Arts Commission, that examined the need and demand for a multivolume series of books on the Indian arts of this region. The results of the study led the Weatherhead Foundation to provide support to "document the full range of prehistoric and historic southwestern Indian arts in books embodying the highest standards of scholarship and presentation."

Considering the relatively small size of the southwestern cultural area, around 300,000 square miles, the diversity and richness of its traditional arts are extraordinary. But with the rapid disappearance of some of these forms, which were produced until recently by the surviving ethnic groups, and the destruction of many prehistoric sites by irresponsible plunderers, the documentation of this material seemed imperative at this time to the School and the Weatherhead Foundation.

From its inception the Southwest Indian Arts Series was envisioned as serving three important audiences: Indian artists, who we hoped would find in it a visual link to the traditions from which they have always worked; southwestern scholars, for whom the series would draw together source material, documentation, and new research; and the large number of knowledgeable general readers who have demonstrated a growing interest in the quality, variety, and history of southwestern Indian arts.

Initially conceived as forming the core of the series and currently in press or under active development are, in addition to the present one, volumes on prehistoric jewelry, rock art, drypainting, historic jewelry, prehistoric weaving, Navajo and Pueblo weaving of the historic period, the Southwest Indian art market, and basketry. To this list will be added other works, now in the planning stage, on architecture, painting, pottery, music, dance, costume, and sculpture.

Southwest Indian art, especially such forms as Navajo blankets and Pueblo pottery, has long been recognized throughout the world as an important element in the wide range of human artistic expression. This series is intended to deepen and broaden that recognition. We believe J. J. Brody's work on Mimbres pottery is an exceptional first step toward that goal.

Douglas W. Schwartz, Director
School of American Research

Preface

"The creative act is not performed by the artists alone; the spectator brings the work in contact with the external world by deciphering and interpreting its inner qualifications and thus adds his contribution to the creative act."—Marcel Duchamp, 1957

Almost seventy years ago, Marcel Duchamp invented "readymades" and demonstrated that art spectators could have an active art-creative role. A readymade was an object or part of an object that had been made, perhaps industrially, for some nonartistic purpose. These could become works of art by virtue of being discovered and named. Several decades before Duchamp created his first readymade, the industrial world was inventing the concept by its acts of discovery; acts that made art out of artifacts created by and for ancient and modern nonindustrial peoples. The "creation"—by discovering and naming—of primitive art clearly enriched the sensibilities and artistic vocabularies of the industrial world. However, even today it is by no means certain that the original makers of these new-old art objects are generally thought of as artists, any more than were the manufacturers of Duchamp's readymades. Instead it seems that the makers of these artistic things are most often thought of as the insensate tools of something very like a natural force that we call culture.

When we think that way, then the shape an art takes is necessarily perceived as inevitable, formed by culture in much the same way canyons are carved by rivers or skies colored by atmospheric dust. Rather than being people, artists become tools of culture. By contrast, our own artists are generally thought of as the essence of ego, creative individualists who invent novel ways of expressing unique personalities. We place great value on biographical information (Beethoven's deafness, van Gogh's mental illness, Billie Holiday's drug addiction) that reinforces our image of art as an idiosyncratic activity practiced outside of culture by tormented if talented

individuals. Museums, scholars, and collectors carry the concern for documentation a step further and consider the record incomplete if they cannot locate the precise spot from which Cézanne painted a landscape or discover what the weather was like that day.

Because of the way so many of us think about primitive art, its documentation is all too often shabby. Many of the same museums, scholars, and collectors who know that Mozart wrote a particular song in a particular key to suit the talent of a particular singer, have art objects in their collections that were torn from the earth by treasure hunters or taken from remote West African villages by modern-day Mountain Men who treat the stuff as though it were beaver pelts. Subsequently we know nothing about the artists, and must guess (with resultant errors) the time and place a thing was made.

The distortion is gross and symmetrical: our artists are no more free of their culture than were those of the Mimbres a thousand years ago. Theirs were as free as ours to play individualistic, expressive games with their art. Ours, by their lifestyle and their products, express alienation from society; theirs expressed integration with society. In both cases, individual artists merely performed or perform the roles assigned to them by their respective societies. In both cases, the respective cultures modified or modify the shape of the art in many of the same ways, with much the same effect.

There are vast differences between the artists of small, tightly integrated societies and those of our sprawling industrial states, and these differences are evident in their respective art products. These are differences only of degree, not of kind, and they cannot be interpreted unless we accept the fact of basic identity. Artists are human beings; people who make art. What I have attempted here is to treat Mimbres art as real art made by real people.

There is much here that I am not satisfied with. I am uncomfortable with the time frames, not at all confident about explanations of historical events and relationships, and believe that I have only begun to explore iconography. Douglas Schwartz wanted this to be a definitive art history. When I began, I thought it could be. It is anything but that. Still, either this book or something very like it had to be written even though a definitive work is years away. There is too much trash to be cleared, too much archaeology to be done before questions of chronology and prehistory can be answered satisfactorily. I am confident that in years to come village and even individual styles will be defined and we will know within a decade and a few miles when and where a particular picture was made. We will also be able to explain the

meanings of many of these paintings. All of this will be the work of many minds and will only happen if radical changes occur in our attitudes and beliefs about how art is or was made by small, tightly integrated societies.

I am grateful to many people and institutions for making this book possible. The University of New Mexico allowed me leave time during 1973–74 when the first draft was written in the village of Haddenham, East Anglia. Cambridge University, The University of London, The Horniman Museum, and the British Museum all graciously made library and museum resources available. Special thanks are due the staff of the Maxwell Museum for bearing with me during an overlong gestation period. And, of course, none of this would have happened without the support and encouragement of Douglas Schwartz, Harry King, and others at the School of American Research. I owe a special debt of gratitude to Wanda Conger of the School of American Research: her patience is matched only by her persistence and perceptive criticism.

Colleagues and friends who contributed freely of their knowledge and ideas include Doug Schwartz, Jane and David Kelley, Charles Di Peso, Steve LeBlanc, Wes Jernigan, Bruce Bryan, Barton Wright, and many others. Most will find their contributions so mangled as to be invisible. The first six named read the manuscript or parts of it. Jernigan also drew the maps and other diagrams and illustrations. No one but myself is responsible for errors of fact or interpretation.

During the past few years, I have taken unfair advantage of my position as director of a museum to intrude on other museums and private collectors. So many people spent so many hours helping me locate and photograph Mimbres pottery that I cannot possibly name them all. I trust they will consider their help to me as bread cast upon the waters. Except for the Museum of the American Indian, all of the institutions that were of assistance are acknowledged with the illustrations. At the risk of offending many others, I must here also thank Mary and John King, Tony Berlant, Joe Ben Wheat, Ron Stewart, and Larry Hammack for acts of special generosity and kindness. And a word must be said for Fred Stimson, a most sensitive photographer and excellent traveling companion. Finally, and even though some of them still haven't read the first book, I dedicate this one to a hardy quartet who learned to wear sweaters in the house, summer or winter, during the Year of the Three-Day Week.

1

Introduction

In the isolated mountain valleys and hot deserts of southwestern New Mexico are the remains of several hundred small villages that were occupied between about A.D. 1000 and A.D. 1250 (Map 1). These would have little interest other than to the inhabitants of the region and a handful of archaeologists but for their production of a remarkable kind of painted pottery. The names for this ware—Mimbres Black-on-white or Mimbres Classic Black-on-white—are misleading; the paint is often brown or red rather than black, the background color gray or buff rather than white. More to the point, the pottery-naming system favored by southwestern archaeologists gives no more idea of the character of this pottery than do the unimpressive remains of the villages that produced it. By any name, Mimbres Black-on-white appears to be a climax ware, a type of pottery on which a certain set of visual ideals and values was pushed to its ultimate limits. This achievement of the Mimbres potters was highly improbable, for they were the wrong people, living in the wrong place and under the wrong circumstances, to carry that particular tradition to a climax.

These potters were not deeply concerned about either ceramic technology or ceramic form. Most of their production was of unpainted utility wares, serviceable but inelegant. Their painted pottery was usually in the form of deep bowls made with techniques that permitted shapes to warp, colors to change, and fire clouds to occur at random. On these, their concern

was to use pottery as a surface on which to paint pictures. The hallmarks of Mimbres Black-on-white are complex nonfigurative, representational, or narrative paintings, often made with an elegant line and powerful and dynamic masses and always placed within framed picture spaces. The contrast between indifferent pottery and fine painting argues that a distinction should be made between the two, for only the latter is at all remarkable.

The most usual painting surface for a Mimbres artist was the interior of a hemispheric bowl. With limited technical means but deft skill, using only a few compositional systems and fewer elements, these artists organized and reorganized their concave picture spaces into a myriad of complex patterns. At their worst they produced moderately pleasing decorations; at their best, powerful statements of that mysterious decorative-expressive duality that we call art. Iconographically and visually the best of the Mimbres paintings are at once simple and complex, clear and obscure, easily perceived and impossible to read. That several generations of subsistence farmers living in isolated villages should have produced art of this order is the central problem posed by Mimbres painting.

Historical data are essential to the understanding of any art production. Unless we know who created an art and why it was created, how and when it was made, whom it affected and in what ways, and how it was judged and valued, the art object is only another kind of natural object. In a sense the original makers become human equivalents of the anonymous and nonhuman natural forces that are responsible for making sunsets and rainbows; their artworks become found objects and the finders are re-creators.

With Mimbres as with many other prehistoric arts, the historical, humanizing data that exist are fragmentary and poorly understood. Reordering this limited knowledge so that it yields all possible information about the meanings Mimbres art had for Mimbres people is an absolutely necessary first step in reconstructing its history. There are three major sources for these data on the Mimbreños: archaeology, ethnology, and the existing paintings. The Mimbres people, for all of the interest their art has generated, are among the most poorly defined of all prehistoric southwestern groups. The archaeological information is incomplete and of limited utility; even more limited are the data obtainable through ethnology. Identification of the Mimbres as ancestral to any contemporary people is problematical. Even if this were not the case, the hundreds of years that separate them from the modern world would make questionable any assumptions based on the oral history or the practices of any

modern people. The paintings themselves, especially those that represent humans and human activities, do offer a rich source of information. Treated as documents, and in light of knowledge culled from other sources, they can help flesh out the skeletal structure of Mimbres history. However, too often the paintings lack essential dating and provenience information, so that they are incomplete as historical documents.

A major objective of this study is to reconstruct the history of Mimbres painting. However, I will make a distinction between art production and art consumption: the first is limited to a specific time and place, and its parameters can be defined; the second is open ended, for so long as the products or even the memory of them exist, their history will be unfinished. For this reason, I will also deal with other, indirectly related problems. Mimbres art was rediscovered in the twentieth century and it belongs to the modern, industrial world as well as to that of an unrelated prehistoric past. Its history at some point entwines with that of contemporary art, and the story would not be complete if it were to end in prehistory. Then there are the very broad and basic questions of why art is produced, and where, and under what circumstances. Mimbres art requires explanation in terms of the isolation, economy, and life-ways of the people that produced it. Despite the paucity of conventional historical data, available information suggests and supports hypotheses that touch on these problems, from which generalizations can be made.

Finally, I will be concerned with the mechanics of painting and with the processes involved when an image is made by applying paint to a blank surface. A picture starts as nothing and becomes a microcosm, a model universe that has its own physical and structural laws. So long as it exists it transcends whatever aesthetic values motivated its producer or affected the judgments of contemporary or later users. At different times and places it can be appreciated, disliked, or ignored. The only permanent and universal message it can possibly carry, and the only key available to objective understanding of it, are embodied in the peculiar logic of its forms and structure. Thus an analysis of the physical and mechanical nature of a painting is yet another way to approach its meaning. With this end in mind, the structural logic of Mimbres painting will be examined in some detail.

2

The Discovery of the Mimbres

MIMBRES ART REDISCOVERED

In 1963 a buyer for a New York art dealer was sent to the American Southwest with instructions to purchase ten thousand Mimbres painted pots. There were several casual reactions to this information at the time: that nowhere near that number of vessels existed; that most existing pots were in public collections; that the market could not possibly absorb that quantity; and that the buyer had probably lied.[1] Only his principal knows what the order was or whether it was filled. It is certain that large numbers of pots were bought, including several forgeries. Most were eventually sold to collectors, and some found their way into public museums.

Sixty years earlier only two or three painted Mimbres pots had been known. Today there is hardly a museum of anthropology or natural history in the United States that does not have a few specimens. A number of museums have hundreds, and at least one has more than a thousand. Fewer examples are found in American art museums, but these are generally of very high quality, and several score pieces are in the collections of at least a dozen

European and Oriental institutions. The total number in public collections throughout the world is well over four thousand. The number of contemporary private art or curio collectors who own Mimbres pottery is unknown, but surely exceeds one thousand. Of these, no fewer than thirty have more than fifty specimens each, and at least a dozen others have hundreds. Thus the total in private collections is probably greater than that in public ones, and when the two are combined the number of known Mimbres painted pots might well approach that inconceivable figure of ten thousand.

For all practical purposes there was no Mimbres art at the beginning of the twentieth century, and thus in a sense this ancient art belongs to the modern world. Certainly it has acted like a twentieth-century commodity. When a market for it was demonstrated about 1914, both supply and price increased. When demand spurted again some fifty years later, supply and price increased once more and forgeries appeared. An essential fact about Mimbres art is its conversion from something made by craftsmen of the eleventh, twelfth, and thirteenth centuries into a market product of the modern world.

When the Mimbres people left their villages in the thirteenth century their art was effectively erased from all knowledge. By about A.D. 1600 parts of their territory had been reoccupied by other farming peoples, had been abandoned once more, and then had become home to bands of Apaches. The Apaches made it difficult for other people either to live in the territory or to exploit it. A mining camp was established at Santa Rita during the early years of the nineteenth century (Ogle 1939:338), but it was not until the last quarter of that century that military conquest of the Apaches and the coming of the railroad opened this isolated and difficult country to settlement by townspeople and ranchers. Earlier, some exploration of the area had been reported by military and surveying expeditions, but the late-nineteenth-century settlers and some of their military protectors were the first people we know of to disturb the long-dead Mimbres villages. Eventually, their information reached scientists who had the means to interpret the finds, conduct systematic investigations, and communicate the new knowledge to the rest of the world.

Prehistoric village sites in the Mimbres country may have been noted as early as 1756 by a Spanish military expedition (Kessell 1971:147) and were certainly reported by John R. Bartlett in 1854 (Bartlett 1854, I:220–23). Near the headwaters of the Gila River in the rugged mountain canyons cliffhouses discovered in 1875 were mentioned by H. L. Henshaw in 1879 (Henshaw 1879), and Adolph Bandelier recorded some sixty ancient villages along a

30-mile stretch of the Mimbres River Valley in 1883–84 (Bandelier 1892:350–58). In 1898 William Taylor reported on the excavation of a Mimbres site (Taylor 1898:258–61), and four years later U. Francis Duff published a short description of a dozen others (Duff 1902). A decade later additional sites were reported by C. L. Webster, whose work in the area had begun in 1889 when archaeological activity could still be inhibited by Apache hostility (Webster 1912b). He recorded that some friends had been killed by Apaches and noted that "four times during these explorations did the writer himself come 'within an ace' of meeting death in the same and other ways" (Webster 1912a:102). Whether Webster exaggerated or not, the fact remains that a series of military posts had been established throughout the region to protect against Apache raids, and some of these were maintained until about 1900.

There is little evidence that any of these early investigators was aware of the unique qualities of Mimbres painted pottery. In 1878 and 1879, looted collections of Mimbres material were sent to the United States National Museum, but painted pottery seems not to have been included (Hough 1907:83–84). Nonetheless, it is certain that some had been unearthed well before the turn of the century, perhaps as early as 1866. In that year Fort Bayard was built about 10 miles from Silver City near the Santa Rita copper mines as one of the network of military strongpoints designed to contain the Apaches. By happenstance, it was located directly on top of an ancient Mimbres village, and throughout its early history excavations of that site provided an irregular but continuous recreational feature of cantonment life (Hough 1914:45). In 1902 Mrs. W. O. Owen, the wife of the commandant, gave several painted Mimbres vessels recovered from the Fort Bayard site to Walter Hough, Chief Ethnologist of the United States National Museum, for transmission to that institution (Fig. 1). Hough was visiting on the first of his two archaeological surveys of the region, and his 1907 report contains the first published pictures of Mimbres representational painted pottery (Hough 1907).

In 1902, Ivan DeLashmutt of the University of Arizona had guided Hough to a number of Mimbres sites, and in that year and again in 1905 ranchers and townspeople throughout the region helped members of the two expeditions locate and map sites. Some of these ruins had been heavily pothunted and it was obvious that many of the local people considered archaeology to be a pleasurable avocation. In reference to sites in the San Francisco River drainage, Hough (1907:41) wrote that "During the period of

Fig. 1. Mimbres Black-on-white bowl. Fort Bayard site, lower Mimbres Valley. Excavated before 1902. Collection, USNM; photograph, USNM.

the spoilation of the ruins of the Southwest. . .[many]. . .had suffered great damage." His optimistic assumption that "spoilation" was a thing of the past was hardly justified. While many Mimbres ruins had certainly been violated before 1905, the damage was only a harbinger of what was to follow. Nonetheless, because of these activities Mimbres sites and Mimbres pottery were known to people in the region. Hough had been given some tantalizing hints about the pottery, but appreciation of its unique artistic character was not to be broadcast for another decade.

The first major collections were formed as a result of the amateur excavations that Hough had deplored. At Deming, New Mexico, E. D. Osborn and S. D. Swope separately accumulated quantities of Mimbres artifacts, including painted pots. Before 1914 Swope gave his collection to the Deming High School, testimony that mere acquisitiveness was not the only motive that had led him into amateur archaeology (Fewkes 1914:6). Osborn played a more active role in bringing Mimbres art to the attention of the world outside southwestern New Mexico. He had amassed a large number of painted vessels from several sites on public and private land, including one on his ranch about 12 miles southeast of Deming. In 1913 he wrote to the United States National Museum describing this collection and sending photographs of major items. These pictures were the first conclusive evidence that the few pieces acquired by Hough a decade earlier were representative examples of a tradition, rather than oddities.

Osborn's letter and photographs prompted J. Walter Fewkes to go to Deming in the spring of 1914. Fewkes was one of the eminent archaeologists of his time, an expert on the American Southwest, and an enthusiastic student

of ancient American Indian art. His interest in Osborn's collection amounted to official recognition of Mimbres painting as an important prehistoric art. After purchasing a number of pieces from Osborn for the National Museum and himself excavating at the Oldtown Ruin, Fewkes returned to Washington and promptly wrote and published a well-illustrated account of Mimbres art (Fewkes 1914). Although other publications followed, 1914 remains the year in which Mimbres paintings were formally introduced to the outside world (Fig. 2). It was a limited introduction, for anthropological journals were the media, the scientific community was the public, and information only gradually filtered outward to a wider audience.

That part of Osborn's collection not purchased by Fewkes was bought shortly afterwards by George Heye for his Museum of the American Indian in New York and formed the nucleus of its fine collection of Mimbres art. By 1921 Osborn had acquired more than one hundred new pieces, and many were purchased for the National Museum by Fewkes in 1923 (Fewkes 1924). Other museums would acquire major collections, but interest in Mimbres art remained essentially parochial, limited to specialized museums and ethno-

Fig. 2. Mimbres Black-on-white bowl. H: 3½″; D: 9¼″. Osborn Ranch, lower Mimbres Valley. Excavated before 1914. Collection, USNM; photograph, USNM.

graphically oriented collectors. To much of the outside world, even that part of it whose interest in the arts is intense and professional, Mimbres painting remains almost as well hidden today as it was in the years before World War I.

Except for the minor testing done by Fewkes in 1914, no professional archaeologist excavated a site that produced Mimbres Black-on-white before the 1920s. Among the many amateurs who did, Mr. and Mrs. Cornelius Cosgrove of Silver City were by far the most important. They had first explored Mimbres ruins about 1911. By 1919 their enthusiasm led them to purchase a site at Whiskey Creek near Fort Bayard. By renaming their ruin "Treasure Hill" they seemed to express an involvement that was anything but scientific, but this was misleading. Swope's interests in archaeology were at best antiquarian, and Osborn's motives after 1914 were certainly commercial, but the Cosgroves became increasingly professional and scientific in their attitudes. They spent the summer of 1920 at three southwestern ruins then being excavated under the direction of three of the historically most important southwestern archaeologists. They observed, conferred with, and learned from Neil Judd at Pueblo Bonito, Frederick Hodge at Hawikuh, and A. V. Kidder at Pecos Pueblo. Four years later they had made their commitment to the profession of archaeology, retiring from business to become staff members under Kidder at the Harvard Peabody Museum. From 1924 to 1927 they excavated the Swarts Ruin for the Peabody. The hundreds of Mimbres Phase pottery paintings from that site, as well as others they had recovered earlier from other ruins and given to the Peabody, have made that institution's collection of Mimbres art the greatest anywhere (Fig. 3).

The Cosgroves also stimulated interest in Mimbres archaeology at the School of American Research and the Museum of New Mexico in Santa Fe, which led to the 1923 excavations at Cameron Creek by Wesley Bradfield (Bradfield 1925, 1927, 1931) and the accumulation of important collections of Mimbres art in Santa Fe and at the San Diego Museum of Man (Fig. 4). The Southwest Museum in Los Angeles sponsored one season's excavation at the Galaz site in 1927 directed by the Cosgroves' son Burton (Bryan 1927, 1931a, 1931b, 1931c, 1961, 1962) (Fig. 5). The Cosgroves are also credited with encouraging the 1929 and 1930 excavations at the Mattocks and Starkweather ruins by Paul Nesbitt of Beloit College in Wisconsin (Nesbitt 1931, 1938), and with helping another legendary amateur turned professional, Earl Morris, to locate Mimbres materials for the collections of the University of Colorado in Boulder (Kidder, in Cosgrove and Cosgrove 1932:xvi–xviii) (Fig. 6).

Fig. 3. Mimbres Black-on-white bowl. H: 5½″; D: 12″. The Swarts Ruin, middle Mimbres Valley. Collection, HP; photograph, HP.

Fig. 4. Mimbres Black-on-white bowl. H: 4½″; D: 11″. Cameron Creek Village, Mimbres drainage. Collection, SAR/MNM; photograph, Fred Stimson.

Fig. 5. Mimbres Black-on-white bowl. H: 3¾″; D: 10″. Galaz site, upper Mimbres Valley. Collection, SWM; photograph, Fred Stimson.

Fig. 6. Mimbres Black-on-white bowl. H: 4″; D: 10½″. Eby site, lower Mimbres Valley. Collection, UCM; photograph, Fred Stimson.

Other significant public collections of Mimbres art include those of the Museum of Northern Arizona in Flagstaff, the Arizona State Museum in Tucson, the Maxwell Museum of the University of New Mexico in Albuquerque, the University of Minnesota and the Minnesota Art Institute, and the Museum of Western New Mexico University in Silver City. In all cases, they were acquired directly as the result of institutional excavations or had been accumulated by amateurs, mostly during the 1920s and 1930s, and given or sold to the institutions.

Because of friction between amateur and professional archaeologists, and because of the more than occasional illegality of amateur excavations, few modern collections come directly to museums. Many contemporary private collectors prefer to remain anonymous, and the professional pothunters protect the locations of their sites, as do many of the nonprofessional, untrained excavators. A by-product of these attitudes has been loss of important information about the Mimbres pottery in many public collections.

The relationships between professional and amateur archaeologists have been an important element in the rediscovery of Mimbres art. The initial finds were made by amateurs, often willing and even eager to guide professionals to sites, to give part or all of their collections to public institutions, and to help the scientists in any way they could. In return, most asked for little more than a share of the professionals' knowledge and, perhaps, some personal recognition. But excavation is always destructive, and an amateur in his eagerness to find artifacts too often destroys information that could have been interpreted by a trained archaeologist. Hough's complaints about "spoilation" were justified and have echoed and reechoed through time, for an archaeological ruin, once disturbed, can never be made whole again. Unless trained to the implications of site disturbance, amateurs will inevitably be regarded as vandals by the professionals.

The professionals' response to the destructive nature of their discipline is to select sites in terms of specific questions and problems, excavate with tedious care, and maintain copious records that make it possible to simulate reconstruction of an excavated site. Professional archaeology is therefore extraordinarily expensive and proceeds at a snaillike pace that permits only a limited number of sites to be investigated during any one generation. But the greatest difference between professional and amateur is less a matter of training or method than it is of attitude. A professional excavates a site in the hope of obtaining information; an amateur digs a site in the hope of finding artifacts.

The exposure of Mimbres art created a demand for it that could not be met by professional archaeology. Institutions that sponsored excavations of Mimbres Phase sites were often unable—for legal and other good reasons—to share collections with other institutions, no matter how large these collections were. Many schools and museums that could not or would not conduct their own excavations wanted the painted pottery in any event. A market had existed from the time the first recorded sale of Mimbres pots was made to one of the great scientific institutions of the world, the United States National Museum. Institutions formed the core of this market, but demand was heightened by curio and art collectors. Since 1914, amateur archaeologists in the Mimbres area have known that they could enrich themselves by finding Mimbres pots. By 1960 or earlier the commercial motive led to mining of sites with earth-moving equipment for the sole purpose of finding whole painted vessels. Looting was particularly outrageous during periods of local economic recession, especially when these coincided with high demand for Mimbres paintings. The wholesale depredations of unscrupulous site-rapers led in turn to panic among amateur archaeologists. Many became understandably anxious to excavate as many sites as they could in the shortest possible time, with the certain knowledge that what they did not dig the mechanized plunderers would (Fig. 7).

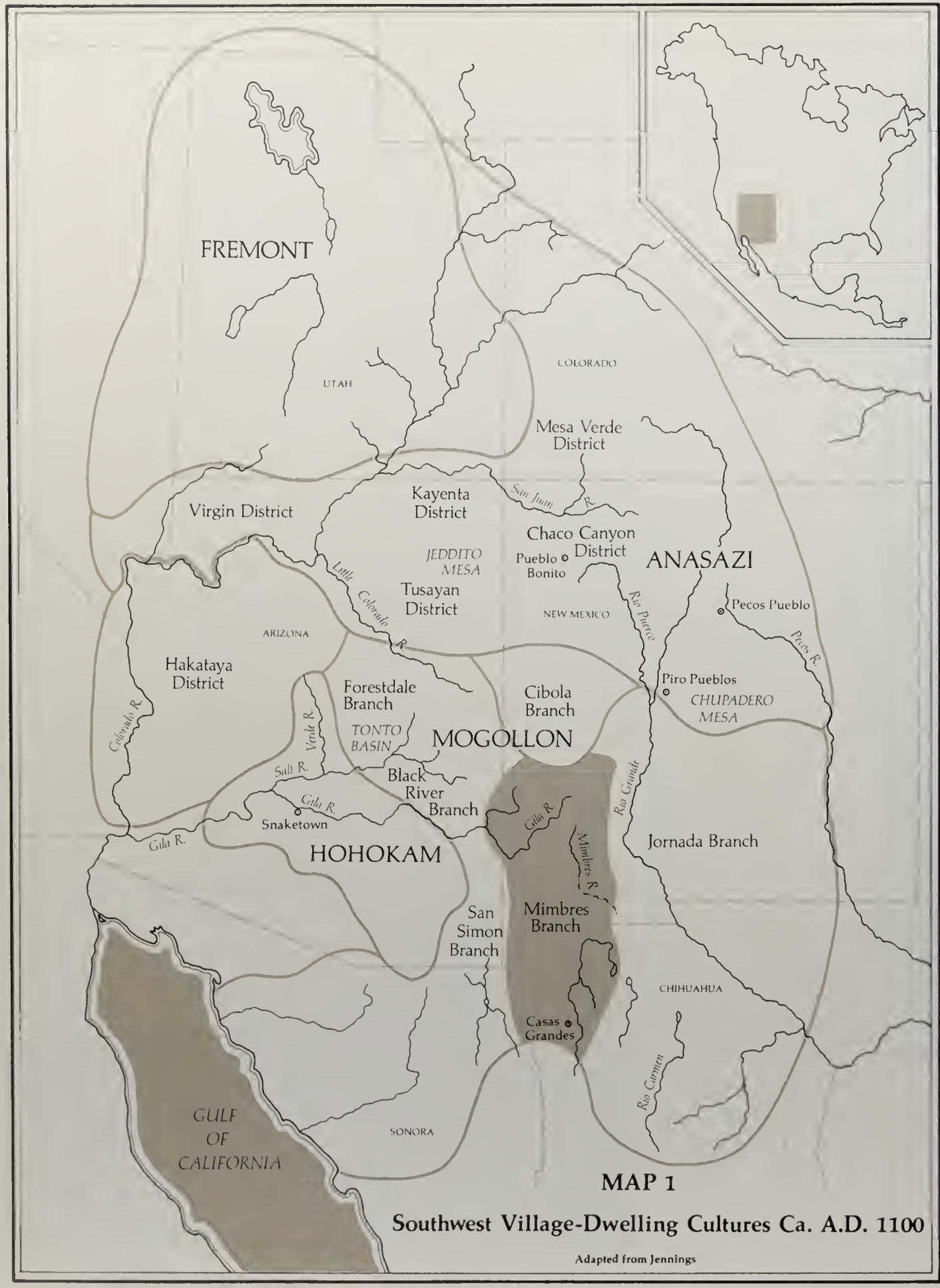
The consequences have been disastrous. Mimbres ruins that had been perfectly secure for seven hundred years and could have been safe for another seven thousand have been disturbed or destroyed. Out of them has come one example after another of Mimbres art, brought to the marketplace anonymously, with no history and no knowledge of its associations or derivations. As site destruction intensified, relations between professional and amateur

Fig. 7. A Mimbres Site Destroyed by Treasure-hunting Bulldozers. Photograph, Courtesy Mimbres Foundation.

archaeologists eroded. The kinds of mutual assistance that had characterized their dealings in the early part of the century almost disappeared, and their inability to combine effectively against the bulldozers makes the later history of Mimbres art a tragedy. Some blame for this must fall squarely on the professionals, in part because of their tendency to consider all amateurs as vandals, in part because they permitted their institutions to become a market factor in Mimbres art, and in part because of their general lack of interest in Mimbres archaeology. Understanding the reasons for this indifference is essential to understanding how Mimbres art became a twentieth-century commodity, a kind of natural resource to be exploited at low cost and for high profit.

THE RISE AND FALL OF MIMBRES ARCHAEOLOGY

When Mimbres art first came to notice, a major concern of southwestern archaeologists was to reconstruct the history of the region. To do this it was necessary to distinguish between the different prehistoric groups and periods and to develop chronological and cultural frameworks. In the time of Hough and Fewkes much had been done to forward these ends. The major research tools were excavation, investigation of early historical records, and the gathering of traditional oral histories of the native peoples. Fewkes especially was fascinated by this last technique and worked with the Hopis in an attempt to relate archaeological evidences to their oral history (Fewkes 1897, 1919, among others). Others, including Kidder, Nelson, Hewitt, and Hodge, were laboriously working backward from the known to the unknown. They developed techniques for establishing a rough prehistoric chronology and for defining the relationships between different prehistoric ruins and between those sites and modern Pueblo people. The most important of their techniques involved the analysis of pottery recovered from stratigraphically controlled excavations (Nelson 1914; Spier 1917). This involved isolating the various strata of a site, describing the pottery fragments found in each level, and then comparing every group of sherds with those from other strata and other sites. Through such seriation it was possible to develop chronological sequences that have since proved remarkably accurate. The painstaking descriptions of pottery also had value as indicators of cultural similarities or differences between the various sites in the Southwest.



MAP 1

Southwest Village-Dwelling Cultures Ca. A.D. 1100

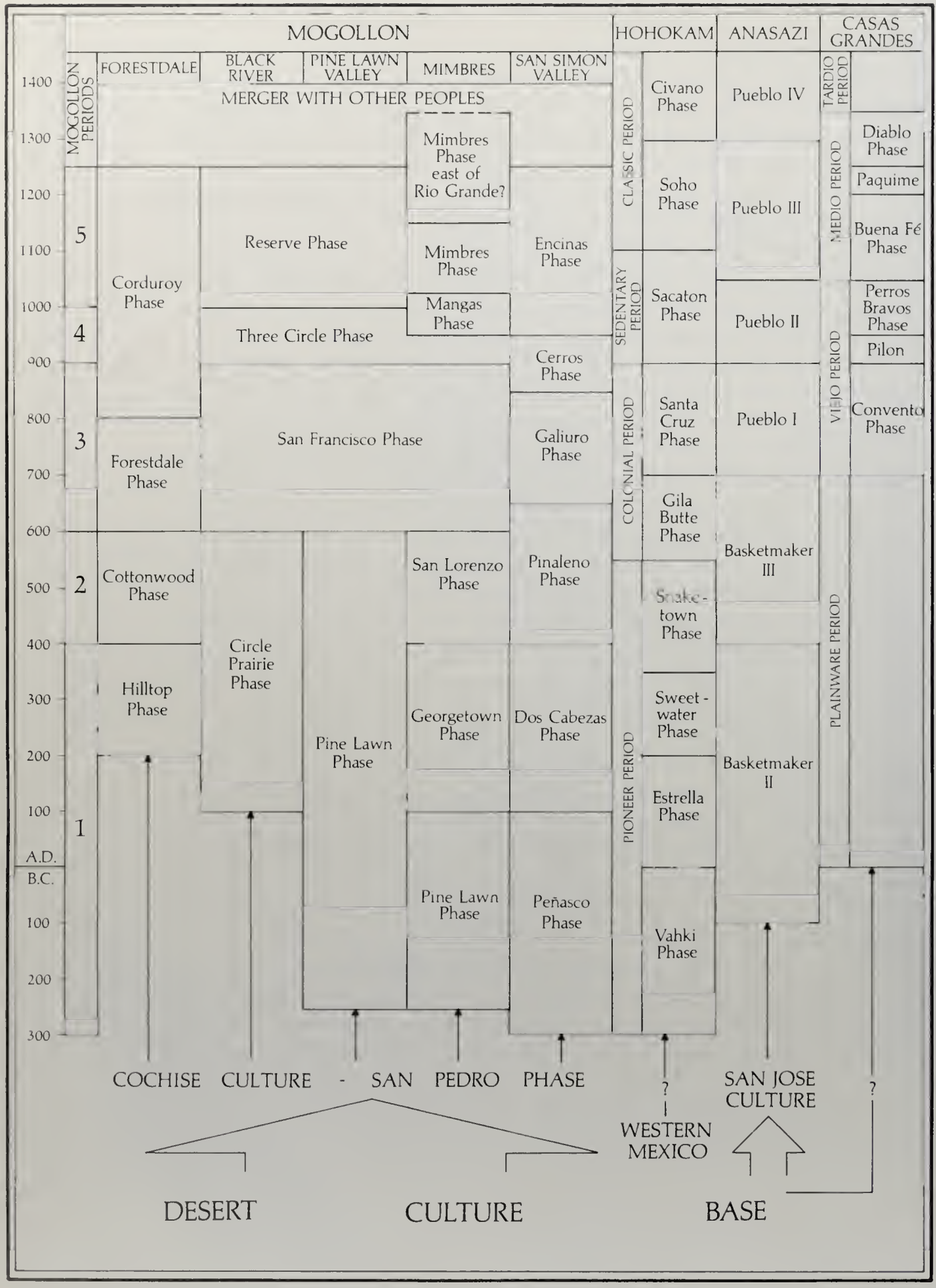
Adapted from Jennings

Close study of pottery traditions indicated that the culture history of the southern part of the Southwest was distinct from that of the northern (compare Figs. 36 and 43). By the same means it became clear that the northern villages of the Mesa Verde, Chaco, Kayenta, and Rio Grande districts were related and had been inhabited by ancestors of the modern Pueblo people (Map 1). Curiously, the Navajo, who had nothing to do with any of these early ruins, contributed the word *Anasazi*, which archaeologists came to use as a generic term for early Pueblo sites and people. Reconstruction of the history and ethnic affiliations of the southern part of the Southwest was more difficult and to this day remains more obscure (Fig. 8).

Bandelier, Hough, and Fewkes all recognized that Mimbres Black-on-white differed somewhat from Anasazi pottery, but they had scant evidence that the people who made it were different enough from the Anasazi to be called by a different name. These pioneers realized that Mimbres Black-on-white was radically different from the dominant redware pottery types of its own region, but they could not adequately explain the phenomenon. By 1914, if not earlier, Fewkes and Hough had guessed that the Mimbres ruins were about contemporaneous with the large pueblos of Chaco Canyon and the cliffhouses of Mesa Verde. They suspected, as Bandelier had earlier, that some Mimbres sites were more ancient than, and some were contemporaneous with, those of Casas Grandes in northern Mexico, and they wondered if the pottery painting of Casas Grandes might not have been derived in part from that of the Mimbres (Bandelier 1892:350–51; Fewkes 1924:1–3, 27–28).

Few questions about Mimbres history could be answered without careful and professionally defined excavations. The first of these was begun by Wesley Bradfield at Cameron Creek Ruin in 1923; the next year, the Cosgroves began excavations at the Swarts Ruin about 18 miles east along the Mimbres River (see Chapter 4). In 1929 and 1930 Nesbitt excavated at the Mattocks Ruin 12 miles upstream from Swarts. These three are perhaps the most thoroughly excavated of all Mimbres sites, and the descriptive reports of them are the most comprehensive published.[2]

These archaeologists' concerns were mainly descriptive and historical. They attempted to reconstruct the realities of village life and to place these sites within cultural and temporal boundaries.[3] Other factors were involved also. Paul Nesbitt was frank. Among his objectives in excavating the Mattocks Ruin were historically oriented research and the training of students in archaeological techniques and procedures, but another goal was "to obtain material from this little-known region for museum display. . . ." (Nesbitt


MOGOLLON
HOHOKAM
ANASAZI
CASAS GRANDES
MOGOLLON PERIODS
FORESTDALE
BLACK RIVER
PINE LAWN VALLEY
MIMBRES
SAN SIMON VALLEY
MERGER WITH OTHER PEOPLES
Mimbres Phase east of Rio Grande?
Reserve Phase
Mimbres Phase
Encinas Phase
Corduroy Phase
Mangas Phase
Three Circle Phase
Cerros Phase
San Francisco Phase
Galiuro Phase
Forestdale Phase
San Lorenzo Phase
Pinaleno Phase
Cottonwood Phase
Circle Prairie Phase
Pine Lawn Phase
Georgetown Phase
Dos Cabezas Phase
Hilltop Phase
Pine Lawn Phase
Peñasco Phase
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
A.D.
B.C.
100
200
300
5
4
3
2
1
CLASSIC PERIOD
SEDENTARY PERIOD
COLONIAL PERIOD
PIONEER PERIOD
Civano Phase
Soho Phase
Sacaton Phase
Santa Cruz Phase
Gila Butte Phase
Snake-town Phase
Sweet-water Phase
Estrella Phase
Vahki Phase
Pueblo IV
Pueblo III
Pueblo II
Pueblo I
Basketmaker III
Basketmaker II
TARDIO PERIOD
MEDIO PERIOD
VIEJO PERIOD
PLAINWARE PERIOD
Diablo Phase
Paquime
Buena Fé Phase
Perros Bravos Phase
Pilon
Convento Phase
COCHISE CULTURE - SAN PEDRO PHASE
?
SAN JOSE CULTURE
?
WESTERN MEXICO
DESERT CULTURE BASE

1931:11). During the summer of 1927 the Southwest Museum in Los Angeles sponsored excavations at the Galaz Ruin, and Bruce Bryan's brief descriptions of that season's work and its results laid great stress on speculative historical interpretations and on the visual quality of the painted pottery recovered from the site, particularly representational pictures (Bryan 1927:325, 330; 1961; 1962). Thus, museum-sponsored excavations of Mimbres sites as recently as about 1930 were still as concerned with artifact recovery as Fewkes had been fifteen years earlier. At times interpretation and historical reconstruction seemed to be of almost secondary importance.

The Cosgroves, Nesbitt, and Bradfield never lost sight of their professional responsibilities, and each contributed to the reconstruction of Mimbres history. So far as they could determine, the temporal limits of the Mimbres were not vastly different from those proposed by Fewkes in 1914. Their sites seemed to be roughly contemporaneous with what by 1932 was called the Pueblo III or Classic Pueblo Period of the Anasazi sequence, dating between about A.D. 1050 and A.D. 1250. Cultural affiliations were more difficult to ascribe. Several horizons were uncovered at all of the sites, and while the most recent one at each appeared to be an Anasazi variant, it overlay and seemed to derive from pithouse occupations that were something other than Anasazi in origin. Mimbres Black-on-white pottery seemed to come from pithouse as well as the Anasazi-like horizons, and it became clear that reconstruction of the history of the Mimbreños and their unique pottery required investigation of ruins ancestral to those villages that had made Mimbres Black-on-white. What had been thought of as a regional Anasazi variant was now known to have begun from non-Anasazi roots.

At about the same time, archaeologists working in the deserts of south-central Arizona had concluded that their sites were so different from those of the northern plateau that definition of at least two distinct prehistoric agricultural traditions in the Southwest was required. By about 1934, a southern culture called Hohokam was defined by H. S. Gladwin, Nora Gladwin, Winifred J. Gladwin, E. B. Sayles, Emil W. Haury, and others based either at the University of Arizona in Tucson or at Gladwin's archaeological laboratory of Gila Pueblo near Globe, Arizona (Gladwin 1928; Haury 1932; Gladwin and Gladwin 1933). Because no two ruins are ever alike, it is often

Fig. 8. A Chronological Chart of Some Prehistoric Southwestern Cultures.

tempting to consider differences between basically similar sites as evidence of separate cultural groupings rather than as minor and expectable variations between unique but culturally and historically related places. For this reason specialists often treat the announcement of any new prehistoric culture with cautious skepticism, and it took some years for the Hohokam to be accepted by others as a discrete culture, contemporaneous with and neighbor to the Anasazi (Gladwin and Gladwin 1934).[4]

One visible and obvious difference between the Anasazi and the Hohokam was in their ceramics, the Anasazi producing mostly black-on-white painted pottery and the Hohokam red, brown, or buff wares. Knowing that brown and red wares were also commonplace in southwestern New Mexico, investigators of the Hohokam were inevitably attracted eastward and, almost incidentally, took up the problem of Mimbres origins. H. S. Gladwin was among the first of these to suggest yet a third basic prehistoric southwestern farming culture located to the east of the Hohokam and south of the Anasazi territories. This he called Mogollon, after the mountain and plateau country that formed a physical barrier between the Anasazi and the Hohokam (Map 2) (Gladwin 1934). Excavations by Emil Haury at sites along the San Francisco and Mimbres rivers confirmed the Gladwin thesis and also provided evidence that ancestors of the people who had made Mimbres Black-on-white pottery were a Mogollon subgroup to be called the Mimbres Branch (Haury 1936). Definition of the Mogollon and their various branches was further refined during the years immediately before and after World War II by Paul S. Martin and John B. Rinaldo of Chicago's Field Museum of Natural History.

As the archaeological work continued a series of temporal phases came to be recognized for each Mogollon branch. Mimbres Black-on-white pottery was now understood to be diagnostic of the final period of the Mimbres Branch, called the Mimbres Phase, and the ware was perceived to be one of a number of Anasazi-like influences that signaled the coming end of a recognizable Mogollon culture in that region. A synthesis of Mogollon prehistory by Joe Ben Wheat of the University of Colorado described and defined that culture in all of its complexity up to but not including its later stages (Wheat 1955). This was severely criticized and an alternative synthesis was offered by Bullard several years later. However, interest in historically oriented Mogollon archaeological investigations then petered out, and the final chapters of Mogollon prehistory, including those on the Mimbres Phase, have yet to be written (Bullard 1962).

The sense of problem felt by professional archaeologists is, ideally, the critical factor in their selection of sites to be excavated. As early as 1902 Hough had been tempted to investigate sites that produced brownware and had done some excavations at Luna Village on the San Francisco River to the northeast of the Mimbres Valley. His report on it was published in 1914, long before the Mogollon was defined, but the village was Mogollon. Southwestern archaeologists at that time were still too deeply immersed in the broad problems of Anasazi prehistory, especially with respect to the large ruins of the north, to spend energy on the small mountain villages of the south. After about 1930 it became apparent that questions of Mimbres origins could be answered only by excavating at sites such as Luna Village that overlapped but predated the Mimbres Phase. The archaeologists—Martin, Rinaldo, Haury, Sayles, and others—whose interest was with the early Mogollon were drawn away from sites rich in Mimbres art and attracted to those that might answer questions about earlier periods and the transition by hunting-gathering Archaic peoples to agriculture, even if they yielded depressingly bad pottery (Martin and Plog 1973:3–34).

Everything considered, during the 1930s there was little of scientific value to be gained by further excavation of Mimbres Phase sites. The Cosgroves' report on the Swarts Ruin was thorough, Nesbitt's on the Mattocks Ruin and Bradfield's posthumous Cameron Creek site reports only slightly less so. Questions these raised were being answered by work in progress on Mogollon archaeology. About fifteen hundred Mimbres painted pots had been recovered from these places and, with those at the United States National Museum and the Museum of the American Indian, a huge amount of pictorial material was readily available to anyone who wanted to use it. By the time the outline of Mogollon prehistory had been drawn, the focus of archaeological problems had shifted radically. Hattie Cosgrove was no longer young, her husband was dead, as was Bradfield, and further investigation of Mimbres Phase sites held little attraction for other professionals.

Ralph Linton, then of the University of Chicago, had defined archaeology as "the ethnology of the past" and in the United States the discipline was increasingly conceived of as an anthropological one. Attempts to reconstruct the social organization of the Mogollon had been made by Paul Martin as early as 1940. After World War II American archaeologists became concerned with problems of social anthropology rather than narrative history (Martin 1940; Martin and Plog 1973:23–34). Thus questions having to do with social process, change, cultural ecology, demography, and social systems

replaced those of historical reconstruction that had dominated southwestern investigations before 1940. Regional concerns were largely irrelevant to the new problems, sites were selected for their universal rather than their historical implications, and visually or emotionally powerful artifacts such as Mimbres paintings were potential distractors that could seduce objective scientists away from their planned studies. Mimbres sites were to be avoided unless the investigator had specific plans to study Mimbres art.

Aside from problem solution, the only other professionally justified site-selecting criterion is threat of destruction. Even though the extensive vandalism of the last few decades has clearly marked every existing Mimbres site as endangered, laws protecting archaeological sites have actually inhibited the conservation or salvage of the Mimbres villages. Federal and state laws of the last two decades require that under certain conditions archaeological sites threatened by construction of roads, dams, or other similar projects must be either by-passed or excavated. Funds are made available to support salvage archaeology, but few Mimbres Phase villages have been threatened by construction gangs, and there are no funds to rescue sites threatened by vandals, no matter how immediate and obvious the danger.

Institutions that could have been expected to salvage, protect, or continue research into Mimbres Phase sites have generally had their energies diverted. The laws intended to protect endangered sites have in fact made it easier for the bulldozers to destroy Mimbres ruins, for, with few exceptions, their effect is to pay archaeologists and their institutions to look in other directions.[5] In that context, inability of the professional and amateur archaeological communities to work together takes on greater significance. The potential for training amateurs to levels of professional technical competence and to professional attitudes has always existed. The amateurs could have become an aggressive army, protecting sites while excavating a selected few. Instead, they were merely enjoined Thou Shalt Not Dig, and themselves became looters.

With so many sites gone, there appears to be little hope that much more will ever be known about the people who made Mimbres art than was understood by the Cosgroves in 1928. Some tentative steps to reverse this depressing situation have been taken during the early 1970s. A series of surveys and excavations was sponsored by the Department of Anthropology of Case Western Reserve University of Cleveland, Ohio, under the direction of James E. Fitting. However, rather than being focused on problems of

Mimbres prehistory, these have been training sessions in archaeological method and theory, and their scope has been severely limited by time and money (Fitting 1971a). Of potentially far greater importance is the work begun by the Mimbres Archeological Center in 1974 under the direction of Steven LeBlanc of the Institute of Archaeology of the University of California, Los Angeles. With the support of private foundation funds, LeBlanc's efforts are directed toward contemporary archaeological problems dealing mainly with the development of irrigation agriculture and demography. But the project is also perceived as a kind of salvage archaeology, "an attempt to save for scientific study all available evidence on the prehistoric people of the Mimbres culture area."[6] In addition to using more traditional archaeological approaches, LeBlanc has been attempting to salvage information from disturbed sites, both pothunted ones and some that were partially excavated by professionals three or four decades ago. If his techniques prove successful his contribution may rival in importance those made more than a generation earlier by Nelson, Spier, and other pioneer southwestern archaeologists.

Meanwhile, Mimbres pots are thrown out of the dirt by looters as though newly made. As a contemporary phenomenon the history of the art is familiar. It is one of exploitation of an irreplaceable resource by irresponsible commercial interests, and of the inability of the scientific community to harness potentially powerful and responsible public forces to protect that resource.

3

The Physical Environment

Mimbres paintings were mostly made to be used by the Mimbres people, both the living and the dead. Much of the art is found as grave offerings, and there is a suspicion that some of it was made only for mortuary use. A few examples have been found far from the Mimbres homeland, and some of these may have influenced the art of foreign peoples. Even more have been found in neighboring communities that were occupied by closely related people, some of whom seem to have used it as a model for their own pictorial arts. Though the paintings are unique and easily recognized, they also belong to a much wider regional tradition, and they most closely resemble the black-on-white pottery art of the Anasazi.

It was earlier claimed that Mimbres pottery was an improbable climax ware, and the bases for the statement should be examined. First, the communities that produced the art were so small, and their economies were so geared to subsistence activities, that they could hardly have supported any specialized artists. Yet the paintings are consistently high in quality and production was stable for so long a time that something like art specialization seems to be indicated. Thus questions must be asked about the communities. Despite appearances, could they have supported art specialists? If not, how were they able to maintain such high quality for so long? If so, what economic and social factors made specialization possible? In either case, who were the artists, how were they supported, and what motivated them?

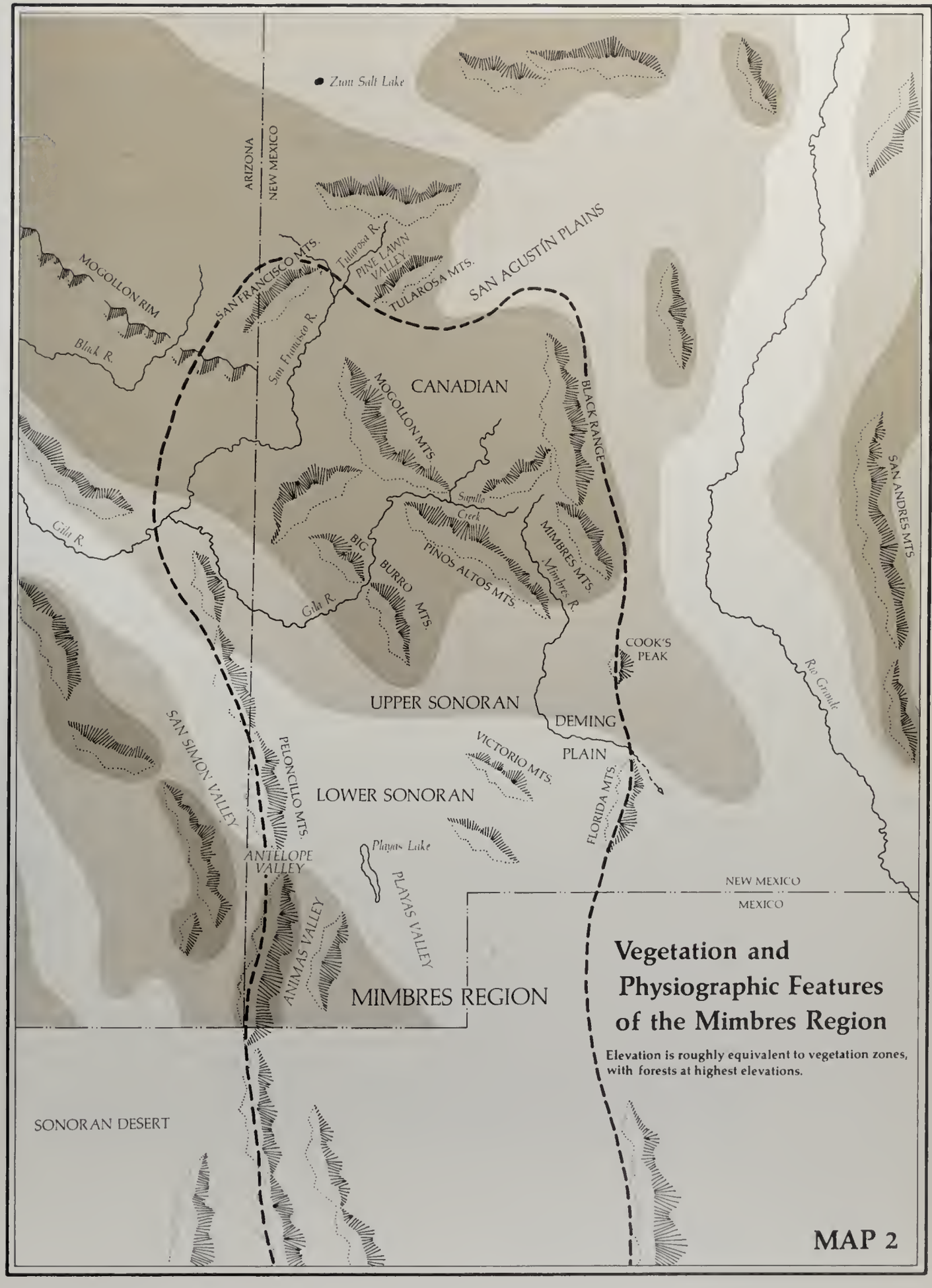
The second basis is historical, for Mimbres geometric paintings are superficially much closer to Anasazi traditions than to those of the Mimbreños' ancestors. Did these people master a foreign art concept so quickly and completely that within only a few generations they could carry it to an ideal conclusion? If so, how and why did the Mimbres adopt Anasazi visual concepts? If not, is the resemblance to Anasazi modes coincidental, the converging of two traditions, each belonging to a much greater regional art tradition? And if that was the case, can the convergence be explained?

We can offer no answer to any of these questions, nor can we be sure that they are the right questions to ask, unless we can place the Mimbres Phase people in historical, temporal, and physical contexts. What they were and what they did were conditioned and tempered by the geographical and human environments in which they lived. This chapter and the two following will describe these environments (Map 2).

THE MIMBRES TERRITORY

Although it is possible to draw precise geographical boundaries around some political units, no precise borders can be placed around the Mimbres country because their largest political unit was a village. The term *Mimbres* describes individual villages that were similar in appearance (sharing a cluster of material traits) rather than a political organism. An approximation of the greatest extent of their territory during the Mimbres Phase is shown on Map 1. Ruins that evidence Mimbres influence or occupation are found beyond these borders, especially to the east and west; other ruins found within the territory were lived in by distinct though closely related peoples. This territorial fluidity should be understood as a consequence of defining the Mimbres Phase people almost solely by their manufacture of a certain kind of pottery. Thus villages throughout the region could alter putative boundaries by choosing to make or not to make Mimbres Black-on-white.[1]

Mountain ranges formed by volcanic activity define the Mimbres homeland on every side but the south, where it blends into the Sonoran Desert. The northeastern boundary, in the middle of the parklike Plains of San Agustín, is an east-west highway that spills into the Rio Grande Valley on one side and on the other becomes a funnel into eastern Arizona through pleasant, narrow valleys. South of the Plains of San Agustín the Mogollon



Vegetation and Physiographic Features of the Mimbres Region

Elevation is roughly equivalent to vegetation zones, with forests at highest elevations.

MAP 2

Mountains are difficult to traverse, and no relatively easy north-south pathway occurs along the northern border until one reaches the valleys of the Tularosa and San Francisco rivers near the present Arizona–New Mexico state line.

Along the western boundary, the San Francisco and Blue Mountain ranges may have inhibited east-west movement, but foot traffic in those directions was simple through the Gila Valley at the junction of the San Francisco and Gila rivers. South of the Gila Valley, the Peloncillo Mountains are rugged, although not as dense and difficult as those of the north. West of the Peloncillos and across the San Simon Valley south of the Gila River are the more rugged Piñaleno, Dos Cabezas, and Chiricahua ranges. East-west passes exist through or between all of these, but the country is arid and no route is pleasant.

On the eastern side, north of Cook's Peak the Mimbres and other mountain ranges are formidable and no clear east-west pass opens up before one reaches the wide gap of Antelope Valley. No extensive mountains bar traffic south of this excellent corridor, but here again the land is dry and sere and not pleasant for traveling (Plate 1). There are no sharp geographical boundaries in the south other than the Sonoran Desert, which is barrier enough. Somewhere in that desert, south of Casas Grandes, Mexico, was the southern limit of Mimbres territory (Brand 1935:302). Thus, although their isolation could be breached, the Mimbres were easily reached only along their hot and dry southern borders or by way of several narrow northern passes.

There are sharp environmental contrasts within the Mimbres territory between northern highlands and southern plateau. The mountains of the north are a bewildering mass of pyramids piled on top of each other and extending over hundreds of square miles. It is not their depth or their height that makes them so impassable, but the random way in which canyons have been cut to separate one steep-sided peak from another (Plate 2). The mountains are well watered, and their snow packs feed streams in the springtime. Fed also by summer rains and underground springs, many streams run all year long to feed three major river systems. The San Francisco River in the northwest is a tributary of the Gila River. The Gila, rising in the northeast corner, flows westward to join the Colorado River hundreds of miles away, finally reaching the Pacific Ocean through the Gulf of California. The third river system, the Mimbres, also rises in the northeast corner but flows south and east toward the Rio Grande only to disappear below the surface of

the dry plateau before it reaches that river. None of the three rivers within the Mimbres territory is navigable.

The hundreds of small and large streams that feed the rivers rise in the mountains of the north, northeast, and northwest. Each stream has cut a steep-walled canyon between mountaintops, and the canyons twist and turn, oriented to all points of the compass. Just as the region itself is isolated by its many mountains, many of the valleys within it, including the Mimbres River Valley, are isolated from each other by watercourses that tend to inhibit rather than promote communication and transportation. A typical canyon cut by one of the larger streams will periodically broaden out into a narrow, terraced river valley (Fig. 9). The floor of its first and lowest terrace will be covered by a layer of alluvium, perhaps 6 to 8 feet deep, deposited by the stream during its flood stages. Steep, rocky slopes rise abruptly from this, sometimes to a height of 60 or 80 feet, to a second terrace, usually composed of layers of dense clay and sand that are sometimes covered by thin topsoil. Hillsides, equally steep and rocky, rise above the second terrace to the mountaintop, or to a third and sometimes a fourth terrace before reaching the summit.

South of the mountains, canyons, and river valleys, the landscape changes radically. It is a soil-covered, rolling plateau, cut here and there by arroyos that contain water only after heavy summer rains in the usually dry basins or playas that dot the terrain. In former days these were lakes and marshes, and a few still remain wet for all or most of the year. Some of these, such as Playas Lake, are of impressive size. Evidences of former volcanic activity are everywhere: hot springs, lava flows, and, most obviously, cone-shaped or jagged mountains upthrust over the plains. Drier now than in the past, this was once a pleasant if hot country. Its desiccation increases toward the south where it merges into the immense Sonoran Desert, in which are found similar basins and playas, volcanic cones, and sharply defined, wicked-looking mountains that jut dramatically out of the relatively flat landscape.

NATURAL RESOURCES

Many of the rich mineral resources in the mountains and on the plateau were exploited by the Mimbreños. With an average annual rainfall of about 20 inches, the northern mountains are perhaps the best watered area of the

Fig. 9. Terraces along the upper Mimbres River. Reproduced by permission from Steven Le Blanc, *Mimbres Archaeological Center: Preliminary Report of the First Season of Excavation, 1974,* Plate A.

entire American Southwest (Wheat 1955:5–6). In earlier days water was also adequate on the plateau, and it was the most vital of all natural resources to the people of the region.

Copper and iron ores, found as nuggets on hillsides or in streambeds, were sometimes ground into paint pigment, as was ocher dug out of hillsides. A variety of clays are present all over the area, including occasional deposits of fine, white kaolin. These and ocher, turquoise, chert, and rhyolite were some of the minerals mined by the Mimbreños.[2] Boulders, especially of basalt, are everywhere, many just the right size for building house walls. Nodules of obsidian, chert, quartz, chalcedony, and other stones suitable for chipping

into tools were locally available, while different grades of basalt and other finer grained stones could be ground into tool forms. Rare or attractive minerals, including turquoise, steatite, pipestone, drip lime, and fluorite, were used to make beads, pendants, and other kinds of decoration. However, the rich local deposits of copper, silver, and gold exploited in recent times were untouched by the Mimbres people. Their salt may have had to be imported, either from the Zuni salt lakes to the north or from salt pans across the Rio Grande in the east.

Except for salt, virtually every mineral they needed or were capable of exploiting was available to the Mimbreños. The most commonly used minerals—such as clay and basalt—and water were available throughout the region though more plentiful in the mountains than on the plateau. Some of the rarer ones, such as turquoise, were found only in the highlands.

The most radical differences between plateau and mountain environments are to be found in the plant and animal life that each supports. Throughout the region changes in vegetation correspond to abrupt changes in topography, orientation, soils, altitude, and availability of water. Varieties of succulents, especially cacti and yucca, grow at all but the highest elevations, some at altitudes of 9,000 feet or higher, and grasses grow everywhere. In the mountain ranges, the north sides of steep, rock-strewn hills or canyons are likely to be almost barren, with clumps of grass, clusters of prickly pear, and an occasional yucca the only growing things. But on south-facing or gentler slopes and on upper terraces and hilltops, plants of the Upper Sonoran life zone thrive. Most characteristic are piñon and juniper trees, which grow amid patches of grass and scattered succulents on the thin-soiled ground. Healthy stands of large agaves are seen on south-facing hills at altitudes above 7,000 feet. On rolling hills and flat-topped mesas the piñon-juniper forests continue until there is a radical change of topography or elevation. Where the soil is deeper, and especially on the higher, wetter mountains of the north, the trees grow closer together and forest floors are more thickly grassed. At higher elevations piñon and juniper gradually give way to the larger western yellow pines of the Transitional Zone. As altitude increases the pines mix with and then are replaced by magnificent Douglas firs and stands of tall quaking aspens. Near the summits of the very highest peaks, from about 9,500 to 12,000 feet, is the treeless Canadian Zone, where only grasses, lichens, and wildflowers grow.[3]

Well-watered, well-drained, shallow depressions occur occasionally between the piñon-juniper belt and the treeless zone, especially on saddles

between mountains. In these bowls are grassy meadows dominated by sagelike shrubs, gooseberry, squawberry, and other bushy plants. Far below, on the alluvial terraces of the canyon bottoms and river valleys, are cottonwoods, willows, live oaks, and an occasional walnut tree. Where the alluvium is thick and streams overflow their banks, flat, grassy meadows and dense clusters of willows and grape, gooseberry, hackberry, and other bushes grow. Most Mimbres Phase sites are found on terraces above the alluvium, usually at altitudes below 6,500 feet.

Altitude decreases toward the south and so does the water supply. Near the mountain bases the transition from Upper Sonoran woods to Lower Sonoran desert is often dramatic. Forests are reduced to a scattering of stunted piñons or junipers growing amid clumps of grass, chaparral, ocatilla, thickets of oak trees no larger than bushes, and healthy cholla, prickly pear, agave, and yucca. On the plateau itself grasses and mesquite and other bushes are plentiful, but the succulents dominate, with yucca and agave, cholla, ocatilla, prickly pear, barrel cactus, organ pipe cactus, and, in the southwest corner, giant saguaros the most visible plants. Creosote and salt bushes grow here also, almost hidden in the cuts made by arroyos and streambeds. Where there is water there are cottonwoods and live oaks, and reeds and willows grow in and near the occasional lakes or marshes. On some mountainsides of this arid region are small piñons and junipers, stunted relations of those that occupy the lush northern mountain slopes.

Animal life is rich throughout the area, and there is ample evidence from excavated sites that it was even more abundant in earlier days. Birds are everywhere, among them varieties of owls, hawks, eagles, buzzards, jays, thrushes, and wrens, each species living where the country suits it best. In the mountains are wild turkeys; on the plateau multitudes of quail, grouse, and roadrunners. A major flyway follows the Rio Grande Valley just to the east. Migratory birds of all sorts pass over this route in season, with enormous numbers of geese, ducks, herons, cranes, and other waterfowl attracted to the scattered lakes and marshes of the plateau.

Of the desert animals, deer and antelope are the largest. Pronghorn antelope roamed this area in great numbers in earlier times, and bison also may have lived there as recently as the early historic period (Brand 1937:51–52). It is probable that now-rare mountain sheep once lived in numbers on the hills and mountains that thrust up from the plateau. Foxes, coyotes, and coatimundi are still found, along with varieties of rodents—rats, mice, and large numbers of jackrabbits. Until recently wolves were not

uncommon. Several kinds of lizards, snakes, tortoises, frogs, turtles, and toads are among the desert reptiles.

Many of the same species are also found in the northern mountains, where deer are larger and more plentiful and where mountain lions, bobcats, brown and black bears, and coyotes are still occasionally seen. Grizzly bears and wolves also lived there until recent times; elk, once killed out, have only recently been reintroduced. Among the smaller mountain animals, beavers, foxes, skunks, raccoons, ringtail cats, gophers, porcupines, tree and ground squirrels, and rabbits are or once were numerous. Many food fishes, including trout, inhabit the mountain lakes and streams.

EXPLOITATION OF THE ENVIRONMENT

When the first people to live in this area arrived some ten thousand years ago or more, it was both wetter and colder than today and its plant and animal populations were richer and more varied. The latter included giant ground sloths, bison, and other extinct as well as modern species. Information about the early human population is sparse; the land was probably occupied thinly but continuously throughout the transition to the hot, dry modern period that began about 6000 B.C.

Until late in the first millennium B.C., when some people in the region began to depend on home-grown foods, human survival depended absolutely on the ability to exploit natural food resources. At the time that Mimbres paintings were being made and for many centuries earlier, the people of this land made imaginative use of its plentiful resources, obtaining food, many of the raw materials needed to manufacture tools, and other necessities and amenities. They hunted wild animals, ultimately domesticated a few, gathered wild plants, and later cultivated others. Their exploitation of the land was in large part seasonal and can be described as a balanced set of complementary activities (Wheat 1955:157).

Many hunting techniques were known and used. Some were depicted on pottery, recovered tools and weapons testify to others, and analogy with historic Pueblo methods suggests still more. Birds and small animals were snared, trapped, netted, or shot with bow and blunt or poisoned arrows. Decoys may have been used for hunting water birds, and it is probable that large groups of men, women, and children participated in rabbit hunts by driving the animals into nets and killing them with clubs or projectiles,

including curved throwing sticks. Larger game such as deer and antelope was stalked by teams of hunters and killed with darts thrown by spearthrowers or, later, with bow and arrow (Roberts 1936). Bears and mountain lions were occasionally killed, probably by stalking and shooting, and bears may also have been trapped and sometimes captured alive. The Mimbres people hunted bison on both sides of the Rio Grande, probably using drive-and-surround techniques.

Animal bones were the raw material for many tools. Deer leg bones and ribs were fabricated into awls and other pointed instruments used to manufacture baskets and textiles. Deer clavicles, ribs, and scapulae could be made into hide scrapers or other useful tools and could be notched as musical rasps. Large hollow bird bones, especially of turkeys and eagles, were made into flutes and whistles. Needles, spatulas, perhaps fishhooks, and decorative items including beads and pendants were all made from bone, and animal teeth were drilled to be suspended on string as pendants or necklaces.

Similarly, wild plants were gathered for many purposes other than their food value. Wooden tools included fire-making drills, hoes, shovels, digging sticks, cradle boards, throwing sticks, spear and arrow foreshafts, and bows. Wood was an important house-building material, and the only significant source of fuel, and was used to make many kinds of ceremonial objects. Reeds became arrow shafts or, filled with tobacco, ceremonial cigarettes. Cord was twisted from several different wild plant fibers and knotted, sewn, or woven into textiles, sandals, carrying bags, nets, and snares. After their meat had been scraped out and eaten, gourd shells were cut to become dippers or pottery-scraping tools.

Some plants were used in their entirety, as the yucca was: the blossoms as dye, the fruit as food, the sudsy roots as soap, the leaves turned into paintbrushes, braided or twisted into cord, or sometimes split to be sewn or woven into sandals or baskets. Willow was only one of several materials used for basketmaking. Many other plants were collected and their parts used for ceremonial or medicinal purposes, as dyestuffs, or for other decorative needs.

Available wild plant foods included mesquite beans and piñon nuts, acorns, berries, grass seeds, yucca pods, cactus fruit, prickly pear pods, and many kinds of root including that of the agave. Cultivated food crops included corn, beans, squash, and sunflowers. Tobacco was grown for smoking and ceremonial and medicinal purposes, and by about the ninth century cotton had replaced some of the wild plant fibers formerly used to make woven goods.

Just as specialized knowledge of the environment was required in the days before farming became a way of life, so also such knowledge was essential for agricultural success. Farming techniques that worked in the well-watered river valleys of the northern highlands might not in the more arid southern regions. Balancing the advantage of having water in the mountains was the effect of altitude on the length of growing season. Crops would be threatened by sudden frosts at high elevations and, in the northern mountains, even minor decreases in mean annual temperatures might force farming peoples to move southward to lower but more arid regions (Haury 1936:128). River valleys such as that of the middle Mimbres at elevations of 5,000 to 6,000 feet seemed to be ideal for agriculture, with year-round water and reasonably long growing seasons (LeBlanc 1975:3). Floodplain farming could be practiced on the alluvial lands of these valleys, they could be irrigated simply, and dryfarming could also be done on the terraces above the floodplains. Farther south, in more arid foothills and on the plateau where there were no permanent streams and where fresh-water springs were scarce, dryfarming dependent on subsurface water was the only practical agricultural technique available (Sauer and Brand 1930:419–20). In these places also, drinking water was scarce except during rainy seasons, and the agricultural people of these regions may have migrated to the uplands during dry periods much as their ancestors had done in earlier, preagricultural times (Sauer and Brand 1930:431–32).

Most of the Mimbres territory was marginal for intensive agriculture, and even in the best of times and locations Mimbres farmers must always have been alert to the food potential of their natural environment. In contrast to their limited exploitation of mineral resources, the Mimbreños made full use of the animal and vegetable life that thrived around them. To do this they needed a great deal of specialized knowledge, close cooperation, and many techniques of hunting, food preparation, and tool manufacture. Above all, familiarity with the landscape and its seasons, information about the location and habits of animals, and knowledge of where and when plants would be ready for harvesting were essential if life was to be reasonably comfortable and secure. To this last end, reliance on several sets of resources meant protection against immediate disaster should one or another staple item fail. Throughout the time they lived in their land, the Mimbreños continued to use the exploitive knowledge and techniques developed over millennia by their ancestors.

4

The Swarts Ruin: A Typical Mimbres Village

During the Mimbres Phase the Mimbreños lived in villages distributed over a fairly large territory, but their largest population centers were in the general vicinity of the Mimbres River Valley. This area also seems to have been the center of production of their painted pottery. Perhaps a hundred villages ranging in size from a few rooms to several hundred have been located in and near this valley, between Sapillo Creek in the northern mountains and the Deming Plain to the south and along the tributaries that flow eastward into the river between those points (Map 3). Though this region is not large in comparison to the total size of the Mimbres territory, it is an ecological microcosm of the whole, including virtually every environmental niche occupied by any Mimbres people.

The Mimbres River flows continuously in the mountainous north but is dry most of the time in its southern reaches. Even so, some of the largest of the Mimbres towns were located in the dry south. Most of these, like Old Town near Deming (Fig. 10), have been thoroughly vandalized. Some, like Cameron Creek Village, were partially excavated and reported on by archaeologists prior to vandalization. Of the largest villages upstream, portions of the Galaz site near the present town of San Lorenzo were excavated by several different archaeologists but only cursorily reported on, while the Swarts Ruin was completely excavated and just as completely reported. The Galaz site is being systematically bulldozed by professional

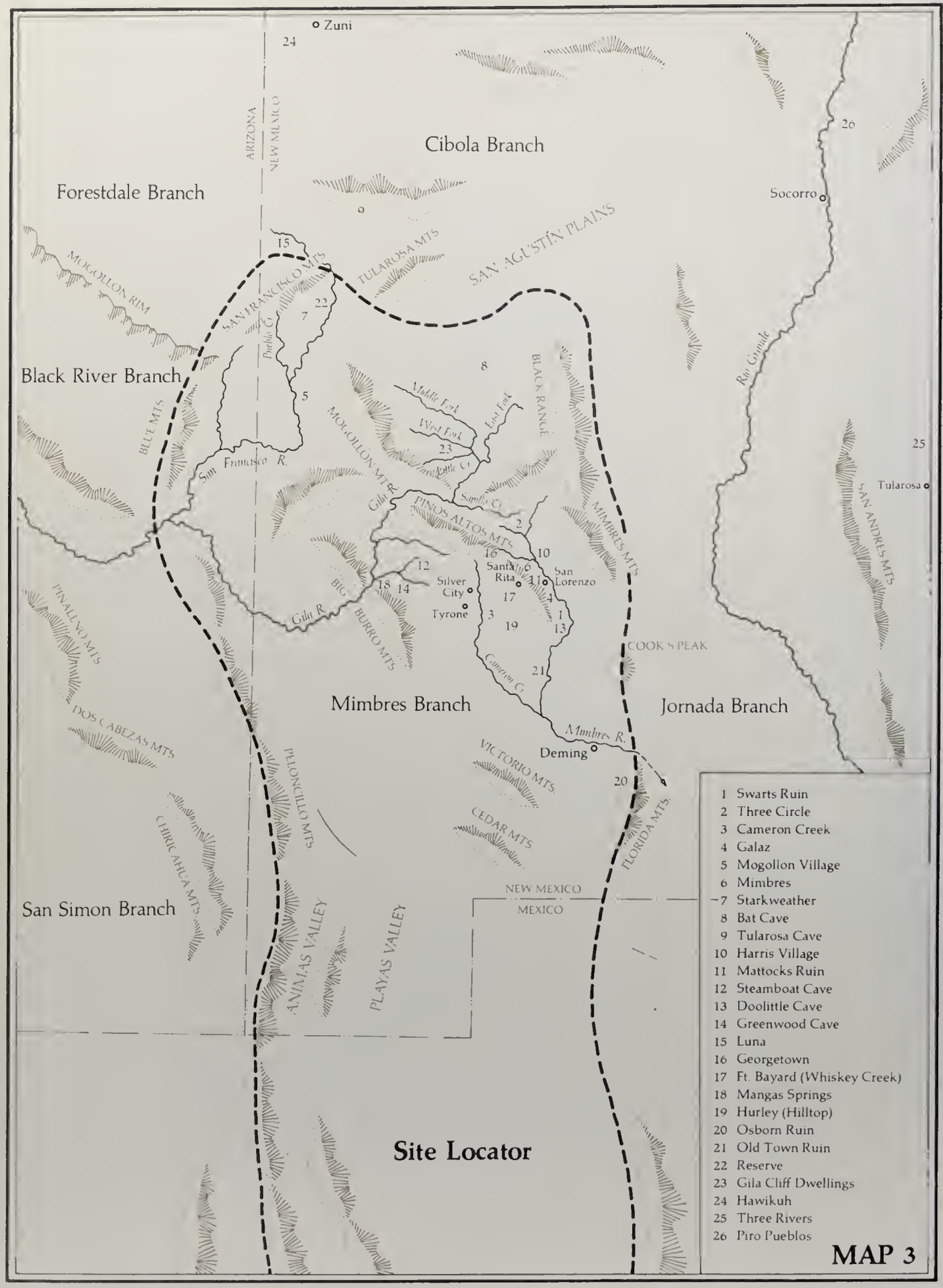

Zuni
24
ARIZONA
NEW MEXICO
Cibola Branch
Forestdale Branch
Socorro
26
SAN AGUSTÍN PLAINS
MOGOLLON RIM
SAN FRANCISCO MTS
TULAROSA MTS
15
22
7
Pueblo C.
Black River Branch
8
BLACK RANGE
Middle Fork
East Fork
West Fork
23
Mule Cr.
5
BLUE MTS
MOGOLLON MTS
San Francisco R.
Gila R.
Sapillo Cr.
PINOS ALTOS MTS
Río Grande
25
Tularosa
SAN ANDRES MTS
2
16
10
12
Santa Rita
6
San Lorenzo
11
MIMBRES MTS
Silver City
18
14
17
4
Tyrone
3
19
1
13
Gila R.
BIG BURRO MTS
PINALENO MTS
COOK'S PEAK
21
Cameron Cr.
Mimbres Branch
Jornada Branch
DOS CABEZAS MTS
Mimbres R.
Deming
VICTORIO MTS
20
PELONCILLO MTS
CEDAR MTS
FLORIDA MTS
CHIRICAHUA MTS
NEW MEXICO
MEXICO
San Simon Branch
ANIMAS VALLEY
PLAYAS VALLEY
Site Locator
1 Swarts Ruin
2 Three Circle
3 Cameron Creek
4 Galaz
5 Mogollon Village
6 Mimbres
7 Starkweather
8 Bat Cave
9 Tularosa Cave
10 Harris Village
11 Mattocks Ruin
12 Steamboat Cave
13 Doolittle Cave
14 Greenwood Cave
15 Luna
16 Georgetown
17 Ft. Bayard (Whiskey Creek)
18 Mangas Springs
19 Hurley (Hilltop)
20 Osborn Ruin
21 Old Town Ruin
22 Reserve
23 Gila Cliff Dwellings
24 Hawikuh
25 Three Rivers
26 Piro Pueblos
MAP 3

Fig. 10. Old Town Ruin, lower Mimbres Valley, after almost a century of pot-hunting. Each crater is a treasure-hunter's hole; note bulldozer scars at top and left side. Photograph, Courtesy Mimbres Foundation.

pothunters and has disappeared or soon will. After the Cosgroves completed their excavations at Swarts in 1928 the site was leveled (Fig. 11). Most of the smaller Mimbres ruins are recognizable today only by the presence of scattered potsherds and other artifacts, vaguely defined stone alignments, and, too often, craterlike potholes dug by treasure hunters. Even so, it is possible to reconstruct some of the reality of Mimbres village life.

When Hattie and Cornelius Cosgrove excavated at Swarts and wrote their monograph about the site, they lacked some basic historical data as well as the benefits of modern archaeological tools and methods. Nonetheless, their report remains the most comprehensive account available of a Mimbres Phase village.[1] More Mimbres painted pottery was recovered from Swarts than from any other Mimbres site ever excavated under controlled conditions, and an

Fig. 11. The Swarts Ruin today. The site, located just beyond the fence line, center left, is now entirely invisible. Photograph, Fred Stimson.

examination of this site may be the best possible way to begin to develop an understanding of Mimbres art and of the people who made it.

THE TOWN SITE AND THE TOWN PLAN

The Cosgroves considered Swarts to be a "typical" Mimbres site, its atypical features merely evidence that each Mimbres community was in some ways unique. At the time they worked and wrote about the Swarts site the Mimbreños were considered to be an aberrant Anasazi people. The site's designation as a Mimbres Phase village of the Mimbres Branch of the Mogollon Culture was not made until some years later.

The Swarts Ruin was located 15 or so miles south of the present town of Mimbres at an elevation of about 5,500 feet, near fertile fields at a wide spot on the floor of the Mimbres River Valley. Its situation on flat land next to the river is the most obvious difference between it and the many mountain villages on terraces or hills above the stream, and in this respect it is more like Mimbres towns found farther south. Swarts lies on the border between well-watered mountain and arid plain; only a few miles downstream the country is flat and barren, only a few miles upstream, rugged and lush.

Vegetation in the immediate vicinity is of the Upper Sonoran type, with piñon, juniper, grasses, and succulents the most characteristic plants and with cottonwoods and willows growing close to the stream. Away from the river the landscape is rather barren now, but it was far richer before the cattle that were introduced in the nineteenth century had eaten so much of the low-lying vegetation.

The Mimbres River may have flowed continuously there when the village was occupied, but even if not the Swarts people had the benefit of runoff from the mountain streams that feed it. Just a few miles south the river becomes intermittent, sinking underground during most of the year. Although Swarts was more dependent on the river than were the upstream villages, its water supply was fairly secure and it was better suited for intensive agriculture than many neighboring towns. Those upstream, especially in the mountains, had less available arable land, while those located farther downstream had less certain water resources. Swarts was also in a good position for the harvest of wild animal and vegetal foods from both the mountain and the desert districts, and, with numbers of neighboring villages strung along both banks of the Mimbres River upstream and downstream from it, it was obviously in a busy and desirable location.

The site was occupied perhaps continuously for about 225 years, from A.D. 950 or a little earlier to A.D. 1175 or a little later. The Mimbres Phase, which covered about the last 100 years of this occupation, was preceded by the Three Circle and Mangas phases (Fig. 8). These three phases corresponded to three major construction periods, with older houses cleaned out, burned, and filled before new ones were built over them. This pattern suggests periodic abandonments, but there are no abrupt breaks in other material culture sequences and, since the burned houses could have been vacated in series rather than all at once, the town may never have been left empty until its very end. A similar pattern of architectural construction was seen at Cameron Creek Village and may well have been common for other Mimbres Branch towns that were occupied during the same time span (Bradfield 1931).

Swarts was founded during the tenth-century Three Circle Phase by a group of no more than ten to fifteen families, probably including fewer than fifty people.[2] They built rectangular, semisubterranean one-room pithouses, each about 4 feet deep and with no more than about 140 square feet of floor space. Each had only one entrance, either through a covered, ramped corridor located about midway along the east wall or by ladder through a hatch-

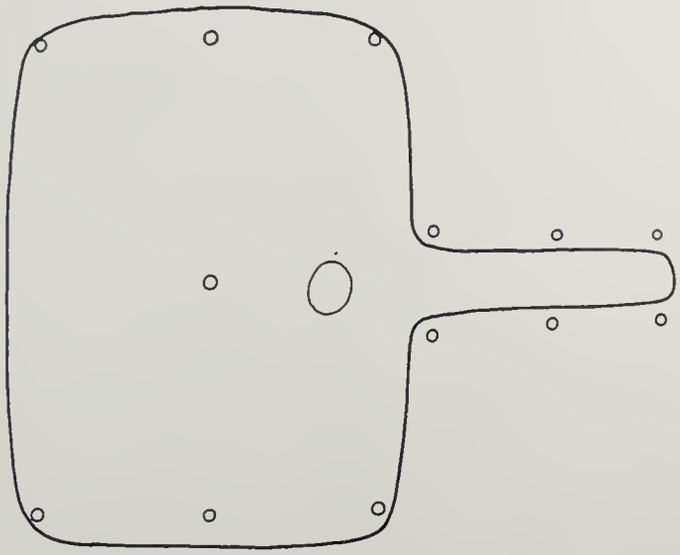
way in the roof. Most had gable roofs of branches laid across support beams and thickly covered with adobe. The roofs were usually supported by four posts set into the adobe floor near the corners of a room (Fig. 12). Most of the walls were dirt, neatly plastered and light tan in color, but if a house was excavated into gravel an interior wall of plastered adobe was built to keep the pit from slumping inward. A shallow hearth located between the midpoint of a room and its side entrance, and a smoke hole in the roof, completed the architectural detailing of most early houses of the village.

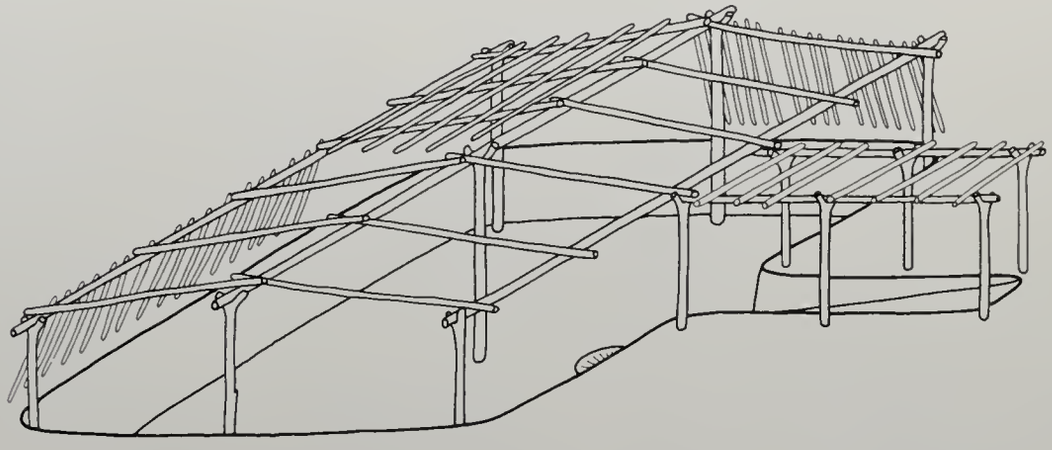
During the site's initial occupation there were fifteen houses of this type grouped in a rough cluster with one other contemporary one, much larger than the residences, that was probably reserved for community and ceremonial use. Later in the period thirty-one more pithouses were built, all with interior walls of plastered masonry that anticipated the next architectural development. Within only two generations the village had about doubled in size, and there is a suggestion that each generation was responsible for its own domestic architecture. Since only about half of the houses were occupied at any one time, the largest population during the pithouse period is estimated at about 110 people or twenty-two families (Cosgrove and Cosgrove 1932:101–3).

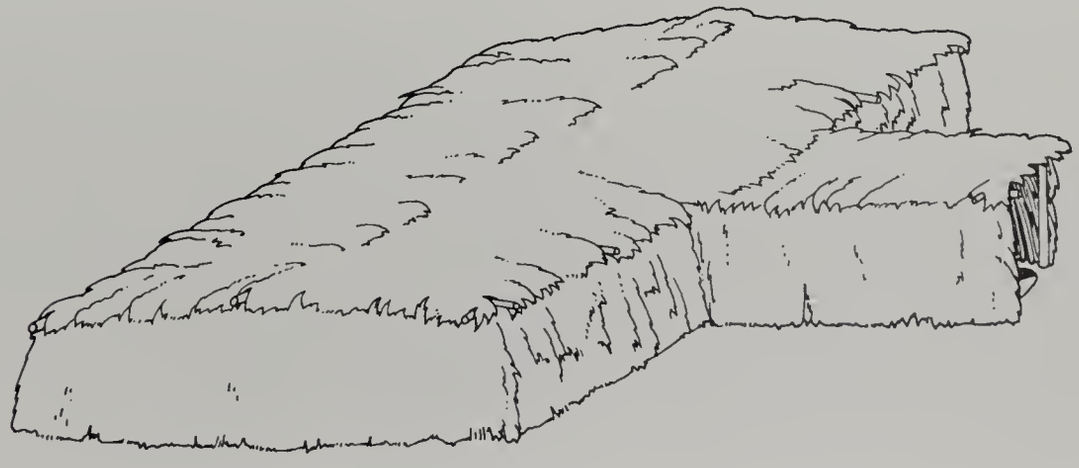
The Mangas Phase, beginning about A.D. 950, is recognized by construction of stone-walled houses directly over abandoned pithouses. All of these were either at ground level or only partly subterranean. Some had two or more rooms. A few had T-shaped outside doorways, but the others were entered by way of ladders through hatchways in flat roofs. Interior walls were plastered; stone- or adobe-lined hearths built into the adobe floors were the only interior features. Except for two houses that were much larger than all of the others and probably were reserved for community use, room size was about the same as in pithouses. This stage of house-building was clearly transitional between the Three Circle and Mimbres phases, and lasted for little longer than a single generation.

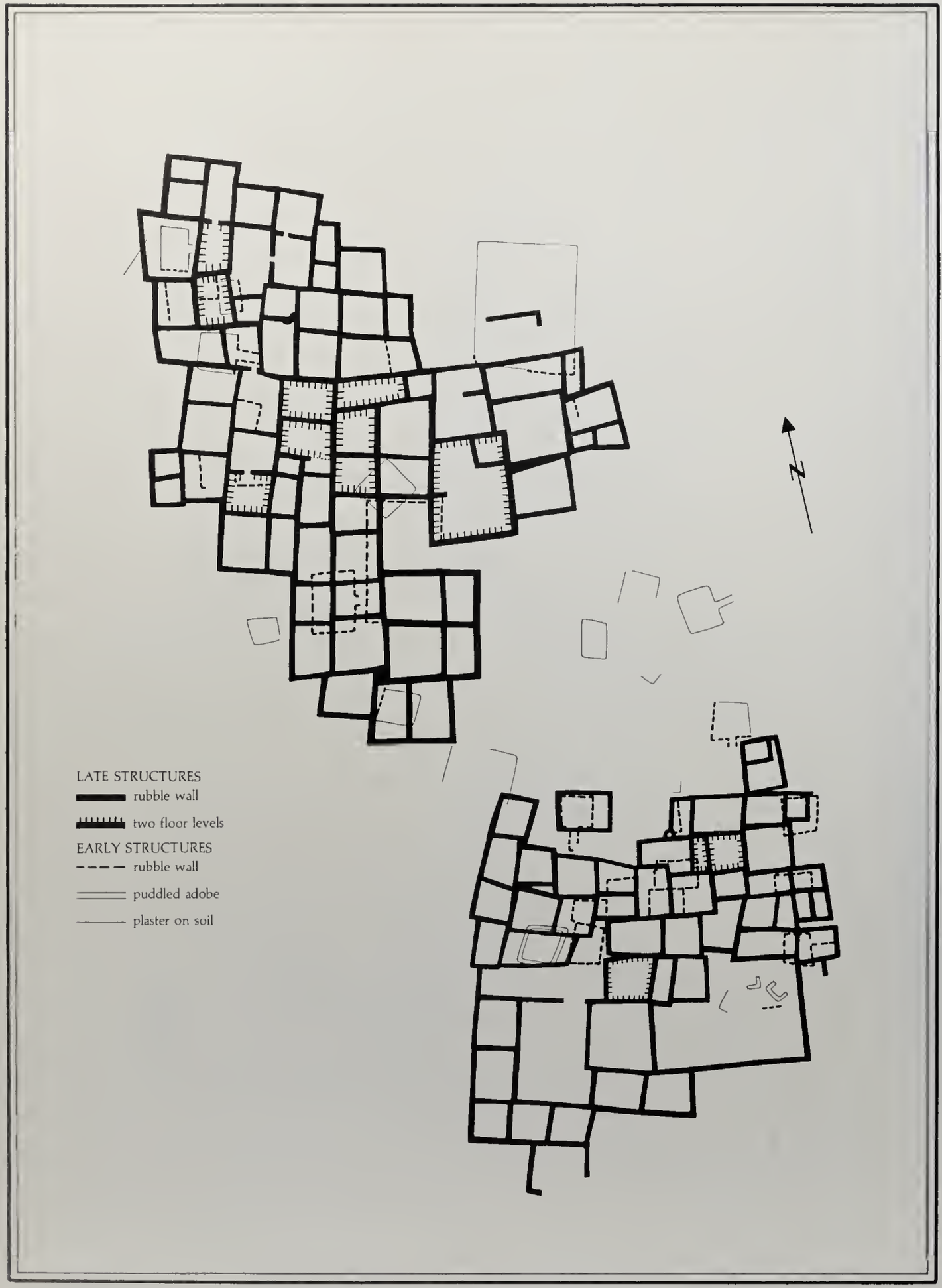
The Mimbres Phase at Swarts began about the eleventh century and lasted for about one hundred years. During this time two single-story, multiple-room residential complexes were built over earlier houses (Fig. 13).

Fig. 12. Projected reconstructions of a Three Circle Pithouse. After Gladwin 1957:132.








LATE STRUCTURES
rubble wall
two floor levels
EARLY STRUCTURES
rubble wall
puddled adobe
plaster on soil
N

Each structure had about sixty rooms, including specialized work areas, general living spaces, storage rooms, and communal ceremonial areas. Several rooms were interconnected by small doorways, suggesting multiroom private apartments. Neither housing block had any exterior access doors, nor was any evidence found for exterior windows. Construction was of stone and adobe.

The two houses were oriented along a rough north-south axis, and they partly enclosed and apparently shared a large plaza that lay between them. Each unit also contained a good-sized ceremonial room. South House had two small enclosed courtyards, and two other walled enclosures were located immediately to its north. These four spaces, open to the sky, as well as the plaza between the two buildings, may all have been used as dance plazas or for other communal activities.

The functional specialization of individual rooms is indicated by size and by the presence or absence of firepits, storage bins, milling basins, and other features. But for these details Mimbres Phase rooms were little different in furnishings and finish from those of earlier periods. Living rooms were somewhat smaller than the multipurpose pithouse rooms had been, roofs were flat as in the transitional Mangas Phase houses, and entrance by way of a ladder through a roof hatch was not uncommon. The average population during the Mimbres Phase is estimated at about 175 people or thirty-five families, and population growth may by itself account for the architectural innovations of the period (Cosgrove and Cosgrove 1932:101–3).

The advantages of surface houses over pithouses are not as obvious as may first appear, and it may be an error to conceive of the change as an improvement in technological efficiency. Construction of masonry- or adobe-walled buildings possibly required less energy than excavation of pithouses, but only if most walls were party walls, built to serve two rooms. New techniques had to be learned, and differences in energy expenditure were not great so long as surface houses were single-room affairs that did not share walls with neighboring buildings. Even later, when rooms were clustered in large buildings, the new style may not have been very practical, for surface structures without windows or doors are no better ventilated than pithouses, and only their interior rooms are as well insulated. Perhaps the only advantage of surface houses over pithouses was the relative ease with which

Fig. 13. Plan of the Swarts Ruin. Note pithouses underlying the large later village. After Cosgrove 1932.

rooms could be added to the former, but that flexibility had value only if there was a desire or need for such expansion. Prior to the Mimbres Phase there was little motivation to build such houses, but the social and economic pressures caused by population increase may have stimulated their construction. Physical security thereafter required larger and safer food storage areas, but even more important, a threshold may have been crossed, forcing the redefinition and restructuring of social relationships.

A one-room pithouse probably sheltered only a single nuclear family; each multiroom building at Swarts housed fifteen or more such groups. Pithouse village families probably did not share spaces other than ceremonial ones or participate in other kinds of group activities except those directly related to food production. Life in the community houses may have been far more closely integrated, with living as well as work, storage, and ceremonial spaces shared by numbers of families, and with most work, including food preparation and product manufacture, done in a social setting.

The two buildings of the Mimbres Phase may have been the physical expression of a dichotomized social organization similar to the moieties of many past and present Pueblo villages. Certainly the architectural scheme resembles that developed from about the ninth to the eleventh centuries by Anasazi peoples, though it should be noted that Anasazi and Pueblo village plans do not necessarily reflect moiety organizations (Jerrold Levy 1975:personal communication). Pueblo moieties are passive, stabilizing institutions that regulate, among other things, membership in the more active social, political, and religious organizations that promote the efficient and disciplined functioning of the group. Separate religious facilities in each building at Swarts lend support to the assumption that the people of the town had adopted a moiety system, with the plaza dividing the two groups but also providing a means for expressing village solidarity by functioning as a joint-use area. It is tempting to speculate that at some point in its growth the community could no longer operate efficiently without having some system for centralizing authority and regulating activity, that the Anasazi moiety system was then adopted to fit the new social requirement, and that the new style of architecture was a concomitant of the new social order.

However, moiety systems were and are widespread throughout the greater Southwest, and the Anasazi model was not the only one available to the Mimbreños (Johnson in Hedrick, Kelley, and Riley 1971:169–99). A somewhat similar adaptation of surface architecture occurred in the Casas Grandes area of Chihuahua about a generation earlier than at Swarts, and, as

at Swarts, it accompanied population growth and had similar social implications.[3] Trade and other relationships during this period seem to have been far more extensive between Mimbreño and Casas Grandes people than between the Mimbreños and the Anasazi. If the idea for surface architecture came from outside, Casas Grandes appears to be the most likely source.

There is reason to suppose that this innovation at Casas Grandes and therefore, perhaps, in the Mimbres Valley had southern rather than northern prototypes. The Perros Bravos Phase village of Casas Grandes, occupied from about A.D. 950 to A.D. 1060, had north and south community houses separated from each other by a walled, plazalike area open to the sky (Di Peso, Rinaldo, and Fenner 1974:190–93). Its excavators suggest that this architectural scheme predates that of similar Anasazi town plans and is derived from those developed near Durango, Mexico (Di Peso, Rinaldo, and Fenner 1974:183, 194). Regardless, it seems clear that the Mimbres Phase architectural program at Swarts had its prototypes elsewhere in the Southwest, and the architecture hints at the adoption of an entire set of intellectual concepts that may have radically changed the social, economic, political, and religious life of the community.

SUBSISTENCE

The village was for all practical purposes self-contained and self-sustaining. Its staple crop was corn, but field beans, squash, sunflowers, tobacco, and cotton may also have been cultivated. Wild foods, both animal and vegetal, provided an important part of the diet, especially protein, and the people of the town, even in its Mimbres Phase, continued to exploit the total environment in traditional Mogollon ways. Food preparation was relatively simple. Corn was parched or dried and stored, its kernels to be ground into flour as needed and used as the base for stews, mush, and fried cakes. Meat was stewed, roasted, broiled, or dried for storage, and wild vegetables were prepared and used in a great variety of ways.

Corn was planted in the nearby fields, probably in March or April, after the last of the hard frosts, and was harvested five or six months later. Villages higher in the mountains may have had precariously short growing seasons, but Swarts was in little danger of losing staple crops because of untimely frosts. Many wild foods were found near the village, and some hunting, especially of small game, probably took place locally during all seasons. Longer journeys

were needed for other wild vegetable harvests and for hunting larger game animals. In earlier times the entire village probably went on expeditions of this sort, spending several weeks at one or another temporary camp and leaving the home base unoccupied. During the Mimbres Phase, village growth and increased dependence on farming may have made periodic abandonment of the town impractical, and some villagers may then have been left behind at all times to maintain the place and care for the crops.

All subsistence-related work was cyclical, as were many other activities. Late summer and early autumn were probably the busiest periods, during which both cultivated and wild vegetable foods were harvested. Autumn and winter were probably the most active hunting times, while a quiet interlude was likely to follow on the spring planting. During lulls in the subsistence cycle, ceremonial, recreational, and manufacturing activities were most concentrated.

CEREMONIALISM

It is impossible to isolate ceremonialism from any other aspect of Mimbres life, although some purely ritual activities can be recognized. Most of these were directed toward subsistence problems, with religious subject matter largely concerned with fertility, hunting, and water, as well as with death and illness (Figs. 14–16). Some Mimbres Phase paintings from Swarts show details of complex priesthood and ritual systems, with all priests and most participants depicted as men (Fig. 17). Among similarities to past and present Pueblo ceremonial practices are the ritual subject matter, the forms and uses of prayer-stick offerings and of shrines, tablita-type headdresses, masks to impersonate supernaturals, and the use of turquoise and bird feathers, including such exotics as those from parrots and macaws. There is also a suggestion of priest-led esoteric societies similar to those of the Anasazi and the Pueblos. Probably each such society acted as caretaker for and practitioner of a portion of the sacred knowledge of the community, but their functions were not confined to the world of the spirit. Each was also an effective local political institution with its membership and secular powers perhaps linked to moieties and other kin associations.

Some of these similarities, such as the form and usage of prayer sticks and shrines, may represent nothing more than a common Archaic origin (Ellis and Hammack 1968). Others are obviously later, but it is by no means clear

Fig. 14. Mimbres Black-on-white bowl. *Childbirth.* H: 2½″; L: 6¾″. Swarts Ruin, middle Mimbres Valley. Collection, HP; photograph, HP.

Fig. 15. Mimbres Black-on-white bowl. *Masked or Supernatural Hunters.* H: 4½″; D: 8½″. Collection, PAM; photograph, PAM.

Fig. 16. Mimbres Black-on-white bowl. *A Curing Ceremony.* Pruitt site, Mimbres Valley. Collection, Robert W. West, Jr.; photograph, ASM.

Fig. 17. Mimbres Black-on-white bowl. *Ceremony.* H: 5″; D: 10″. Collection, PAM; photograph, PAM.

how the Mimbres and the Anasazi came to share many of these traits, and the similarities are often more generic than specific. Pueblo-like corn and harvest dances are hinted at in some Mimbres paintings (Fig. 18), but their pictured animal dances are generally unlike those of the modern Pueblos, and there are relatively few iconographic similarities and many differences between Mimbres and Anasazi ritual paintings. Despite some likenesses to Anasazi ritual, Mimbres Phase ceremonial life at Swarts was distinctive.[4]

This distinctive quality may be best illustrated by their mortuary practices. During all periods at Swarts, but especially during its Mimbres Phase, it was customary to bury the dead beneath the floors of occupied houses. More than 900 of the 1,009 burials recovered from the site were found under rooms in individual unlined pits; at other contemporaneous villages similar burial pits were rock lined or thickly lined and sealed with adobe (Bradfield 1931). Within each grave were offerings of pottery, tools, exotic stones, turquoise or shell jewelry, and, rarely, food. Almost a thousand pottery vessels, mostly painted Mimbres Black-on-white bowls, were found in the

Fig. 18. Mimbres Black-on-white bowl. *Dancer with Horned Serpent Headdress* (body paint resembles that of a Pueblo *Koshare* dancer). H: 4¼"; D: 9¼". Pruitt site, upper Mimbres Valley. Collection, TM; photograph, Fred Stimson.

Swarts graves, and many of these had been deliberately "killed" by striking a hole in the bottom with a pointed tool.

The Mimbres Phase mortuary tradition differed from those of the Anasazi, the Hohokam, and other Mogollon people. The only other Southwesterners who regularly buried their dead beneath the floors of occupied houses were those of Casas Grandes, and only the Mimbreños so consistently "killed" their mortuary offerings. So many Mimbres representational paintings on pottery are found with burials and so few in other contexts that the suggestion must be made that at least some of these were painted for mortuary use. If so, the practice was unique in the American Southwest. The Hohokam usually cremated their dead and buried the remains in pottery urns that are generally alike and may well have been made for that purpose. However, the patterns on these vessels are apparently no different from those placed on their other pottery, and Hohokam representational paintings are not regularly found in mortuary associations. Some Mimbres people also practiced cremation, with remains deposited in either jars or bowls, and there is nothing to suggest that these were made initially for that purpose. In some Mimbres sites, particularly at Cameron Creek Ruin, pottery offerings were sometimes smashed rather than killed by having holes punched in their bases, but this seems to have been done mostly in the period just prior to the Mimbres Phase.[5] At Cameron Creek also, many burials were deposited in trash-filled rooms rather than in adobe-lined coffins beneath occupied rooms, and this practice was much like that of many Anasazi groups. Again, this seems to have occurred prior to the Mimbres Phase (Bradfield 1931).

Other details concerning death ritual at Swarts are unknown, but the care with which their dead were buried, the high quality of grave offerings and their deliberate destruction, and the physical link established between the living and the dead by proximity all bespeak an elaborate concern for the dead that differed in important ways from that evinced elsewhere in the Southwest.

GAMES, GOODS, AND TRADE

Just as purely ceremonial activities are difficult to define, so also are the recreational ones that often have ceremonial, social, and economic functions. A number of group sports probably were played, including the very ancient

game of kickball, and these had obvious social and ceremonial implications. Some kinds of hunting may also be considered as recreational, such as rabbit hunts that almost certainly involved large numbers of people and probably had ceremonial as well as economic purposes.[6] The time invested in hunting the larger, more dangerous or less accessible game animals such as mountain lions or mountain sheep would have been disproportionately high for the economic return of their meat and skins, and recreational and ceremonial concerns must also have been motivating factors in that activity. Among the less active forms of recreation, storytelling and gambling were both important. Some paintings seem to illustrate legends and suggest a rich and didactic tradition of oral literature, while the many dicelike counters found at Swarts and other sites evidence several variations of gambling hand games (Fig. 19).

As in earlier times, most manufactured goods necessary to maintain life and provide comfort were made in the village. Considering the wide variety and small quantities of craft products that were needed and the limited size of the work force, craft specialization, though it probably existed, could not have been highly developed. Certainly some people were more skilled than others at making certain things, and they may have produced surplus goods for trading purposes. It is improbable that all skills and all knowledge were shared; ritual knowledge would almost surely have been limited to specialists and might well have been of economic benefit to its possessors. Turquoise mining was probably only one of several nonsubsistence trades that may have been carried on only by certain trained specialists (Cosgrove and Cosgrove 1932:109).

For technical reasons some kinds of manufactures, such as pottery, could be made only during certain seasons. Other items could be fabricated at any time and were probably made at need or during lulls in the subsistence work cycle. Each person probably made all or most of the things needed for his or her work, and in that respect craft specialization by sex was a reflection of a more general division of labor. Men were thus responsible for making hunting tools and women for housekeeping equipment, while other goods such as textiles could be made by anyone or by members of one or the other sex according to some arbitrarily arrived at formula.

The people at Swarts were probably familiar with a large area of countryside within a few days' journey of their home. Some no doubt knew more distant places also, as suggested by bison bones found at the town, possibly from as far east as the Pecos Basin or as far south as Chihuahua.[7]

Fig. 19. Mimbres Black-on-white bowl. *Gambling for arrows.* H:3¼"; D: 9". Cameron Creek Village, Mimbres drainage. Collection, SAR/MNM; photograph, Fred Stimson.

They were in contact with the Anasazi, the Hohokam, and the people of Casas Grandes, and trade goods found at the nearby Galaz site and at villages in southwestern New Mexico and southeastern Arizona suggest an active trade network to the south and west (Bryan 1927:330–31; Kidder, Cosgrove, and Cosgrove 1949:144–47; Sauer and Brand 1930:444–45; Brand 1938). The possibility that Mimbreños were familiar with Baja California or the Pacific Ocean is also suggested by one Mimbres painting that depicts a dead whale-sized fish (Fig. 20).

In any case, almost all of the foreign goods found at the village are luxury items or other nonessentials. These include decorated pottery, ground stone tools, shell jewelry, parrots, macaws, and some copper ornaments. Just how much of this exotic material was obtained directly from the source, and by what means, is unknown. But, even though the Mimbreños traveled and were not ignorant of the world around them, their dependence on outside resources was negligible.

Fig. 20. Mimbres Black-on-white bowl. *Man and Large Fish* (perhaps a gray whale beached near a shell-collecting area off the Gulf of California). H: 4¼"; D: 10". Collection, Mrs. Warren Barnes; photograph, Fred Stimson.

THE INDIVIDUAL AND COMMUNITY LIFE

The people at Swarts and the other Mimbres towns were probably not at all concerned about what to call themselves. They knew who and what they were and in self-imposed isolation managed to achieve lives of moderate comfort and reasonable security. As an individual, each was restricted by the environment, the necessity to exploit it, and the cyclic nature of the exploitation. Material objects and mechanical and social techniques were invented or adopted to deal with problems of survival and of success. These imposed further restrictions on each person. Each was part of a system, and, as in any organic and working cultural system, the restrictions imposed on each were so varied, diffused, and impersonal as to be invisible.

With everything to be done from house-building to relieving arthritic pains, and with so few people available to do it all, no one could be entirely a specialist. Success of the community depended on close cooperation and on

the assurance that each person knew almost all there was to know about almost every facet of existence. Born into the system, each individual was trained from birth to maintain it, and there was little time, energy, or motivation for innovative experiments. Results were what counted, and pragmatism required that proven methods should be repeated. The freedom to fail is a luxury that only full-time specialists can afford, and whether as artist or artisan, housewife or hunter, individual Mimbreños rarely if ever had the price. Change tempered by conservatism defines the Mimbres Phase and its art.

The material success of Mimbres Phase life is self-evident. Swarts grew as did many other neighboring, contemporaneous villages. There and elsewhere similar mechanical and social techniques were invented, adopted, or adapted to deal with the problems of growth. Nowhere is there compelling evidence to explain the desertion of Swarts or the abandonment of the area by other Mimbreños. However, about the end of the twelfth century, the people of Swarts seem to have packed their valuables and left for reasons and regions unknown. Other Mimbres Valley towns were also vacated at about the same time, and the rich valley may have been depopulated until Animas Phase people of the thirteenth or Salado people of the fourteenth century reoccupied some villages and built others in what had been the Mimbres homeland.

The death of the town was not an isolated event: "Fertile valleys, the Southwest over, tell the same story of intensive aboriginal occupation, then desertion. The factors involved. . .are larger and more comprehensive than any isolated drainage can give. . . ." (Haury 1936:129). Up until the very end of Swarts, its pottery-painting art was vital and inventive. Later, the art apparently flourished elsewhere, and it seems that wherever the people went, they carried with them a set of intellectual concepts and manual skills that were not to be abandoned for some time longer. To begin to understand these events it will be necessary to examine more fully the history of the entire region, for, clearly, Swarts Village, the Mimbres Valley, and Mimbreños everywhere, despite their isolation, were deeply affected by events and activities in surrounding areas.

5

The Human Environment

The general flow of southwestern prehistory is fairly well understood. That of particular communities has in some cases been reconstructed in great detail.[1] However, attempts to synthesize a detailed prehistory of the entire region or large parts of it have had only limited acceptance. Different specialists have derived entirely different historical meanings from the same information, and more than one specialist has, over the years, developed contradictory interpretations of the same data (Bullard 1962; Martin and Plog 1973). The basic problem is the absence of written documents, making tangible objects and oral traditions the only sources for historical information. Deductions are based on the presence or absence of certain material goods and on the meanings inferred from style changes of artifacts that were sometimes of marginal importance to the people who made and used them. Not only are these interpretations unprovable, but they depend on the attitudes and assumptions of the person making them. Regardless of these limitations, however, we must attempt to fit the events and the art of the Mimbres Valley into some sort of historical perspective. It is certain that Mimbres Branch people were neither the first nor the last to occupy that country, and, despite their isolation, changes in their way of life occurred that were in direct response to widespread regional events.

The Mimbreños are now recognized by virtually all southwestern prehistorians as a subdivision of a larger group called the Mogollon, who in

turn were not too dissimilar from other prehistoric peoples of the region (see Map 1).[2] Tangible objects made by Mimbreños before about 200 B.C. hardly differed from those made by neighboring peoples, and by the time they abandoned their home territory they were once again producing artifacts similar to those made by some nearby non-Mogollon groups. During the fourteen or fifteen hundred years that Mimbreños lived in the Mimbres Valley, from 200 B.C. to A.D. 1300, populations expanded throughout the Southwest, the inventory of material products multiplied everywhere, and style differences increased. Some prehistorians therefore define a wide variety of peoples during later periods, each called by a different name and recognized by the manufacture of stylistically different sets of similar material objects; others tend to be sparing in their use of cultural designations, perhaps because of greater tolerance in their expectations concerning the material behavior of peoples and communities. No attempt will be made here to reconcile these different philosophies except to advance a single objective, that is, to explore the relationships among southwestern peoples that may bear on the history of Mimbres art.

Attempts to define the characteristics of temporal periods for all of the Mogollon have been thwarted by the great diversity that apparently existed among the regional branches (Fig. 8).[3] Technological differences define the branches of the Mogollon and, within each branch, define local temporal phases. But the technology of one branch may have had no relevance to any other, and it may be that after all the term *Mogollon* is a catch-all, used to describe not a culture so much as a variety of groups whose commonality was difference from both the Hohokam and the Anasazi.[4] Each Mogollon branch may be considered as a separate entity, but the concept of a Mogollon culture has utility nonetheless, particularly for early periods before the branches diverged enough from each other to be described. It appears that all people we now call Mogollon behaved in much the same manner then and were indeed a culture, a very basic southwestern one.

The Mimbres Phase, the last period of the Mimbres Branch, differs radically in many material respects from any earlier phase of that branch, but, as demonstrated at Swarts and elsewhere, many of its innovations were forecast during the generations immediately preceding it. No matter what the origins of these novelties, most seem to have been filtered through and altered by earlier Mimbres Branch traditions.

The interplay to be studied, then, is that between the generations-old traditions of the Mimbreños and the alteration of these by internal and

external forces. The painted pottery of the Mimbres Phase was apparently a radical innovation, and whether this art is perceived as a sudden idiosyncratic invention that became a local tradition through imitation, or as an evolution from local prototypes, is a central issue.[5] Art is a form of human behavior, and to the extent that other behavioral activities of Mimbres ancestors suggest conformity to certain patterns these also must be examined. The assumption made is that the art of any group is more likely to conform to, reflect, and express the general patterns of behavior of that group than to diverge from those patterns. To put it another way, genius may have its place, but the social, economic, ecological, and historical contexts are to idiosyncracy what a lake is to a raindrop.[6]

EARLY TIMES: COCHISE AND DESERT ARCHAIC

Relatively little is known about the earliest people to occupy the Mimbres territory. Spear points of Clovis, Folsom, and other Paleo-Indian types have been found in the southern parts of the region, and these indicate occupation ten thousand or more years ago (Haury 1950, 1953, 1956). Somewhat more recent (from about nine thousand years ago) is evidence of the Cochise Culture found in caves and at open sites mostly along the northern and western margins of what was to be the Mimbres country (Libby 1955). The Cochise is one of the several Desert Archaic cultures of western America, and, as defined by Gladwin, Haury, Sayles, and others, it was the basic prototype from which many later prehistoric southwestern cultures stemmed (Haury 1943, 1950). It developed in southern Arizona and southwestern New Mexico over a long period of time and in relative isolation. Local variants of it or other similar Desert cultures occurred as far north and west as Utah, Nevada, and perhaps California, and as far east as the Hueco Mountains of west Texas. These may have been even more widespread (Jennings 1968).

Toward the end of its time, Cochise exploitation of the environment was in many respects identical to that of the early Mogollon people, who are generally thought to be among their direct descendants (Hayden 1970). The hunting and food-gathering activities of the Cochise were balanced, and some plants were cultivated. Animal and plant products were the basic raw materials for manufacturing a variety of goods, more limited than but in many instances quite similar to those made later. Cave sites have been the

most fruitful sources of information about the Cochise, but caves were by no means their only shelters or living areas. Many of their large food-grinding stones have been found near caves and in open country far distant from them. From these implements and other evidence it is assumed that open sites were repeatedly occupied for lengthy periods, and that the heavy tools were left to be used again on future visits. These places were selected for their convenience to water and to some harvest, and their seasonal character would seem to be beyond question.

House remains from early periods have not been found and there is no information about the kinds of shelters that were made or used other than the caves. During middle and later periods large pits were excavated in cave floors, probably for storing wild food harvests. These may have been the inspiration for the oval pithouses built during late Cochise times, which were the prototypes for houses built by successor cultures. Dug to a depth of about 2 feet and covered by roofs supported by three wooden posts, Cochise houses had fire pits and were entered by way of side openings but had few other distinguishing features.

Aside from houses and food-grinding stones, Cochise material culture also included other stone tools and a variety of wooden and woven products. Almost nothing is known about their art and little about their ceremonial life. Their communities were small and mobile, and their survival depended on detailed knowledge of the land and its resources. Every individual had to be able to contribute a wide variety of skills and talents to the group, for bands were simply too small to support specialists.

Corn may have been introduced during the fourth millennium B.C. but at first was probably not given much more care after planting than went to the wild food crops (Dick 1965:106–11). After about 300 B.C., dependence on cultivated foods increased, and there were other specialized changes in the material and nonmaterial cultures of people living in different parts of the Southwest. Among the groups defined by these changes are the Mogollon.

THE EARLY AND LATE MOGOLLON

Mogollon dependence on agricultural foods was concomitant with sedentary village life and a variety of new social, political, and religious practices. Innovations in material culture are the evidence for and symbols of

these changes and they define the various Mogollon periods, branches, and phases, but precise boundaries in time or space for any of these are nonexistent. The two southern branches, the Mimbres and the San Simon, occupied desert and foothill country and differed in many respects from the highland northern Mogollones. The Mogollon development described below seems to fit these southern groups best (Bullard 1962:184–87).

The early Mogollon are best known from cave sites in the Pine Lawn and San Simon valleys, where radiocarbon dates demonstrate long and continuous occupations (Martin 1952:483). Perishable materials from these caves, including food and clothing, provide rare details about daily life and evidence of a slow evolution from the hunting-gathering Cochise to the horticultural Mogollon Culture. Cochise people first lived in the Pine Lawn Valley about four or five thousand years ago; by about 250 B.C. their descendants are identified as Mogollon by their manufacture of pottery.[7] Some stone tools of Cochise type continued in use until about A.D. 500, and until then subsistence patterns, manufacturing techniques, and methods for exploiting the environment had changed only slightly. Corn, beans, and squash were cultivated, but use of wild foods was as great during early Mogollon periods as in Cochise times, and only pottery distinguishes early from later horizons. Not until about A.D. 500 or A.D. 600, when an improved variety of corn was grown, was there any significant increase in the use of cultivated foods and a corresponding decrease in dependence on wild food crops (Wheat 1955:155, 156).

Most Mogollon traits evolved gradually. For example, the early Mogollon houses are only larger and more complex variations of Cochise pithouses. By A.D. 1000, Mogollon pithouses had become quite distinctive, and several regional variations had evolved; however, villages were still organized like those of the Cochise, with no easily discernible pattern of streets or plazas. The number and size of villages grew and there is other evidence of expanding populations, particularly after the sixth century. After then, also, there were series of technological and stylistic innovations related to the production of tangible objects. Some of these, such as the replacement of spearthrowers and darts with bows and arrows and the introduction of cotton, had foreign origins; others, such as the style changes that took place in architecture before about A.D. 1000, evolved within the Mogollon communities. In both mountain and lowland regions successful agriculture required specialized techniques and tools that differed from those needed for wild food exploitation in the same areas. Daily and seasonal patterns of movement and

activity were also affected by agricultural requirements, while the scarcity of good arable land might well have led to changes in ownership systems, law, and patterns of social obligation.

Related and equally radical changes occurred in the religious system. As dependence on corn increased, so probably did formalized ritual efforts to ensure its success and the survival of the new way of life. Some ceremonial houses had been built during early Mogollon times; in later periods these became more specialized and more widespread. Hunting ritual was important, but corn, water, and fertility came to dominate religious iconography and also, probably, religious activity. As evidenced by rock art and pottery paintings, cults using masked dancers to impersonate supernatural beings made their appearance about A.D. 900 (Fig. 21). The elaborate paraphernalia and rituals painted on pottery at Swarts Village and other Mimbres Phase sites suggest that by about A.D. 1000 religious cults and their priests had charge of a complex ritual system (Figs. 22, 23).

The most southern of the Mogollon branches, the San Simon and the Mimbres, are the oldest, dating to about 250 B.C. Emergence of the Black River Branch about A.D. 100, and the Forestdale Branch a century later, suggests that cultural flow initially was toward the north. It is uncertain whether this movement was of people into these regions or of ideas affecting

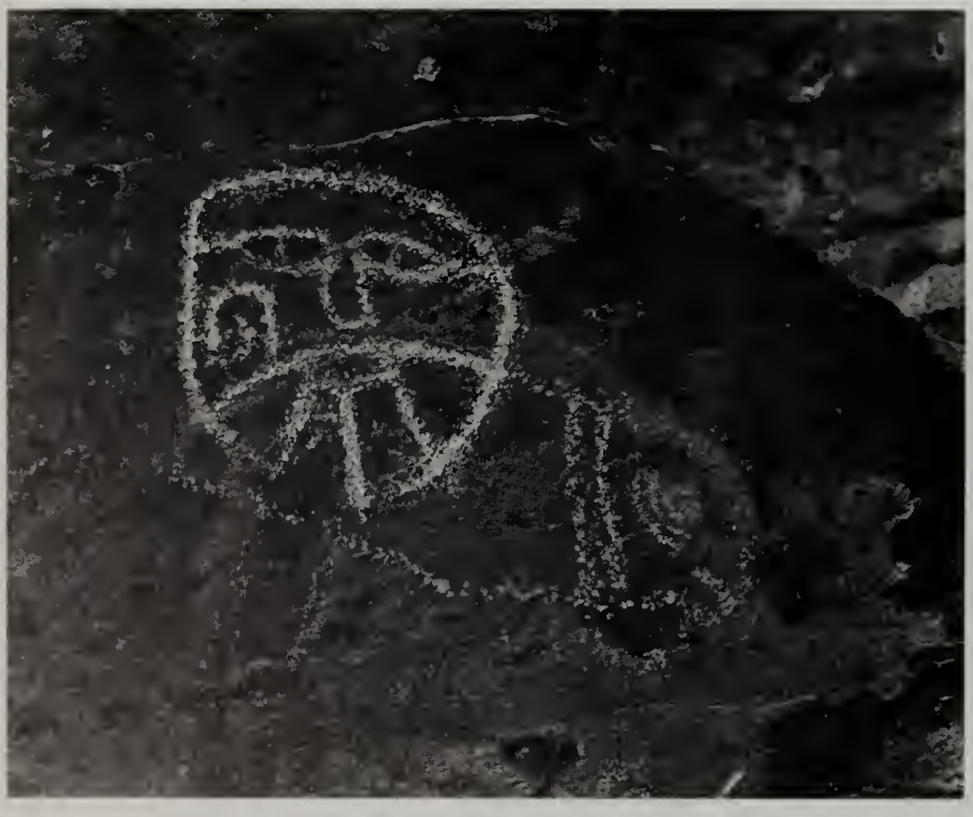


Fig. 21. Pictograph. *Masked Head and Fish.* Rio Grande Valley near Hatch, N.M., probably Mimbres Branch, Mimbres Phase. Courtesy Polly Schaafsma; photograph, Karl Kernberger.

Fig. 22. Mimbres Black-on-white bowl. *Hunting Ceremony.* Collection, Anthony Berlant; photograph, Frank J. Thomas.

Fig. 23. Mimbres Black-on-white bowl. *Dancer Wearing Animal Mask* (Wolf?). H: 5¾″; D: 9″. Collection, MRMM; photograph, Fred Stimson.

the lifestyle of those who already lived there. Rate of change within each branch and the degree of difference between branches accelerated with the passage of time. Differences were reinforced by geography, and the material culture and lifestyle of each Mogollon branch took on some of the character of its closest neighboring, non-Mogollon group.[8] Population growth in each area also seems to have been a key to reinforcing differences among the branches and speeding up the process of change within each. Wheat's Mogollon 4 period lasted for only about 100 years, as compared to about 650 for his Mogollon 1, and all branches differed far more sharply from each other during Mogollon 5 than at any earlier time (Fig. 8) (Wheat 1955).

By about the eighth century A.D. the material life of Mimbres Branch people was in many respects far different from that of other Mogollones such as Forestdale Branch people. After about A.D. 1050 these differences increased to the point that Mimbres Phase towns could easily be mistaken for Anasazi ones. Adaptation of Anasazi ideas seems to have stimulated in the architecture and pottery of the northern Mogollon branches radical changes that parallel and perhaps predate those of the Mimbres Branch as noted at the Swarts site.[9] For example, Reserve Phase people of the Pine Lawn and Black River branches began to make black-on-white pottery clearly inspired by Anasazi models, and their towns also took on the character of Anasazi ones. Finally, the abandonment of the Mimbres Valley by Mimbreños was echoed throughout the Mogollon world, for, before the beginning of the fourteenth century, Mogollon communities everywhere either had been abandoned or were so altered in character that the culture can be said to have ended.

DATING OF THE MIMBRES PHASE

The best reported excavations of Mimbres Phase sites were done before precise dating techniques had been developed and before either the Hohokam or the Mogollon had been defined. Mimbres Phase people were therefore originally classified as an Anasazi variant. It was hardly suspected then that their history was older than that of the Anasazi or that they were converging with rather than diverging from the northern people. For these reasons, most Mimbres Phase sites must be reinterpreted and dated retrospectively on the basis of the old field reports and new artifact analysis. Dating relies heavily on

the cross-reference of pottery types, both foreign wares found at Mimbres sites and Mimbres pottery found elsewhere. It is necessarily imprecise, particularly since there is evidence that the ware was made for some generations after abandonment of the Mimbres Valley by the Mimbreños. It should also be noted that the date given to foreign pottery found at any site is only evidence that an exotic and perhaps valued object was in use at a certain time. It may bear no relation to the actual date of manufacture.

Mimbres Black-on-white is the diagnostic pottery type of the Mimbres Phase, but an earlier ware, Mangas Black-on-white (formerly called Mimbres Boldface Black-on-white), was also used during its early years. Mangas Black-on-white was widely traded throughout the Mogollon branches, and dates obtained from a number of places suggest that it was made from about the middle of the San Francisco Phase around A.D. 775, through most of the Three Circle Phase to about A.D. 950.[10] Mimbres Black-on-white was not as widely traded, except perhaps to the south, but small quantities of it have been found at Hohokam and Anasazi sites. Associated materials range in date from the tenth to the fourteenth century but cluster in the eleventh and twelfth centuries, with two twelfth-century tree-ring dates from Anasazi sites directly related to the ware (Breternitz 1966:5, 86). Foreign pottery reported from Mimbres Phase sites includes Anasazi, Hohokam, and Casas Grandes types manufactured between the ninth and the fourteenth century, most made during the twelfth century. There is uncertainty about precise associations; the early intrusive pottery may have come from Three Circle and later wares from Animas Phase horizons at many of the sites from which foreign pottery has been reported.

Only a few precise dates are available from Mimbres Phase sites. On the Flying A Ranch near Tyrone, New Mexico, a radiocarbon date of 980 ± 95 years before the present (A.D. 896–1086) was obtained in 1971 from a test trench in a Mimbres Phase site that also had Mangas pottery (*Masterkey* 1971). Because of that association, and because of the incomplete nature of the excavation, the date is ambiguous and could refer to either the Three Circle or the Mimbres Phase. Equally equivocal are a surprisingly late series of tree-ring dates from the Three Rivers Ruin north of Tularosa, New Mexico, and far east of traditional Mimbres territory. These range from A.D. 1310 to A.D. 1347, with seventeen specimens clustered between 1345 and 1347. Clearly there was building activity at the site during the 1340s, but the assumption that the Mimbres sherds found with the dated logs were actually

made at that time and in that place is not shared by all authorities (Smiley, Stubbs, and Bannister 1953:38; Breternitz 1966:86; LeBlanc 1975:personal communication). Perhaps the most secure tree-ring dates for the Mimbres Phase are those from the Mattocks Ruin in the Mimbres Valley, ranging from A.D. 1080 to A.D. 1107, with the most recent date from a room built late in the history of the town.[11]

Kidder and the Cosgroves dated Mimbres Black-on-white from about A.D. 950 to A.D. 1150 (Cosgrove and Cosgrove 1932:110–13; Kidder, Cosgrove, and Cosgrove 1949). Haury postulated an end date of about A.D. 1250 (Haury 1943), and David Breternitz assumed the period of manufacture to be between A.D. 1000 and A.D. 1275 (Breternitz 1966:86). Frederick Dockstader gives dates of 1000 to 1350 (Dockstader 1961) and Di Peso from about 1050 to 1200 (Di Peso, Rinaldo, and Fenner 1974:306–8). LeBlanc leans toward an abandonment date for the Mimbres Valley in the 1150s (LeBlanc 1975, 1976:personal communication); Edward Danson (Danson 1957) and James E. Fitting (Fitting 1971a) judged that the highland parts of Mimbres territory were abandoned about 1250, as were sites farther south, particularly in the Animas Valley (Kidder, Cosgrove, and Cosgrove 1949; McCluney 1965). D. J. Lehmer reported "typical Mimbres villages" east of the Rio Grande in the territory of the Jornado Branch of the Mogollon; these sites had associated materials that could have been made in the fourteenth century (Lehmer 1948:71). Mimbres Black-on-white sherds have also been found in association with fourteenth-century wares by Jane Holden Kelley (1966) as far east as the Pecos River Valley and in the El Paso area.[12] It is therefore likely that Mimbres Black-on-white was made well east of the Mimbres Valley for a century or more after its production had ended elsewhere (Hammersen 1972:19).

Other than the Mattocks Ruin dates, virtually all dating evidence for the Mimbres Phase is based on associations with dated trade wares. It is often unclear whether these intrusive wares were found in Mimbres Phase contexts, and, at best, there is a wide margin for error. An end date of about A.D. 1350 for Mimbres Black-on-white may be justified, but production almost certainly ended at least one and perhaps two centuries earlier in the Mimbres Valley if LeBlanc's tree-ring dates prove to be typical. Peak production there seems to have occurred over a period of perhaps two hundred years, from A.D. 1000 to A.D. 1200. At different places it may have begun sooner or ended later, but no fewer than ten and possibly as many as sixteen generations of artists painted Mimbres Black-on-white pictures.

THE NEIGHBORING PEOPLES

The Mimbres Phase was based on Mogollon traditions shaped by the pressures of a growing population and an increasing dependence on agriculture. Reaction to these pressures depended in great part on the availability of behavioral models that these people could adapt to suit their novel requirements. Such models could have been supplied by any one or all of three nearby, energetic cultural systems that had earlier come to terms with similar problems. These were the Anasazi to the north, the Hohokam to the west, and the Casas Grandes to the south (Map 1). During early periods the Hohokam seem to have been the major donor culture for the Mogollon, but by the time of the Mimbres Phase, Casas Grandes and Anasazi influences dominated. Ultimately, the material culture of the Mimbres Valley seems mostly to have followed Anasazi models; the painted pottery made there certainly did.

The reasons for this are not hard to understand. Hohokam culture was firmly conditioned by the needs of canal-based irrigation in hot, flat, dry country. When Hohokam people moved into the mountains their material culture and subsistence techniques were modified by Anasazi or Mogollon patterns. Classic Hohokam patterns and subsistence techniques would be of little benefit to mountain- or plateau-dwelling people who depended on precipitation, flooding, or runoff for their agricultural water. Similarly, only those Mimbreños living in desert country like that occupied by the Casas Grandes people would benefit much by using techniques developed there or by adopting a lifestyle similar to that of Casas Grandes. The Anasazi, on the other hand, so diverse and so difficult to define, provided a variety of related solutions to problems like those faced by Mimbreños living in mountain valleys. Mimbres Phase adaptations inevitably were modeled after one or another Anasazi solution to certain common problems.

Initially, however, as mentioned previously, the strongest outside influences on the Mogollon had come from Hohokam people living to the west and south. The Hohokam were probably the first sedentary, agricultural people of the American Southwest, and by about 300 B.C. or earlier they had built a complex network of irrigation canals between the Gila and Salt rivers in the flat desert of south-central Arizona. There they also built several towns. Snaketown, the largest, was continuously occupied for more than a thousand years.

Some Cochise people of the San Pedro stage are identified as Hohokam

ancestors, just as some of their eastern neighbors have been identified as ancestral Mogollones (Fig. 8). The transition about 300 B.C. from Cochise to Pioneer Period Hohokam seems to have occurred rapidly, with the dramatic development of canal irrigation and all that it implies in the way of technical knowledge and social and political organization. The selection of an ideal location for what seem to be the earliest canals suggests a practiced technological experience for which there is little prior evidence. There is even less evidence that the necessary knowledge was transmitted by migration of a group of people from western Mexico, as has been suggested, and debate on Hohokam origins continues.[13] In any event, some contact with Mexico seems certain, and continuing relationships with the south are evidenced by ball courts, low truncated pyramids on which religious structures were built, small fertility figurines, importation of macaws and copper bells, and, not least, pottery traditions.

If indeed the Hohokam system was triggered by migrants moving into the area from western Mexico, it seems certain that these would have been a frontier group far removed from the centers of Mexican culture. As one of many frontier groups, influenced by rather than a part of the high cultures of the south, these postulated proto-Hohokam canal builders may well have decided to settle in the Gila-Salt Valley because they could judge and manipulate its agricultural potential. Once established, they would have become a southwestern people, mixing with the local Cochise population, whose technology and standard of living were probably not too dissimilar, and the two together probably became the Hohokam. They ultimately expanded in all directions. North, in the Flagstaff area, they came into contact with western Anasazi people; in the east they bordered on the Forestdale, Black River, and San Simon branches of the Mogollon; to the west and south they moved as far as the desert and other peoples would permit.

In all phases and periods there is a suggestion of dichotomy or even multiplicity about them. The River or Basin Hohokam were more fully dependent on cultivation than were the Desert people. The latter farmed but also relied heavily on wild foods for their sustenance, thus retaining a life rhythm more like that of the ancestral Cochise or the neighboring Mogollon. Those who moved into the mountain areas north and east of the Gila-Salt Valley had to modify so many aspects of their lives as to be sharply different from both of the lowland groups. Though not all authorities agree, it seems likely that the Desert Hohokam people came eventually to be identified with

the modern Papago and the River people with the Pima.[14] Some who had moved to the north or east came to be influenced by or integrated with groups of Mogollon or Anasazi and developed systems so different from any of the three major groups as to require other cultural designations. Identification of any of these last with any modern people is often tenuous.[15]

Through most of time, the Hohokam produced red or buff pottery, superficially similar to some Mogollon types but technologically different from all. Formative stages of pottery making have not been found, and it is assumed that the trait was imported somehow from the south. In the San Pedro Valley of southeastern Arizona where Hohokam and Mogollon people of the San Simon Branch met, their sites intermix and the cultures blend. Similarity of pottery between Hohokam and Mogollon is strongest here, with each group freely adapting ideas introduced by the other. To the east, where the San Simon and Mimbres branches bordered, a similar situation prevailed, and it is likely that San Simon people acted as intermediaries for whatever contact there may have been between the Mimbres and the Hohokam (Sayles 1945; Wheat 1955:27–29).

Until about A.D. 900, when the Anasazi began to modify both cultures strongly in different ways, the Hohokam and the Mogollon were mutually influential and shared a number of traits, but with characteristic differences (Gladwin in Sayles 1945:iii–iv; Haury 1936:127). Both peoples lived in pithouse villages, but Hohokam dwellings were large rectangular houses built in shallow pits, and the villages were more rigidly patterned with plazas or other focal points. Both made red, brown, or buff pottery, but their ceramic technologies differed. Both groups were agricultural; in each many people continued to rely on gathering and hunting for a large proportion of their sustenance, but there were important differences in agricultural technologies. They were close neighbors, but until late were noncompetitive, each choosing to occupy a different environmental setting from the other, which required different techniques for effective exploitation. Those Hohokam people who moved into cool, wet mountain areas, like that around Flagstaff, saw their material culture become much like that of their Mogollon or Anasazi neighbors. Nonmaterial aspects of their lives must also have been altered. Those Mogollon who lived in the hot deserts, as in the San Simon or southern Mimbres regions, were in many respects more like the Hohokam than like their mountain-dwelling Mogollon relatives.

Some similarities were a matter of common Cochise origins and others

the result of the diffusion of innovative ideas. Except in border regions, contacts between the two peoples seem to have been rather minimal. Some Mogollon pottery, including Mangas Black-on-white and Mimbres Black-on-white, is found at Hohokam villages even as far west as Snaketown, and Hohokam pottery is found at Mogollon sites, including those of the Mimbres Phase. There was trade also in stone tools, but most Hohokam materials found at Mimbres sites are decorative nonessentials, and Hohokam influences on the Mimbres seem to have occurred mainly through trade in luxury goods.

The Hohokam appear to have been singularly homogeneous when compared to the enormously complex and diverse Anasazi. The latter term is used here to refer to the ancestors of the modern-day Pueblo people: the Tanoan and Keresan speakers of the Rio Grande Valley, the Shoshonean and Tanoan speakers of the Hopi mesas, and the Zuni and Keresan speakers of the towns that lie between. Their linguistic diversity is ample evidence of a complex ancestry that is borne out by archaeological investigations (Brand 1935:302). On the face of it, the Anasazi were many people rather than one, and the term is little more than a historical convenience.

The salient feature of Anasazi prehistory is the widespread adoption by different peoples of a generalized set of economic, social, religious, and material ideas. These include sedentism supported by the cultivation of corn, beans, and squash and residence in small, independent, and essentially egalitarian villages in which kin systems were inseparable from political and religious organizations and obligations.

The most distinctive material expressions of Anasazi culture are architecture and pottery. Until about A.D. 1300 there was a decided preference among most Anasazi for decorated pottery to be painted with a black line on a white surface. After that time decorative preferences were more varied and complex, but the painting tradition was maintained. In architecture, after an initial period of pithouse construction, the Anasazi built above-ground multifamily, multiroom, and in many places multistory houses of stone or adobe. These focused on a plaza, or, when villages grew to include a number of large buildings, two or more plazas. Semisubterranean religious buildings, called kivas today, were usually located in the plazas, and smaller equivalent structures were often contained within residential building blocks. Sometimes, as at Pueblo Bonito, an extraordinary number of these were integrated within the housing complex. Often, two or more were located in one plaza, and some of these were 60 feet in diameter or larger.

Anasazi origins appear to have been much like those of the Mogollon,

with scattered groups of Cochise or other Desert Culture people of the middle Rio Grande Valley and along the drainage of the upper San Juan River becoming sedentary and agricultural after about A.D. 200. The impulse and the techniques for this transition almost certainly came by way of the Mogollon and may have been fostered by northerly migrations of Mogollon people. From about A.D. 400 to about A.D. 1000, there was an enormous expansion of Anasazi territory to include most of central and northern New Mexico, northern Arizona, portions of southeastern Nevada, southern and central Utah, and southern Colorado. There were several regional centers, each distinctive in character and all exerting powerful influences. The most important of these were at Mesa Verde in southwestern Colorado, in the Kayenta District of northeastern Arizona, and in the Chaco Canyon area of northwestern New Mexico. Before A.D. 700 in these areas, virtually all traces of Mogollon origin or influence had been thoroughly submerged.

Elsewhere among the Anasazi, especially in regions bordering on Mogollon territory, some modified Mogollon traits persisted. Redware pottery traditions continued in some places throughout the black-on-white period, and pithouse forms were a continuing feature of ecclesiastical architecture everywhere and of domestic architecture in many places well into the ninth century. Contacts were continuous between the Mogollon and the Anasazi, and by A.D. 700 some Anasazi innovations had been adopted by northern Mogollon people. Within the next three hundred years this influence filtered south, and the architecture, pottery, and, presumably, many intellectual features of the Reserve, Tularosa, and Mimbres phases of the Mogollon were decidedly Anasazi in character. Anasazi expansion here, as in other places before A.D. 1000, seems mostly to have involved the diffusion and voluntary adoption of a set of ideas, rather than large-scale migrations or political domination from any regional center.

Much the same pattern seems to have prevailed in the south, in the present-day Mexican states of Chihuahua and Sonora. Mimbres Phase and earlier Mimbres Branch sites have been located as far south as the Rio Carmen in territory that came to be dominated by the people of Casas Grandes (Brand 1935:302). Recent excavations in the region suggest that the indigenous peoples went through an evolution similar to that of the Mimbreños, from a Cochise-like hunting-gathering base through early agricultural phases and, finally, to sedentary village life that was mostly but not entirely dependent on agricultural products (Di Peso 1973:10).

During the Viejo Period at Casas Grandes, from about A.D. 700 to A.D.

1060, the bulk of trade pottery seems to have come from the Mimbres, but this trade stopped at about the close of the eleventh century (Di Peso, Rinaldo, and Fenner 1974:250, 308). By then, Casas Grandes seems to have become the northern focus of a trade network linked to the Valley of Mexico and Middle America, and it remained an important center of commerce until its destruction in the fourteenth century (Di Peso 1973:8; Di Peso, Rinaldo, and Fenner 1974). It had become one of the largest, perhaps the largest, of the communities on the northern Mexican frontier, and almost certainly it was a principal distributor of Mexican-derived intellectual and material ideas that permeated the Southwest after the eleventh century. If Mimbres pottery was no longer important to the Casas Grandes by then, minerals from the Mimbres country, including turquoise, were, and trade contacts continued. The possibility that Mimbres Phase architecture was directly or indirectly derived from that of Casas Grandes has been discussed (pp. 46–47). It is likely also that representations on Mimbres Phase vessels that are apparently of Mexican inspiration were prompted by ideas received from Casas Grandes. Nevertheless, before the tenth and early eleventh centuries the lifestyle of the peoples of the Casas Grandes region was little different from that of the southern Mogollon, and it is likely that the two peoples exerted mutual and balanced influences on each other.

To the end of the tenth century, all of the cultures of the Southwest seemed to benefit equally from contact with their neighbors, and there is little evidence of domination by any one group over another. If the early Anasazi adopted ideas from the Mogollon, they took these and altered them to fit their own peculiar circumstances. When northern Mogollon people later were influenced by the Anasazi, they also seem to have absorbed these influences slowly at first and adopted them to suit the prevailing local traditions. It is difficult if not impossible to identify painted pottery made before the tenth century by people of the San Simon Branch as either Mogollon or Hohokam, and, but for their black-on-white pottery, the Mimbreños living in the Casas Grandes region were almost indistinguishable from their neighbors. Occasionally these cultural exchanges bore unexpected fruit. By the thirteenth century, in the Cibola and Forestdale districts the interchange of ideas between Mogollon and Anasazi people led to the development of a rich and florid polychrome pottery tradition. This spread after about A.D. 1250, when large-scale migrations began in many parts of the Southwest, and in its many variations and much modified it persists to the present day.

The migrations begun in the thirteenth century affected all southwestern

Plate 1. The Lower Mimbres Valley. Photograph, Fred Stimson.

Plate 2. The Upper Mimbres Valley. Photograph, Fred Stimson.

Plate 3. Three-Circle Red-on-white seed bowl. H: 5¾″; D: 7″. Cameron Creek Village, Mimbres drainage. Collection, SAR/MNM; photograph, Fred Stimson.

Plate 4. San Clemente Glaze on yellow bowl (Anasazi, P IV). H: 4″; D: 11″. Pottery Mound, N.M. Collection, MMA; photograph, Fred Stimson.

Plate 5. Sikyatki Polychrome bowl (Anasazi, P IV). H: 4½″; D: 10½″. Kawaika-a site. Collection, UCM; photograph, Fred Stimson.

Plate 6. Mimbres Black-on-white eccentric form (an effigy vessel with the head broken off?). H: 4″; D: 10¼″ x 11″. Collection, MNM; photograph, Fred Stimson.

Plate 7. Mimbres Black-on-white bowl. *Fish and Mythic Creature with Fish and Rabbit Attributes.* H: 4½″; D: 10″. Collection, SAR/MNM; photograph, Fred Stimson.

Plate 8. Mimbres Polychrome bowl. H: 3″; D: 6½″. MM site, lower Mimbres Valley. Collection, Mr. and Mrs. John King; photograph, Fred Stimson.

Plate 9. Mimbres Polychrome bowl. *Frog.* H: 4″; D: 9¾″. Collection, MMA; photograph, Fred Stimson.

Plate 10. Mimbres Black-on white bowl. *Four Grasshopper-like Insects.* H: 4″; D: 8¼″. Cienega site, upper Mimbres Valley. Collection, MMA; photograph, Fred Stimson.

Plate 11. Mimbres Black-on-white bowl. *Decapitation*. H: 5″; D: 10″. Collection, UCM; photograph, Fred Stimson.

Plate 12. Mimbres Black-on-white bowl. *Stylized Human*. H: 4″; L: 10″; W: 8″. Collection, MRMM; photograph, Fred Stimson.

Plate 13. Mimbres Black-on white bowl. *Pair of Quail and Hatching Eggs.* H: 5½″; D: 12″. Collection MRMM; photograph, Fred Stimson.

Plate 14. Mimbres Polychrome bowl. *Warrior.* H: 5″; D: 10¾″. Collection, Dr. Rudolph Kieve; photograph, Fred Stimson.

Plate 15. Mimbres Black-on white bowl. *Mythic Creature with Rattlesnake, Frog or Toad, and Human Attributes.* H: 4½″; D: 11¼″. Eby #5 site, lower Mimbres Valley. Collection, UCM; photograph, Fred Stimson.

Plate 16. Mimbres Polychrome bowl. *Woman Carrying Antelope in Burden Basket.* H: 3¼″; D: 11¼″. Collection, HMWC; photograph, Fred Stimson.

people. Most of the northern Anasazi centers were abandoned, and a bewildering series of population shifts continued for about 150 years. The general direction of Anasazi movement was to the south and east, and during this time many of the modern Pueblo villages were established. The largest populations and greatest number of towns were relocated in the general vicinity of the Rio Grande Valley, between Socorro and Taos. Other centers were east of the Rio Grande in the Pecos River drainage, west in the Tusayan District of northeastern Arizona, and between Tusayan and the Rio Grande, especially in the vicinity of the modern pueblos of Zuni and Acoma (see Map 1).

Movement of Hohokam and Casas Grandes people is less well documented, while Mogollon people seem to have moved in all directions. Those Mogollones who moved northward toward Acoma, Zuni, and Hopi integrated so well with the Anasazi that identification of any Mogollon Branch with a modern Pueblo population is based on little more than logic and geography (Ellis 1967; Ford, Schroeder, and Peckham 1972). It is conceivable that some Mimbres people moved northward, but at present there is no way of knowing if they actually did so. Significantly, the most recent discussion of Mogollon absorption by the Anasazi ignores the Mimbres entirely (Ford, Schroeder, and Peckham 1972).

Mimbres movement to the east and south is more certain (Sauer and Brand 1930; Brand 1935; Haury 1936; Danson 1957). It appears likely that numbers of Mimbreños moved southward, but the picture is confused, especially because of an apparent northward movement of the ill-defined Animas Phase people into the Mimbres Valley during the 1200s. The material culture of the Animas Phase suggests a blending of Mimbres and Casas Grandes traits with later Salado influences from the Middle Gila region (Kidder, Cosgrove, and Cosgrove 1949; McCluney 1965). The Salado are difficult to define except for their unique pottery of the thirteenth to fifteenth centuries. They may have been northern Mogollones who came into contact with both Anasazi and northern-moving Hohokam groups, and the Salado "Culture" perhaps included elements of both. They moved southward to occupy most of the upper Gila drainage area during the fourteenth and fifteenth centuries. It is conceivable that Animas Phase people were in fact Mimbreños whose lifestyle and material culture were adapted to an arid region, in which case their move to the Mimbres Valley a generation or two after its abandonment was a reoccupation. If Mimbres-style painted pottery found east of the Rio Grande can be taken as evidence of Mimbres movement

in that direction, then it is plausible to assume that some of these people or their descendants mingled with those Anasazi who moved into that region during late prehistoric and early historic times.

Whatever the case, the abandonment of their home territory by the Mimbreños was not an isolated event but rather was one of many contemporary migrations whose explanation eludes southwestern prehistorians. Drought conditions and erosion were factors that led to abandonment of some Anasazi centers in the north, but evidence of similar problems in the Mimbres territory is lacking. Casas Grandes was destroyed by military action, but that happened long after the Mimbreños left the Mimbres Valley, and there is no evidence that any Mimbres Phase site was ever attacked or threatened by enemies.[16] In fact, there is so little evidence to support any possible explanation for abandonment of the Mimbres Valley that speculation as to cause must be open-ended and may be worthless.

Leaving their home territory may well have been a traumatic event for the Mimbreños, but trauma was certainly not involved in the radical changes of their lifestyle that occurred during the Mimbres Phase. During that time it seems that they were influenced from both north and south, by the Anasazi and by the people of Casas Grandes. The process of absorbing these influences lasted for several hundred years, was selective and pragmatic, appears to have been entirely voluntary, and may not have been perceived as a radical change by the people involved. Large towns grew during this period, both north and south of the Mimbres country, and there are indications, especially at Casas Grandes, that these imposed political and economic dominance on neighboring peoples. But there is no evidence at all that the Mimbreños changed their ways as a result of domination or conquest by any other group, and the general character of their new lifestyle was more like that of the Anasazi than of Casas Grandes.

By the twelfth century, differences between the material culture of the people of the Mimbres Valley and any Anasazi group were no greater than existed between any two groups of Anasazi. To the degree that material culture mirrors total culture, those Mimbreños had become a kind of Anasazi. A similar process farther south may well have converted other Mimbreños into a kind of Casas Grandes people, but, in the mountain country at least, the conversion was made before any physical merger had taken place between the Mimbreños and any of their Anasazi neighbors.

From first to last, enormous differences in lifestyle and material culture can be perceived between Mimbres Phase people and their remote Cochise

ancestors. Nonetheless it seems certain that these differences evolved as the result of invisible, time-consuming internal processes rather than as clear-cut events. Novel ideas seem to have been adopted from all available sources for pragmatic reasons and altered to fit particular Mimbreño needs and behavioral patterns. The painted pottery tradition that developed in the Mimbres Valley during the tenth century served decorative and communicative functions. In respect to the latter use, this pottery was a symbol of the new system and its novel economic, social, political, and religious forms. As an integral part of Mimbres Phase life, Mimbres art must also have evolved in the same manner as did all of the other activities that serve to define the Mimbreños.

6

Mimbres Painted Wares: Continuity and Change

Mimbres pottery painting involved two separate but closely related traditions, one figurative and the other nonfigurative. The figurative tradition was largely home grown and to a great degree it defines the Mimbres Phase. Although it may have had some effects on later and on foreign painting, its unique character ended with the close of that phase.

The nonfigurative tradition had another history entirely. It began long before the Mimbres Phase and developed slowly within several Mogollon branches. In its earlier aspects it resembles and seems to be derived from Hohokam prototypes; later it resembles and apparently was heavily influenced by Anasazi design styles. Because of the long time involved in its development and because each change was logically integrated with an earlier mode, continuity rather than radical innovation characterizes its history. Mimbres Phase nonrepresentational paintings are distinguished from those made by earlier Mimbres Branch people, mostly by differences in detail, including important if subtle changes in the character of line and paint application. Even though these changes had the effect of converging some pictorial ideals of the Mimbreños with those of the Anasazi, it will be seen that in its main features Mimbres Phase painting was indigenous and Anasazi influence was, in the last analysis, only general and superficial.

Certain elements of the Mimbres nonfigurative tradition were continued in later times, at other places and by other people, but on wares that are

easily distinguished from those made in the Mimbres Valley or at other Mimbres Phase locations. Even so, it is difficult to determine the points of continuity between Mimbres painting and that of any later people. Conversely, continuity and the slow and logical growth of a painting system characterize the relationship between Mimbres Black-on-white and earlier Mimbres Valley painting and it is sometimes impossible to distinguish between the Mimbres Phase paintings and their local prototypes.

MOGOLLON POTTERY PAINTING PRIOR TO THE MIMBRES PHASE

The earliest Mogollon pottery making seems to have been imported as a complex from some outside source with forms as well as methods a part of the package (Wheat 1955:72–73). Unpainted polished brown or red wares were the first Mogollon pottery, and variants of these formed the vast majority of all ceramics made in all of the Mogollon branches from about A.D. 200 until about A.D. 1000. Hardly more than twenty distinct shapes were made, mostly variations of hemispherical bowl or globular jar forms.

Painting did not become an important decorative mode in any Mogollon branch until very late times, and texturing of pottery was probably of greater importance to these people than to any others of the Southwest. Texturing patterns and techniques were much the same in all branches, but painting had a much more varied history. Some fragments of Mogollon 1 painted pottery (approximately 250 B.C.–A.D. 400) have been recovered from regions to the west of the Mimbres Branch. These resemble decorative modes then current in northern Mexico that depended on the application of broad red lines on unslipped brownware bowls. Execution was unrefined and designs were little more elaborate than the segmentation of a vessel interior with a few lines. Despite their crudeness and lack of detail, these paintings established important precedents. By using an entire visible surface as the design field and dividing this into a series of center-oriented segments, they predicted the organizational principles that dominated all later Mogollon painting, including that of the Mimbres Phase.

The tradition was carried a step further during Mogollon 2 (A.D. 400–600) in the San Simon Branch with the manufacture of Dos Cabezas Red-on-brown pottery (Fig. 24). Paintings here were refinements of the visual ideas suggested earlier and were made only in deep hemispherical bowls that

Fig. 24. Dos Cabezas Red-on-brown bowl. H: 2¾"; D: 6¼". Collection, ASM; photograph, ASM.

often had firing clouds on their unpainted exteriors. Sectioned design patterns made with broad red lines were placed over the entire surface of the red-slipped but unpolished vessel interiors. Large triangles were suspended from lines drawn around the rim, and these were usually joined at the center of a bowl. With chevrons, they made up the total inventory of design elements and motifs (Sayles 1945:42). This design system was similar to that used by contemporary neighboring peoples to the south and, with only minor variation, persisted in some areas well into the tenth century.

The geographical focus of Mogollon painting shifted to the north and east between A.D. 600 and A.D. 900. The Black River, Pine Lawn Valley, and Mimbres branches became pottery-painting centers, all producing Mogollon Red-on-brown, considered to be the diagnostic ware of the San Francisco Phase (Wheat 1955:88–90). Made in relatively small quantities, this was a further refinement of preceding types. A thin hematitic pigment was sometimes applied as a slip to bowl exteriors that often had fire clouds also. The same pigment was used to paint designs on bowl interiors or the insides or outsides of other vessel shapes, including plates, jars, and beaker forms. If slipped surfaces were not polished the painted lines were, and the resulting contrast between shiny lines and dull ground helped intensify the difference between otherwise closely related colors.

Bowls often had out-curving sides, but their entire inner surfaces were

considered design fields. Paintings were organized by subdividing a surface into four wedge-shaped sections with broad and imprecise lines. Several patterning variations were used, and all became a part of the Mimbres Black-on-white inventory. Most relied on relationships between the lines that quartered a vessel and the four solid triangles that were suspended from another line at the bowl rim (Fig. 25). One variant had quartering lines placed between the rim solids (Fig. 26*a*), and in another these extend from the points of the solid triangles (26*b*). Quartering lines are eliminated in a third variant and segment the vessel by implication (26*c*), while a fourth variation used dividing lines in pairs, with the space between each pair bisecting each of the solid triangles (26*d*). Pentagonal structures with pendant rim solids were also painted (26*e*).

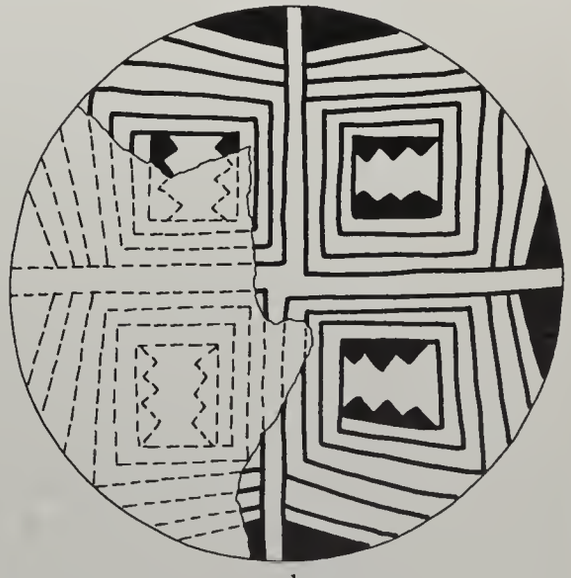
Fig. 25. Mogollon Red-on-brown bowl. H: 4¼″; D: 9¾″. Metcalf Ranch, Mimbres Valley. Collection, MNM; photograph, Fred Stimson.

Fig. 26. Design Systems. Mogollon Red-on-brown. After Haury 1936a:12–13.

a

b

c



d

e

Solids, chevrons, rectangular scrolls, and nested polygons were used as fillers. The innermost of a group of nested polygons sometimes had a reserved center in which a saw-toothed motif was placed, and similar rectangular motif-holding units were sometimes reserved at the center of a vessel. As in most earlier paintings, no large areas were left unfilled, and the kind of dark-light imagery that so captivated Mimbres Phase painters was not yet hinted at. With the greater variety and precision of its structural systems, Mogollon Red-on-brown design also included greater varieties of filler elements, most of which were first introduced in the Mimbres Branch. Among them were simple curvilinear patterns, interlocking elements, fringed lines, and cross-hachuring (Haury 1936:12, 13). In comparison with later designs, those on Mogollon Red-on-brown vessels are unrefined and repetitive, but they have a vigor and spontaneity not matched by the more complex and controlled later wares. The system was a logical development from the earlier Mogollon painted wares and an equally logical precursor of the later ones.

Three Circle Red-on-white replaced Mogollon Red-on-brown in these same regions during the ninth century, its production period beginning late in San Francisco times and continuing into the Three Circle Phase (Haury 1936:18–19; Wheat 1955:90–91). A heavy white slip applied to the brown paste pottery made this the first of the Mogollon white wares. The slip was placed only in bowl interiors. About half of these vessels were further colored by a red or brown slip or paint on their exterior surfaces, which were commonly marked by firing clouds.

Three Circle bowls are more hemispherical than those of earlier periods, but most still had an out-curving rim. The white slip is usually chalky, thick, and well polished, although it has a tendency to crackle or flake. It often fired ivory or pink, in harmonic contrast with the red hematitic paint that was applied to it. Brushwork was more precise and lines were finer than in Mogollon Red-on-brown paintings, and the trend to precision as a painting ideal became well established. Design systems and elements are substantially like those of the earlier red-on-brown wares, but the proportion of solids to linear fillers is greater, small unpainted areas occur more frequently, and there is a suggestion of positive-negative duality (Plate 3). Designs on bowls were usually carried to the rim, but framing lines below the rim occurred more often than in earlier times.

Three Circle Red-on-white was short lived and may not have been made in as large an area as was Mogollon Red-on-brown. Its manufacturing period overlapped with that of Mangas Black-on-white (Mimbres Boldface), and the

latter, made mostly in the Mimbres region, may have been a local substitute for the earlier white-slipped ware (Martin and Rinaldo 1950:362–69; Wheat 1955:91–92). More complex and refined than any earlier designs, the Three Circle Red-on-white system, with its curvilinear and interlocking elements and suggestion of positive-negative duality, presages both later Mimbres black-on-white types.

Mangas Black-on-white ware was made from about the middle of the San Francisco Phase around A.D. 775 to about the middle of the Three Circle Phase in the tenth century, but its manufacture may have continued almost to the eleventh century at some places. It differs from the red painted wares in more respects than paint color, but in its early varieties the design similarities are so strong that paste and slip color are its only distinguishing features (Martin and Rinaldo 1950:362–69). Because of variations in firing atmospheres these color differences are not always easily seen, for the black paint is often chocolate brown and the white slip pink. It is very like Three Circle Red-on-white in almost every respect, although it is usually more smoothly finished than the red painted ware; but as time passed, design differences increased.

The most common vessel form is a hemispherical bowl, similar to that produced by Mimbres Phase potters and frequently asymmetrical due to warpage in firing. Firing clouds are also common. Some Mangas Black-on-white paintings are representational, and these are the prototypes for later Mimbres Phase figurative art. Layout schemes were little different from those of earlier and contemporary Mogollon painted wares, but a number of new elements and motifs were introduced and there was a subtle change in the character of the paintings (Fig. 27). Radial patterns were made, sectioned design areas were sometimes recombined to form large central motifs, and framing lines came to be used as space-defining elements with designs suspended from them. Lines were precisely drawn and large unpainted or hachured zones were left in many pictures that shifted the balance of dark and light close to the norms for Mimbres Black-on-white decoration (Fig. 28). Among new nonrepresentational motifs and elements were interlocking curvilinear scrolls, often combined with triangles, and wavy-line hachures (Figs. 29, 30).

The appearance of Mangas Black-on-white in the continuum of Mogollon pottery is easy to pinpoint; color differences between it and its prototypes make it possible to distinguish clearly between them. No such simple criteria are available at the end of the continuum, however, when it merges with

Fig. 27. Mangas Black-on-white bowl. H: 3¾″; D: 7¼″. Cameron Creek Village, Mimbres drainage. Collection, Mr. and Mrs. John King; photograph, Fred Stimson.

Fig. 28. Late Mangas Black-on-white bowl. H: 3½″; D: 9¾″. Eby site, lower Mimbres Valley. Collection, SAR/MNM; photograph, Fred Stimson.

Fig. 29. Mangas Black-on-white bowl. H: 2½″; D: 5¼″. Galaz site, upper Mimbres Valley. Collection, Mimbres Foundation; photograph, Fred Stimson.

Fig. 30. Mangas Black-on-white bowl. H: 3½"; D: 8¼". Reserve Area, north of the Mimbres Valley. Collection, MNM; photograph, Fred Stimson.

Mimbres Black-on-white. Visual differences between the two are often subtle and a matter of degree. Boldface paintings are fine lined but not usually as fine as the Mimbres Black-on-white. Most Mangas pictures have only a single framing line, while multiple framing lines and complex frames characterize the later paintings, which are usually more precise and have a much greater interplay of darks and lights. But is a heavy-lined painting with a multiple or complex frame to be called Mimbres Black-on-white and a precise, fine-lined one with a dark-light image but only a single framing line or none at all to be called Mangas Black-on-white (compare Figs. 31 and 28)? The lack of historical data makes the unscrambling of these parts of the continuum almost impossible. Logically a certain progression can be expected, but the logical and typological expectations of the twentieth century may have no relationship whatever to the realities of the eleventh.

Fig. 31. Mimbres Black-on-white bowl. H: 9¼"; D: 4¼". Mitchell site, upper Mimbres Valley. Collection, WNMUM; photograph, Fred Stimson.

Mangas Black-on-white was transitional between Three Circle Red-on-white and Mimbres Black-on-white, but transition is a retrospective concept that has no meaning to any historical present. Any contemporary artist at any time and in any place can produce works that are ahead of, or lagging behind, or peripheral to, or irrelevant to whatever tradition comes to be recognized by a future observer as the mainstream. For these reasons it is presently impossible to define the visual and pictorial differences between these two closely related wares except in the most general terms. Around the end of the tenth and beginning of the eleventh centuries they were for all practical purposes identical.

Mangas representational pictures were either vignetted or integrated decoratively with the framing system that defined the picture space. Again, lack of data inhibits examination of the development of these representational modes, but even tentative observations may shed some light on the symbolic and decorative objectives of the painters. Representational pictures on Mangas Black-on-white pottery recovered from controlled excavations suggest that early figurative paintings were less illusionistic, more conventionalized, and more decorative than later ones. Life-forms were sometimes placed within design zones, and interior frames shaped around them made them effective parts of a nonrepresentational pattern (Fig. 32). They were often treated as decorative symbols rather than as illustrations of some experienced reality, and even when they were given vitality by posture or attitude, the conventionalized modes dominated (Fig. 33). Most Mangas representations are more like emblems that lack narrative content, and there is every indication that illustrative techniques and the desire to reproduce anatomical details and illusionistic space developed only after the production of conventionalized life drawings had become systematic.

Because most Mimbres pottery can be dated only in general terms, the development of the painting styles can be logically surmised but not proven. There seems to be a straight-line progression of figurative painting toward greater realism and greater pictorial complexity. Even so, while the more complex paintings are probably all late, any single figure or vignetted picture might have been made at any point on the continuum. As much as two hundred years may have separated the earliest Mangas figurative pictures from the earliest ones of the Mimbres Phase. So far as available evidence shows, on the other hand, the period between might just as easily have been compressed into the space of a single generation.

Earlier or other sources for representational paintings are not found in

Fig. 32. Mangas Black-on-white bowl. *Man/Crane*. H: 4½″; D: 9¾″. Mattocks site, upper Mimbres Valley. Collection, Janss Foundation; photograph, Janss Foundation.

Fig. 33. Mangas Black-on-white bowl. *Waterbirds and Rattlesnakes*. H: 3½″; D: 9″. Cameron Creek Village, lower Mimbres Valley. Collection, Mr. and Mrs. John King; photograph, Fred Stimson.

other Mogollon wares, and, no matter when it began, the figurative painting tradition of the Mimbres Phase developed within the Mimbres Branch. This is in contrast with their nonrepresentational painting, which had its structural modes established in a tentative fashion as early as Mogollon 1 in the San Simon Branch. The nonrepresentational pottery paintings of later Mimbreños are vigorous elaborations and modifications of these ancient themes. They are unique, but even so, as in all Mogollon pottery painting, emphasis was placed on much the same visual factors: overall patterning, division of a vessel into quarters or fifths with the center of a bowl as its visual focal point, and use of triangles as the dominating design element. All later Mogollon pottery traditions tended to the development of linear precision and strong dark-light contrasts, and the difference between Mimbres design of any period and contemporaneous ones made by other Mogollon people was a matter of the emphasis placed on one or another of these visual ideals.

Mimbres Black-on-white nonrepresentational paintings were a local and specialized variation of Mogollon pictorial traditions, rather than a sudden and swift divergence from them. Foreign influences were certainly involved, but these not only were absorbed selectively by the Mimbreños and made to conform to Mogollon patterns but also affected other Mogollon traditions in parallel ways. Techniques for achieving black-on-white pottery may have been learned from the Anasazi, but their adoption was logical if previously established dark-light patterning ideals were to be realized. The emphasis placed on brush control may also have reflected Anasazi influence, but the tendency in that direction was evident long before any Mimbres Black-on-white paintings were made.

None of these changes was inevitable, for the potential to emphasize other characteristics was always present. In the beginning, and at least through the Mogollon Red-on-brown period, linear emphasis might just as reasonably have been placed on boldness, fluidity, and spontaneity. Until then the design systems had at least as much potential for developing along static principles as along active ones, and passivity rather than tension might have become a visual ideal. But conscious or unconscious decisions were made to shape the art in one direction rather than another, and any sources that would help to attain the objectives were welcome. That some of these changes were promoted through foreign contacts or by way of foreign traditions in no way implies that the Mimbres tradition depended on these. Rather it seems more likely that the Mimbres craftsmen would have invented a black-on-white technology if none was available to be borrowed.

Among the interchanges between the Mogollon and other people that affected the shape and form of Mogollon pottery painting, three were of particular importance. The first and most basic was with the unknown group or groups from whom the craft was first learned. The second, and almost equally fundamental, was with the Hohokam, whose painted pottery seems to have provided the first models for the Mogollon painters (Wheat 1955:200). The character of these models came to be indelibly planted as the most basic possible source for all later Mogollon painting. The third, and for the Mimbres and some other groups superficially the most visible, was with Anasazi traditions.

FOREIGN INFLUENCES: HOHOKAM

Beyond identifying the vast territory of northern Mexico as the probable source for both Hohokam and Mogollon pottery technologies, it is impossible at present to specify the origin of either system. Differences in production methods were so great as to make it improbable that Hohokam people acted as the first teachers of the Mogollon potters. Firing technologies were similar and produced similar color results, but there were significant differences in shape and in decorative impulses as well as in some manufacturing methods.

Hohokam potters had always put their greatest decorative energies into painting, and they developed an inventory of vessel shapes that also influenced Mogollon potters. Among these forms were flat plates or dishes, helmet- or soup-plate-shaped, flared-rim bowls with perpendicular walls, and ollas with low centers of gravity and sharply angular upper shoulders.

Hohokam vessels were usually finished by paddle and anvil methods rather than through scraping and polishing, and most seem to have been hand molded or slab built rather than coil made. These differences take on greater significance if the pragmatic conservatism of both groups is considered. All the methods are about equal and produce comparable results, but all require a certain amount of training and practice before the requisite craft skills can be learned. Learning took place within the communities, and their size and nature required that emphasis be placed on results rather than processes. So long as craft products met certain minimum standards, the first easily taught and easily learned successful process might effectively foreclose any further experimentation. Later technical innovations correspond to changes in the standards of acceptability, and even minor technological differences are

significant as evidence either of divergent origins or of differences in standards.

Early Hohokam ceramic influences extended as far east as the Mimbres Branch, where deep flared-rim bowl forms derived from Hohokam models were made, while resemblances of the earliest Mogollon painted wares to even earlier Hohokam models is almost total. In vessel shape, design layout, element and motif details, and draftsmanship, the San Simon Branch Dos Cabezas Red-on-brown ware is a Hohokam type, differing from its prototypes only in manufacturing methods (compare Figs. 24 and 34). This apparently total acceptance of foreign visual ideals makes palatable the concept of the San Simon Branch as a "blend" of Mogollon and Hohokam cultures (Wheat 1955:27–29).

As later Mogollon painted wares increased in proportion to other kinds of Mogollon pottery, these took on an increasingly independent character, and distance from the source may have been a prerequisite for this development. The San Simon Branch made no further ceramic contributions and the resemblance of Mogollon to Hohokam wares decreased with distance and time. Although Hohokam visual ideas continued to be absorbed as late as the black-on-white period, by then they were being passed through the filter of a Mogollon aesthetic. Among late Hohokam inclusions in the inventory of Mimbres motifs were wavy-line hachures and interlocking scrolls that grow out of solid triangular figures (compare Figs. 29 and 30 to Fig. 35). Hohokam contributions to Mimbres figurative painting also occurred well after the establishment of a distinctive Mimbres design tradition. These adaptations were all quite selective, and each group diverged in its own way from what had once been a common set of visual ideals.

The most basic points of similarity were the habits of using all of a visible surface as the design field and the reliance on center-oriented segmentary patterns for paintings placed on interior surfaces. Unlike the Mimbres, whose concentration on bowl designs was almost obsessive, the Hohokam painters worked with a great variety of vessel forms, developing different kinds of patterning systems for each. Until very late, when Anasazi-influenced segmented or banded patterns became pervasive, the usual objective was to cover most of a vessel with visual activity by repeating motifs (Fig. 36). On interior surfaces these motifs were often confined within structural subdivisions similar or identical to those adopted by Mogollon painters. Repeat motifs on exterior surfaces usually were placed in horizontal registers, set on a diagonal bias, or interwoven.

Fig. 34. Sweetwater Red-on-gray bowl (Pioneer Period, Hohokam). H: 9¾″; D: 4¼″. Snaketown site. Collection, ASM; photograph, ASM.

Fig. 35. Santa Cruz Red-on-buff bowl (Colonial Period, Hohokam). H: 4″; D: 8¾″. Snaketown site. Collection, ASM; photograph, ASM.

Fig. 36. Gila Butte Red-on-buff jar (Colonial Period, Hohokam). H: 5″; D: 6″. Hodges site, southern Arizona. Collection, ASM; photograph, ASM.

Hohokam lines tended to be heavy and the brushwork was vigorous and spontaneous. There was some play with dark and light patterning, but the purposeful positive-negative ambiguity of Mimbres painting was hardly attempted and would have been impossible to achieve because of the close color relationships between red paint and buff ground. In early times painted lines tended to be uncontrolled, but between about the eight and the tenth centuries the draftsmanship was finally balanced between control and spontaneity. By contrast, the later tight-lined paintings are remarkably uninspired.

Part of the success of Hohokam painting was due to the use of tension-producing motifs, including scrolls emerging from or opposed to straight lines or solid triangles (Fig. 37*a, b*), chevrons with one straight and one wavy line (37*c*), and straight-line hachure or solid areas opposing units filled with wavy lines (37*d, e*). Blank spaces were rare, and, with most of a ground covered by paint, contrasting motifs or other similar devices were essential to the creation of lively surfaces. These motifs all became important components of Mimbres Black-on-white painting, but they were transformed and used for entirely different visual effects (compare Figs. 6 and 35).

Life-forms were a minor but well-established theme of Hohokam painting. On exterior surfaces they were usually conventionalized, simple, linear, and active motifs to be repeated with the same sort of spontaneity and the same visual objectives as nonfigurative patterns (Fig. 36). Similar treatment sometimes occurred on interior spaces, but more often there, life-forms were used as realistic and dominating motifs (Fig. 38). They were also integrated into quartered patterns and framed with a shape derived from the silhouette of the figure (Fig. 39). Similarities between these and some early Mimbres figurative paintings are obvious, and there is little doubt that these Hohokam concepts had their influence on the Mimbres tradition (Figs. 40, 3). While derivative framing is entirely compatible with spontaneity, for that reason it is less suitable to a tradition that puts its values on linear control and planned dramatic effects. The Hohokam life-form conventions were therefore unsuitable to the maturation of Mimbres Phase pictorial ideals. Mimbres Phase figurative painting was far more elaborate in every way than that of the Hohokam and, though the tradition may have been initiated by use

Fig. 37. Common Motifs Used on Hohokam Pottery. After Haury 1976:246–47.

a

b

c

d

e

Fig. 38. Sacaton Red-on-buff platter (Sedentary Period, Hohokam). H: 2″; D: 12⅛″. Sacaton site. Collection, ASM; photograph, ASM.

Fig. 39. Santa Cruz Red-on-buff plate (Colonial Period, Hohokam). Collection, private; photograph, Fred Stimson.

Fig. 40. Mangas Black-on-white bowl. H: 5¼″; D: 14½″. Collection, HM; photograph, Fred Stimson.

of Hohokam models, in its maturity there are very few stylistic or iconographic similarities.

In the final analysis, relationships between the decorative traditions of the Hohokam and the Mogollon, especially the Mimbres, were essentially one-sided. The basic structural systems of all Mogollon painted pottery seem to have been largely derived from Hohokam models and the Mogollon pictorial idiom was for several hundred years largely a variation of a Hohokam theme. With the white-slipped wares and later use of black paint, Mogollon painting took on an independent character and borrowings from the Hohokam after then were selective and transposed to fit the requirements of a truly local aesthetic. Until then, painted decoration was only a minor factor in any of the Mogollon branches and their imitation Hohokam pottery might have been conceived of as a substitute for a difficult-to-procure product. As copyists the Mogollon painters could contribute little to any tradition that served as their model.

White-slipped Mogollon pottery found in small quantities at Hohokam sites was mostly imported during the climax period of Hohokam pottery making. As an offshoot of a vigorous tradition the Mogollon wares still had little to offer other than the novelty of their color-dependent effects. By the time that black-on-white painting traditions largely independent of Hohokam models had matured in a number of the Mogollon branches, the northern Hohokam people were in direct contact with the Anasazi. The shift in Hohokam visual ideals may have taken place in response to that intercourse rather than through contact with any Mogollon group.

The possibilities of the Hohokam adopting any Mimbres Phase decorative ideas were slim indeed. Mimbres Phase figurative paintings were not widely exported and the character of Mimbres nonfigurative black-on-white painting was paralleled in a number of other Mogollon and some Anasazi traditions that were all more directly accessible to Hohokam territory. Thus for all its quality and originality, Mimbres Phase painting had little chance of affecting Hohokam decorative traditions.

FOREIGN INFLUENCES: ANASAZI

The interrelationships between the painted pottery of the Mimbres and other Mogollon people and that of the Anasazi had a different history. It is generally assumed that the ceramic craft was transmitted to the Anasazi by

the Mogollon, because basic pottery-forming technologies were identical, as were basic decorative modes in early times. Important differences appeared almost immediately, for Anasazi potters concentrated on painting as their primary decorative means, and despite their late acquisition of the craft they very soon developed more complex and diverse painting traditions. Early Anasazi brown and red wares were little different from the Mogollon 1 prototypes and included red-painted pottery similar to that of the Mogollon Period. But within a short time Anasazi potters were using reduction firing techniques that produced black-painted gray wares, and before A.D. 600 black-on-white traditions had become dominant. Initially these had little impact on any foreign wares, and the few Mogollon decorators who were involved with pottery painting at that time still looked westward to the Hohokam for their models.

Early Anasazi black-painted decoration is characterized by the use of open layouts in which scraggly lines seem to float in a sea of white or gray space. The Anasazi patterning systems, except when derived from Mogollon or Hohokam sources, are often random and unstructured, as when a single line with appendages bisects the interior of a bowl (Fig. 41), or when carelessly drawn triangles are draped around the shoulder of a jar. Despite their crudeness, many of these early paintings predict the essential character of later Anasazi decoration. The dominant and sometimes the sole visual element is a thin and tense line, and visual effectiveness is a function of its precision. Line-drawing motor habits were different from those used by Hohokam and early Mogollon draftsmen. The southern habit was loose-wristed, allowing lines to be drawn swiftly, with vigor and spontaneity that made precision irrelevant to effectiveness and ultimately counterproductive. The Anasazi line instead is stiff-wristed and tight, and unless used precisely its tensions are simply awkward (Fig. 42).

In time the diversity of related pottery traditions almost matched the diversity in origin of the various Anasazi groups. Several different systems of design structure came to be used, and their regional independence should be emphasized. Most tended to have separate framed design spaces that defined and articulated the different parts of a vessel. In this architectonic system the walls of a bowl are treated as different from its base, the neck of a jar as different from its shoulder, and the shoulder as different from its waist (Fig. 43). When overall patterns were used, the Anasazi tendency was to subdivide the surface into a series of independent panels related rhythmically to each

Fig. 41. Kana-a Black-on-white bowl (Anasazi, P I). H: 3″; D: 6″. Collection, MMA; photograph, Fred Stimson.

Fig. 42. Kiatuthlana Black-on-white bowl (Anasazi, P II). H: 3¼″; D: 7¾″. Whitewater District, Arizona. Collection, MNM; photograph, Fred Stimson.

Fig. 43. Tunicha Black-on-white jar (Anasazi, P II). H: 8″; D: 6¼″. Collection, MMA; photograph, Fred Stimson.

other. Even if these are identical, each is an isolated and independent design unit.

In some regions, such as the Mesa Verde and Kayenta districts, dark-light, positive-negative patterning was the dominant mode. In others, such as the Chaco District, lightweight linear patterns were given emphasis by hachure and cross-hachure. Everywhere, the white slip was treated as both a positive design element and a background to linear or solid black motifs and elements. Design spaces were divided and subdivided, turned into active areas, and filled with linear elements, solids, triangles, diamonds, or rhomboids. Curves and interlocking scrolls were used sparingly and were usually small, but almost any kind of linear or geometric motif or element was likely to be in use in some design district.

Some fine painted wares were made earlier, but the first maturity of Anasazi pottery painting did not occur until almost A.D. 850 or 900. Anasazi painting could not have had much impact on any Mogollon tradition before the tenth century, by which time Mimbres painting was reaching maturity. Black-on-white decoration reached a climax in all districts from about the eleventh to the thirteenth centuries.

Relatively few pieces of northern black-on-white pottery have been reported from Mimbres sites, and most predate the tenth century (Cosgrove and Cosgrove 1932:92–99; Bryan 1961; Breternitz 1966). Most often found are the widespread generic linear types such as Red Mesa Black-on-white and Kiatuthlana Black-on-white, which, except for color and fine line draftsmanship, have little in common with Mimbres painting. Thus there is little evidence that Mimbres painters had much knowledge of or interest in Anasazi pottery decoration during the time their own black-on-white visual ideals were reaching maturity. However, their experiences with it might well have contributed in a general way to the shape of their emerging tradition.

On close examination, Mimbres and Anasazi black-on-white decoration are quite different in detail. Technology and technique, line control, color, the use of white space as a positive design element and of hachuring to produce grays, and subdivision of design areas into intricate panels about sums up the inventory of similarities. The Mimbres potters probably acquired their black-on-white firing technology from the Anasazi, but those Mimbres artists who first used it did so on pictures in which positive-negative images were sharply defined. They had been exploring this decorative theme for several generations, well before systematic experimentation with similar concepts occurred in any Anasazi district. When it did occur it was mostly in

the Kayenta and Mesa Verde districts, and there is virtually no evidence of any contact at any time between the Mimbres and either of those regions.

Mimbres use of Anasazi techniques was selective and deliberate, and had much more to do with changes that were taking place within the Mimbres design tradition than with the sudden adoption of any Anasazi visual themes or ideals. It is possible that the Mimbres Phase aesthetic might have been different if no Anasazi pottery had been available to suggest alternatives to the Hohokam models. It is certain that its internal logic brought Mimbres design into the orbit of the very loosely defined tradition that is called Anasazi. The organic and systematic nature of these changes in the painting traditions gives meaning and adds another dimension to understanding the parallel changes that occurred at about the same time in many other aspects of Mimbres life.

Although figurative paintings occur on very early Anasazi pottery, there was no consistent and patterned use of such forms in any Anasazi district until long after the Mimbres figurative tradition had become well established. Anasazi life-forms were either schematic or realistic figures shown in narrative or anecdotal situations, or highly conventionalized and geometric renderings of birds or other animals (Figs. 44, 45). The more realistic ones are pictographic in character and were placed on an interior or exterior surface with little or no reference to an overall design pattern. Their resemblance to

Fig. 44. Rosa Black-on-white bowl (Anasazi, P II). H: 5″; 2½″. Collection, MNM; photograph, Fred Stimson.

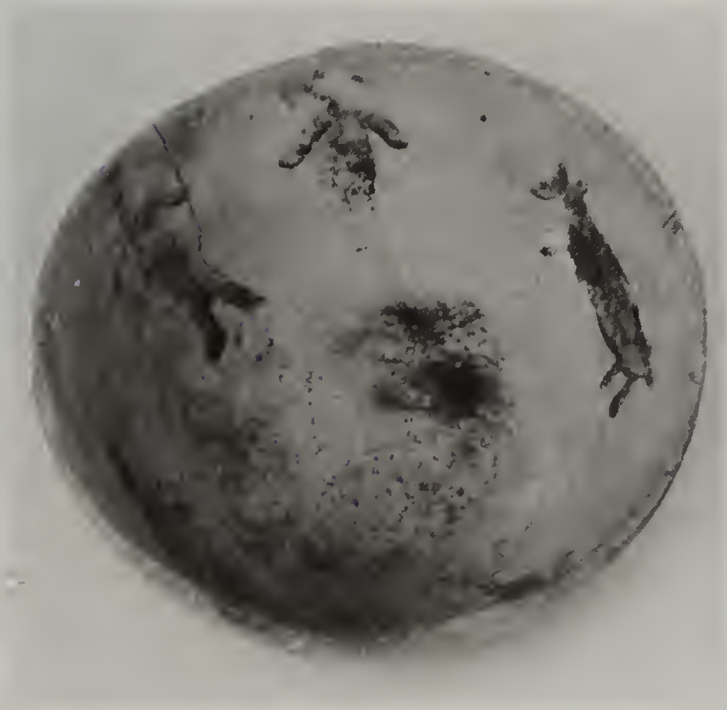


Fig. 45. Mesa Verde Black-on-white bowl (Anasazi, P III). H: 2″; D: 6″. La Plata County, Colo. Collection, UCM; photograph, Fred Stimson.

rock art is conceptual as well as technical, for in both kinds of picture the space in which figures are placed is unframed and limitless (Fig. 46). Their very formlessness makes it improbable that any of these occasional, random, and roughly executed paintings could have had an influence on the Mimbres figurative tradition.

The highly structured, conventionalized, and less lifelike Anasazi representations are equally improbable as an influence on Mimbres figurative art. Most are contemporaneous with or postdate vaguely similar Mimbres conventions and any possible historical flow would have moved in the opposite direction. Beyond that chronological problem, these are so simple, basic, and obvious an invention that it seems fruitless to speculate on either their origin or their influence.

CONTEMPORANEOUS INFLUENCES ON MIMBRES PHASE POTTERY PAINTING

Other Mogollon contemporaries of Mimbres Phase people painted pottery that was radically different from their earlier wares. The Mogollon 5 Period was in fact characterized in most branches by a wide range of pictorial inventions. The polychrome wares made by Forestdale, Black River, Cibola, and neighboring Salado peoples were to have the greatest future impact and were the most radical and inventive of all contemporary southwestern pottery decoration. In retrospect, the Mimbres black-on-white tradition was a dead end and quite conservative when compared to the novel shapes, color combinations, techniques, and pictorial dynamics of some contemporaneous polychromes made by nearby peoples. However, comparable black-on-white and related black-on-red wares were made in some of the very same regions that produced the polychromes and several alternative decoration traditions were obviously in coexistence (Carlson 1970).

In the Black River, Pine Lawn Valley, and Cibola branches, confluence with the Anasazi in architecture and other aspects of material and nonmaterial culture was as strong as or stronger than in the Mimbres Branch. With the possible exception of the Cibola, these were also the areas in which pottery painting had been important. The late painted pottery from these regions, especially in black-on-white, was rooted in the same systems and idioms that were the basis for Mimbres Black-on-white. The people who made these

Fig. 46. Petroglyph (Anasazi, P I/II). Largo Canyon, northwestern N.M. Courtesy Polly Schaafsma; photograph, Karl Kernberger.

paintings were undergoing much the same experiences as were those of the Mimbres villages.

Tularosa Black-on-white made mostly in the Cibola region and Reserve Black-on-white of the Pine Lawn Valley and Black River branches are among other Mogollon painting traditions that were contemporaneous with Mimbres Black-on-white. Both are very like the Mimbres ware in matters of technique, draftsmanship, and patterning (Figs. 47, 48). Both differ in details that bring them closer than the Mimbres art to Anasazi traditions, and neither produced significant figurative paintings.

In neither tradition was concentration on the interior surfaces of small, shallow bowls as intense as among the Mimbres. Instead, a much higher proportion of jars and other exterior forms was used as painting surfaces, with important effects on the design systems. Organization of design was usually into architectonically prescribed units that were sometimes divided into

Fig. 47. Tularosa Black-on-white jar (Cibola Branch, Mogollon 5). H: 7½″; D: 6¼″. Collection, MMA; photograph, Fred Stimson.

Fig. 48. Reserve Black-on-white bowl (Cibola Branch, Mogollon 5). H: 4″; D: 9½″. Collection, MMA; photograph, Fred Stimson.

panels but more often covered by continuous repeated motifs. Curvilinear interlocking scrolls were favored in the Tularosa ware and diagonal wicker-like interlacings of straight-line hachures in Reserve pottery. The intensity that was given to Mimbres painting through its concentration on an instantly perceived pattern was thus missing from contemporary Mogollon black-on-white traditions.

The most critical differences were in the respective patterning concepts. In opposition to the Mimbres preference for dark-light tensions, the others spread color evenly. The resulting gray harmonies tend to cancel out the tensions produced by linear oppositions, and in this respect these patterning systems are like those of earlier and contemporaneous Anasazi decoration of the Chacoan traditions (Fig. 49). Geographical closeness to the regions where these were made suggests that both the Reserve and the Tularosa design systems were patterned after Anasazi models.

In contrast, the earliest Salado designs contemporaneous with very late Mimbres paintings were more similar to both Mimbres and Hohokam patterning systems than were contemporaneous Mogollon black-on-whites. Representational painting was again not a factor, and technique, coloration, patterning, and linear qualities were often distinctive. However, the Salado painters used many Hohokam-inspired motifs and gave emphasis to the opposition of large and active dark-light units, and in this respect their paintings deal with visual ideals similar to those of the Mimbres (Figs. 50, 51).

MIMBRES INFLUENCE ON LATER WARES

The polychrome wares of the northern and western Mogollon branches were among the most influential prototypes for painted pottery made throughout the Southwest during and after the migrations of the thirteenth and fourteenth centuries. Patterning systems became quite diverse and those made in the western regions tended to elaborate on Hohokam-Mogollon procedures of overall coverage and center-oriented segmentation. Meanwhile, eastern wares came to be dominated by more architectonic conceptions, with origins in Anasazi decoration of the San Juan, Chaco, and Mesa Verde districts. Population shifts eastward meant that ultimately the great majority of late prehistoric and early historic painted pottery was in those

Fig. 49. Chuska Black-on-white bowl (Anasazi, P II). H: 4¾″; D: 10½″. Collection, MMA; photograph, Fred Stimson.

Fig 50. Gila Polychrome bowl (Salado Culture, P III/IV). Collection, ASM; photograph, ASM.

Fig. 51. Mimbres Black-on-white bowl. H: 2¼″; D: 4¾″. Collection, PAM; photograph, PAM.

architectonic modes, with design areas determined by the peculiarities of vessel form and with paneled bands used as the dominating structural method.

The influence of the Mimbres tradition on any of these polychromes or on most later black-on-white decoration was negligible. The design problems of most later traditions were so different from those of the Mimbres painters that it was hardly possible for Mimbres painting to have an effect on the immediate future (Plate 4). Similarities between the design systems of the Mimbres and Pueblo IV polychromes are slight, generalized, and perhaps attributable to their sharing of common origins.

Manufacture of black-on-white pottery ended in most parts of the Southwest by about the close of the fourteenth century. The isolated bichromatic wares made later in the northern Rio Grande Valley were either extensions of local polychrome design systems or a much modified continuation of late imported Mesa Verde traditions. However, in regions adjacent to Mimbres country and removed from the new Anasazi heartland of the middle Rio Grande Valley, the Mimbres design system had continuing effects. In the southern Rio Grande Valley and in parts of the Jornada, Mimbres, and Cibola territories several late black-on-white wares were heavily influenced by or may even have stemmed directly from Mimbres Black-on-white painting.

The type called Socorro Black-on-white was made over a long period of time in much of this territory. It is recognized less by its design features than by its technical ones, including a distinctive gray color, thin slip, hardness, and a tendency to warp. Several different design systems seem to be associated with the ware, and these may have both temporal and regional implications. In most, emphasis was placed on linearity and linear precision and on patterns of repeated elements that were used as fillers within large, unpaneled design zones (Fig. 52). Some are quite similar in structure, pattern, and motif to nonfigurative Mimbres Black-on-white pictures (Fig. 53). This similarity extends to such technical matters as warpage and the ubiquity of fire clouds, and to formal ones including the shapes and proportions of bowls.

Unfortunately, few of the Mimbres-like Socorro vessels have been recovered in controlled excavations, and most lack such basic data as provenience and date. Their relationships to the Mimbres tradition are therefore confused, for they could be contemporaneous copies of Mimbres vessels, later revivals, perhaps even made by descendants of Mimbres emigrants, or sometimes one, sometimes another, and sometimes neither. At

Fig. 52. Socorro Black-on-white bowl (Anasazi P III/IV). H: 5″; D: 11¼″. Collection, MMA; photograph, Fred Stimson.

Fig. 53. Mimbres Black-on-white bowl. H: 6″; D: 10″. Collection, DMNH; photograph, Fred Stimson.

all events, Socorro painting was in decline by the fifteenth century and gone before the sixteenth. By then, the linear values of the eastern polychrome tradition had become almost universal throughout the drainage area of the Rio Grande and eastward.

These values produced a wide and imprecise line that was both stiff and angular (Plate 4). It was drawn with a stiff wrist in contrast to the equally wide but buoyant and loose-wristed Hohokam line, but it did not have the fineness and precision of the similarly stiff-wristed Anasazi black-on-white line. The eastern polychrome line at its best is tense and emotive, at its worst

spastic in its lack of discipline. The Hohokam line at its best is lively and at its worst extraordinarily sloppy. The difference is analogous to that between the lines of Van Gogh and Matisse. The polychrome painters' adoption of this line is an obvious and most emphatic rejection of most earlier Anasazi linear ideals, but made without reference to the Hohokam alternative.

Some fine-line traditions continued in the late prehistoric Southwest, especially in the Tusayan District of the northwest and in the Casas Grandes region of northern Mexico. Tusayan wares form one of the more complete southwestern series and show unbroken derivation from local and near-local prototypes. Thus there appears to be little possibility for a Mimbres contribution to its aesthetic, although there are some rare but intriguing similarities (Figs. 54, 55). However, figurative painting was an important aspect of Tusayan pottery art, and late prehistoric and early historic representational painting produced elsewhere in the Southwest is mostly based on Tusayan models. Since this figurative tradition began during the thirteenth and fourteenth centuries and reached its climax with the Sikyatki and related Hopi wares of the fifteenth and sixteenth centuries, there is no chronological barrier to its being derived from Mimbres prototypes. Evidence that it was is scant and there are significant differences in subject matter and pictorial methods.

Sikyatki life-forms were painted within the framed spaces of bowl interiors (Plate 5), integrated with decorative panels placed on jar or olla exteriors, or placed on the exterior surfaces of bowls. Variety in color and texture created rich visual effects in sharp contrast to the unrelievedly smooth black-and-white Mimbres compositions. Ground color was a light yellow or creamy white, and lines drawn on this surface varied from light red-brown to deep brown or black. The interior spaces of representational figures were often filled by red lines or masses, or by red spatterings or dry-brush textures. Engraved lines and textures as well as spattering and dry-brushing were used for decorative or dramatic effects elsewhere on a picture surface.

In many Sikyatki paintings the life-forms were used as little more than decorative elaborations of a repeated motif, much as in earlier Anasazi and Hohokam figurative pictures. In others, the figures are as much like those on framed easel paintings as in the most complex of Mimbres narrative pictures. The vast majority of this type of composition uses only a single figure, but even when this is vignetted it is far more closely integrated with its picture space and frame than was characteristic of vignetted Mimbres paintings (Plate 5). In contrast to the multiple-figure Mimbres paintings, Sikyatki

Fig. 54. Mimbres Black-on-white bowl. H: 4¼"; D: 9¼". Collection, TM; photograph, Fred Stimson.

multiple-figure compositions tend to treat the painting surface as though it were a flat and stable plane that could and should be oriented to a vertical axis.

Sikyatki iconography is dominated by birds, especially parrots and macaws, and by masked humans or supernaturals. Bird feathers, wings, and tails, rattlesnakes, horned and feathered serpents, frogs, tadpoles, lizards, butterflies, and dragonflies were also common subjects. Other animals, including rabbits and antelope, appear less often, and complex narrative or anecdotal groupings are rare. Concentration on just a few subjects, all with modern Pueblo ritual associations, is in sharp contrast to Mimbres iconography, with its numerous subjects that are handled as if all are equally important and whose meanings are all obscure today.

It is difficult to isolate any manners, methods, or subjects in Sikyatki figurative paintings that are clearly derived from Mimbres prototypes. Even so, some possibility of Mimbres inspiration should not be entirely ruled out. There is richness and certainty of purpose in even the earliest of the Tusayan figurative pictures, and the tentative and awkward presentations that occur in some Mimbres and Hohokam and most Anasazi representational paintings are simply not a part of the Tusayan sequence. This confidence implies familiarity with some successful models, and those of the Mimbres were the nearest available in both the geographical and the temporal senses.

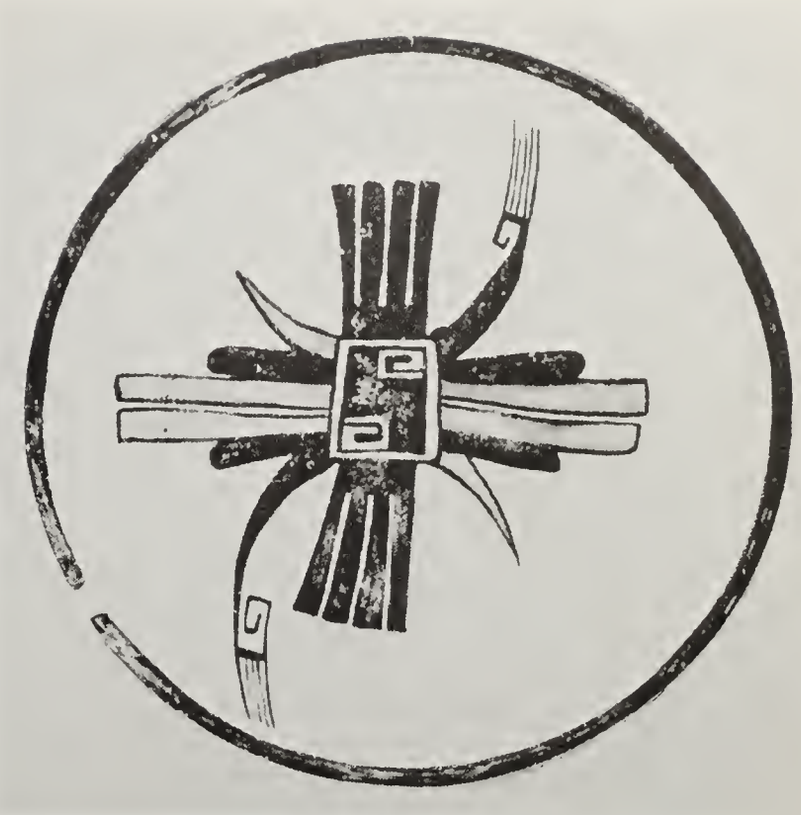


Fig. 55. Sikyatki Polychrome bowl (Anasazi, P IV). Sikyatki site. Collection, USNM; photograph, USNM.

A more direct source for parts of the Sikyatki idiom came from the Casas Grandes region. The town of Casas Grandes and its satellites are thought to have acted as a frontier Mesoamerican trading center that stimulated and inspired a number of Mexican-derived innovations among the southwestern peoples from about A.D. 1060 to about A.D. 1340 (Di Peso 1968a, 1968b; Di Peso, Rinaldo, and Fenner 1974). Most of the populations of these communities were probably recruited from the immediate region, which included parts of the old Mimbres territory. Before 1060 Mimbres Black-on-white pottery was a common trade ware. Some southern Mimbres sites were later reoccupied by people making Casas Grandes pottery, and these later occupants were familiar with Mimbres Phase painted pottery, for they lived among the sherds. The familiarity may have been more deep-seated, for there is a possibility that they were in fact Mimbres people who came to be identified with Casas Grandes.

Several distinctive pottery decoration systems were operative in the Casas Grandes towns. Among them were polychrome wares similar or related to varieties of Tusayan and other Anasazi, or post-Mogollon, polychrome traditions. In addition, the Casas Grandes people made smudged wares similar to those manufactured by the Mogollon as well as a number of other groups in northern Mexico. Some black-on-white wares were also made, and the patterning systems and motifs of some of the painted pottery are

reminiscent of late Mimbres Black-on-white paintings. In addition, the value that was placed on linear precision suggests continuity of a Mimbres concern.

The most characteristic of the Casas Grandes forms are painted effigy jars very much like the rare human effigies of the Mimbres Phase and similar contemporaneous vessels made in the Reserve and Chaco Canyon regions (Figs. 56, 57) (Switzer 1969). Most Casas Grandes effigies seem to be contemporaneous with or to postdate those of the Mimbres and may predate the ones made farther north. With the other factors cited, they suggest some Mimbres presence, or at least an awareness of the Mimbres traditions. Contacts between Casas Grandes and the Tusayan region are more precisely documented than those between the Mimbres and Tusayan regions, and it is suggested that whatever Mimbres influence there was on the Sikyatki tradition was filtered second-hand through Casas Grandes.

Several other figurative painting traditions developed during late prehistoric and early historic times. At Zuni and in the middle Rio Grande Valley these derived from Sikyatki models. A more independent manner that was in use at some of the Piro pueblos in the Pecos Basin may have had other origins entirely. Tabira Polychrome and related wares in their form, draftsmanship, and organization obviously belong to the eastern polychrome tradition. Their figurative subjects emphasize masked humans or supernaturals and seem to be derived from Sikyatki iconography (Fig. 58). Their color patterns closely resemble those of contemporaneous bichromatic wares of the northern Rio Grande Valley and are also similar to some earlier nonfigurative black-on-whites of the more immediate area, such as those produced in the vicinity of Chupadero Mesa (Fig. 59), wares that are found in Mimbres Phase and Casas Grandes sites.

Unlike Sikyatki representations, those of the Tabira tradition are not closely integrated with either their frames or their vessel forms. Although they entirely lack the control and subtlety of the Mimbres Black-on-white paintings made generations earlier, the structural relationships between figures and their ground are more like those than any other possible prototype. Tabira ware seems to be a much modified and provincial survival of earlier and probably local black-on-white traditions. If Mimbres pottery was indeed made during the fourteenth century in the Pecos Basin at the Three Rivers site and elsewhere, it becomes temporally and geographically reasonable to suggest that Tabira representational paintings were an enormously modified survival or revival of Mimbres zoomorphic pictorial traditions (see pp. 65–66).

Fig. 56. Ramos Polychrome hooded effigy vessel (Casas Grandes, Medio Period). H: 8¼″; D: 5″. Collection, MMA; photograph, Fred Stimson.

Fig. 57. Red Mesa Black-on-white effigy vessel (Anasazi, P II). Collection, Tonia Skousen; photograph, Jerry Jacka.

Fig. 58. Tabira Black-on-white canteen (Anasazi, P IV). Collection, NPS; photograph, Fred Stimson.

In summary, neither representational nor nonrepresentational Mimbres painting seems to have had any but the most modest effects on contemporary or later southwestern pictorial traditions. Mimbres influence on some varieties of Socorro Black-on-white produced in neighboring regions is obvious, but it is unclear whether this was contemporaneous or delayed. It is doubtful that black-on-white paintings produced by nearby and contemporaneous Mogollon people were much affected by the Mimbres, and more likely that their similarities were generic, reflecting the reactions of several groups to much the same influences and impulses.

The importance of the Mimbres tradition to any later pottery painting in the Southwest is at best vague and speculative. The Mimbres Phase overlapped spatially and temporally with Casas Grandes, and at least some Casas Grandes potters were familiar with Mimbres painting. The pictorial and visual problems of the two traditions were quite different, and any Mimbres influence on Casas Grandes painting was at most incidental and peripheral to its main themes. The same can be said with even greater

Fig. 59. Chupadero Black-on-white bowl (Anasazi P III) (found in a Mimbres Valley site). H: 5″; D: 11¾″ x 8¾″. Collection, WNMUM; photograph, Fred Stimson.

certainty of all later polychrome painting traditions of the Southwest. Following the population movements of the thirteenth and fourteenth centuries and the dramatic changes in all aspects of daily life, radical changes also occurred in ceramic techniques and, even more, in the problems and the principles of pottery painting. The visual language of the Mimbres tradition seems to have had little value or meaning to any of these later people.

From beginning to end that tradition was historically, technically, and stylistically a part of the larger painted-pottery tradition of the greater Southwest. It was at one time or another deeply or superficially affected by the technical and aesthetic developments that took place among neighboring peoples. At the beginning and for a long time thereafter it was a relatively minor art, derivative, involving few people, and with a low level of production. The florescence of the unique aesthetic of the Mimbres Phase was less an event than a process. A generation in the lifetime of a group that existed for fifteen hundred years is no time at all, and from a certain perspective Mimbres Phase art appears as a sudden development. But for an

individual a generation may be all the time there is, and maturing of the art over the course of several generations was, from an individual point of view, a lengthy process.

It took place at a time when the Mimbreños may have been crossing a demographic threshold and, in conjunction with other activities that tell of a burgeoning population, searching for means to control a variety of growth-inspired pressures. But correlation is not explanation, and nowhere is there a hint to explain why the Mimbreños, alone of all southwestern peoples, chose to devote so much of their creative energy to that particular art in that particular way.

7

The Potters and Their Wares

The Mimbres potters are anonymous; none of their workshops or kilns have been positively identified, and except for the pottery itself there is little evidence of their industry. In this respect they are no different from all other prehistoric potters of the American Southwest. Throughout the region kilns were self-consuming, tools were small and mostly perishable, and work areas had few furnishings or other identifiable features. This is as we would expect it to be if the ancient potters worked in ways similar to those of the modern Pueblos, where the ceramic industries leave almost no physical evidences other than the end products. Analogy with modern Pueblo practices therefore seems to be the best and is perhaps the only way to gain some understanding of the processes and methods of the Mimbres potters.

By such analogy it has generally been accepted that the people who made and decorated the ancient pottery of the Southwest were women who were trained in their craft by their own kin or by older relatives of their husbands, depending on locality and marriage practices of a particular community. It may also be assumed that even though makers' marks were never placed on pottery, the work of each potter of a village was recognized by her contemporaries through idiosyncracies in design, form, or craftsmanship.

Paintings on some Mimbres Phase vessels raise questions about the validity of the first of these assumptions. Some pictures of men in groups show

Fig. 60. Mimbres Black-on-white bowl. *Pair of Dancers Wearing Insect Costumes.* H; 6½"; D: 14". Collection, Nicholas Wolushuk; photograph, Fred Stimson.

details of esoteric, male-oriented ceremonies (Figs. 17, 60). Women are pictured seldom and are usually shown in passive attitudes or as subsidiary to the actively dominating male figures. The masculine orientation and esoteric nature of these figurative paintings imply that some of the Mimbres pottery painters may have been men. Their usual high quality suggests that the artists, whether male or female, were as well trained and experienced in their craft as were all other Mimbres painters.

If some Mimbres men did paint pottery, they did no great violence to southwestern traditions. Male participation in pottery making is and has been far more common than is usually conceded, although it is true that few have formed pottery until very recent years. For several generations Pueblo men have been observed decorating pottery, gathering and preparing clay and tempering materials, building kilns, firing, and doing everything else except fabricating the pots.[1]

For example, the pottery revival begun at Hopi about 1890 by Nampeyo was strongly affected by her husband, Lesou, who helped her collect sherds from nearby ruins to use as visual models and encouraged her to adapt the Sikyatki forms and designs for a contemporary market (Frisbie 1973;

Nequatewa 1943). The contributions made by Julian Martinez to the pottery revival begun at San Ildefonso Pueblo about fifteen years later were even more specific. His skills as a painter and designer far surpassed those of his wife, Maria, while the two together were jointly responsible for the technological innovations that were so vital to the success of the revival (Marriot 1948). Julian Martinez was by no means the only San Ildefonso man to paint pottery. Crescencio Martinez, Alfonso Roybal, and others of their generation exercised that skill, and the practice has continued without break to the present day. Similarly, some vessels made at Zia, Santa Clara, Cochiti, Acoma, and the Hopi towns, though often signed by women, have in fact been decorated by men.[2]

In many pueblos there seems to have been no question for at least three generations that pottery painting is an appropriate male craft. In all pueblos men have been expected to assist women potters, if only as hewers of wood and drawers of water. For many years, then, a distinction has been made in the pueblos between forming pottery, generally considered to be woman's work, and other aspects of the craft, including painting, which could and in some cases should be done by men. This distinction will be followed here: pottery making is assumed to have been woman's work among the Mimbres, but pottery painting, except where there is an obvious sexual bias, is assumed to have been a craft that might have been practiced by either sex.

Most painted Mimbres pots were made to be used in the villages where they are found and by potters and painters who spent most of their time doing other things. Some who were more gifted than others may have made or painted vessels for those less skilled, who may have made none at all, but there is no evidence that anything approaching full-time craft specialization or professionalism occurred. Nonetheless, Mimbres Black-on-white painting gives the impression of being so consistently high in quality that something like craft specialization must have happened. This impression is somewhat misleading. Only the finest examples are usually seen, and examination of many hundreds of specimens suggests a much wider range in quality than is visible in museum exhibits and publications (Fig. 61). Even so, the overall quality is high, and there is no question that the Mimbres made art without the luxury of having full-time artists.

Pottery making was probably taught to all or most of the women of a Mimbres community as one of the useful and necessary craft skills. As with all other crafts, it was learned by observation of and some instruction by experienced craftspeople and by practice. The entire training process took

maybe I made the actual pottery while men decorated it

Fig. 61. Mimbres Black-on-white bowl. *Men and Fish.* H: 3½"; D: 7¾". Goforth site, Gila drainage. Collection, ASM; photograph, ASM.

place within a community and the obligations of pupil to teacher were probably no more than those assumed by kin relationships and respect for age. Women learned how to paint pottery as they learned how to make it; if men also painted pots, their training was probably limited to that one skill. With emphasis on pottery manufacture as a useful craft, its techniques, forms, and decorative systems would have the appearance of being tradition bound, and conscious striving for radical innovations or highly individualistic personal styles would have been unthinkable.

Tradition as developed and transmitted by and through the community was the compelling feature of craft training that fortified conservative attitudes. The Mimbres aesthetic had evolved slowly and with an almost inevitable logic that permitted innovations only within strictly understood limits. The most radical of these was the introduction of representational subjects, but the forms these took evolved in accordance with the rules. Within its limitations, however, this conservative visual tradition provided the parameters for and even encouraged invention. The visual elements of Mimbres painting were simple and basic and therefore could be combined and recombined endlessly. Thus, despite the restrictions of custom and a finite number of patterning procedures, personal and expressive picture making was possible.

The phenomenon of having an art without artists required something like a restrictive tradition, for, without simplicity of means and form and

without a set of easily followed rules, the part-time artists could never have achieved consistency. Level of performance is always partially or entirely a function of the relationships between the performer and the available models and ideals. The exceptional Mimbres painters produced exceptional paintings, but their quality is always related to the group standards or social ideals. The restrictive traditions of the group and its high expectations ensured a predominant mediocrity that served as the base for the occasional production of a memorable painting.

That similar limitations can be a means for achieving personal creative satisfaction is eloquently illustrated by pottery making in the pueblos during the twentieth century. At Zuni about 1920, all potters worked with the same inventory of techniques, forms, structural formulas, and design motifs. Each combined and recombined these in a slightly different manner, and all considered every novel combination to be an invention. The work of individual potters was recognized by characteristic motif combinations, patternings, and craft techniques. Other potters and the community at large judged and criticized the work according to these factors, even though the range of variation was narrow and the differences subtle. Potters accepted the restraints of tradition without question, did their best to make pottery that conformed to the generally recognized but unstated standards of the village, and expressed no awareness of personal creative restrictions (Bunzel 1929).

Traditional standards of form and design can change with surprising swiftness in the most conservative of systems, only to be reintegrated by the habits of traditional thought. Throughout the Pueblo region during and after the period of late prehistoric migrations, community after community replaced black-on-white and other bichromatic pottery with polychromes. Both the change and its restrictive codification took little longer than the time needed to move from one place to another. Even more radical changes have been documented during recent times following the introduction of industrially made products that effectively rendered most native pottery obsolete. The craft remained vigorous only in those pueblos that developed new forms and designs to suit new and foreign markets. This process took place within the matrix of weakened but still ongoing pottery-making systems and the new forms and designs were swiftly reabsorbed by the basic traditions, even though most production of the last seventy-five years has been for alien use (Wade 1974).

These survivals demonstrate the vital role played by technology and training in the maintenance of traditional art. The radical changes in form

and design introduced by Nampeyo at the Hopi towns about 1890 were accepted by other potters and systematized within ten or fifteen years. They have since changed only slowly and in tradition-patterned ways. Even more startling changes and some outright inventions introduced by individuals at other pueblos in the years since 1910 have been similarly absorbed. While changes in form or design were accepted either quickly or not at all, any technical innovations that could have altered the training systems or otherwise upset traditional modes of behavior were entirely rejected. Attempts to introduce potter's wheels, permanent electric or gas-fired kilns, high-firing clays, or glazes all failed until very recent times.[3] Design and form, then, were only the symbols of conservative traditions whose survival depended absolutely on the social meaning and value of a technological system.

In the Mimbres towns traditional forces must have worked in much the same way. Radical innovations in form and design could occur under the proper circumstances and no lengthy period was needed for them to be accepted and absorbed. So long as there was stability of technology, training systems, and related social values, the fundamental tradition could absorb any amount of visual change. Within its constraints each potter and decorator had ample opportunity to express his or her individuality, most obviously by manipulating design elements, more subtly and pervasively by developing personal qualities of line and other technical means so that each vessel made or decorated became a kind of signature.

MANUFACTURE

The basic raw material used in manufacturing the pottery was a low-firing, redeposited clay widely distributed throughout the Mimbres region. Small quantities of this could be dug out of arroyo banks or other accessible places and taken by the potters or their helpers to the villages for processing. Processing involved little more than breaking the lumps of clay and soaking them in water for several weeks. The clay graded itself by settling stratigraphically by weight, and aging in water promoted biological actions that improved its plasticity. Neither mining nor refining was a time-consuming job, and hardly more than a basketful was needed to make a kiln load of fifteen or twenty vessels.

Clay taken out of the soaking and aging solution and with most

impurities removed was formed into small loaves. These were kneaded to make their texture consistent and to remove air pockets. Bits of ground-stone tempering material were added at this time; without these inclusions the interior of a formed clay piece would dry and shrink at a slower rate than its exterior, causing its surface to check and crack. Tempering materials varied, but most Mimbres potters used volcanic stone: hard basaltlike rocks or soft volcanic ash, and sometimes both together. Tempering stone was crushed between a hardstone mortar and a pestle, whose fragments inevitably became intermixed with the end products. Particles of river sand that remained in the clay even after refining also functioned as temper.

The amount of temper to be added was judged on the basis of experience and training, with the need to ensure even drying balanced against the loss of plasticity and smoothness caused by the additive. Several hours of concentrated work were required to knead and temper enough clay to make a kiln load of pottery. To do the entire lot at once would have created storage problems, and potters probably prepared only enough to make a few vessels at one time, with the added advantage that the drudgery was spaced into a series of short bursts.

Once the clay was kneaded, tempered, and made plastic enough to permit the rolling of coils, construction of a vessel could begin. A pot was usually started with a clay coil, from ¼ inch to ½ inch in diameter and 6 or 8 inches long. This was wound around itself to form the base and additional coils of about the same size were joined to the first so that the pot grew outward and upward from its center, built of welded lengths of clay. Sometimes a vessel was started by lining a shallow container, such as a basket or a pottery bowl, with a sheet of clay about ¼ inch thick, to which coils were added.

If coils were too wet, a vessel would not hold its shape under construction. If they were too dry, they would crack as they were wound into place. The potter's hand was kept moist while working and periodically she moistened the growing vessel. As each coil was placed and welded to the one below, it was flattened and smoothed by hand pressure, so that the finishing process was begun during construction. If a potter failed to weld and smooth the coils while they were plastic, the pot would be weak and might not survive firing.

The clay was prepared and the pot formed on a smooth slab, probably of stone, placed on or slightly above the floor of a room. If set outdoors it would have had to be sheltered from wind and direct sunlight to prevent the clay

from drying too rapidly. Most potters probably sat or knelt in one place as they worked, turning the forming vessel as coils were added to it. A pot started in a container spun easily and its soft base was protected. Others required more careful handling, and their bases would somehow have to be kept from sticking to the work surface.

Up to this point an identical technology was used for all pottery vessels no matter how they were to be finished. Decorated pots were either textured or painted, and finishing systems differed for each class. Texturing, usually done while the clay was still plastic, could be as simple a process as roughening an entire surface with a corn cob or bundle of grass or as complex as shingling or making other elaborate modifications of the body coils (Fig. 62). Among some contemporary and all earlier Mogollon people, texturing had been by far the most usual decorative technique. Mimbres Phase potters continued to make traditional Mogollon textured wares and even developed some new types, but painting was their most characteristic means of decoration. Most Mogollon textured pottery has all-over patterns on only one surface, and, regardless of their elaboration, few vessels have the visual interest of any of the painted wares. The forms and firing techniques of textured vessels also differed from those of painted pottery.

The most common shape of painted vessel was a hemispherical bowl about 10 inches in diameter and less than 5 inches high. Among other forms are small globular jars, ollas, and effigies, but few are larger than 14 inches in any one dimension. A standard bowl could be made in an hour and at the end of that time was still plastic although firm enough to retain its shape. A jar or olla would have to be made more slowly for fear that the weight of its upper parts would collapse inward if the clay were too wet. An experienced potter might take about a week to build the fifteen or twenty pieces needed for an efficient kiln firing. Four to six more days were probably required to finish and decorate a kiln load. If the pottery could be kept moist mass-production finishing methods would have speeded up the work, but it is unlikely that such methods were used. Instead, the Mimbres potters probably shaped only one or two vessels at a sitting and finished these except for the painting before beginning any others.

Finishing methods included hand smoothing, welding, scraping, polishing, and slipping. Most smoothing and welding were done as coils were added to form a vessel. When it had dried to leather hardness its surface was scraped with a piece of gourd, a sherd, or some other material cut to fit the curvature. This process removed most traces of coil construction, and any cracks that

Fig. 62. Mimbres corrugated jar. Collection, MMA; photograph, Fred Stimson.

had developed during drying were patched with welds of wet clay during this stage. Bits of temper were often lifted by the scraper and dragged along the surface, scarring it, and these marks also required patching and further smoothing. Meanwhile, all of the finishing processes combined to reduce the thickness of a vessel wall to about 3/16 inch.

Bowl interiors were generally finished with more care than their exteriors, and drag marks and partially smoothed coils are often seen on the outside of Mimbres bowls (Fig. 63). During the scraping process the plasticity of a vessel needed careful balancing, and the vessel and the potter's hands and tools were often moistened. If the pot was too pliable it would scar easily and might slump; if it was too dry, coil smoothing was difficult and the brittle clay might break under the pressure of the potter's hands.

After smoothing, a pot was left to dry until it became hard and ready to be slipped with a fine, white kaolin clay. Only a few deposits of this mineral were known to the Mimbres, but since it was usually applied as a thin wash to one surface of a vessel, only small quantities were needed. A cloth, piece of

Fig. 63. Mimbres Black-on-white bowl. Exterior of Fig. 16. H: 3½"; D: 8¼". Collection, HM; photograph, Fred Stimson.

leather, or bundle of fibrous material was used for slip application and the watery mixture was soaked up instantly, bonding to the dry vessel. It served as the ground for a painting and to be effective had to be thick enough to cover the gray paste. However, if slip was applied too thickly its bond with a vessel was insecure and it might crackle or flake. For this reason several thin layers were probably applied rather than one thick one. Bowls were always slipped on the inside and globular forms on the outside. While some bowls had exterior slips, most had only a narrow collar of white on the outer wall immediately below the rim. This was no more than the smearing of surplus slip that tended to pile up on the lip of a vessel.

Almost as soon as it was applied the slip was ready to be polished with a smooth, hard stone. Polishing stones were used as burnishing tools, rubbed against the slip with a short, hard, back-and-forth motion whose direction varied. The stone was lubricated with water, and as burnishing took place this moisture and hand pressure further strengthened the bond between slip and vessel paste. The ideal seems to have been a satin-smooth, somewhat reflective, even-toned pure white surface. Once this had been achieved or approximated, a slipped and polished vessel was ready to be painted.

DECORATION

The decorative quality of a pot is most obviously seen in its painting. However, every step of the manufacturing process had decorative consequences of equal importance to the lines and patterns of a picture, and at

each stage pure craftsmanship was a vital part of the aesthetic process. Well-kneaded clay with nicely balanced temper content is more easily worked into a refined shape and accepts a finer finish than clay that has been indifferently prepared. A well-smoothed surface is more easily slipped and painted than one that is lumpy or striated. A neatly applied, even-colored, and well-polished slip is far superior as a painting surface to one that lacks these qualities. Slip that does not adhere to the paste will ultimately crackle, flake, or powder, destroying any painting that may later be applied to it. Thus the potter, whether or not she was also the painter, played an essential and creative role in the making of Mimbres paintings.

Pictures were rarely placed on unslipped surfaces, and figurative paintings occur almost exclusively on bowl interiors. The usual color combination was black-on-white, but a third color made from a slip that fired red-brown was sometimes used. Depending on firing conditions, black paint might come out of the kiln as red-brown and white slip pink or tan, the color of the end product being as much a matter of firing technology and control as of raw materials. Paint was made by grinding a piece of iron ore into a fine powder. This was mixed with water and sometimes with boiled plants (such as beeweed) to make a heavy, black paste. The ore did not need to be mined, since pebbles of hematite, limonite, and other iron ores are found on the surface throughout the Mimbres area and only small quantities were required. A wet brush worked into the black paste picked up enough pigment to make a line of paint that would be instantly absorbed by the porous slip of an unfired pot. Granules of iron too large for absorption adhered to the surface and would fuse to the slip when the pot was fired. Smaller grains of pigment that soaked into the slip made erasure practically impossible. Paint could be removed only by removing the slip that had absorbed it, but unless all of it was removed from a surface a patchmark was left as the indelible and unsightly evidence of an erasure. Slip could be removed only by the tedious and impractical process of scaping it off an unfired and very fragile vessel, or a painting error could be covered by fresh application of slip. In any event, paint had to be applied with a sure stroke and precise knowledge of where each brushmark was supposed to go and what it was supposed to do.

Most brushes were probably made of yucca leaves split to the thickness of a desired line and cut to lengths of about 3 or 4 inches. About a third of that length was stripped of its outer fiber and chewed soft to be used for paint application. The remainder was left as a handle. A yucca brush is a highly specialized tool, so limp when wet that if it is held and used as though it were

either stiff or flexible it makes an uncontrollable and ragged line. However, this unresponsive, blunt-ended, square-sided instrument can be ideal for making straight and even-edged lines on a curved surface. Wet, it will rest on a surface and if pulled gently will follow all the contours of a complex shape. Moved at the proper speed and held firmly, it will deposit even quantities of paint, making a line unvaried in thickness. It will do the same if held still at the proper angle against the side of a moving vessel. Line direction can be changed by turning the brush or repositioning the pot, and any kind of line, excepting only continuous thick-thin ones, can be neatly and easily drawn.

These brushes were the most important decorative tools in the inventory of the Mimbres painters. The potters' tools were mostly simple and unspecialized and included digging sticks for mining clay, baskets for carrying it, and large storage vessels in which to soak, cure, and store it. A fine-grained stone work surface, stone mortar and pestle for grinding temper and perhaps a finer set for grinding paint pigment, small containers for storing these materials, pottery or gourd scrapers, something flexible for applying slip, and a smooth, hard, fine-textured polishing stone completed the inventory. Of the total, only good polishing stones were hard to find or make. The Mimbres potters may have treated these as many modern Pueblo potters do, as heirlooms to be treasured and passed by gift or inheritance from generation to generation.

FIRING

Pottery was probably made only during the warm part of the year when it could be fired under optimal conditions on sunny, still, dry days. It is likely that vessels were left to dry for about a week or ten days before firing so that they would not contain excess moisture that would expand in the heat of the kiln, causing them to explode. In the arid climate, drying required nothing more than a reasonably stable environment and protection from direct sunlight. On the morning of a day selected for firing, a kiln would be built on a flat spot in an open area in or very near a village. Its base was probably a layer of wood spread in a rough circle about 6 feet in diameter and covered with large pieces of broken, fired pottery. Vessels to be fired would be placed carefully on these sherds so that they did not touch the fuel. Additional layers of pottery would be stacked above the first, resting on sherds, and the entire pile would then be covered with other large pieces of broken pottery in order

to isolate and protect the unfired ware from the dried wood that was stacked over and around the entire mass to complete the kiln. A kiln made to hold about fifteen or twenty vessels of average size could be built in about an hour. When ignited it would burn for perhaps ninety minutes at temperatures greater than 800°C and probably less than 1,100°C. Within a couple of hours after the kiln had consumed itself the completed pottery would be cool enough to be removed, cleaned, and used.

The clay, slip, and paint all contained iron, which would oxidize at temperatures ranging from 800°C to 1,200°C provided there was a strong draft in the burning kiln. If it oxidized, the colors after firing would range from pink to tan to brick-red. Oxidation cannot occur without air, and in a reduction atmosphere, without the free flow of air, the colors of paste, slip, and paint would be gray, white, and black. Strict control of a firing atmosphere is hardly possible with an outdoor, self-consuming kiln, for at any time a strong breeze can convert a reductive firing to an oxidizing one.

Mimbres Phase potters were aware of the effects of firing atmospheres and did attempt to control them. Many still made traditional Mogollon redwares, perhaps with the same clay as for the gray-paste painted wares, and the differences in color are consistent, the result only of differences in firing atmospheres. Nevertheless, their black-on-white surface effects are singularly erratic. A high proportion have oxidized or partially oxidized paint, usually on a white or pink slip and a gray paste body. The effect can happen only if a reducing atmosphere becomes an oxidizing one late in a firing but with temperatures still above 800°C. If oxidation occurs too soon or too thoroughly the previously reduced grays and whites will also turn red. Most Mimbres Phase paintings are black, but some are part black and part red or brown, obviously as a result of poor control of firing atmosphere (Plate 6). However, so many are a consistent rich brown that the effect must have been deliberate rather than accidental (Plate 7). Potters as concerned as the Mimbres were with visual quality and surface appearance could have been expected to build windscreens to prevent vagrant breezes from accidentally oxidizing their kilns. Their failure to do so can only be interpreted as the exercise of a deliberate aesthetic choice: they either courted accidents or controlled their firing atmospheres so that some paintings would emerge red. Enough oxidized vessels were recovered from the most recent level at the Mattocks Ruin that Nesbitt (1931) felt impelled to treat them as a separate named type. These are possibly among the last Mimbres Black-on-white paintings made in the Mimbres Valley, are consistently high in visual quality, and if anything are

more rather than less carefully made and decorated than other painted vessels found at the same site.

Other preventable "accidents" that occurred suggest a pattern. Black streaks or firing clouds were often burned onto decorated bowl exteriors when pieces of burning fuel rested against a vessel during firing (Fig. 63). Though such accidents are easily prevented, few Mimbres potters seemed to care about protecting their vessels from them. Vessels were sometimes warped during firing and this also could have been prevented easily, but the potters seem not to have cared about shape distortion either (Fig. 64). The deliberate courting of certain kinds of accidents is an unexpected aspect of the Mimbres aesthetic, a counterbalance to the perfection of patterning sought for and often achieved by the painters.

Firing temperatures were not high by modern ceramic standards, but Mimbres kilns achieved temperatures well above the minimum necessary to complete the physical transformation of raw clay into durable pottery. Theirs was a low-firing clay; pots are sometimes found in burned rooms that were warped beyond use or vitrified at temperatures that could hardly have exceeded 1,500°C. With kilns rarely capable of achieving temperatures much higher than 1,100°C, by accident or design the Mimbreños had found a technology that was appropriate to their materials.

Once the contents of a kiln had been removed and the protective sherds taken away, only ashes were left to mark the spot. After one or two hard rainstorms and some strong winds, these would be washed and blown away and all evidence of the firing would be gone.

Mimbres pots are hard, durable, porous, and brittle. Those left unpainted and unslipped were used for storage and cooking. Once they had acquired a thick coat of grease they were quite waterproof and made excellent containers for boiling foods. Ungreased vessels were also waterproof but porous enough so that stored liquids would be kept fresh and cool by evaporation through the body walls and would acquire an earthy taste that can be considered pleasant. Foods stored in such containers are perfectly protected from vermin of all sorts; in the dry climate, humidity could not build up in them and there was little danger of spoilage due to fungi or mildew. The excellence of these storage vessels is amply demonstrated each time an ancient southwestern pot is found with corn kernels or other food still intact and apparently edible after the passage of hundreds of years.[4]

Painted bowls with relatively soft slips and easily chipped paint on their

Fig. 64. Mimbres Black-on-white bowl. H: 6″; D: 11¾″. Collection, DMNH; photograph, Fred Stimson.

only usable surface have far more limited uses. Many were serving dishes or food containers, and their scratched and otherwise defaced interior surfaces attest the incompatability of this use with the decorative mode. Any kind of pottery, including almost all that has figurative designs, could have kill-holes punched in it and be used as a mortuary offering. If figurative painted vessels were made for any other purpose, they were handled with great care, for few are defaced except for their kill-holes.

Like most other prehistoric southwestern pottery, that of the Mimbres was a good utilitarian ware. Its greatest drawback was its fragility. The average life of similar wares has been estimated at about six years, although the tons of broken pottery that cover some sites in the Southwest suggest an even shorter life span.[5] But if easily broken, the pots were also easily made. Materials were common and at hand, most tools were simple and unspecialized, and a household that broke twenty pots in twelve months could replace the loss with ten days of work spread over a month.

The cost was low, and pottery making and pottery painting are crafts that provide avenues for people to display personal, expressive, and creative skills. The technical and social constraints provided no more than the matrix or field needed to make the work intelligible. The end products have important communicative and aesthetic capabilities, and the care taken by the Mimbres potters in making and decorating their vessels attests the aesthetic and symbolic values given to the art by the group.

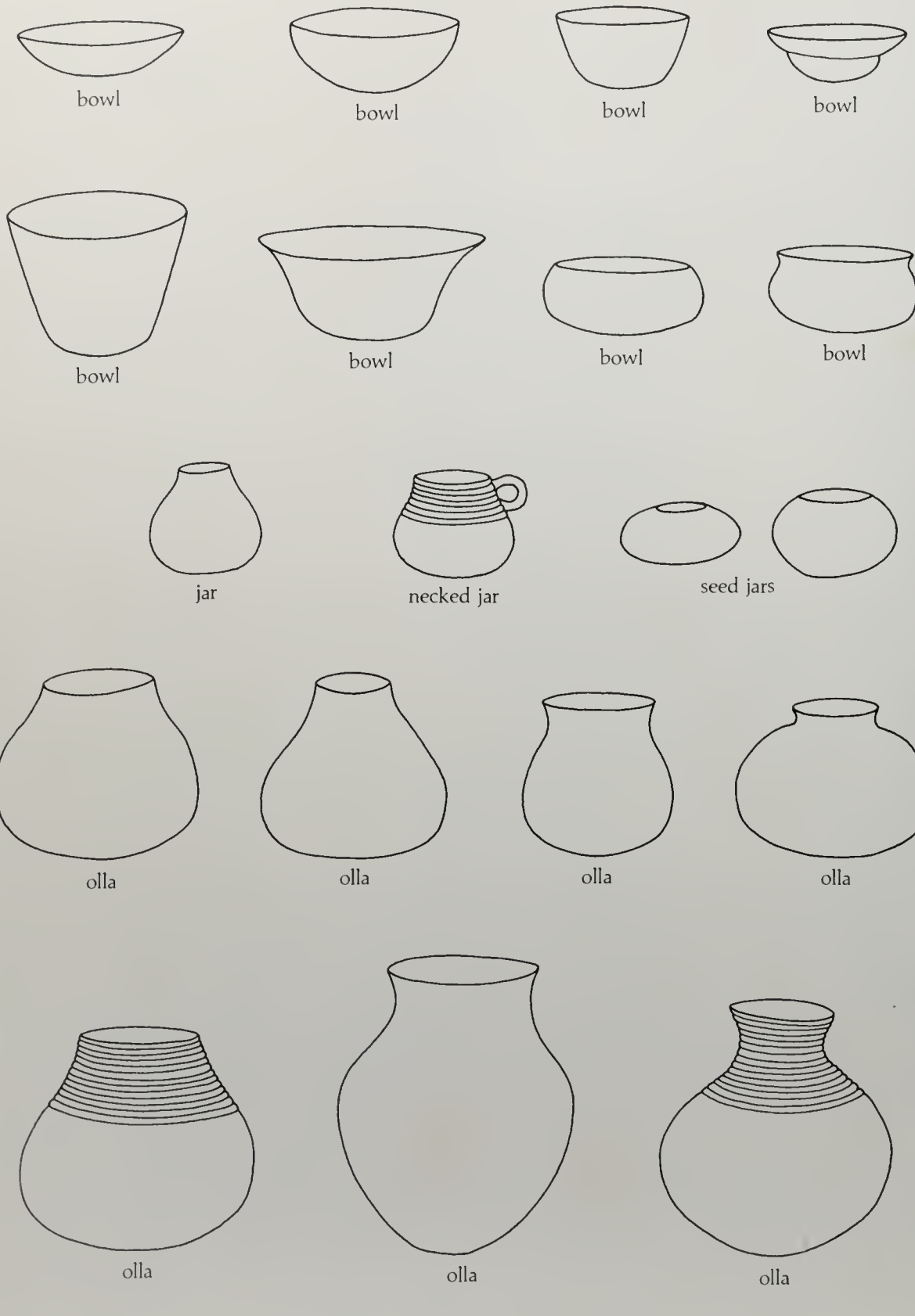
8

Pottery Painting: Form and Structure of Mimbres Black-on-White

VESSEL FORM

While pottery making was a major craft of the Mimbres people, they had relatively little interest in the tactile and plastic potentialities of clay. Their overwhelming aesthetic concern was with the two-dimensional surfaces rather than the three-dimensional forms of their vessels. Open bowls were by far the most common type of painted vessel, with smaller numbers of globular jars and high-shouldered ollas the only other painted forms found in any quantity. Some odd shapes, including effigy jars, ladles, and dippers, were also painted (Fig. 65).

Bowls are round bottomed and usually somewhat wider than twice their own height, so that they are not quite hemispherical. The most common bowl variants are globular forms with flared rims, but whatever their shape, most bowls are about 10 inches in diameter and between 4 and 5 inches deep. Small ones are common and tend to be proportionally more shallow than those of average size; bowls larger than 11 inches across are rare and they tend to be proportionally deeper. Almost all warped vessels are bowls, with warpage usually along one axis to produce an elliptical shape. Although this distortion sometimes produces a useful pouring spout, the effect was often accidental. These bowls were sometimes painted as round rather than elliptical forms; they were no longer plastic when the paint was applied, and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their shapes could not change except in an uncontrolled way during the firing process.

The assumption that shape distortion usually resulted from uneven firing temperatures or occurred if vessels were fired before they had properly dried is supported by the rarity of warpage of small and of flared-rim bowls. The former have walls as thick as those of average size and were therefore considerably more stable. The collarlike rims of the flared-rim vessels gave these shapes great stability also, and neither form was susceptible to accidental warpage. Flaring rims are usually an inch or less wide and project from vessel walls at about right angles; their rim profiles are elaborate and suggest that some potters were taking tentative steps toward using the plasticity of the clay for decorative ends.

The other standard forms are much alike in being globular and having small openings and painted decorations confined to the upper parts of their outer surfaces. Several varieties of small vessels with this configuration were made, including canteens, seed jars, and necked jars. A vertical neck or spout usually projects upward from the center of these forms; a very few of these have one or two handles or as many as four suspension rings attached. Handles range in elaboration from simple flat straps to complex braided coils, and some bear tiny modeled animals or animal heads. Most handles are vertical and joined to the pot at two points, the lip of a neck or spout and the shoulder or widest part of the upper body. Suspension rings were also attached to the shoulder of a pot or a little above it; they range in shape from simple pierced nipples to braided loops. Ollas are larger and usually have a necked center orifice, no handles or suspension rings, a pronounced shoulder, and a pointed or somewhat flattened base. The lips of necked vessels are often everted.

Perceptually, the greatest differences in decoration between globular and hemispherical forms have to do with convexity and concavity. Proportions are similar and design problems hinged on the question of whether the inner or the outer side of a hemisphere was to be painted. Other forms, especially effigies, presented other kinds of visual problems.

Numerous plant and animal effigies were made, but some are known from only one or two examples and none are plentiful. Bird effigies are the

Fig. 65. Mimbres Pottery Vessel Shapes. After Wheat 1955.

most common and are usually variations of the standard jar shape, with mouth and neck shifted from the center to one end to form the head and neck of the bird. They are often ovoid or triangular in plan. As with other life-form representations, they vary greatly in their degree of realism (Figs. 66, 67). In some examples the only anatomical details are painted patterns that suggest wings, tail, and breast feathers; in shape these sometimes resemble a shoe more closely than they do a bird. Others have modeled heads forming a spout, projecting tails, and modeled wings, neck, and body (Fig. 68). Some are supported by two or more often three or four legs that have no resemblance to those of a bird.

Effigies of four-footed animals are generally similar. Most have four legs, but except for horned animals species identification is often problematical (Fig. 69). Bowl-shaped effigies were also made, usually painted on interiors but sometimes on the outside as well (Fig. 70). They tend to be small and ellipsoid and may have an arched handle parallel with the long axis of the vessel. Their animal features are limited to modeled heads, tails, and sometimes feet attached to and projecting from the bowl body at appropriate places.

Perhaps the most elaborate of the effigies are those of humans. They are rare and known mostly from fragments. Most are seated with crossed arms and legs modeled from clay coils that were applied to the surface of a vertical, tubular container. The container is the human trunk, and a modeled head open at the top or back forms a pouring spout. The heads are disproportionately large but have realistic features made by pinching, painting, and adding shaped bits of clay. In almost every instance effigy forms were painted with black on a white slip. Exotic or specialized forms were also painted. Included in this category are miniature vessels, some of which may have been made as toys (Fig. 71). Scoops, ladles, and odd shapes that were presumably made for ritual purposes are also found (Plate 6).

THE PAINTING TRADITION

The decorative possibilities open to any Mimbres painter, in theory, were infinite. In practice, the artists accepted—as all artists do—a set of arbitrary limitations that had an internal logic. An understanding of their decorative system must inevitably refer to these limitations, their logic, and their effects.

Fig. 66. Mimbres Black-on-white effigy vessel. *Human-faced Bird.* H: 7½″; D: 10″. McSherry site, Gila drainage. Collection, WNMUM; photograph, Fred Stimson.

Fig. 67. Back view of Fig. 66.

Fig. 68. Mimbres or Tularosa Black-on-white effigy vessel. Gila drainage. H: 2¾″; L: 7½″; W: 3¾″. Collection, MNA; photograph, Fred Stimson.

Fig. 69. Mangas Black-on-white effigy vessel. H: 5″; L: 8¾″. Collection, CSF; photograph, Fred Stimson.

Fig. 70. Mimbres Black-on-white effigy bowl. *Quadruped.* H: 3½″; D: 8¾″. Private collection; photograph, Fred Stimson.

Fig. 71. Mimbres Black-on-white miniature bowl. H: 1½″; D: 3½″. Treasure Hill site, Mimbres drainage. Collection, MNA; photograph, Fred Stimson.

Among the systematic exclusions accepted by Mimbres artists was the use of texture and, with some exceptions, of more than two colors on any one surface. Paint was thus used mainly for its linear values or as a solid filler. The Mimbreños' figurative pictures generally avoided allusions to spatial depth, and this commitment to a two-dimensional imagery was consistent with their painting strategy. They chose to paint only in well-defined patterning areas on only one surface of a vessel. Their framed pictures in consequence could not become an integral part of any pot. Except for their figurative paintings, they were committed to geometrical regularity, and this led to an inevitable and rigorous rhythmic formality. Although paintings and their supporting surfaces were recognized as two separate things, the character of each shaped surface was considered when picture spaces were defined, and painted frames and motifs were made to conform to the peculiar shapes on which they were placed. Finally, the tensions between the shape of a vessel and its painted covering intensified all dynamic possibilities in any painted pattern.

At the heart of this tradition was the conception of a pot as a surface on which to put a painting. Relationships between the two were inorganic and in a sense either could exist independent of the other. This concept was modified by a set of mechanistic features that had the effect of creating pseudo-organic relationships between pictures and their support surfaces. Among these features were the commitment to maintaining the picture plane by avoiding three-dimensional illusions, the adjustment of picture frames so that painted shapes were often made to conform to the shifting planes of globular or spherical vessels, the repetition of a few basic geometric elements in mathematically predictable sequences, and, above all, the treatment of paint and background as visual co-equals. Despite this mutual independence, in practice the tradition demanded close visual interrelationships between the shape of a vessel and the forms painted on it.

This system was not used exclusively by the Mimbres but rather was and is common to most Native American pottery traditions of the Southwest. The specific Mimbres tradition is defined by certain innovations and mechanical details rather than through any basic modifications of the regional system. Some of these details are unique, but most are not, being instead clusters of attributes any one of which might be shared with other regional subtraditions or co-traditions. The most important Mimbres innovation was in the figurative paintings, which are unique in their execution and organization. In these the Mimbres artists frequently abandoned the mathematical inevitability of geometric rhythms and sometimes implied a three-dimensional

pictorial world. Even so, these pictures generally maintain two-dimensional surfaces, their organizational schemes are often geometric, and in other respects they differ from the nonfigurative pictures mostly by their subject matter.

The Mimbres variation of the southwestern decorative tradition is mostly defined by choice of subject or motif, concentration on certain kinds of rhythm, pictorial structure, draftsmanship, coloration, and tensions. Nonfigurative paintings were all organized according to one or another of a limited group of geometrical schemes, and their elements were also severely limited to sets of basic geometrical figures. The various schemes and figures could be combined and recombined in an infinite series, but none of these inventions would have the effect of modifying the underlying concepts. Though the conceptual rules were limiting, their logic provided the artists with a framework within which they had the freedom to manipulate, interpolate, interpret, and invent. Everything followed from the basic premise that paint was applied to the surface of the vessel as a sort of skin, hugging it and adjusting its two-dimensionality to the three-dimensional reality of the space enclosed by the vessel.

Pictorial composition was largely determined by vessel form, and the limitation in the number of basic vessel shapes and their simplicity gave positive support to the primacy of painting over all other decorative means. All vessels have relatively large expanses of gently curving, smooth, hemispherical or globular surfaces. Systems of pictorial organization that were invented to cover one form could, with a minimum of adjustment, be made suitable for another, and concavity and convexity were merely two sides of the same hemisphere. Perceptual problems were another matter entirely. Bowl paintings on concave interior surfaces were normally perceived as entities, but only parts of exterior paintings on other vessel shapes could normally be seen at any one time. Paintings on jars, ollas, and similar forms therefore required alternative organizations if they were to be as effective as those on bowls. As it happened, paintings on all forms were usually organized in about the same manner, as though perception would be immediate and total. Thus the Mimbres concentration on bowl paintings was more than statistical; it was also a state of mind.

The patterning of geometric paintings on bowls usually clarified structural characteristics of the vessel form. Framing lines were placed immediately below the rim of a vessel and were usually drawn around its bottom also. Even though the potters seldom emphasized the architectural

parts of the bowl—its rim, walls, and base—these were isolated and stressed by the painters. When no bottom frame was drawn, the bowl center was given importance by use of some alternative painting structure, usually lines that radiated from it to emphasize the symmetry and hemispherical nature of the form. The picture space was further subdivided, but the patterning systems tended to integrate all parts of a design into a single unit. For example, each segment of a quartered pattern might enclose a self-centered design, but the dominant image is of a single figure rather than four separate ones (Fig. 71). Division of a vessel into quarters, with or without a reserved center, was the most common method of structuring bowl paintings, but segmentation into two, three, or five or more parts was also done. In most the divisions are radial and the dividing lines actually or by implication pass through the center of the vessel (Figs. 72–75).

The reserved space in a bowl center could become its visual focal point and, when representational designs were placed in it, any sidewall patterns were reduced to function as more or less ornate frames. This reduction of the importance of the vessel walls also happened if geometric designs were isolated in a bowl center (Fig. 2). But most often center spaces were either left blank or included in an all-over pattern. In the one case concentration was on the vessel walls; in the other, paint was applied to all parts of the surface (Figs. 76, 77). In rare examples wall patterns are static, with motifs

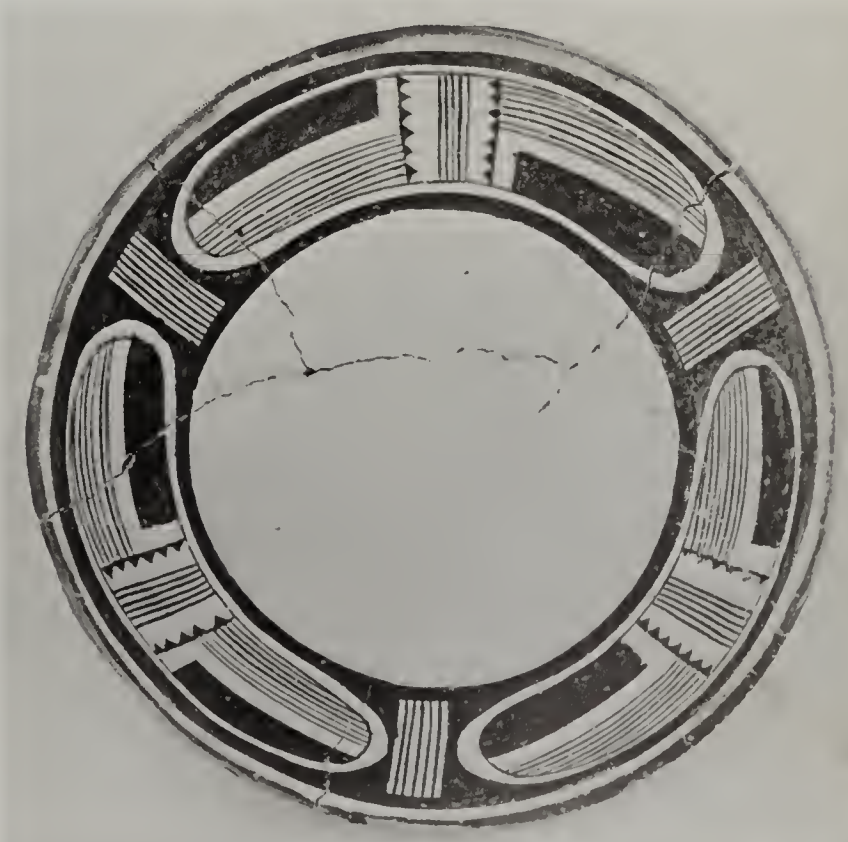


Fig. 72. Mimbres Black-on-white bowl. H: 2½″; D: 8″. Collection, HMWC; photograph, Fred Stimson.

Fig. 73. Mimbres Black-on-white bowl. H: 3½"; D: 10½". Eby site, lower Mimbres Valley. Collection, UCM; photograph, Fred Stimson.

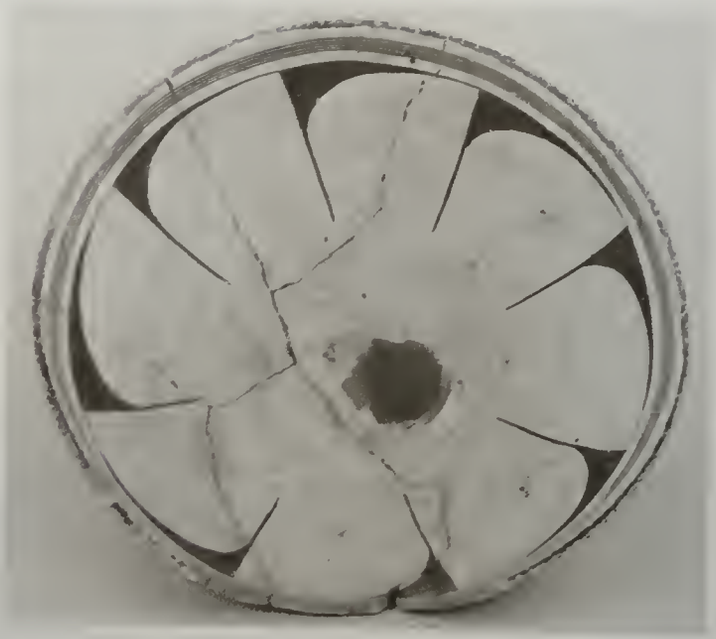


Fig. 74. Mimbres Black-on-white bowl. H: 4¼"; D: 10". Upper Mimbres Valley. Collection, MMA; photograph, Fred Stimson.

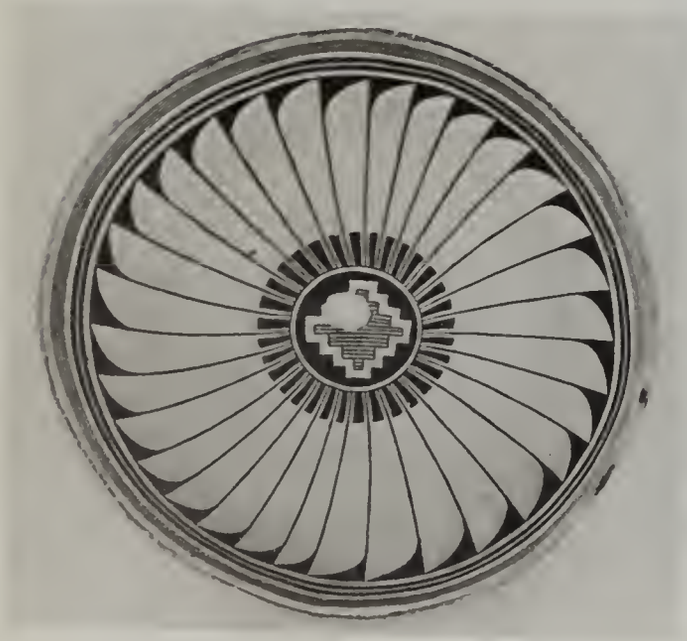


Fig. 75. Mimbres Black-on-white bowl. H: 4½"; D: 10¼". Collection, HM; photograph, Fred Stimson.

Fig. 76. Mimbres Black-on-white bowl. H: 5½″; D: 12¾″. Mattocks site, upper Mimbres Valley. Collection, MNM; photograph, Fred Stimson.

Fig. 77. Mimbres Black-on-white bowl. H: 4½″; D: 10″. Collection, TM; photograph, Fred Stimson.

Fig. 78. Mimbres Black-on-white bowl. H: 4¼″; D: 10½″. Collecti ·n, WNMUM; photograph, Fred Stimson.

confined to rectangular panels (Fig. 78), but dynamic patterning was the usual rule, a tense by-product of the Mimbres response to the southwestern assumption that a painting on a pot was both a part of and apart from the vessel.

The Mimbres organized pictorial space on a bowl so that it conformed to the architectural parts of the vessel. They then violated the resulting horizontal registers by crossing them with a series of radiating divisions. Other tension-creating devices included the kinetic effects achieved by offsetting radiating lines, contrasting smooth curves against straight lines, use of ambiguous positive-negative forms, and the systematic repetition of sharply angular elements and motifs (Figs. 79–82). Their system required the painted skin of a pot to conform to the vessel shape but permitted secondary patterns to ignore the architectonic form-determinants, and therein lies its vitality.

Designs on shapes other than bowls either used bowl structural systems with little modification or depended on series of repeated, self-contained panels. Rarely were results as satisfying or dynamic as paintings on bowls. Bowl designs transferred to exterior surfaces ignore the perceptual problem and are most effective only when seen from above. From a more normal side perspective the dominating and dynamic form and rhythm, and the tensions that characterize Mimbres bowl design, are lost (Figs. 83, 84). Those exterior designs that depend on panel structure are static and tend to behave as series of self-contained, separate but related pictures. Again, their static nature is most obvious from a side view, in which the complete organizational structure may be surmised but not seen.

Painted effigies are even more restrained in patterning, with the commitment to representation taking precedence over all decorative inten-

Fig. 79. Mimbres Black-on-white bowl. H: 4″; D: 9″. Collection, TM; photograph, Fred Stimson.

Fig. 80. Mimbres Black-on-white bowl. H: 3⅜; D: 8¼". Colson site, upper Mimbres Valley. Collection, WNMUM; photograph, Fred Stimson.

Fig. 81. Mimbres Black-on-white bowl. H: 5"; D: 10¾". Treasure Hill site, Mimbres drainage. Collection, MNA; photograph, Fred Stimson.

Fig. 82. Mimbres Black-on-white bowl. H: 5"; D: 14½". Colson site, upper Mimbres Valley. Collection, WNMUM; photograph, Fred Stimson.

Fig. 83. Mimbres Black-on-white olla (top view). Collection, Dr. E. H. Robison, Sr.; photograph, Fred Stimson.

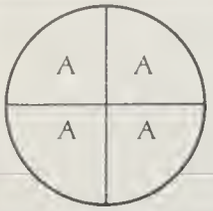
Fig. 84. Side view of Fig. 83.

tions. Spatial organization was dictated by the physical character of the life-form. For example, a bird-human effigy has painted panels placed in wing, back, tail, and neck areas. These interrelate to the shape of the vessel and the conventions of bird representation, but not to each other as parts of one decorative picture (Fig. 85). These panels were usually filled with arbitrary geometrical figures but were organized as representational units, no matter now nonrepresentational their interior motifs.

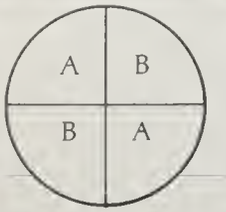
BASIC PICTORIAL STRUCTURES

The most common and elementary of the Mimbres visual devices was line, and with line the artists created all painted decoration (Fig. 85). It is commonplace to consider the lines as either curved or straight, but most were placed on curved surfaces that deny the possibility of a straight line. Nonetheless, the illusion and effect of ruler-straight lines was created and it is more convenient to accept the illusion than it is to deny it. Most Mimbres lines are continuous, even-sided, and narrow. The thick-thin variations that do occur seem always to be departures from an ideal, the result of careless brush handling or the simple technical inability of an individual artist to draw a straight line (Fig. 61).

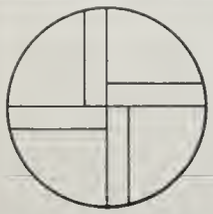
In a nonfigurative painting continuous lines generally move in only one of three directions—parallel to the pot rim and forming a complete circle, at right angles to the rim and bisecting the vessel, or at about a 45-degree angle to the rim, segmenting the vessel from rim to rim. Painting seems usually to have started with a line placed parallel to and just below the rim to encircle the vessel. This served as the upper frame of the design area. Other circles parallel to the first were often drawn to define subsidiary design zones or to elaborate on the upper frame. Additional long lines were then drawn at right or oblique angles to the first. These defined other major decorative zones, bisected or quartered the vessel, outlined a dominant central form, or otherwise provided the framework for a complex and dynamic structure that would cover the surface defined by the framing lines. Design zones established by the second group of lines might be further divided with short lines to form filler units made up of geometrical elements such as rhomboids, triangles, rectangles, or squares. In combination, these subunits formed readily identifiable motifs, and short filler lines were sometimes placed within



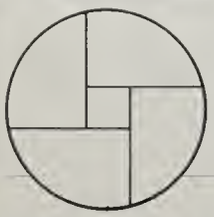
1. Four equal wedge-shaped segments, each with the same pattern.



2. Four equal wedge-shaped segments, with a different pattern in each pair of opposed wedges.

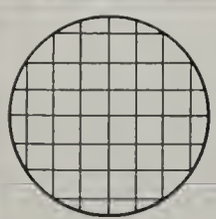


3. The bisecting lines are off-set, wedges rotate, wedges filled as in 1 or 2.



4. Wedges rotate about a reserved design area in the center.

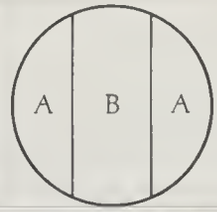
5. The related parts of an image are in a quartered pattern, the bisecting lines are implied.



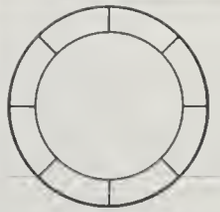
6. An overall "wallpaper" pattern which can be extended indefinitely.

7. Same as 1 through 5 but division is in three segments.

8. Same as 1 through 5 but division is in five or more segments.

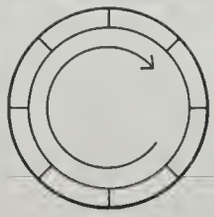


9. Division into three along a vertical axis, the center usually dominant.



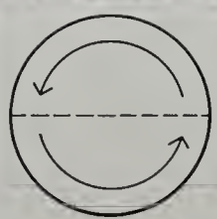
10. Division along the horizontal plane, wall pattern dominates, center reserved.

11. Central picture space dominates, top-bottom orientation with side wall painting as a frame.



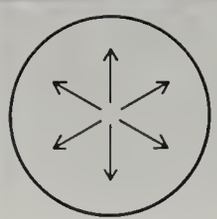
12. As in 11 but with the figure in the central picture space curved to avoid top-bottom orientation.

13. Figure in central space integrated with frame. Orientation is top-bottom.



14. Pair of opposed but non-interacting figures within framed space. The picture space is implicitly divided into two separate units.

15. Two or more figures integrated with the frame, central space blank.



16. Group of interacting figures within framed picture space. Each is on axis oriented to an invisible vanishing point near the bowl center.

each. Throughout, all lines were complete, either by being made continuous as in a circle, or by running from one crossing point to another.

Long lines that bisect a vessel from rim to rim form sweeping curves. Somewhat exaggerated and in combination with straight lines or other curved ones, these were the framework for distinctive and dynamic central motifs. Other curved lines include short arcs that combined with straight lines to form small design zones or large motifs. Curved lines were also used to make continuous and sometimes interlocked tight scrolls and elegant S-shaped motifs. Less common linear variations included zigzags and short lines, sometimes used as dashes but more often in combinations to form motifs.

Solid areas were always delineated before being filled, and heavy black paint was never anything but an alternative way of filling a defined space. In some cases narrow lines were made to expand until they functioned as a solid filler, and black areas are sometimes so dominant that the unpainted white slip left between two solids is all that remains to carry an image. These strikingly ambiguous positive-negative patterns are among the most active and effective of all Mimbres nonrepresentational paintings (Figs. 76, 82).

Basic design structures including the dominating shapes and rhythms were established by the first few lines drawn on any vessel. Details and elaborations might develop slowly and perhaps spontaneously, but at the outset the painter necessarily had a mental image of the intended picture. As it developed with motifs and elements placed within zoned areas, it was possible to change an image or modify the original intention by smothering the structure with an overlay of pattern. But the original lines could not be erased without destroying an entire pattern, and the end result was a logical if complex variant of a basic scheme established by the first few brushmarks (Fig. 86).

Most of the paintings are monochromatic, and line functions as a visual substitute for color. The spectrum was narrow, ranging from white (or the absence of paint) to solid black (or the total covering of slip). A variety of hachured grays could relieve the stark dark-light contrasts that otherwise prevailed. The tone and intensity of grays is a function of line width and closeness, with light and middle values predominant. Occasionally the hachuring dominates, but most often it serves only to relieve sharp contrasts

Fig. 85. Basic Layout Patterns of Mangas and Mimbres Phase Painted Pottery. (Note: layout schemes 1–7 occur throughout the region of northern Mexico and the southern Southwest; 1, 3, 4, and 5 occur with great frequency on Mogollon Red-on-brown and Mangas Black-on-white. Schemes 8–16 are found mostly on Mimbres Black-on-white.)

and to act as a bridge between the dark and the light parts of a picture (Fig. 87). On the rare polychrome vessels a third color made of a thin red slip was used as a filler. This usually functioned as hachure does, to establish an intermediate color (Plates 8 and 9).

Line quality was remarkably consistent throughout the entire Mimbres Phase and in all of the Mimbres region. As much as any other single factor it dramatizes the power of traditional training, for the only variation other than steadiness is in line thickness. Some were thinner than others, but any lines wider than about 1/16 inch were made by pairing narrow lines and filling the space between them. Brushes could not hold much paint, and long lines were made as series of connected dashes rather than in a single stroke. These betrayed the less skilled painters, whose lines were unsteady, varied in thickness, and made uncontrolled changes of direction (Fig. 61). The importance of line is manifest, and every Mimbres painting was both opportunity and challenge to an artist who was expected to demonstrate linear skills.

MOTIFS AND IMAGES

The elemental forms of Mimbres painting were even more limited in their number than the structural systems. The most common, excluding line, are triangles and circles. Diamonds, rhomboids, squares, crosses, and spirals can also be considered as elemental units, but the first three are made of paired triangles and the last two are line variants. A single kind of form element could be repeated to make a complex design; two were used most often, three sometimes, more than three rarely (Figs. 88–90). Circles were used mainly to describe large design zones, especially central ones, and also to describe the shape of a subunit (Fig. 90). Wedge-shaped triangles were a natural consequence of any quartered design structure and were also used to describe large design zones. Small-scale triangles are visually the most compelling of Mimbres elemental forms, the shape appearing as zone fillers, in motif combinations, as motifs, and as line embellishments (Fig. 91).

Different elemental forms are generally found only as zone fillers or in motif-forming combinations. Motifs are of two general sorts, structural ones that serve as the dominant image on a vessel and nonstructural ones used as fillers or embellishments within design zones. The former class, because of the logic of the design system and nature of the shape they must dominate, tend

Fig. 86. Mimbres Black-on-white bowl. H: 5¼"; D: 12". Eby site #3, lower Mimbres Valley. Collection, UCM; photograph, Fred Stimson.

Fig. 87. Mimbres Black-on-white bowl. H: 4"; D: 9¼". Collection, TM; photograph, Fred Stimson.

Fig. 88. Mimbres Black-on-white bowl. H: 5¼"; D: 13¾". Les Dos site, lower Mimbres Valley. Collection, SAR/MNM; photograph, Fred Stimson.

Fig. 89. Mimbres Black-on-white bowl. H: 5½″; D: 14″. Eby site, lower Mimbres Valley. Collection, SAR/MNM; photograph, Fred Stimson.

Fig. 90. Mimbres Black-on-white bowl. H: 6″; D: 12½″. Eby site, lower Mimbres Valley. Collection, UCM; photograph, Fred Stimson.

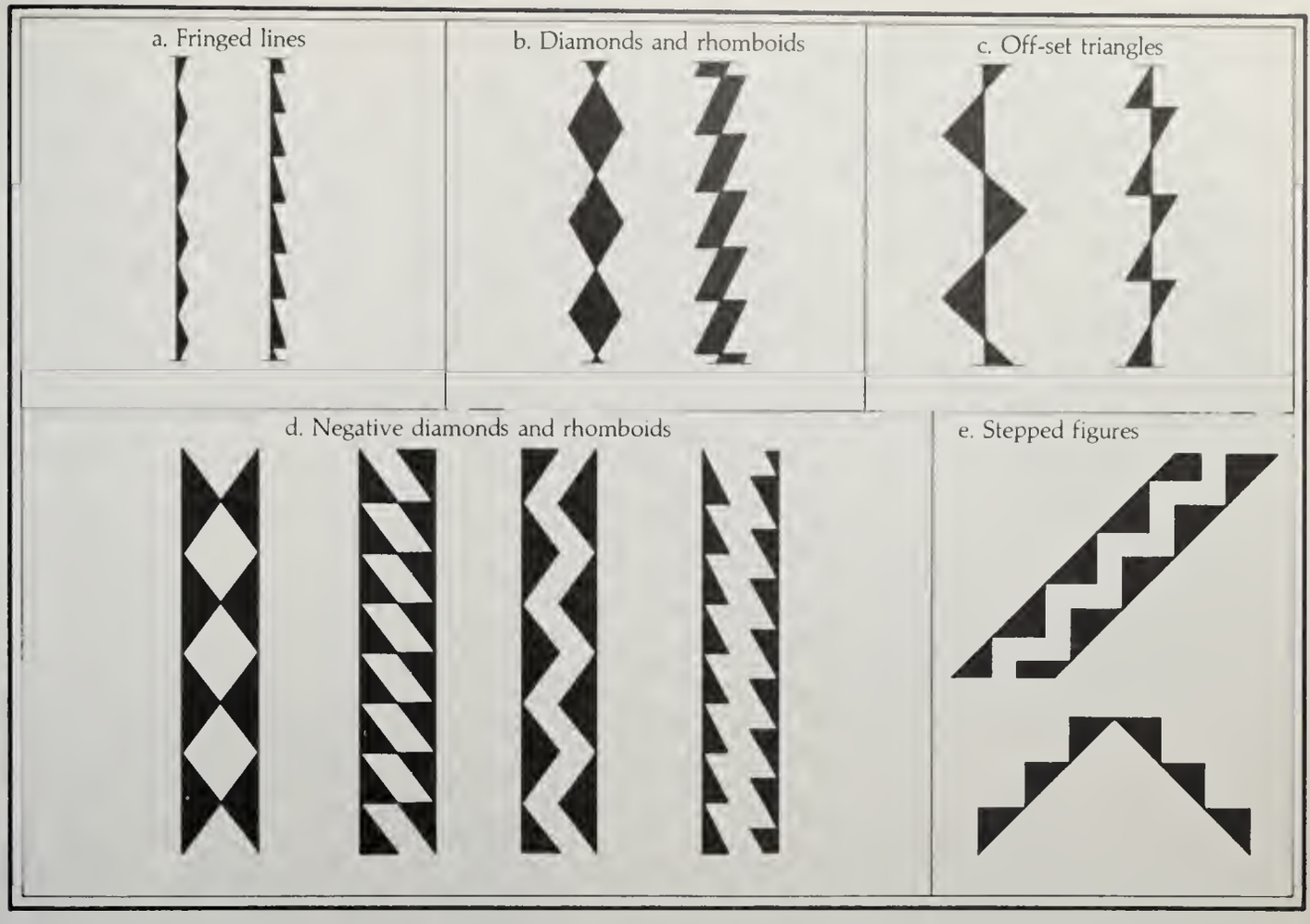


Fig. 91. Triangles as Zone-filling Elements, Line Embellishments, and Motifs on Mimbres and Mangas Painted Pottery.

to be organized with reference to the center of their vessel. They rotate around, expand from, or contract toward this center, which is often an imaginary rather than a manifest point in the picture space. The motifs thus tend to resemble stars, fans, flowers, and similar forms, but their specific image is less a matter of larger structure than of detail, especially the distribution of darks and lights. If, for instance, the basic structure is a quartered circle, the two lines that intersect to make the figure also create the image of four wedge-shaped triangles suspended point inwards from the rim border. Depending on subsidiary details, the focal motif made by those two lines could be a starlike or an hourglass figure, could rotate or be stable, could expand from the center or implode toward it (Figs. 6, 73, 92, 93). If one side of each of the wedge-shaped triangles was curved, a rotational fan would result (Fig. 94). If the two upper corners of each were curved the resulting image would be petallike, suggesting leaves, a flower, or perhaps feathers

Fig. 92. Mimbres Black-on-white bowl. H: 3½″; D: 9″ Collection, UCM; photograph, Fred Stimson.

Fig. 93. Mimbres Black-on-white bowl. H: 4⅜; D: 11″. Old Town Ruin, lower Mimbres Valley. Collection, SAR/MNM; photograph, Fred Stimson.

Fig. 94. Mimbres Black-on-white bowl. H: 10½″; D: 4¾″. Collection, Rick Dillingham; photograph, Fred Stinson.

(Fig. 95). In every case, and despite clear differences of imagery, the basic quartered design structure is identical, and identification of the image with a natural form is problematical.

Other central motif variants were made with equally simple means. Lines that converged toward a bowl center could be incomplete, dividing the bowl by implication or suggestion even when the center was left blank and the dividing lines were reduced to mere stubs. Structural motifs could be made more or less complex by changing the number of their cross divisions and thereby changing their geometric rhythms. Always, activity and ambiguity, motion and impact were determined by linear direction and line quality, by specifics of geometric distribution, and by use of light and dark patterning.

A pair of triangles joined at their tips and each with one side curved in the same direction forms an **S**-shaped figure. This was among the more popular of Mimbres motifs and in its many variations was used as an active major or minor image. As a major motif it usually extends from rim to rim, sometimes repeated to form a fanlike rotating figure (Figs. 96, 74). As a minor motif it was often used as a fat, negative filler confined within a design zone. Formed by pairs of **S**-shaped lines, the images were carried by the white spaces between them, and the motif provided a rich source of ambiguous dark-light, positive-negative variations (Fig. 97). When several were placed in a line parallel to a bowl rim and within a design zone, each interlocked with those on either side of it to form a continuous chain, and the interlocking curves were sometimes connected or extended to form spirals (Fig. 81).

Zone-filling motifs were often derived from combinations of two or more triangles and often placed on line. Depending on the kind of triangle and the direction of the line, many different images, including negative ones, could be

Fig. 95. Mimbres Black-on-white bowl. H: 3½"; D: 7½". Collection, Nicholas Woloshuk; photograph, Fred Stinson.

Fig. 96. Mimbres Black-on-white bowl. H: 4″; D: 8½″. Collection, DMNH; photograph, Fred Stimson.

Fig. 97. Late Mangas Black-on-white bowl. H: 5¼″; D: 11¼″. Pruitt site, Mimbres Valley. Collection, WNMUM; photograph, Fred Stimson.

made. A series of small triangles on a line created a fringed line; two series, one on either side of a line, became series of diamonds or rhomboids. If offset and kept small they created the effect of a zigzag line. Triangles on two lines facing each other made series of negative diamonds, rhomboids, or a stepped white line in the space left blank between them. Equilateral triangles placed on a diagonal line made a stepped figure. A pair of these in opposition left a white stepped line between them (Fig. 91). When curvilinear forms are added to the triangle-based motifs and variations in scale, color, and rhythm are taken into account, the possible combinations appear to be endless.

Variations in tonal value created the equivalents of color effects, and

these colors were massed rather than spread evenly. The effect of color massing was to develop active, contrasting, and sometimes ambiguous dark-light patterns. Half or more of a picture space was often covered by paint, but activity and contrasts of shape as well as color kept them from being somber, and where hachure was used the gray tones often dominate. Hachuring was as close as the Mimbres artists ever came to painting apparent textures. At times their fascination with the mechanics of drawing fine lines led to creation of delicate traceries that could cover an entire vessel, but more usually hachure was confined to filler areas within motifs (Figs. 98, 86).

Large motifs and those with large interior spaces were often subdivided and sometimes had reserved spaces within them in which other motifs could be placed. These spaces were usually well defined in shape and by color contrast, and their motifs were generally basic signs such as crosses or circles (Fig. 5).

The Mimbres geometric painting system often depended on the use of active, well-defined, overall motifs that can be read as either positive or negative images. Alternatively it called for subdividing space into ever-smaller units that could be visually reintegrated into a single, dominating,

Fig. 98. Mimbres Black-on-white bowl. H: 4½"; D: 10½". Collection, PAM; photograph, PAM.

overall pattern. Ambiguity, motion, and tension were built into the system and were reinforced by specific methodologies. Thus color distribution made it possible to read designs as both black patterns on white grounds and white patterns on black. Direction of movement was also ambiguous, leaving questions as to whether a particular image expands or contracts. The end results are often complex, but the means were always so simple that full effectiveness made skillful brushwork an absolute requirement. Indifferent draftsmanship voided visual success, no matter how fertile the imagination, while superb draftsmen who followed the rules could hardly go wrong.

The particular characteristics of Mimbres geometrical painting grew out of fascination for the visual potentials of ambiguity and movement that were latent in the major southwestern decorative tradition. Mimbres artists developed these potentials, and the emphatic value they placed on line control and the uses of interlocking forms and visual space are the hallmarks of their tradition.

The limitations and constraints of that tradition were a guarantee of consistency. The superficial visual conservatism that appears to be so alien to the creative process was instead an essential protective device that made pictorial invention possible. Rather than inhibiting the part-time artists, tradition provided them with a framework on which each could build with confidence to the full limit of individual creative ability.

9

Representational Paintings

Many of the representational pictures of the Mimbreños differ from their nonrepresentational ones in a number of fundamental respects other than subject matter. Some were organized as overall, complex patterns that differed from the geometric paintings mainly by inclusion of a life-form, but in most the picture field was conceived of as a background or living space for the illustrated figures. In that respect they are categorically a different kind of painting, intellectually more stimulating, pictorially more difficult, and, often, visually less dynamic.

The geometric pottery paintings are usually center oriented and always have their own self-defined spatial reality. Because they are nonrepresentational, all viewing angles are equally correct and concepts of top, bottom, or side are irrelevant. Representational paintings, whether center focused or not, are implicitly or explicitly illusionistic. They refer to subjects that do exist in real space, and they assume correct or incorrect viewing positions. Concepts of top, bottom, and side not only are relevant but often are essential for the pictures to be intelligible.

The interior surface of a free-standing, movable, hemispherical bowl is the antithesis of a stable and horizontal picture space. Added to the visual problems of geometric painting was the necessity for representational pictures to have a consistent and stable orientation even when made on a surface that had neither attribute. Most often the Mimbres painters resolved

this problem in the most expedient way possible, by ignoring it. For this reason, despite the charm that any Mimbres representational image might have, its effectiveness as a painting is often incomplete, and many paintings lack the total consistency of image that characterizes the nonrepresentational pictures. However, those representational artists who recognized the problem of orientation and developed solutions to it made pictures with a balance between content and decorative values that are among the most important ever made by Native American artists during pre-Columbian times.

PICTORIAL ORGANIZATION: SINGLE-FIGURE COMPOSITIONS

Most representational pictures have only a single figure placed in or near the center of a bowl (Table 1). Except for the painted frame there are no lines other than those needed to describe the figure, and the organizational principle is simply that of vignetting a form against a blank background within a framed picture space. The figure is usually shown in profile, full face, or from above. Its posture is static, its position implies relationship to an invisible ground line or the surface of the earth, and top-bottom orientation is often explicit (Figs. 99, 100). The portable, concave, hemispherical surface was usually treated as though it were an immobile, vertical, flat rondo to be seen from only one viewing position.

Picture frames are often no more than one or several banding lines that are well isolated from the main figure, thus emphasizing the nonintegrative character of the representational paintings (Fig. 101). Framing lines may have been painted after the illustrative picture was made (Bryan 1962). If so, frame

TABLE 1. PICTORIAL ORGANIZATION AND SUBJECT COMPLEXITY

	Vessels		Simple frame		Complex frame		Integrated composition		Center point perspective	
	no.	%	no.	%	no.	%	no.	%	no.	%
one-fig. vessels	468	64	319	68	149	32	—	—	—	—
two-fig. (nonnarrative)	113	15	43	38	70	62	36	32	—	—
three+ fig. (nonnarrative)	34	5	15	44	19	56	17	50	—	—
narrative with humans	69	9	51	74	18	26	5	7	21	30
narrative without humans	49	7	43	88	12	6	1	2	3	6
Totals	733	(100)	471	64	262	36	59	8	24	3

Fig. 99. Mimbres Black-on-white bowl. *Quail*. H: 4″; D: 11″. Eby site, lower Mimbres Valley. Collection, UCM; photograph, Fred Stimson.

Fig. 100. Mimbres Black-on-white bowl. *Antelope*. H: 4½″; D: 10½″ x 12¼″. Pruitt site, Mimbres Valley. Collection, ASM; photograph, Fred Stimson.

and picture were conceived of as visually unrelated and the representational pictures were conceptually distinct from the organically organized, totally integrated nonrepresentational ones. A more complex frame was used in about one-third of the single-figure paintings, and this resembles a design zone that might occur in any of the nonrepresentational pictures (Fig. 102). Rarely, the elaborate frame spilled over to integrate with the figure and the effect is that of a dynamic geometric picture that happens to include a life-form motif (Fig. 103). Although these attempted to resolve the visual problems presented by their peculiar painting surfaces, the solution is often so decorative that representational meaning is lost and visual success was achieved at the expense of illustrative content (Fig. 104).

A small minority of single-figure paintings deals with pictorial as well as representational problems by having the life-form manipulated to control all or most of its assigned space (Fig. 105). This was sometimes done by twisting a body or one of its appendages into a spiral or **S** shape that rotated through or about the vessel center in order to cope with the requirements of the concave hemisphere. By attempting to avoid rigid, one-view orientations, the artists who adopted this solution echoed the characteristic geometric design systems. However, most single-figure paintings control so little of their space and so lack any semblance of the integration and balanced complexity of the nonrepresentational ones as to leave little basis for comparison.

PICTORIAL ORGANIZATION: MULTIPLE-FIGURE COMPOSITIONS

In contrast to the static organizational system that characterized single-figure compositions, more than half of the paintings that have two or more figures are active and complex and have multipoint viewing positions. Most of the remaining multiple-figure pictures are at least partly integrated with their total space and are more satisfactorily adjusted to their concave ground than are most single-figure paintings (Fig. 106). There are no substantial differences in the framing systems used for single- or multiple-figure compositions, but pictures with more than one figure are more often organized into overall design patterns. These integrate life-forms with complex geometric ones, and their figurative impact is overwhelmed by their decorative force (Figs. 107, 108). Other kinds of multiple-figure paintings are

Fig. 101. Mimbres Black-on-white bowl. *Woman with Stick and Ring.* Collection, Tonia Skousen; photograph, Jerry Jacka.

Fig. 102. Mimbres Black-on-white bowl. *Rabbit.* Collection, Anthony Berlant; photograph, Frank J. Thomas.

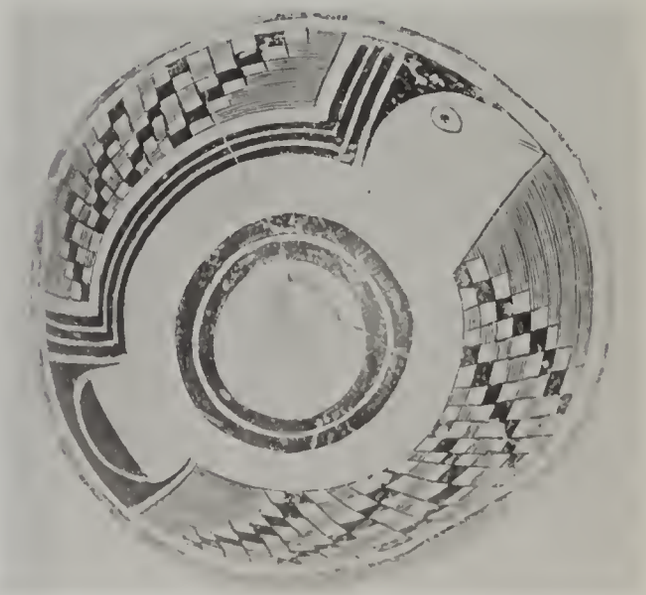


Fig. 103. Mimbres Black-on-white bowl. *Bird.* H: 4″; D: 8″. Collection, TM; photograph, Fred Stimson.

Fig. 104. Mimbres Black-on-white bowl. *Mammal with Raccoon and Mountain-Lion Attributes.* H: 3½″; D: 10″. Collection, USNM; photograph, USNM.

Fig. 105. Mimbres Black-on-white bowl. *Horned Mythic Animal with Fish or Bird, Frog, and Insect Attributes.* H: 4″; D: 9″. Old Town site, lower Mimbres Valley. Collection, Mr. and Mrs. John King; photograph, Fred Stimson.

Fig. 106. Mimbres Black-on-white bowl. *Negative Image of Four Birdlike Forms.* Collection, Anthony Berlant; photograph, Frank J. Thomas.

Fig. 107. Mimbres Black-on-white bowl. *Pair of Cat-tailed Antelopes and Fish.*
Collection, Tonia Skousen; photograph, Jerry Jacka.

Fig. 108. Mimbres Black-on-white bowl. *Pair of Mountain Sheep Heads.* H: 3½″; D: 9¼″. Mattocks site, upper Mimbres Valley. Collection, MF; photograph, Fred Stimson.

structurally similar to the geometric ones but retain their illustrative focus (Figs. 109, 110).

In the simplest type of integrated multiple-figure organization, the life-forms are analogous to the large motifs that dominate center-oriented geometrical pictures. They too are center oriented and often contort into **S** curves, scrolls, or other radial postures that cause them to circulate about an invisible point located in the middle of a bowl. They tend to be more passive than active and more decorative than illustrative and usually lack obvious narrative implications. As in similar nonfigurative structures, the picture space is divided into a series of equal-size wedges, but the division lines are usually implicit rather than specific. Other integrative characteristics of geometric paintings such as the positive-negative color distributions are also sometimes present in representational pictures (Fig. 106).

A second organizational system is similar to the usual single-figure composition, with two or more life-forms vignetted in or near the center of a bowl. They are usually drawn in profile, static, and with top-bottom viewing orientation (Figs. 111, 112). Occasionally these figures appear to be in some sort of interactive relationship to each other. For that reason and also simply

Fig. 109. Mimbres Black-on-white bowl. *Pair of Turkeys and Human Hands.* McSherry site, Gila drainage. Collection, MMA; photograph, Fred Stimson.

Fig. 110. Mimbres Black-on-white bowl. *Pair of Scorpions.* Collection, Tonia Skousen; photograph, Jerry Jacka.

Fig. 111. Mimbres Black-on-white bowl. *Pair of Turtles.* H: 3″; D; 6¼″. Collection, Roland Hermann; photograph, Fred Stimson.

Fig. 112. Mimbres Black-on-white bowl. *Pair of Crowned Fish.* H: 4″; D: 9″. Collection, Nicholas Woloshuk; photograph, Fred Stimson.

because two or several figures occupy more space than only one, these paintings appear to be structurally more complex and more tightly integrated than those with only a single figure. Their complexity is often as much a matter of subjective or psychological interaction as it is of pictorial integration.

A third compositional group includes fewer than half of the multiple-figure paintings and only one in six of all figurative ones. It is, however, by far the most important. Pictures in this group usually have some specific narrative content and the figures in them act in relation to this, to each other, to the framed picture space, and to an imaginary environment. In a sense all are vignetted since background details such as horizon lines, landscapes, or interiors are at most hinted at, never specified. Even so, a natural or artificial environment is usually understood because of the placement or the actions of the painted figures or objects. Most important, these pictures are composed with reference to illusionistic rather than geometric organizational principles.

In one example, a woman, a boy or man, and a dog are shown walking through an invisible landscape (Fig. 113). By their attitudes and actions they occupy and visually control most of the space defined by the framing line at the bowl rim. Orientation is primarily of the top-bottom sort, but the man or

Fig. 113. Mimbres Black-on-white bowl. *Woodgatherers*. H: 4¼″; D: 8½″. Cienega site, upper Mimbres Valley. Collection, MMA; photograph, Fred Stimson.

boy is tilted and his relation to a horizontal plane differs from that of the other two figures. This difference acknowledges the concavity of the painting surface and suggests a variable viewing orientation that helps to bring large unpainted areas of the hemisphere under pictorial control. Active relationships among the figures are reasonably specific and define the character and dimensions of the spaces between them. Paint application is flat and without grays, but mass, volume, and spatial depth are indicated by perspective drawing, especially as applied to the positioning of the legs, the overlapping of arms, and body posture. Depth relationships between the two humans are not at all clear and their size difference can be read as either an effect of deep horizontal distance or the portrayal of larger and smaller individuals standing close to one another.

In the absence of horizon lines, landscape details, or other clues about the spatial environment, the illusion of real space is achieved solely by the interaction of the figures. The assumption that they are in narrative relation to each other creates the mental image of the space they occupy. Inconsistencies of draftsmanship and incomplete control of the pictorial space (particu-

larly around the upper margins) are indications that the natural laws of this particular micro-universe were only partly understood by the artist, but the intent to create a self-contained, complex representational entity is clear. Other paintings that are similar in their attempts to develop self-contained environmental illusions were sometimes more successful.

Among these, a more complex grouping helps to demonstrate the correlation between subjective complexity and pictorial unity. In Figure 17 nine humans are arranged near the center and around half the perimeter of a bowl, with two others on its opposite wall facing the larger group. Posture and attitude vary from figure to figure, defining both personality and interaction, and these variations contribute to the illusion that each one occupies real space. Most figures were placed on the vessel walls and look inward, defining the parameters of the space they occupy and control. Illusory, pictorial space and real space trapped within the hemisphere of the bowl are one and the same thing. Each figure is flatly painted; perspective drawing was minimal but allusions to spatial depth are quite specific and a deliberate function of draftsmanship and figural placement.

Further use of the concave hemisphere is seen by the full development of a convention hinted at in Figure 113. Each figure is tilted along its own vertical axis, and these axes radiate from the center like so many steel needles pointing toward a magnetic pole. The central point functions as the equivalent of a horizon line drawn on a flat, rectangular surface for the purpose of establishing an environmental base. This kind of polar orientation, relatively unsuccessful when used with only two figures and a dog, is given credence by numbers, and the tilting relationships between all figures become a believable perspective device. As with any other one-point perspective system, illusion depends on consistency and failure occurs when the system is not followed. The figure in the box or basket seems to float uncertainly in space, disoriented because it is parallel to rather than tilted away from the figure nearest to it. Despite this, and even though no landscape or background details were drawn, the illusion that these figures occupy a real space is almost complete. Meanwhile, pictorial space is as fully controlled as in the most complex and geometrically formal of the nonfigurative paintings.

Most narrative pictures that use polar orientation have informal compositions. However, formal geometric structures that avoided the rigidity of geometrical painting could be adapted to the system (Plate 10). Four men are shown seated on a blanket in Figures 19 and 114. Each figure has an arrow in his hand and four others nearby. The compositional structure is a

Fig. 114. Side view of Fig. 19.

center-focused, quartered pattern, identical to those used in many rotational nonfigurative paintings. However, all painted lines except for the frame are representational and the narrative content is strong and explicit. The characteristic play of dark and light and the geometric complexity of nonfigurative painting are entirely absent, and the decorative origins of the format do not inhibit anecdotal realism.

The figures and objects are on a blank white ground with no indication of specific background; none is needed, for the relationships between each figure and object define the operational space. The square mat or blanket in the center is the ground or base around which all figures squat. Each of the humans and most of the objects are on a polar axis, tilted to about a 90-degree angle in relation to all of the others. Seen from above, the angle is extreme and there is an apparent visual contradiction between the center mat, shown in plan, and the figures painted in profile and at right angles to it. From any other perspective the contradiction is denied, for each figure is placed on the upward-curving sides of the bowl, and, in real space, is actually at (or almost at) right angles to the center (Fig. 114). The three-dimensional physical character of the picture surface reinforces a pictorial illusion that is best perceived when the surface is mobile and viewed naturally (Figs. 115, 116).

A flexible orientation system was also developed in relation to the frame rather than the center of a composition. Although pictures of this sort were generally developed along a vertical axis, their "bottom" was usually conceived of as any point along one-third or one-half of the outer circumference of a vessel. In some instances any part of the circumference served as a

Fig. 115. Mimbres Black-on-white bowl. *Rabbit Hunt with Net.* H: 4″; D; 10″. Collection, Tonia Skousen; photograph, Jerry Jacka.

Fig. 116. Mimbres Black-on-white bowl. *Mythic or Ceremonial Event.* H: 3¾″; D: 9¾″. Collection, HM; photograph, Fred Stimson.

base point (Fig. 117). In one example, a seated man wearing an elaborate headdress is in the act of decapitating another. The victim lies in front of the seated figure, his body and partially severed head curved with reference to the framing line (Plate 11). By this device, the framing line becomes a ground line along a substantial part of its length and the picture is made intelligible when viewed from any angle that includes part of the victim's body at the base. Thus, even though there is a top-bottom orientation, about one-half of the bowl can be read as the bottom and its potential mobility is controlled and incorporated as a visually active element.

A similar effect is achieved by different means in a painting of four men and a fish (Fig. 118). In this, each figure is positioned in relation to a different point on the framing line so that even though all are upright and on more or less parallel vertical axes, a large segment of the framing line becomes a ground line. As in Figure 117 and Plate 11, the mobility of the vessel is incorporated as a compositional element, and any point along one-third of its outer perimeter provides an intelligible and "correct" viewing position.

In virtually all multifigure paintings some attempt was made to cope with the visual problems presented by a picture surface that is in fact a three-dimensional, concave hemisphere. Formal solutions were sometimes borrowed from the nonfigurative painting system, and these could be modified without crippling the representational intention. Often, however, the powerful geometric logic of the nonfigurative tradition overwhelmed representational intent and life-forms were treated as though they were just another kind of decorative motif (Figs. 119, 120). At times also, multiple-figure pictures were given top-bottom orientations unsuitable to the hemispherical nature of the painting surface. Most often, then, the artists were unable to control the total pictorial space and draftsmanship was not enough to prevent these from functioning as vignettes (Fig. 121).

The most successful of the figurative paintings were narratives that accepted the constraints of the bowl shape by either using the framing line as a ground line or adapting a kind of polar, one-point-perspective system to the vessel. Combined with a rough-and-ready linear perspective, these were perhaps unique solutions to a most difficult visual problem, one that gave the Mimbres artists an opportunity to use the peculiar shape of their painting surface as a positive visual tool. By working with the hemisphere they found that it could help to establish and define the physical and spatial relationships of their painted figures (Fig. 122). The result was an inventive kind of picture making, far different from the systematic formalism of their geometric

Fig. 117. Mimbres Black-on-white bowl. *Man in Costume with Fish, Bird, and Horned Animal Attributes.* H: 5″; D: 10½″. Collection, TM; photograph, Fred Stimson.

Fig. 118. Mimbres Black-on-white bowl. *Four Men and a Large Fish.* H: 3″; D: 8½″. Collection, USNM; photograph, USNM.

Fig. 119. Mimbres Black-on-white bowl. *Three Long-legged Birds.* H: 5″; D: 12½″. Cameron Creek Village, Mimbres drainage. Collection, Mr. and Mrs. John King; photograph, Fred Stimson.

Fig. 120. Fig. 119 viewed from above.

Fig. 121. Mimbres Black-on-white bowl. *Fish and Human.* H: 4″; D: 10½″. Collection, HM; photograph, Fred Stimson.

Fig. 122. Mimbres Black-on-white bowl. *Man Whirling Bullroarer.* H: 3½″; D: 7½″. Mattocks site, upper Mimbres Valley. Collection, MF; photograph, Fred Stimson.

pictures and the static and casual structures of their figurative vignettes. It is the most expressive and inventive of all prehistoric southwestern pictorial traditions.

PICTORIAL MEANS AND SUBJECT MATTER

Although there are significant differences in pictorial organization between the figurative and nonfigurative paintings of the Mimbreños, the technical means were about the same in both kinds of painting. Emphasis was placed on draftsmanship and on line, and the interior spaces of many representational figures were treated as though they were the interiors of nonfigurative design zones. Life-forms as well as geometric motifs were usually drawn in outline with their interiors left blank, filled solidly, or divided and subdivided by linear or triangular elements. Line was the primary visual element but many figures appear to be more massive than linear because of their isolation as black silhouettes against a white or gray ground (Fig. 123) or, rarely, as white figures against a black or hachured ground (Plate 12).

Designs painted within life-forms were sometimes given illustrative meaning by association with some clearly drawn anatomical region of an animal such as its neck, tail, or belly (Fig. 124). Nonfigurative motifs therefore could be made to carry objective messages, and intellectual as well as visual

Fig. 123. Late Mangas Black-on-white bowl. *Pair of Fish.* Collection, TMM; photograph, TMM.

Fig. 124. Mimbres Polychrome bowl. *Beaver*. H: 2¾"; D: 8". Ranger Station site, upper Mimbres Valley. Collection ASM; photograph, Fred Stimson.

ambiguity became a constant feature of Mimbres painting. Fillers were also used to maintain the integrity of the picture plane; the geometrically decorated interior of an animal often admixes with its background space so that the animal motif becomes a part of as well as apart from its spatial environment. Spatial illusion was destroyed by this convention, but confusion of a life-form with its background may have been a visual and metaphorical expression of belief in the essential unity that exists between a being and its environment. Illusion was not the goal, and to the extent that a belief system will prescribe the kind of reality an artist chooses to depict, the ambiguity and visual puns used by Mimbres artists may be understood as deliberate metaphors.

The number of figures in a picture generally dictated its organizational complexity. Since certain subjects were more likely to be used in less complex paintings, the subject matter of single-figure paintings tended to differ from that of multiple-figure ones.

Nonhuman mammals or birds are the subject in about half of the

single-figure vignetted pictures. Other common subjects in these are reptiles, insects, fish, mythic creatures combining attributes of two or more animals, and humans (Table 2). Most two-figure paintings are only slightly more complex versions of single-figure vignettes with the same subject repeated on two halves of a vessel, but a substantial minority show two different animals interacting. The subject matter of the nonnarrative two-figure paintings is markedly different from that of single-figure pictures. About half of these subjects are mammals other than humans. Fish, mythic animals, insects, and birds appear with some frequency but humans and reptiles were seldom pictured.

Most multiple-figure paintings are complex narratives in which humans are the most common subject. Usually these are the center of action, both literally and figuratively. Other mammals and birds and fish appear fairly often in narrative paintings, insects and reptiles far less often, and mythic animals only rarely. The key to selection of subjects used in the more complex paintings appears to have been narrative interaction. Selection of a particular subject was probably made because of its association in some real or imaginary event with another being.

Identification of animal species is often problematical and usually depends on the rendering of some diagnostic detail such as posture, ears, horns, or tail. Only a few fish such as pike, gar, or catfish have enough such detail to permit even tentative identification. Most are shown in profile and are richly decorated with geometric motifs that sometimes conform to their anatomical parts and occasionally suggest scales or other observed details (Figs. 121 and 125).

Frogs, toads, turtles, lizards, and snakes were usually shown from above, with emphasis placed on their bilateralism and some other obvious physical characteristic. For example, lizards might have their sinuosity emphasized by a series of **S** curves, and turtle carapaces have geometric fillers that suggest their natural patterning. All but snakes appear with about the same frequency (Figs. 126–29).

Most mammals other than humans were shown in profile, sometimes with their heads turned, and usually with both eyes, ears, horns (if any), and all four legs visible. Species identification can be made for the majority. Rabbits and mountain sheep are proportionally the most common; deer, antelope, canines, and felines are less common but were used more often than other local species such as bears, raccoons, bats, and beavers (Figs. 130–35, 104, 108, 124).

TABLE 2. SUBJECT DISTRIBUTION ON 733 FIGURATIVE VESSELS

	Nonnarrative compositions									Narrative compositions						All subjects		All vessels	
	one fig.			two figs.			three figs.			with humans			no humans						
	no. figs.	no. pots	% pots	no. figs.	no. pots	% pots	no. figs.	no. pots	% pots	no. figs.	no. pots	% pots	no. figs.	no. pots	% pots	no. figs.	% in class	no. figs.	% in class
1. Nonhuman mammals																			
antelope	15	15	12	15	8	18	—	—	—	3	3	19	4	4	13	37	13	29	13
canine	12	12	10	10	5	11	—	—	—	4	4	25	—	—	—	26	9	21	10
deer	10	10	8	11	6	13	—	—	—	2	2	13	3	2	7	26	9	20	9
feline	6	6	5	1	1	2	—	—	—	1	1	6	11	10	33	19	7	18	8
rabbit	23	23	19	28	14	31	4	1	25	1	1	6	5	5	17	61	22	44	20
sheep	25	25	21	16	10	22	—	—	—	1	1	6	5	3	10	47	17	39	18
other[1]	19	19	16	2	1	2	—	—	—	3	2	13	6	3	10	30	11	25	11
unidentified	11	11	9	6	3	7	9	3	75	4	2	13	3	3	10	33	12	22	10
Totals	121	121	(100)	89	48	(106)	13	4	(100)	19	16	(101)	37	30	(100)	279	(100)	218	(99)
2. Amphibians and reptiles																			
frog/toad/tadpole	19	19	28	—	—	—	9	3	60	1	1	33	—	—	—	29	30	23	28
lizard (includes horned toad)	25	25	37	4	2	50	4	1	20	—	—	—	—	—	—	33	34	28	34
snake	1	1	1	—	—	—	—	—	—	2	2	67	2	2	100	5	5	5	6
turtle	24	24	35	2	2	50	4	1	20	—	—	—	—	—	—	30	31	27	33
Totals	69	69	(101)	6	4	(100)	17	5	(100)	3	3	(100)	2	2	(100)	97	(100)	83	(101)
3. Insects																			
ant-lion larva	9	9	15	6	3	20	—	—	—	—	—	—	—	—	—	15	13	12	14
caterpillar	8	8	13	—	—	—	—	—	—	2	2	50	3	2	33	13	11	12	14
dragonfly	5	5	8	—	—	—	—	—	—	—	—	—	—	—	—	5	4	5	6
grasshopper	8	8	13	4	2	13	4	1	50	1	1	25	1	1	17	18	16	13	15
other[2]	6	6	10	8	4	27	—	—	—	—	—	—	1	1	17	15	13	11	13
unidentified	24	24	40	12	6	40	4	1	50	7	1	25	3	2	33	50	43	34	39
Totals	60	60	(99)	30	15	(100)	8	2	(100)	10	4	(100)	8	6	(100)	116	(100)	87	(101)
4. Birds																			
parrot	5	5	5	4	2	20	—	—	—	7	6	50	2	1	3	18	6	14	8
quail	15	15	15	2	1	10	—	—	—	—	—	—	16	4	14	33	12	20	12
turkey	4	4	4	2	1	10	10	3	17	1	1	8	2	1	3	19	7	10	6
other Galliformes	6	6	6	6	3	30	8	4	22	—	—	—	4	2	7	24	9	15	9
waterbird—long leg	8	8	8	—	—	—	—	—	—	—	—	—	26	12	41	34	12	20	12
waterbird—short leg	6	6	6	—	—	—	—	—	—	—	—	—	10	4	14	16	6	10	6
other[3]	4	4	4	—	—	—	—	—	—	1	1	8	6	1	3	11	4	6	3
unidentified	53	53	53	6	3	30	42	11	61	15	4	33	9	4	14	125	45	75	44
Totals	101	101	(101)	20	10	(100)	60	18	(100)	24	12	(99)	75	29	(99)	280	(101)	170	(100)
5. Totals—all subject classes																			
nonhuman mammals	121	121	26	89	45	40	13	4	12	19	16	23	37	30	61	279	24	216	29
humans	32	32	7	4	2	2	2	1	3	152	69	(100)	—	—	—	171	15	104	14
amphibians and reptiles	69	69	15	6	4	4	17	5	15	3	3	4	2	2	4	97	8	83	11
insects	60	60	13	30	15	13	8	2	6	10	4	6	8	6	12	116	10	87	12
birds	101	101	22	20	10	9	60	18	53	24	12	17	75	29	59	280	24	170	23
fish	38	38	8	42	21	19	22	6	18	11	11	16	20	16	33	133	11	92	13
mythic creatures	47	47	10	34	17	15	4	1	3	—	—	—	—	—	—	85	7	65	9
Total number of pots involved	468	468	(101)	225	113	(102)	126	34	(110)	219	69	(166)	142	49	(169)	1,161	(99)	733	(111)

(Pot number corrected for occasional use of 2 or more subjects on one vessel.)

1. Includes armadillo (2 on 2), bat (5 on 5), bear (10 on 7), beaver (3 on 2), coati (2 on 2), raccoon (8 on 7).
2. Includes aphid (4 on 1), blister beetle (1 on 1), damselfly (2 on 1), inchworm (3 on 3), millipede (2 on 2), moth (2 on 2), scorpion (1 on 1).
3. Includes hummingbird (6 on 1), roadrunner (5 on 5).

Fig. 125. Mimbres Black-on-white bowl. *Fish and Worms.* H: 2¼″; L: 8¼″; W: 6½″. Collection, Roland Hermann; photograph, Fred Stimson.

Fig. 126. Mimbres Black-on-white bowl. *Lizard with "Horned Toad" Attributes.* H: 3½″; D: 7¼″. Site LA 1118, lower Mimbres Valley. Collection, MNM; photograph, Fred Stimson.

Fig. 127. Mimbres Black-on-white bowl. *Turtle.* H: 3½″; D: 9¾″. Collection, Dr. E. H. Robison, Sr.; photograph, Fred Stimson.

Fig. 128. Mimbres Black-on-white bowl. *Frog.* Collection, Anthony Berlant; photograph, Frank J. Thomas.

Fig. 129. Mimbres Black-on-white bowl. *Rattlesnake with Four Young.* H: 2¾"; D: 6¾". Collection, MRMM; photograph, Fred Stimson.

Fig. 130. Mimbres Black-on-white bowl. *Rabbit.* Galaz site, upper Mimbres Valley. Collection, Mrs. Jean Watson Eckard; photograph, Fred Stimson.

Fig. 131. Mimbres Black-on-white bowl. *Coupling Antelope.* H: 4¼"; D: 9¼". Collection, WNMUM; photograph, Fred Stimson.

Fig. 132. Mimbres Black-on-white bowl. *Canine.* Pruitt site, Mimbres Valley. Collection, MMA; photograph, Fred Stimson.

Fig. 133. Mimbres Black-on-white bowl. *Feline.* H: 4¼″; D: 9¾″. Mitchell site, upper Mimbres Valley. Collection, MMA; photograph, Fred Stimson.

Fig. 134. Mimbres Black-on-white bowl. *Bear.* H: 3″; D: 6″. Mitchell site, upper Mimbres Valley. Collection, MMA; photograph, Fred Stimson.

Fig. 135. Mimbres Black-on-white bowl. *Bat with Bird Head.* H: 2½"; D: 5½". Mitchell site, upper Mimbres Valley. Collection, MMA; photograph, Fred Stimson.

More than with other animal classes, there was great diversity in the degree of realism of bird pictures. Some are so conventionalized as to be little more than a series of triangles organized to suggest a bird form (Fig. 136); others are so detailed and their posture and attitude so lifelike as to evidence close observation and precise representational intentions. Most standing birds are shown in profile, but flying ones have their wings spread and are usually seen from below (Figs. 137, 138). Turkeys, quail, and cranelike waterbirds, all among the easiest to characterize visually, are the most common of the identified bird species (Fig. 139, Plate 13, Fig. 140). Parrots or macaws, crows, ravens or grackles, and swallows or swifts also appear with some regularity (Figs. 141–43). Most unidentified birds appear to be small thrushes, wrens, or other field birds (Figs. 136, 137). On all, the geometric decoration usually conforms to some sort of feather patterning and often provides representational clues. Cranes, often shown interacting with fish, and parrots or macaws, usually associated with humans, are the birds most likely to appear in narrative settings.

Winged insects, caterpillars, ant-lion larvae ("doodle bugs"), and grasshoppers are among the identified insects or insectlike animals that were represented with fair regularity. Few of these occur in narrative contexts, and, perhaps because of their decorative potential, they make up a substantial proportion of multiple-figure subjects (Figs. 144–47).

Human beings were usually shown head-on or in profile, often with their heads facing front and bodies in three-quarter profile (Figs. 148–50). Males

Fig. 136. Mimbres Black-on-white bowl. *Flying Bird.* H: 4½"; D: 9½". Cameron Creek Village, Mimbres drainage. Collection, SAR/MNM; photograph, Fred Stimson.

Fig. 137. Mimbres Black-on-white bowl. *Standing Bird.* H: 6¼"; D: 11½". Collection, TM; photograph, Fred Stimson.

Fig. 138. Mimbres Black-on-white bowl. *Flying Bird.* H: 4¾"; D: 10¼". Collection, CSF; photograph, Fred Stimson.

Fig. 139. Mimbres Black-on-white bowl. *Hunters and Turkey.* Collection, Anthony Berlant; photograph, Frank J. Thomas.

Fig. 140. Mimbres Black-on-white bowl. *Wading Bird and Fish.* H: 4″; D: 7½″. Collection, WNMUM; photograph, Fred Stimson.

Fig. 141. Mimbres Black-on-white bowl. *Masked Parrot Trainer.* H: 3¼″; D: 10¾″. Collection, Anthony Berlant; photograph, Frank J. Thomas.

Fig. 142. Mimbres Black-on-white bowl. *Underworld Scene, Man and Birds.* H: 3½″; D: 7¼″. Pruitt site, Mimbres Valley. Collection, ASM; photograph, ASM.

Fig. 143. Mimbres Black-on-white bowl. *Flying Bird.* H: 3¼"; D: 8". Pruitt site, Mimbres Valley. Collection, ASM; photograph, ASM.

Fig. 144. Mimbres Polychrome bowl. *Pair of Flying Insects.* H: 3"; D: 7½". Pruitt site, Mimbres Valley. Collection, WNMUM; photograph, Fred Stimson.

Fig. 145. Mimbres Black-on-white bowl. *Caterpillar.* H: 3½"; D: 8". Collection, DMNH; photograph, Fred Stimson.

Fig. 146. Mimbres Black-on-white bowl. *Ant-lion Larva.* H: 4½″; D: 11½″. Pruitt site, Mimbres Valley. Collection, MMA; photograph, Fred Stimson.

Fig. 147. Mimbres Black-on-white bowl. *Bird and Insect.* H: 4¼″; D: 10¾″. Collection, HMWC; photograph, Fred Stimson.

Fig. 148. Mimbres Black-on-white bowl. *Standing Figures.* H: 4¾″; D: 10¼″. Treasure Hill site, Mimbres drainage. Collection, MNA; photograph, Fred Stimson.

Fig. 149. Mimbres Black-on-white bowl. *Man with Staff and Backpack* (Merchant?). H: 4″; D: 9¼″ x 10½″. Upper Mimbres Valley. Collection, MMA; photograph, Fred Stimson.

Fig. 150. Mimbres Black-on-white bowl. *Humpbacked Man with Staff*. (Kokopelli?). H: 3″; D: 8½″. Collection, WNMUM; photograph, Fred Stimson.

were pictured far more often than females, and, except for their rare appearance as single-figure vignettes (Fig. 151), humans of either sex were usually shown in some sort of active posture. When other animals or objects are associated with humans, the scale relationships between figures is usually realistic, but on occasion another mammal, a bird, or most often a fish is shown disproportionally larger than the people in the picture.

Geometric elements painted within human forms sometimes suggest costumes and may be read as textile patterns. Other costume details, including belts, kilts, skirts, and leggings, were often specified, as were cosmetic features such as hair settings, necklaces, and other body adornment (Plate 14). Masks or facial paintings were also detailed regularly, with diamond-shaped spectaclelike eye coverings especially common.

Regardless of posture, all four human limbs as well as fingers and toes were usually indicated. Hands were sometimes cut off at the wrist but often in a context to suggest that this was a convention made to avoid drawing that most difficult part of the human anatomy (Fig. 152). Swellings of the limbs to suggest calf, thigh, or arm muscles and heel protrusions, genitalia, and facial features are other commonly rendered human anatomical details. People were usually made as solid black silhouettes and sometimes as hollow outlined

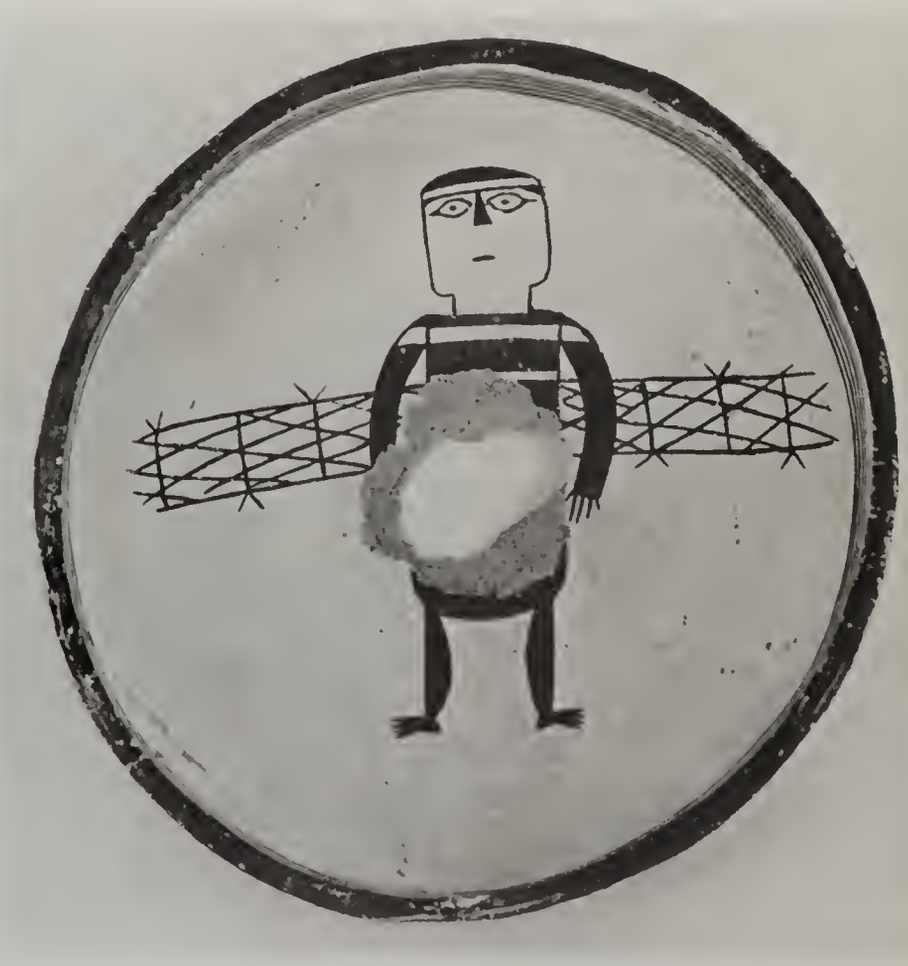


Fig. 151. Mimbres Black-on-white bowl. *Man in Front of Fence*. H: 3″; D: 6¾″. McSherry Site, Gila drainage. Collection, ASM; photograph, Fred Stimson.

figures, and the variety in degree of realism ranged from stick figures that have almost no representational details to closely observed lifelike illustrations.

Most subjects that combine characteristics of different species have fish, human, or bird features often joined to those of one other mammal (Table 3) (Figs. 153–56, Plate 7). Sometimes the intent may have been to record an

TABLE 3A. COMPOUND OR MYTHIC ANIMAL ATTRIBUTES: 85 IMAGES ON 65 VESSELS

	bat	bear	deer	feline	rabbit	sheep	human	? mammal	frog	lizard	turtle	snake	fish	grasshopper	scorpion	? insect	owl	turkey	? bird	? animal	total	% of artifacts (131)	% of images (85)
bat								1											3		4	3	5
bear							1						1								2	2	2
deer																			1		1	1	1
feline							2												1		3	2	3
rabbit													1			1					2	2	2
sheep													2			1					3	2	3
human		1		2				7				1	4			2	1		1	1	20	15	23
? mammal	1						7						6						3		17	13	20
frog												1	1							1	3	2	3
lizard													1						1		2	2	2
turtle													1								1	1	1
snake							1		1					1					1		4	3	5
fish		1			1	2	4	6	1	1	1		2	1					5	4	29	22	34
grasshopper												1	1							1	3	2	3
scorpion																1					1	1	1
? insect					1	1	2								1						5	4	6
owl							1														1	1	1
turkey																		1			1	1	1
? bird	3		1	1			1	3		1		1	5						3	1	20	15	23
? animal							1		1				4	1					1	1	9	7	11
total	4	2	1	3	2	3	20	17	3	2	1	4	29	3	1	5	1	1	20	9	131		

TABLE 3B. COMPOUND OR MYTHIC ANIMALS: GENERAL ATTRIBUTES—85 IMAGES, 65 VESSELS

	nonhuman mammal	human	amphibian/reptile	insect	fish	bird	unknown	total	% of artifacts (131)	% of images (85)
nonhuman mammal	2	10		2	10	8		32	24	38
human	10		1	2	4	2	1	20	15	23
amphibian/reptile		1	2	1	3	2	1	10	8	12
insect	2	2	1	2	1		1	9	7	11
fish	10	4	3	1	2	5	4	29	22	34
bird	8	2	2		5	4	1	22	17	26
unknown		1	1	1	4	1	1	9	7	11
total	32	20	10	9	29	22	9	131		

Fig. 152. Mimbres Black-on-white bowl. *Canine Trainers.* Collection, Roland Hermann; photograph, Fred Stimson.

Fig. 153. Mimbres Black-on-white bowl. *Mythic Creature with Fish and Human Attributes.* H: 4½″; D: 9¼″. Collection, TM; photograph, Fred Stimson.

Fig. 154. Mimbres Black-on-white bowl. *Mythic Creature with Human, Feline, and Monster Attributes.* H: 2¾″; D: 6½″. Pruitt site, Mimbres Valley. Collection, MMA; photograph, Fred Stimson.

Fig. 155. Drawing of Fig. 154.

Fig. 156. Mimbres Black-on-white bowl. *Mythic Creature with Bird, Fish, Grasshopper, and Mammal Attributes.* H: 4¼"; D: 8". Collection, DMNH; photograph, Fred Stimson.

event, such as the acting out by a person in animal costume of a representation of the animal, or of some supernatural or mythic being (Fig. 117). However, many composite subjects seem to portray the being itself (Figs. 105, 157–60, Plate 15). Bears, mountain sheep, rabbits, felines, lizards, snakes, and insects are also among identified animal parts of compound, mythic beings. The birth of such personages may also have been pictured (Fig. 161).

Except for the artifacts and costumes that are details in narrative paintings, nonanimal representations are rare. *Glycymeris* shell bracelets, prayer sticks, wands, and prayer plumes and celestial bodies are almost the only nonliving figurative subjects, sometimes shown as isolated motifs, at other times associated with an animal in a vignette (Figs. 162, 163). Vegetal and landscape forms are even less common (Figs. 164, 165). Petaled flowers were sometimes the motif in otherwise nonfigurative paintings, but these usually seem to be the by-products of geometric patterning rather than deliberate pictures of plants (Fig. 2). Squashlike vegetables and cornstalks painted as background information in narrative pictures are rare, but, except for the flowerlike geometric motifs, are the most common growing plants painted by the Mimbreños.

Fig. 157. Mimbres Black-on-white bowl. *Mythic Batlike Creature Carrying a Rabbit.* H: 5¼″; D: 10½″. Mattocks site, upper Mimbres Valley. Collection, MNM; photograph, Fred Stimson.

Fig. 158. Mimbres Black-on-white bowl. *Siamese Twinned Fish.* H: 3½″; D: 7½″. Pruitt site, Mimbres Valley. Collection, MMA; photograph, Fred Stimson.

Fig. 159. Mimbres Black-on-white bowl. *Mythic Creature with Turkey and Skunk or Turtle Attributes.* H: 3¼″; D: 8¾″. Collection, WNMUM; photograph, Fred Stimson.

Fig. 160. Mimbres Black-on-white bowl. *Horned Serpent with Fish Tail.* Collection, SWM; photograph, Fred Stimson.

Fig. 161. Mimbres Black-on-white bowl. *Birth of a Human from a Quadruped's Egg.* H: 4¾"; D: 12⅝. Eby site, lower Mimbres Valley. Collection, SAR/MNM; photograph, Fred Stimson.

Fig. 162. Mimbres Black-on-white bowl. *Four Hohokam Style Shell Bracelets.* H: 3¼"; D: 7¾". Collection, ASM; photograph, Fred Stimson.

Fig. 163. Mimbres Black-on-white bowl. *Rabbit on Crescent Moon.* H: 3½"; D: 8". Cameron Creek Village, Mimbres drainage. Collection, SWM; photograph, Fred Stimson.

Fig. 164. Mimbres Black-on-white bowl. *Quail, Insect, and Tuft of Grass.* Pruitt site, Mimbres Valley. Collection, Robert W. West, Jr.; photograph, ASM.

Fig. 165. Mimbres Black-on-white bowl. *Antelope in Landscape.* H: 4″; D: 10″. Collection, HMWC; photograph, Fred Stimson.

Considering the wealth of potential life subjects, Mimbres representational paintings are remarkably limited. Some common food animals were often pictured; others, such as the elk, seem never to have been. Indeed, most of the animal life of the region—skunks, porcupines, squirrels, gophers, and many other rodents—were rarely if ever made the subject of a painting. Many of the visually distinctive and common birds of the area, including jays, roadrunners, owls, hawks, eagles, and vultures, were also virtually ignored. Subjects were limited and carefully selected, but neither the pattern of selection nor its meaning is clear. Few hints about either are to be derived ethnographically from the oral literature of any living southwestern people. Some animals that figure in Pueblo myth are the subjects of Mimbres art, but many others are not, and even the dragonfly, so common in Anasazi art, is virtually absent from that of the Mimbreños. Sustenance, rarity, ubiquity, character, potential decorative value—none of these seems to have been a selective factor, and the factors that we can be sure of—myth, literature, history, and religion—may never be known.

ICONOGRAPHY

The original intended meanings of any Mimbres Phase painting are obscure at best. Some geometric motifs suggest clouds, lightning, stars, flowers, butterflies, or other natural forms that may be associated with rainfall, and, by extension, with fertility. Similar motifs used in recent times by Pueblo potters are sometimes named for one or another natural form, but there is little evidence that they are usually intended to convey any specific message or that they are, strictly speaking, symbols. Instead, the names seem often to be suggested by the forms themselves; some are given different names by different makers and different users, and most of the names, if not all, appear to be generic and suggestive rather than specific in meaning (Bunzel 1929).

On a different level, quartered compositions suggest the representation of the four world quarters that are so important an element of Native American cosmogony, particularly in the Southwest and Middle America (J. Charles Kelley 1966:98). Those quartered designs that have reserved or patterned centers suggest the world above and the world below, perhaps the place of emergence, perhaps sun or fertility symbolism (J. Charles Kelley 1974). However, these suggestions cannot be proven and may be incorrect.

Quartering systems are common in Mimbres Phase pottery art but were used proportionally far more often in preceding phases. Mimbres Phase potters were as likely to divide a vessel into units of two, three, or five as into units of four, and there is no hint that any one patterning system carried special meaning not shared by the others.

Whether or not Mimbres geometrical compositions and motifs were given particular meaning cannot be determined, but there is no doubt that representational paintings were made at the very least to commemorate the real or imagined existence of a being or thing. Most single-figure paintings can be read as emblems. Many are of easily identified animals, suggesting the possibility of their use as the logo for clan or personal names. Again, the conjecture is unsupported, and more often than not, pictures of several different animals are on the vessels buried with a single person (Bradfield 1931; Cosgrove 1932). Animals may have been associated with year, month, or society names or with such cosmic features as the sun, stars, or moon. The ancient Middle American identification of the rabbit with the moon may also have been applied by the Mimbreños, for many rabbit pictures have lunate forms associated with that animal (Fig. 163). Other iconographic details lend support to this assumption. In Middle America the crane may have been associated with lunar eclipses, and several Mimbres paintings show a bird eating a rabbit, which may confirm lunar meanings (Fig. 166) (David Kelley 1975:personal communication; Linda Schele 1976:personal communication). Even if so, there is still no way of knowing if a rabbit picture referred to the moon, to an individual, real or mythic, named for the moon, or even to a verbal-visual pun. If "rabbit" meant "moon," a picture of a rabbit could refer to a word that sounded like the Mimbres word for "moon" but meant something else. Or it could refer to all or none of these potential meanings.

More complex figurative paintings, simply because they are more complex, carry greater potential for interpretation than do most single-figure pictures. Those that describe group or daily activities—hunting (Plate 16), fishing (Fig. 118), gathering wood (Fig. 113), or trapping birds (Fig. 167)—seemingly inform about aspects of Mimbres life that are otherwise shadowy. But we can never know whether what we see is a picture of an observed event or an imaginary one. Considering the many fantasies drawn by Mimbres artists and their penchant for visual puns, there can be no assurance about the genre nature of any Mimbres painting. A picture that seems to depict the trapping of birds may instead—or also—be depicting a mythical event, wherein a culture hero saves the stars by trapping the crows that were

Fig. 166. Mimbres Black-on-white bowl. *Wading Bird Attacking a Rabbit.* H: 3″; D: 7¼″. Collection, HMWC; photograph, Fred Stimson.

Fig. 167. Mimbres Black-on-white bowl. *Man Trapping Birds in a Garden.* H: 3½″; D: 8¼″. Collection, HM; photograph, Fred Stimson.

eating them (Fig. 167) (David Kelley 1975:personal communication).

The genrelike pictures lend support to but hardly confirm conjectures about the communal nature of Mimbres life and details concerning the forms and decoration of other Mimbres manufactured items such as baskets, arrow quivers, shields, and costume. We can assume but not know that everyday dress was simple and minimal, and that elaboration of costume, body ornament, and hair style for ceremonial and ritual events also tended to be minimal. Details concerning motor habits are perhaps more certain. How people sat, walked, danced, carried things, used tools, bore children, trained animals, are all described by Mimbres artists, and often these pictures carry the apparent stamp of observed reality.

Numbers of paintings simulate reality but for one reason or another are fantastic or even, apparently, whimsical (Fig. 168). Siamese-twinned fish (Fig. 158) or bird-tailed or rabbit-headed insects (Figs. 156, 169) could refer to anything from proverbial folklore to private fantasy, from frivolous cartooning to awesome representations of supernatural beings. It has been suggested (but without supporting evidence) that composite figures are clan emblems (Kabotie 1949). It may be safe to assume that, when fantastic forms were repeated and perhaps made in different communities, they had social meaning beyond idiosyncracy and related to a rich and imaginative oral literature. But whether the pictures were intended to be mnemonic, emblematic, illustrative, or proverbial cannot be known.[1]

Some of the more complicated narrative paintings suggest folkloric illustration and others seem to be a type of genre picture that records some ceremonial event rather than a more mundane activity. Among the former are many depicting cranes and fish and several showing confrontations between groups of men and a gigantic fish. A number of vignettes that portray man-beast interactions or composite figures may record ceremonial rather than mythic events, with humans in animal costumes portrayed (Fig. 170). Other, more easily perceived masks were also painted and, although it is not known when masking came to be used by the Mimbreños, it was certainly a well-developed trait by the time of the Mimbres Phase—even animals used animal masks (Fig. 171). Only a few paintings of Mimbres masks or costumes suggest those of the modern Pueblos (Figs. 18, 23) and, even though most are of animal subjects, the animals most commonly used in Pueblo masquerades, such as deer, antelope, mountain sheep, and bison, seem not to have been a major part of the Mimbres masking system.

Fig. 168. Mimbres Polychrome bowl. *Human and Flying Insects.* H: 4½″; D: 10¾″. Goforth site, Gila drainage. Collection, WNMUM; photograph, Fred Stimson.

Fig. 169. Mimbres Black-on-white bowl. *Three Mythic Creatures with Insect, and Tadpole (?) Attributes. Each within a Negative, Rabbit-eared Nimbus.* H: 4½″; D: 10½″. Treasure Hill site, Mimbres drainage. Collection, MNA; photograph, Fred Stimson.

Fig. 170. Mimbres Black-on-white bowl. *Pair of Dancing Humans in Feline Costumes.* H: 5″; D: 10″. Pruitt site, Mimbres Valley. Collection, MMA; photograph, Fred Stimson.

Fig. 171. Mimbres Black-on-white bowl. *Armadillo with Deerhead Mask.* Collection, SWM; photograph, Fred Stimson.

Other masks suggest both Mexico and the Southwest. Those of horned serpents may be identified with the Mexican deity Quetzalcoatl, the Feathered Serpent, sometimes depicted also as Ehecatl, the Wind God. At least one Mimbres painting of a mask may be identified with the Mexican rain god Tlaloc (Fig. 172) (Di Peso, Rinaldo, and Fenner 1974:566, 714 n. 103). Much altered and in a variety of manifestations, these Mesoamerican deities became important to later Anasazi and historic Pueblo people. However, the difficulty in deriving original Mimbreño meanings from any of these well-established identities is manifested by examining one of the more dramatic Mimbres paintings that depicts a horned serpent mask. The decapitation scene (Plate 11) is one of two known versions that are alike in formal and iconographic detail. They were found in separate localities and differ enough in draftsmanship to make it reasonably certain that they were painted by different artists, perhaps at separate times and places.[2] For that reason it can be assumed that the theme was a traditional one with obvious social meaning to the Mimbreños. However, information based on well-documented Pueblo and Mesoamerican sources provides at least three different and equally plausible interpretations: (1) It represents a human sacrifice made in time of drought by a local priest. This is supported by analogy with reported Hopi and Zuni practices of the nineteenth century and earlier (Kabotie 1949). (2) It represents the ritual decapitation of a Mimbres prisoner by a Casas Grandes warrior. This is supported by analogy with contemporary and earlier Mesoamerican practices (Di Peso, Rinaldo, and Fenner 1974:150, 707 n. 21). (3) It illustrates the Mimbres version of a Classic Mayan myth as recorded in the *Popol Vuh*, in which one twin culture hero decapitates his brother as part of a scheme to trap and kill the Lords of the Underworld (Coe 1973:12–13). The only certain iconographic message that survives is that there were historic relationships between Mesoamerica and the Mimbres Valley.

The funerary contexts in which so many of the Mimbres representational paintings are found deserves emphasis in this context. The Hero Twins of the *Popol Vuh* conquer the Underworld Lords, the fearful masters of the worlds where dead souls must wander on their hazardous journey to a final resting place (Coe 1973:12). The houses and gardens of the Underworld Lords are guarded by different birds, by jaguars, and by bats. All of these animals or their near relatives figure prominently in Mimbres iconography, occasionally with details surprisingly close to those of Mayan iconography. Thus, the Mayan "Killer Bats" of the Underworld are depicted with crossed long bones

Fig. 172. Mimbres Black-on-white bowl. *Tlaloc-like Figure.* Swarts Ruin, middle Mimbres Valley.

on their wings (Coe 1973:14); Mimbreño bats with crosses shown on their wings are not dissimilar (Figs. 135, 157).

Other death-related beings and events that figure in Middle America and Mesoamerica and also occur on Mimbres funerary pottery include armadillo, owl, centipede, and stilt dances performed by the Twins in the Underworld (Figs. 171, 173, 174). Mortuary iconography also includes dogs, flying insects, water birds, frogs, a fish god, deer, and rabbit, and the celestial signs associated with the Twins and their father and uncle—the sun, the moon, Venus as both the morning and the evening star, and death's-heads with drilled teeth (Fig. 175). Morning and evening stars are sometimes shown as four-pointed stars in historic Pueblo ritual art and some, at least, of the four-pointed figures of Mimbres art may be representations of Venus. The catalog of similarities is impressive and suggests that the pictures on many vessels the Mimbreños sacrificed to their dead referred to a complex mythology of death.

Fig. 173. Mimbres Black-on-white bowl. *Bat-winged Armadillo.* H: 4″; D: 10½″. Pruitt site, Mimbres Valley. Collection, WNMUM; photograph, Fred Stimson.

Fig. 174. Mimbres Black-on-white bowl. *Man on Back of Owl.* H: 4″; D: 7½″. Mattocks site, upper Mimbres Valley. Collection, MNM; photograph, Fred Stimson.

Fig. 175. Mimbres Black-on-white bowl. *Death Figure.* H: 4½"; D: 8". Collection, Louis Berry; photograph, Fred Stimson.

Ideological relationships to Middle America and Mesoamerica were manifested in many ways and seem to have been intermittently active from time immemorial. They are specified and humanized by the Mimbreño paintings cited and also by others such as pictures of large treelike staffs that may relate to the "tree of life" of *volador* ritual (J. Charles Kelley 1974), birds and serpents (Fig. 176), and by representations of the *sipapu,* the place of emergence from the Underworld of the basic southwestern and Mesoamerican origin legend. Several Mimbres variations of this theme are known, and all are basically similar but different in detail from any recorded southwestern version of the legend. In one, a group of men is shown in a spiralate composition, crawling through a tunnellike structure and climbing upward (Fewkes 1923:Fig. 3). In another, an underground world is more clearly indicated in which a single man is chopping his way out of a womblike cave and into a tunnel filled with birds. At the other end of the tunnel is a gigantic bird seemingly enclosed within another cave (Fig. 142).

Similarities to the religious iconography of both the Pueblos and Mesoamerica seem to be clear, but Mimbreño use of these common themes was unique. The suggestions must be made first that some aspects of the ideology pictured were basic and ancient, and second that the Mimbreños were exposed to Mexican ritual ideas and characteristically adapted them to their own style. For whatever reason, this style was submerged in later times just as the Mimbreños themselves lost every vestige of a particular identity after the thirteenth or fourteenth century. Some of the southern-inspired iconographic themes appear as early as the tenth century on Mangas

Fig. 176. Mimbres Black-on-white bowl. *Roadrunner and Rattlesnake.* Collection, SWM; photograph, Fred Stimson.

Black-on-white pottery (Fig. 33), but most made their initial appearance no earlier than the eleventh century. This was during the time that Casas Grandes was growing in importance as a trade center and as the northern outpost of a kind of Mesoamerican cultural imperialism (Di Peso, Rinaldo, and Fenner 1974). At about that time, also, similar influences were being absorbed at Chaco Canyon (Jennings 1956; J. Charles Kelley 1960, 1966) and there may have been an influx of people from the south into the Hohokam region as well (Doyel 1974; Schroeder 1960). The peculiar iconography of the Mimbreños suggests that their adaptation of foreign concepts was independent of both the Anasazi and the Hohokam.

That they did adapt what appears to have been a demanding religious complex fortifies the belief that their world was troubled. Many of the iconographic evidences of this new religious complex can refer to fertility as well as death, a theme suggested also by phallic subject matter that seems to occur late in Mimbres art (Fig. 150). The duality is in keeping with the contrast of oppositions that is so characteristic of Mimbreño art. Pragmatism, novelty, fertility, demanding ritual—all combine to suggest that the focus of the Mimbres problems was economic and related to food production, and that the new rituals and the new art were different but related means for coping with the new problems.

10

Ethnoaesthetic and Other Aesthetic Considerations

THE ORIGINAL UTILITY OF MIMBRES PAINTED POTTERY

The utility of the vessels on which Mimbres paintings were made is obvious. They were containers for food, water, ritual objects, and a great variety of other things, and many were ultimately used as mortuary offerings. The utility of the paintings is not so easily assumed or demonstrated. They have little or no relation to vessel use, and they underline the proposition that the function of a utilitarian object should never be confused with the decorations on it. A picture is not a pot; they mean different things, are used for different purposes, and function in different ways and for different ends.

To judge from their scarred interiors, many Mimbres bowls were used for food service and food preparation. These are likely to have any kind or quality of nonfigurative painting applied to them, but others with figurative pictures are scarred in the same way and were presumably used for the same purposes. Most life-form paintings are on bowls that were killed and used as mortuary offerings. Other kinds of painted and unpainted pottery were also buried with the dead. Except that a number of representational ones show no evidence of other use, the only reason to believe that any were made solely to accompany the dead is the supposition that their subject matter referred to death itself.

Few Mimbres vessels and almost none that have figurative paintings were traded outside the Mogollon region. All kinds of Mimbres painted vessels were used in some numbers by other Mogollon people, some of whom made no painted pottery of their own. This suggests that painting may have had a limited economic use that was independent of the utilitarian value of the pottery. The proposition is uncertain, for trade may have been for the contents of a vessel, for the vessel, for the paintings on it, or for all or none of these reasons.

All that can safely be postulated is that nonrepresentational pictures were more likely to be associated with practical and daily activities and representational ones with sacred and death-related uses. What emerges from these uncertainties is the conviction that either the utility of Mimbres paintings was unrelated to the uses of the pottery or that certain knowledge of these relationships has been irretrievably lost. In either case, the symbolic value of the art is likely to defy any utilitarian interpretation—which is not to deny that such interpretations may have been made by the painters or their contemporary audiences. Nor does lack of correlation with pottery use mean that no other supportable hypotheses can be made concerning the uses and functions of Mimbres pottery painting.

Above all else the paintings are imaginative creations made to serve imaginative functions. They are decorative visual stimulants that please and titillate. The complex imagery of the nonrepresentational paintings are intellectual puzzles, metaphoric visual games designed to exercise the imagination. The figurative pictures are stimulants of a different order—metaphors, but also symbols, signs, illustrations that suggest moral, ethical, or didactic ends, emblems, social commentaries, and mnemonic devices. Whatever their specific purposes, they had far more meaning to people familiar with their references than they can possibly have to any later observers (Fig. 177). They retain the power to stimulate the imagination, but for personal rather than social ends, evoking speculation that easily degenerates into romanticism or inanity;[1] or for social purposes that may have no bearing on their original intentions.[2]

If the Mimbres used their paintings for sensual and emotive purposes, then their art functioned as art to its makers and their audiences. The pots served physical functions; the paintings on them served psychic and social ones. Among these last functions, two should be looked at with some care. First was the use of paintings as self-conscious symbols of the Mimbres community, and second was their use as imaginative attempts to "classify out

Fig. 177. Mimbres Black-on-white bowl. *Animal*. H: 1¾"; D: 5". Collection, HMWC; photograph, Fred Stimson.

the universe" or invent a form of what Lévi-Strauss (1963) has called "objective coding."

MIMBRES PAINTING AS COMMUNITY IDENTIFICATION

The southwestern pueblos must serve to illustrate the first of these functions, the use of paintings as self-conscious community symbols. Among the more conservative pueblos, painted pottery is the one art that expresses individuality and strength. In some of the upper Rio Grande towns and at Acoma, Zuni, Zia, and Hopi, wherever there are strong decorative traditions deeply rooted in the past, these are consciously considered as a sign of the integrity, vitality, and quality of the group (Bunzel 1929; Maxwell Museum 1974). In most of these places interpersonal rivalries and competition between potters tend to create community tensions, but they also serve to maintain standards of craftsmanship and to stimulate decorative invention. Competition between communities acts as an integrative bonding within each while promoting the spread of regional craft and decorative ideals.[3] Assurance of technical and decorative equality or superiority, even when personified in the work of an individual craftsperson, becomes important to the self-image of each community.[4] As much as any other factor this may account for the viability of the craft and the revivalism that periodically occurs in those pueblos where pottery-making traditions have died.

The Mimbres community was much larger than that of any modern pueblo, including as it did several hundred towns. While most pueblos today have satellite villages, the analogy to the past is most visible at Hopi, which has more than a dozen distinct towns spread across the reservation. The regional design tradition there includes several local variations, of which some are limited to the work of one potter or one family. Comparative judgments are made at several different levels that determine the importance of the paintings as community self-images. At the lowest level these are between the work of two potters or two families of the same village; at the next, between paintings produced by different communities that share a closely related decorative tradition; and at the next, between these and all the rest of the pueblos. The final comparison is between the pottery art of all of the pueblos and that of the rest of the world.

Differences in design between any two contemporary pueblos are much more apparent than those that existed between any two Mimbres towns, but that does not affect the analogy. Intensification of these differences is a relatively recent phenomenon partly resulting from the enormous population losses of the last four centuries. Reduction of the number of villages meant that design traditions that had once been widespread and shared by tens or hundreds of towns became focused on the few that survived. To a greater or lesser degree, each of the modern pueblos is a shrunken vestige of a much larger group of communities that was in every way comparable to that of the Mimbres.

Other factors have further intensified differences during the last three or four generations. The Pueblo Indians are surrounded and dominated by alien people and have become a relatively powerless minority in their own land. Their internal need to assert identity in opposition to immigration of new populations is obvious. Less obvious, perhaps, is that economic domination of the painted pottery market by alien consumers has meant that the Pueblo people must now accept some new aesthetic values. The new consumers insist on being able to identify individual artists and individual communities, and this insistence further reinforces tendencies toward visual distinction. Because of these internal and external pressures, pottery art now proclaims identification and the self-worth of a particular community or of an individual member of it.

It may be that this particular function of pottery painting was less important to Mimbres people than to those of the modern pueblos. The pressures were different, possibly not as intense; precise historical parallels

are impossible to draw and would be suspect in any case. The fact remains that we identify the Mimbres by their pottery art and almost certainly this was one of the means that they used to identify themselves. That there was some need to assert self-identity is evident, given that their communities did not survive.

Painting as a means of proclaiming the Mimbres regional identity is more easily demonstrated than the use of the art for a similar purpose by towns and individuals within the region. There is at present no clear evidence of any village traditions or "schools" that produced works recognizably different from those of the regional type. In part this is because so much material is without provenience, but in part also it is because we may not know what to look for. Patterning systems and design values were similar throughout the region, and certain motifs that have the appearance of being individualistic seem also to have been used anywhere. It should be remembered that the specifics that defined individuality within the Zuni pottery-painting system were invisible to outside observers because it was not motifs but their patterned distribution that expressed idiosyncracy (Bunzel 1929).

Attempts to define the visual differences between various kinds of decorated pottery made at the Tewa pueblos within the last century further illustrate the problem (Harlow 1967, 1973; Frank and Harlow 1974). Even when provenience is known and the paintings are only a few generations removed from the historical present, it is hardly possible to define those visual characteristics that proclaim either individual or town identity. We are left, then, with the belief, but no evidence, that the Mimbres tradition could not have intensified to the degree that it did in the absence of some comparative system for making highly critical social judgments about the quality of painted pottery. If comparative judgments were also made at the local and personal levels, then they must inevitably have led to creation of locally recognized painting modes that served to identify particular places and, perhaps, people.

MIMBRES ART AS METAPHOR

There are several dimensions to the postulated second social function—to "classify out the universe"—of Mimbres Phase painting. This art, like any other, was a metaphorical ordering or classifying of phenomena, a kind of taxonomy used to create order in a disorderly universe. Thus our own

classification of it into two genera, the representational and the nonrepresentational, recognizes a distinction that was in fact made by the Mimbres. In their system certain kinds of natural and imagined natural phenomena, especially animals, are pictured as existing in one kind of visual space, while other, invented and nonfigurative forms are made to fit in another.

Every successful Mimbres nonfigurative picture is in stasis as a harmonic balance of tensions: dark-light, positive-negative, curve-straight, in-out, push-pull, physical space–illusory space. In every case the painter began with neuter, deliberately created binary oppositions of which any pair had the potential for fragmenting the composition, and then brought all of these forces into balance until the picture was made self-contained. The balance was always a matter of linking each pair of oppositions to each other and of treating all pairs in parallel ways. Thus color, linear direction, visual direction, and visual space were all dealt with as pictorial co-equals, and specific motifs are no more than the by-product of the painting process. Geometric motifs may very well have been recognized and even named, but they probably had no meaning out of context and their context was structural. The motifs exist only in relation to each other and as elements of a pictorial universe, and everything, including the technology that produced the picture surface and its tense draftsmanship, contributed to the image of that universe whose substance was made up of pairs of opposing forces. If these were not in balance the universe could not be held together; aesthetically and intellectually the picture was a failure.

The harmony of a nonfigurative painting depended ultimately on the indivisibility of its physical surface, the real picture space and the illusory visual space created when marks were made on the physical surface. Symbolism intrudes on the metaphor of a harmonic universe of oppositions when the painted images are of life-forms. Living things in a real world occupy real space. Their images in the imaginary world of a painting occupy an ill-defined image of real space. The cohesive unity of the totally imaginary nonfigurative universe can never be achieved. The space occupied by a painted animal is arbitrary, defined by a framing line that can be positioned in one spot as well as another, and because the illusory space is ill defined it is perceived as different from the physical surface. Pictures of life-forms organized as though they were nonfigurative achieve a harmony of physical and illusory space only so long as the life-forms are hidden in the pictorial mass. The instant they are perceived a spatial illusion occurs that separates them from the picture surface. They can return to the harmonic universe of

nonfigurative painting only when perceived again as nonfigurative masses (Fig. 106).

The vignetted pictures are emblems clearly divorced from the harmonic ideals of Mimbres nonfigurative painting. In the representational paintings, full reintegration of physical and visual space could be achieved only at the expense of figurative clarity. The continued invention of distinctive visual spaces in which representations would appear comfortable emphasizes the value the Mimbreños gave to the images of living things and to the idea of re-creating or reordering perceived reality. Their two kinds of painting were conceptually distinct and mutually exclusive. In one, the intent was to create an imaginary harmonic universe that was kept in stasis by the equivalence of all of its parts. In the other it was to create a universe to be dominated by and exist for certain images. The objective of figurative painting was again to develop a harmony, but of a different order, for the physical and visual spaces were conceived of as distinctive opposites rather than an indivisible unity.

In their nonfigurative paintings the Mimbres artists built models of a spatial system occupied by forces that are in tense opposition to each other. In their complex figurative paintings they built models of real space that was occupied by images of real things. In both the structuring of a harmonic balance was an ideal, but two separate kinds of reality were involved and each required different systematic solutions based on differing sets of assumptions.

Rather than being the by-products of a painting process, the images and motifs of the representational paintings are their subject matter and reason for being. They introduce other sets of relationships that are ideogrammatic rather than visual, that exist between the images of the things, the things themselves, and any meanings that may be given to either.

Ideogrammatic meanings are indivisible from formal presentations, but they are changeable and absolutely dependent on social time and place. The energy spent by Mimbres painters in inventing plausible operative spaces for their figures is a measure of their concern for perceptual reality, a concern they shared with other artists in other times and places, and its message is unequivocal. The ideogrammatic language is, however, a far more specific kind of communication than the visual one, and it is always defined by cultural and social contexts. As every satirist knows, an ideogram must be put into formal harmony with certain socially defined expectations if its meaning is to be clear. Since these expectations are always transitory and arbitrary they are irrelevant to pictorial functions, however necessary they may be to

communicative ones. After their meanings have been lost these communicative formalities may be harmless but they always carry a disharmonic potential. Mussolini as a green-faced jack-in-the-box was a powerful and ideogrammatically harmonic image of the 1930s. It has since become increasingly disharmonious, its message becoming first quaint and then bizarre because of its formal peculiarities.

If the representation survives the group that produced it, it often does so devoid of original specific meanings, but it may be given new ones by new audiences. A painting of Saint Sebastian tied to a stake and punctured with arrows may have been intended to inspire veneration for the man and condemnation of his tormentors. The image is graphic and evocative, but had he not survived, or had the torment been less picturesque, he might well have been ignored by the image makers. However, the picture can be made meaningful in any number of imaginative ways that need have no relationship to the original intentions. Identification of the figure as a Christian saint, for example, may limit the range of interpretation, but it is still not definitive. The picture can still reasonably be read as a warning to demonstrate the foolhardy nature of sanctity and its dire consequences.

In the absence of any documentation except the images themselves, archaeological iconography can do little toward discovering any original and specific meanings other than to call a thing by its name. To identify a horned serpent in a Mimbres painting as Quetzalcoatl of Mexico or the Awanyu of the Pueblos approaches the limits of such interpretative possibilities. Further refinement may be made by familiarity with documents referring to precontact practices in Mexico and Middle America and by knowledge of contemporary Pueblo religion. Though other important historical purposes may be served by these refinements, and reasonable original meanings of the motif may be postulated, they can never be proven. Paleolithic wall paintings or ancient Eskimo figurines may be identified as "fertility," "magic," or "sacred" images, but there is no way of knowing why they were made, how they were used, or what they were originally supposed to mean, and the characterizations may in the end be meaningless. Iconographic studies in these circumstances are useful to the reconstruction of history and of ethnography but can hardly re-create a lost ideology.

Even when they cannot be specified, however, social ideogrammatic meanings can be generalized if only on the basis of the formal structural characteristics of the art under study. The same is true of more private and emotive expressions that are also indecipherable out of context because their

conventions are defined by social matrix. The smile on the Mona Lisa may express a broken heart, imbecility, or indigestion. Having outlived her time, her expression is only a puzzle to which documentation may offer an intellectual solution that is the very antithesis of emotive communication. In terms of direct expressive values, the absence of documentation is no great loss, for only imaginative interpretations can hope to approach original expressive intentions. Yet such interpretations can have no bearing on the reconstruction of original meanings; they are instead the evidence of re-creation of the work of art by a new audience.

The assumption that modern interpretations of Mimbres expressive conventions correspond to the original ones has led to stereotyping. For example, interactions between cranes and fish in some Mimbres pictures have suggested conversations to some observers (Snodgrass 1973, 1975; Fewkes 1914, 1923, 1924; Watson 1932). It is not at all clear that the animals shown in these paintings are in verbal communication, although some sort of by-play is obvious, but the idea has taken hold and given rise to anthromorphic interpretations that belong to the world of Uncle Remus, Walt Disney, and Bugs Bunny. Mimbres animals are "beasties," harmless, cuddly, cute, and comical, while the narrative animal pictures are assumed to illustrate the homely, folksy wisdom of the Mimbres people. By extension, all of these characteristics apply to many if not all Mimbres figurative paintings, and the expressive intentions of the artists, no matter what they might have been, are made to fit the expectations of an alien world.

In other social contexts, talking animals can carry other social meanings, and the range of possibilities is as great as the range of human intellectual expression. Acceptance of one set of meanings as being timelessly correct forecloses all others. The intellectual and expressive content of the Mimbres pictures is thought to be understood, and the painters and their original audiences are stereotyped into categories that were made by, and in the long run for, their interpreters. The rather obvious expressive complexity of the pictures and their structural harmony make any frivolous reconstruction of original social meanings absurd. An audience that cannot read a language but insists on translating it only illustrates the potential for disharmony that is latent in any ideogrammatic art.

Paintings are imaginative artifacts that have the intrinsic capability of being reused for purposes that could not have been imagined by their makers. Resurrection in a new context may be an obscenity or a sacrilege, but misuse can be prevented only by the timely destruction of a picture when its original

meanings become obscure. To the pragmatists able to discover new values in old artifacts, considerations of obsolescence are meaningless, but the new values can have social authenticity only if their novelty is acknowledged. To do otherwise simply makes over the past in the image of a present whose values must be judged by the future as ethnocentric. There is no escaping the limitations, for the symbolic and expressive meanings of the imaginative product must change as it interacts with new times, places, and people.

NEW USES FOR OLD ART

In the context of southwestern archaeology at the turn of the century, the rediscovery of Mimbres paintings was startling. The nonfigurative metaphors could be understood on an intuitive level; they were unique but still fitted the model based on experience of what prehistoric southwestern painted pottery should be. But nothing discovered earlier, not even the figurative paintings of the Sikyatki tradition, could have prepared any observer for the realism of Mimbres figurative paintings. The novelty was not so much in their imagery as in their concern for perceptual reality (Fig. 178). A parallel to the illusionism of familiar European picture making was apparent and the "naturalism" or "realism" of Mimbres figurative painting, at once familiar and alien, called for a kind of understanding that went beyond intuition but was impossible to achieve. In their new context these paintings were considered more as the key to a code than as imaginative artifacts that existed independent of their own past.

Resurrected by people mostly interested in their historical and ethnographic values, and then confined to institutions committed to investigation of these problems, Mimbres paintings naturally enough had little impact as, or on, any twentieth-century art. Most analyses have concentrated on their iconographic specifics and documentary potentials and have been more or less frustrated by inability to crack the code. Because the art cannot reveal any timeless messages, investigations are shelved and the pictures are set aside as curiosities to be looked at later.

Almost their only modern use has been as models for some Pueblo potters and easel painters. The concern of these painters most often has also been with ideogrammatic rather than structural or metaphoric potentials, but for different reasons. Whether Mimbres painters were directly, indirectly, or

Fig. 178. Mimbres Black-on-white bowl. *Swimming Men and Fish.* H: 4½"; D: 9½". Collection, CSF; photograph, Fred Stimson.

not at all ancestral to any of the modern Pueblo people, they were indisputably ancient and southwestern. All Mimbres motifs have current symbolic value for all of the Pueblos as a sign of legitimacy and antiquity. They are selected not for any specific ancient meanings but, practically, because they fit particular formal and decorative requirements, and metaphorically because rightly or wrongly they are identified with antique independence.

Julian Martinez of San Ildefonso may have been the first of the modern pottery painters to adapt Mimbres motifs to his own art. During the second and third decades of the twentieth century he and his wife, Maria, were the moving force behind the revival of pottery making at San Ildefonso and ultimately at a number of other Rio Grande pueblos. He used motifs from several ancient southwestern sources, including pottery recovered from nearby ruins, museum specimens, and photographs made available to him by friends and employers at the Museum of New Mexico in Santa Fe. One Mimbres motif in particular was translated to the new pottery with a great

deal of success. This was a radiating pattern suggesting a feather fan that was applied to the interior of flat plates or the exterior of bowls or ollas (Figs. 75, 179). After his death in 1943 other members of his family continued to use the motif, but even before then it had become part of the design inventory of other Rio Grande decorators. To that degree at least the Mimbres decorative system has entered the twentieth century as an active stimulant after seven hundred years of dormancy.

As executed by Julian Martinez and his followers, the feather-fan motif is at least as precise as on the original paintings, but each petal or feather-shaped unit is smaller, more delicate, and, on flat surfaces, more attenuated. The motif was not normally used on exterior surfaces by Mimbres painters and when placed on these at San Ildefonso it has a sedate rhythm, while on the flat plates it is even more swiftly comprehended than on Mimbres bowls. The greatest difference between past and present effect is a function of color and texture, for on San Ildefonso vessels black-on-black or red-on-red are used rather than the strongly contrasting black-on-white of the Mimbres originals.

San Ildefonso slips are burnished to the highest possible gloss, and the thick paint applied over them has a dull matte texture. Slip and paint are identical in color and only the textural contrast reveals the painted designs. The subtle and elegant results are entirely different in character from the strong and deliberate oppositions of the Mimbres black-on-white paintings. The harmonies are of a different order, with the art of Maria and Julian Martinez depending on the balance and perfection of fewer visual forces. A highly burnished black surface that is properly fired has a mirrorlike luminosity against which the dull paint can operate. An unending variety of images is produced by the effects of light on these surfaces, but if reflectivity is reduced, visual interest goes with it. This delicate balance depends also on draftsmanship, for any uncontrolled or distorted line is magnified by the elongation and refinement of motif parts.

The slip of San Ildefonso painted pottery is as much a part of the physical surface of a vessel as Oriental glazes are indivisible from their surfaces. However, the paintings placed on this slip are as distinct from their ground as are the most ideographic of Mimbres images. In contrast to Mimbres nonfigurative motifs, those of the San Ildefonso painters are the subject matter rather than the by-product of a design system.

Pueblo potters who paint their own vessels generally conceptualize the applied design as they form the pots, and the separation of physical surface from visual space that occurred at San Ildefonso may stem in part from the

Fig. 179. Olla, San Ildefonso Pueblo, 1963. Artists: Maria Martinez and Popovi Da. Collection, private; photograph, Fred Stimson.

separation of the pottery-painting function from the pottery-making one (Bunzel 1929).

Emblematic use of figurative and nonfigurative motifs had earlier precedents among the Pueblos, but there is little evidence other than the emblems themselves that pottery fabrication and painting were done by different people at those times. In particular, motifs of a religious nature were visually isolated during the period following the thirteenth-century migrations and again after the Spanish occupation. Stress on proclamatory motifs and division of physical surface and visual spaces seem to correlate with historical situations that threatened community identity or survival. Division of labor, rather than causing a change in the design system, may instead have offered a convenient way of effecting it.

Antique motifs including those borrowed from the Mimbres are used in other contemporary Pueblo arts, especially easel painting. Tony Da, a grandson of Julian Martinez and a creative potter as well as a painter, is one of several artists to use Mimbres emblems in easel paintings. The textured

background spaces of his paintings interact with the motifs to maintain a two-dimensional picture plane, but the integration of paint and physical surface depends almost entirely on tactile qualities and bears no relation to Mimbres visual problems or Mimbres pictorial conventions (Fig. 180). In easel paintings as well as pottery paintings, the Mimbres influence at San Ildefonso and other Rio Grande pueblos is emblematic only, and no other aspect of the ancient decorative tradition has been adopted.

The experience at Acoma Pueblo has been entirely different. Because of its isolation, Acoma was able to maintain something very like preindustrial conditions until almost the middle of the twentieth century. Its pottery tradition remained strong even though no great efforts were made, as they had been at San Ildefonso and Hopi, to develop an alien market for it. Significant quantities of tourist pottery were manufactured after 1900, but decorative continuity with the past was supported by continued home use of pottery products. By the time alien consumers had come to form a large enough segment of the Acoma pottery market to exert a critical influence, the Acoma aesthetic was quite distinctive simply because that pueblo had not altered its decorative traditions very much.

Nonetheless, after about 1950 a greater degree of intellectualization and self-awareness on the part of Acoma pottery painters led to an antiquarian revival of black-on-white traditions. Though some use was made of museum specimens and photographs, this revival was primarily modeled after Chacoan, Tularosa, Reserve, and Socorro wares found at sites located in and near the Acoma reservation. The black-on-white revival was enthusiastically received by both the alien audience and the people of the pueblo, and shortly after it began, several potters introduced a Mimbres component based mostly on published illustrations. Mimbres figurative motifs were painted as emblems on bowls, dishes, and globular vessels. These are usually animal figures, neatly and precisely drawn, sometimes modified to fit a particular pottery form, but generally very like their Mimbres prototypes (Fig. 181). As at San Ildefonso they are emblems, modern translations of motifs rather than of a design system, but a more fundamental response to the stimulation of these ancient patterns was also made, especially in nonfigurative pictures. In these, the structural patterns rather than the motifs inspired the modern painters, and all of the tensions and harmonies of Mimbres nonrepresentational art were adapted to the contemporary wares.

The most typical modern Acoma shape is globular rather than hemispherical, and other ancient traditions, especially those of the Reserve and

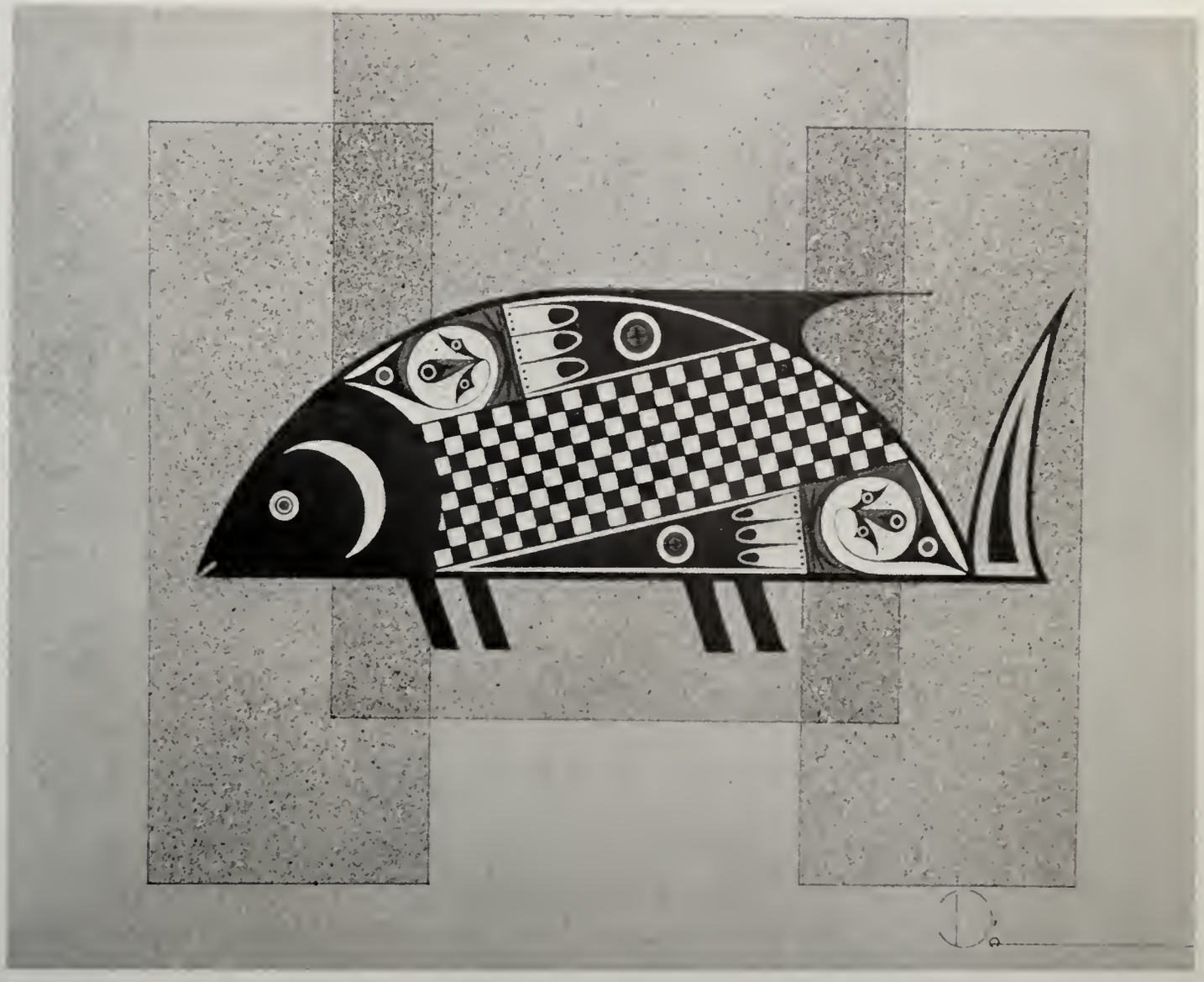


Fig. 180. *Mimbres*, watercolor on paper, 1970. 12″ x 16¼″. Artist: Tony Da, San Ildefonso Pueblo. Collection, HM; photograph, HM.

Tularosa systems, are better suited to these forms. Nonetheless, some Mimbres bowl designs were freely translated to jars or other exterior shapes with about the same or even greater visual success than had been achieved by Mimbres painters who attempted to apply hemispherical designs to globular forms (Fig. 182). As replication of all of these antique paintings became less mechanical, a modern Acoma black-on-white tradition has emerged, and its Mimbres elements are not easily isolated. The most significant aspect of this revival is the adoption by the Acoma potters of ancient structural principles, and in this respect their use of the past is unique among the modern Pueblos.

Fig. 181. Dish, Acoma Pueblo, 1973. H: 1½"; D: 5½". Artist: Marie Z. Chino. Collection, MMA; photograph, Fred Stimson.

Fig. 182. Seed Jar. Acoma Pueblo, 1967. H: 5¾"; D: 8½". Artist: Anita Lowden. Collection, MMA; photograph, Fred Stimson.

In its resurrected state, then, Mimbres painting has been used mostly as an emblem, valued for what it represents rather than for what it is. In that respect its reentry has not been too dissimilar from that of other exotic arts that have become a part of the visual inventory of the industrial world during the last century. If some of these have been made more visible because of their use as models for the production of contemporary art, the emblematic nature of that use cannot be disguised. Neither the structural values nor the metaphoric organizations of Oceanic, African, or Middle American art were projected by those moderns who used these arts idiosyncratically. Instead, the native arts merely provided primitivising ideograms, and even more obviously than with Mimbres paintings they were reused as stereotypes, formed to fit their new users rather than to revive the ideals of the original makers (Goldwater 1967).

It is the stereotyping that destroys the humanity of an art object and converts it into a natural one. Concentration on supposed ideogrammatic meanings diverts attention from the structural ones intended to "classify out the universe," and the art object becomes a found object, made by as well as belonging to the finder. As the structural metaphors and the original makers both become more familiar, the modern-made myths dissolve and the resurrected art can become rehumanized. Full realization that the art artifact was made by human hands comes with the knowledge that it served its makers as art. Only when there is certainty that Mimbres paintings were made to function as imaginative products, that they are metaphorical even if they were ideogrammatic, will they begin to serve the same function to new audiences. But never, until due respect is given to the humanity of the makers, can the imaginative artifacts serve their original purpose in unimagined new ways to unimaginable new audiences.

Appendix

Collection Data

Fig.	Collection	Cat. no.	Collection history
1	USNM		1902 donation by Mrs. W. O. Owen, amateur excavation before 1900.
2	USNM	286342	1913–14 purchase from E. D. Osborn.
3	HP	94916	1924–27 Peabody Museum excavation, Cosgroves directed.
4	SAR/MNM	20420/11	1923–27 SAR/MNM excavation, Bradfield directed.
5	SWM	491-G-2438	1927 SWM excavation, Burton Cosgrove, Bruce Bryan directed.
6	UCM	9369	1956 museum purchase, excavated 1926 by Earl Morris.
14	HP	94632	1924–27 Peabody Museum excavation, Cosgroves directed.
15	PAM	72-9	1972 donation, purchased by donor from dealer ca. 1969, no prior history.
16	Private	n/a	In present owner's family since excavated by family member ca. 1950.
17	PAM	70.106	1970 donation, purchased by donor from dealer ca. 1969, no prior history.
18	TM	4589	1936 purchase from amateur excavator Richard Eisele, excavated 1921.
19	SAR/UNM	43438/11	1923–27 SAR/MNM excavation, Bradfield directed.
20	Private	n/a	Ca. 1970 purchase, no prior history.

Fig.	Collection	Cat. no.	Collection history
22	Private	n/a	Ca. 1970 purchase, no prior history.
23	MRMM		Museum purchase from dealer, no prior history.
24	ASM	A36437	Ca. 1920 University of Arizona excavation.
25	MNM	8393/11	1934 museum purchase from amateur excavator.
27	Private	n/a	Excavated by owners, amateur archaeologists.
28	SAR/MNM	L-19938/11	1954 SAR/MNM purchase from A. M. Thompson, amateur excavator.
29	MF	27-85-24 B/4	1976 Mimbres Foundation excavation, Le Blanc directed.
30	MNM	20419/11	Ca. 1920 museum purchase from amateur excavator.
31	WNMU	Be 10/56	1973 donation by Grants County Archaeological Society; excavated before 1932 by Richard Eisele, amateur.
32	Janns Foundation	LA 676-431-5-14/3	1975 Mimbres Archaeological Center excavation, Le Blanc directed.
33	Private	n/a	Excavated by owners, amateur archaeologists.
34	ASM	A 25062	University of Arizona excavation, Haury directed.
35	ASM	A 7	University of Arizona excavation, Haury directed.
36	ASM	A 7279	University of Arizona excavation, Haury directed.
38	ASM	A 21150	University of Arizona excavation, Haury directed.
39	Private	n/a	Purchased by present owner, no prior history.
40	HM	NA-Sw-Mg-Az-11	Ca. 1952 purchase from dealer, excavated ca. 1920 by Osborn.
41	MMA	B 10/492	1947 donation, no prior history.
42	MNM	8224/11	1933 USNM excavation, F. H. H. Roberts directed.
43	MMA	66.93.11	1966 donation, no prior history.
44	MNM	43819/11	1969 donation, no prior history.
45	UCM	4052	1930 UNM and Carnegie Institution excavation, Earl Morris directed.
47	MMA	B 10/497	1947 donation, no prior history.
48	MMA	61.3.295	1961 donation, no prior history.
49	MMA	Bm 10/33	1942 donation by Gila Pueblo, Earl Morris excavated, near Bennett Peak.
50	ASM	GP 12603	Gila Pueblo excavation.
51	PAM	72-2	1972 donation, purchased by donor from dealer ca. 1969, no prior history.
52	MMA	70.60.12	1970 donation, purchased by donor from amateur excavator ca. 1969.

Fig.	Collection	Cat. no.	Collection history
53	DMNH	7156	Donation (Crane collection), purchased by donor from dealer, no prior history.
54	TM	4490	1936 purchase from amateur excavator Richard Eisele.
55	USNM		Ca. 1895 USNM excavation, Fewkes directed.
56	MMA	68.131.1	1968 donation, excavated by donor (amateur) before 1960.
57	Private	n/a	1975 purchase, excavated by amateur ca. 1968.
58	NPS		Ca. 1965 NPS excavation, Alden Hayes directed.
59	WNMU	Aug 10/141	Donation, excavated by donor (amateur).
60	Private	n/a	Ca. 1965 purchase, no prior history.
61	ASM	GP 6553	Ca. 1928 purchase, no prior history.
62	MMA	B 10/397	1940 donation, excavated by Berry Bowen, amateur, ca. 1930.
63	HM	NA-Sw-Mg-Az-8	Ca. 1952 purchase from dealer, excavated ca. 1920 by Osborn.
64	DMNH	7155	Donation (Crane collection), purchased by donor from dealer, no prior history.
66	WNMU	Be 10/55	1973 donation by Grants County Archaeological Society; excavated before 1932 by Richard Eisele, amateur.
67	WNMU	Be 10/55	1973 donation by Grants County Archaeological Society; excavated before 1932 by Richard Eisele, amateur.
68	MNA	834/A 327	1936 donation by the Cosgroves.
69	CSF	n/a	Ca. 1975 donation, commercially pot-hunted.
70	Private	n/a	Ca. 1970 purchase, no prior history.
71	MNA	834/NA 3298.65	1936 donation by the Cosgroves.
72	HMWC	G 431	Donation, excavated before 1937 by William Endner, amateur.
73	UCM	9370	1926 UC excavation, Earl Morris directed.
74	MMA	B 10/214	Ca 1940 donation, excavated by Berry Bowen, amateur, ca. 1930.
75	HM	NA-Sw-Mg-Az-5	Ca. 1952 purchase from dealer, excavated ca. 1920 by Osborn.
76	MNM	8531/11	1934 exchange, 1929–30 Beloit College excavations, Nesbitt directed.
77	TM	4592	1936 purchase from amateur excavator Richard Eisele.
78	WNMU	Be 10/49	1973 donation by Grants County Archaeological Society; excavated before 1932 by Richard Eisele, amateur.
79	TM	4491	1936 purchase from amateur excavator Richard Eisele.

Fig.	Collection	Cat. no.	Collection history
80	WNMU	GCM Be 10/111	1973 donation by Grants County Archaeological Society; excavated before 1932 by Richard Eisele, amateur.
81	MNA	834/NA 3288.74	1936 donation by the Cosgroves.
82	WNMU	Be 10/241	1973 donation by Grants County Archaeological Society; excavated before 1932 by Richard Eisele, amateur.
83	Private	n/a	Ca. 1972 purchase, no prior history.
84	Private	n/a	Ca. 1972 purchase, no prior history.
86	UCM	3113	1926 UC excavation, Earl Morris directed.
87	TM	4483	1936 purchase from amateur excavator Richard Eisele.
88	SAR/MNM	44000/11	1954 purchase by SAR/MNM from A. M. Thompson, amateur excavator.
89	SAR/MNM	11920/11	1954 purchase by SAR/MNM from A. M. Thompson, amateur excavator.
90	UCM	7741	1926 UC excavation, Earl Morris directed.
92	UCM	7744	1926 UC excavation, Earl Morris directed.
93	SAR/MNM	19906/11	1954 purchase by SAR/MNM from A. M. Thompson, amateur excavator.
94	Private	n/a	Ca. 1975 purchase, excavated before 1965, no prior history.
95	Private	n/a	Ca. 1968 purchase, excavated before 1965, no prior history.
96	DMNH	9151	Donation (Crane collection), purchased by donor from dealer, no prior history.
97	WNMU	73.8.2	1973 donation by Grants County Archaeological Society; excavated before 1932 by Richard Eisele, amateur.
98	PAM	72-11	1972 donation, purchased by donor from dealer ca. 1969, no prior history.
99	UCM	9366	1926 UC expedition, Earl Morris directed.
100	ASM	GP 4953	Donation, excavated by amateur Berry Bowen, ca. 1930.
101	Private	n/a	Purchase, no prior history.
102	Private	n/a	Purchase, ca. 1970, no prior history.
103	TM	4492	1936 purchase from amateur excavator Richard Eisele.
104	USNM	326256	1923 purchase from E. D. Osborn.
105	Private	n/a	Excavated by owners, amateur archaeologists.
106	Private	n/a	Ca. 1970 purchase, no prior history.
107	Private	n/a	Purchase, no prior history.
108	MF		1976 MF excavation, Le Blanc directed.
109	MMA	B 10/174	Ca. 1949 donation, excavated by Berry Bowen, amateur, ca. 1930.

Fig.	Collection	Cat. no.	Collection history
110	Private	n/a	Purchase, no prior history.
111	Private	n/a	Purchase, no prior history.
112	Private	n/a	Ca. 1968 purchase, no prior history.
113	MMA	B 10/167	Ca. 1949 donation, excavated by Berry Bowen, amateur, ca. 1930.
114	SAR/MNM	43438/11	1923–27 SAR/MNM excavation, Bradfield directed.
115	Private	n/a	Purchase, no prior history.
116	HM	NA-Sw-Mg-Az-4	Ca. 1952 purchase from dealer, excavated ca. 1920 by E. D. Osborn.
117	TM	4493	1936 purchase from amateur excavator Richard Eisele, excavated ca. 1920.
118	USNM	326260	1923 purchase from E. D. Osborn.
119	Private	n/a	Excavated by owners, amateur archaeologists.
120	Private	n/a	Excavated by owners, amateur archaeologists.
121	HM	NA-Sw-Mg-Az-33	Ca. 1952 purchase from dealer, excavated ca. 1920 by Osborn.
122	MF		1976 MF excavation, Le Blanc directed.
123	TMM	740-108	?
124	ASM	26527-X-6	Ca. 1955 donation, excavated by Berry Bowen, amateur, ca. 1930.
125	Private	n/a	Purchase, no prior history.
126	MNM	37942/11	1962 MNM contract archaeology, Peckham directed.
127	Private	n/a	Purchase, no prior history.
128	Private	n/a	Purchase, no prior history.
129	MRMM		Purchase, no prior history.
130	Private	n/a	Ca. 1920 excavation by Editha Watson, amateur.
131	WNMU	Be 10/309	1973 donation by Grants County Archaeological Society; excavated before 1932 by Richard Eisele, amateur.
132	MMA	B 10/237	Ca. 1949 donation, excavated by Berry Bowen, amateur, ca. 1930.
133	MMA	40.4.130	Ca. 1949 donation, excavated by Berry Bowen, amateur, ca. 1930.
134	MMA	B 10/280	Ca. 1949 donation, excavated by Berry Bowen, amateur, ca. 1930.
135	MMA	B 10/268	Ca. 1949 donation, excavated by Berry Bowen, amateur, ca. 1930.
136	SAR/MNM	20391/11	1923–27 SAR/MNM excavation, Bradfield directed.
137	TM	4587	1936 purchase from amateur excavator Richard Eisele.

Fig.	Collection	Cat. no.	Collection history
138	CSF	n/a	Ca. 1975 donation, commercially pot-hunted.
139	Private	n/a	Purchase, no prior history.
140	WNMU	Be 10/69	1973 donation by Grants County Archaeological Society; excavated before 1932 by Richard Eisele, amateur.
141	Private	n/a	Purchase, no prior history.
142	ASM	GP 4961	Donation, excavated by Berry Bowen, amateur, ca. 1930.
143	ASM	GP 4965	Donation, excavated by Berry Bowen, amateur, ca. 1930.
144	WNMU	Be 10/31	1973 donation by Grants County Archaeological Society; excavated before 1932 by Richard Eisele, amateur.
145	DMNH	9146	Donation (Crane collection), purchased by donor from dealer, no prior history.
146	MMA	B 10/239	Ca. 1949 donation, excavated by Berry Bowen, amateur, ca. 1930.
147	HMWC	G 436	Donation, excavated before 1937 by William Endner, amateur.
148	MNA	834-3288.4	Ca. 1936 donation, excavated by Cosgroves ca. 1920.
149	MMA	B 10/231	Ca. 1949 donation, excavated by Berry Bowen, amateur, ca. 1930.
150	WNMU	Be 10/57	1973 donation by Grants County Archaeological Society; excavated before 1932 by Richard Eisele, amateur.
151	ASM	26527-X-4	Ca. 1955 donation, excavated by Berry Bowen, amateur, ca. 1930.
152	Private	n7a	Purchase, no prior history.
153	TM	4590	1936 purchase from amateur excavator Richard Eisele.
154	MMA	B 10/180	Ca. 1949 donation, excavated by Berry Bowen, amateur, ca. 1930.
155	MMA	B 10/180	Ca. 1949 donation, excavated by Berry Bowen, amateur, ca. 1930.
156	DMNH	7152	Donation (Crane collection), purchased by donor from dealer, no prior history.
157	MNM	8535/11	1934 exchange, 1929–30 Beloit College excavations, Nesbitt directed.
158	MMA	B10/190	Ca. 1949 donation, excavated by Berry Bowen, amateur, ca. 1930.
159	WNMU	Be 10/24	1973 donation by Grants County Archaeological Society; excavated before 1932 by Richard Eisele, amateur.
160	SWM	47-P-204	Museum purchase, excavated by E. D. Osborn before 1923.

Fig.	Collection	Cat. no.	Collection history
161	SAR/MNM	19939/11	1954 SAR/MNM purchase from A. M. Thompson, amateur excavator.
162	ASM	GP 4933	Donation, excavated by Berry Bowen, amateur, ca. 1930.
163	SWM	1948-G-1	Donation, 1923–27 SAR/MNM excavations, Bradfield directed.
164	Private	n/a	Excavated by owners, amateur archaeologists.
165	HMWC	G-497	Donation, excavated before 1937 by William Endner, amateur.
166	HMWC	H-449	Donation, excavated before 1937 by William Endner, amateur.
167	HM	NA-Sw-Mg-Az-8	Ca. 1952 purchase from dealer, excavated ca. 1920 by E. D. Osborn.
168	WNMU	Be 10/38	1973 donation by Grants County Archaeological Society; excavated before 1932 by Richard Eisele, amateur.
169	MNA	834/NA 3288.50	1936 donation, excavated by Cosgroves ca. 1920.
170	MMA	B 10/175	Ca. 1949 donation, excavated by Berry Bowen, amateur, ca. 1930.
171	SWM	491-P-3772	Purchase, no prior history.
172	HP		1924–27 Peabody Museum excavation, Cosgroves directed.
173	WNMU	Be 10/78	1973 donation by Grants County Archaeological Society; excavated before 1932 by Richard Eisele, amateur.
174	MNM	8544/11	1934 exchange, 1929–30 Beloit College excavations, Nesbitt directed.
175	Private	n/a	Purchase, no prior history.
176	SWM	491-P-3908	Purchase, no prior history.
177	HMWC	H-451	Donation, excavated before 1937 by William Endner, amateur.
178	CSF	n/a	Ca. 1975 donation, commercially pot-hunted.
179	Private	n/a	Awarded 3d prize at 1963 Gallup Ceremonial.
180	HM	340	?
181	MMA	74.1.24	1974 donation.
182	MMA	67.96.2	1967 purchase, commissioned from artist.

Plate	Collection	Cat. no.	Collection history
3	SAR/MNM	20224/11	1923–27 SAR/MNM excavations, Bradfield directed.
4	MMA	Bpm	1954–60 UNM excavations, F. C. Hibben directed.
5	UCM	3484	1926 UC excavation, Earl Morris directed.

Plate	Collection	Cat. no.	Collection history
6	MNM	8617/11	1940 donation, no prior history.
7	SAR/MNM	19926/11	1954 SAR/UNM purchase from A. M. Thompson, amateur excavator.
8	Private	n/a	Excavated by owners, amateur archaeologists.
9	MMA	49.4.92	Ca. 1949 donation, excavated by Berry Bowen, amateur, ca. 1930.
10	MMA	B 10/204	Ca. 1949 donation, excavated by Berry Bowen, amateur, ca. 1930.
11	UCM	3198	1926 UC excavation, Earl Morris directed.
12	MRMM		Purchase, no prior history.
13	MRMM		Purchase, no prior history.
14	Private	n/a	Purchase, no prior history.
15	UCM	3201	1926 UC excavation, Earl Morris directed.
16	HMWC	G-495	Donation, excavated before 1937 by William Endner, amateur.

Notes

Chapter 2. The Discovery of the Mimbres

1. The buyer, E. Hollis Hopkins, had been commissioned by the late Julius Carlebach of the primitive art gallery that bore his name.

2. Nesbitt's (1931) was the first; largely descriptive, its conclusions are tentative and contribute little to the problems of historical reconstruction. Bradfield's posthumous report was published the same year; in some respects it is the most useful, including catalog descriptions and *in situ* excavation details for each artifact. It is also the most frustrating, for little attempt was made to develop interpretation beyond the point reached by Bradfield at the time of his death. The Cosgroves' 1932 report is the most thorough, neatly balanced between objective descriptions and clear-headed analyses. Perhaps wisely, they elected to postpone a thorough stylistic study of pottery design for a later time (which never came). They did reproduce drawings of every painted vessel recovered from the site as well as others collected from nearby ruins, but regrettably neglected to follow Bradfield's lead and did not publish full catalog information for each specimen.

3. See Kidder's introduction in Cosgrove and Cosgrove 1932.

4. As knowledge of southwestern prehistory expanded, other investigators applied the term *culture* to other regional groupings whose life-ways and histories seemed to differ significantly from both the Anasazi and the Hohokam, and at least four and perhaps seven or more distinct prehistoric cultural groups are now recognized by southwestern specialists (Martin and Plog 1973:23–34).

5. Portions of several Mimbres sites have been excavated under salvage contracts by the Museum of New Mexico, and others have been surveyed under the same or similar conditions (Wendorf 1957). Those parts of a site that are not threatened by highway or dam construction may not be excavated under contract, so that the scope of the archaeology is limited by concerns that are scientifically irrelevant. "For example, while Peckham was excavating a few

rooms of the Baca Ruin because of highway construction, [pothunter's name deleted] was looting the entire rest of the site" (LeBlanc 1975:personal communication).

6. LeBlanc 1975:1. The work has been supported by the Janns Foundation of Los Angeles.

Chapter 3. The Physical Environment

1. Judgment as to affiliation ultimately depends on whether pottery, a portable commodity, was made at a given place or imported. The assumption made by Breternitz (1966:86) that Mimbres Black-on-white found at the Three Rivers site was indigenous must lead to the conclusion that Mimbres Phase sites extended far to the east of the Mimbres River area. However, the basis for the assumption seems to be impressionistic, and there appears to be no objective evidence to support it.

2. Di Peso (1974:630) suggests that serpentine, chrysotile asbestos, and meerschaum were also mined for export south to Casas Grandes.

3. Danson (1957:8–12) provides a more complete description.

Chapter 4. The Swarts Ruin: A Typical Mimbres Village

1. Cosgrove and Cosgrove 1932. Earlier reports on excavations by Bradfield (1931) and Nesbitt (1931) have been cited. A number of shorter articles and less comprehensive reports were published both earlier and later by this same trio as well as by Fewkes, Bryan, and Jenks. More recent publications concerning Mimbres Phase sites have tended to be brief and more descriptive than interpretive (see Wendorf 1957; Fitting 1971a, b, c), but LeBlanc (1975) seems to presage a new and much-needed interest in interpretation.

2. Cosgrove and Cosgrove 1932. Unless otherwise specified all details concerning Swarts Ruin are from that monograph. The town was founded during the Three Circle Phase of the Mimbres Branch of the Mogollon (see Chapter 5), a period and culture that had not yet been defined when the Cosgroves wrote their report.

3. Di Peso, Rinaldo, and Fenner 1974:180–97; Viejo Period, Perros Bravos Phase, about A.D. 950–1060.

4. See sections on iconography, Chapters 8, 10.

5. Most smashed pots found at Cameron Creek are of the Mangas Black-on-white type, Mangas Phase.

6. Wooden kickballs, wooden throwing sticks used for hunting rabbits and other small game, and nets used to trap driven small game are among artifacts recovered from cave sites in the Mimbres country. See Lambert and Ambler 1961; Cosgrove 1947; Martin, Rinaldo, Bluhm, Cutler, and Grange 1952; Kaemlein 1971.

7. See Chapters 9 and 10.

Chapter 5. The Human Environment

1. See Hill 1970 and Di Peso, Rinaldo, and Fenner 1974, among others.

2. Paul S. Martin, who did as much as anyone to conceptualize and define the Mogollon, in the end called it "merely a subsystem of Southwestern culture and not a distinct cultural

entity" (Martin and Plog 1973:180). Definitions of the term *culture* as used by anthropologists must be the province of anthropology. Regardless of what it is called, archaeologists have demonstrated the historical validity of the Mogollon, its Mimbres Branch, and its Mimbres Phase.

3. The branch system used here is that proposed by Wheat (1955). Bullard (1962) presents an alternative system.

4. As defined by Wheat (1955), these periods were considered by Bullard (1962:64) to "lack . . . internal coherence." Bullard did concede their validity for discussion of the southern or "nuclear" branches of the Mogollon.

5. A. V. Kidder suggested that the Mimbres representational painting tradition may have begun as "an artistic mutation" invented by some anonymous genius (Cosgrove and Cosgrove 1932:xxi). The suggestion has been discussed seriously by others, including other anthropologists. The latter would reject out of hand any surmise that an entire group might suddenly adopt an idiosyncratic new form of spear point or kin terminology without there being some good and significant social reason for the change.

6. For fuller discussion of the issue see Kroeber 1963 and Kubler 1962.

7. Wheat (1955:72) defines the Mogollon 1 period as "Cochise plus pottery."

8. Bullard (1962:186–88) remarks on the increasing likeness through time of northern Mogollon material culture to that of their Anasazi neighbors and of that of the San Simon Branch to their western Hohokam neighbors.

9. The architectural sequences of Mogollon periods 3, 4, and 5 within the Mimbres Branch and village plans of the surface-structure period are illustrated in Bradfield 1931, Nesbitt 1931, and Cosgrove and Cosgrove 1932.

10. Breternitz (1966:86) says the best tree-ring dates are from A.D. 775 to A.D. 927. However, Mangas Black-on-white is found in association with later types at virtually every Mimbres site excavated and a later terminal date seems to be justified.

11. LeBlanc 1975, 1976:personal communications. Room 115, from which the 1107 date was obtained, had already been identified as a late structure (LeBlanc 1975:11).

12. Jane Holden Kelley 1974–75:personal communication. Dr. Kelley was kind enough to show me sherds from several sites excavated between the Pecos Valley and Three Rivers, New Mexico. Room floor materials from several of these included Rio Grande Glaze A Red sherds found in direct association with Mimbres Black-on-white variants. Lehmer's survey (1948) indicated that intrusive Mimbres wares were characteristic of many Jornado Branch sites. See also Hammersen 1972:23–24.

13. Martin and Plog 1973:172–73. See also Haury 1967 and Hayden 1970 for arguments favoring migration from western Mexico as a critical factor in the development of the Pioneer Period Hohokam.

14. For recent discussions of this and related problems see Hayden 1970 and Doyel 1974.

15. Many southwestern peoples identified archaeologically are not easily classified, among them those of the Verde Valley, the Middle Gila, the Tonto Basin, and the Animas Valley. While specialists generally refer to these as Salado Culture and Animas Phase peoples, neither has been adequately described, nor have their relations to neighbor groups been documented.

16. Sauer and Brand (1930:446) were neither the first nor the last to remark on the nondefensive character of Mimbres sites: "So remote are many of these habitations from refuge places, so far from drinking water, so openly placed. . .that it is hard to conceive of them as having been built. . .when enemies were abroad." Possible fortification of Mimbres sites is discussed by Fitting (1972) and Martin and Plog (1973). Jelinek (1961) describes a

fragmentary Mimbres painting that may picture warfare and certainly portrays violence, and Di Peso interprets another Mimbres painting as depicting the decapitation of a Mimbres prisoner by a Casas Grandes warrior (Di Peso, Rinaldo, and Fenner 1974:fn. 21; 707) (see also Plate 11). One of the several alternative interpretations of that same picture is given on page 206 of this volume. Di Peso's interpretation is difficult to accept in light of the stress he places elsewhere on the peaceful and economic nature of the relationships between the Mimbres Valley and Casas Grandes. Still, the most compelling argument for the Mimbreños having lived a basically peaceful life is the entire absence of evidence of violence at any Mimbres site thus far excavated and reported.

Chapter 7. The Potters and Their Wares

1. LeFree (1975:6–10); W. W. Hill, unpublished manuscript on Santa Clara Pueblo; W. W. Hill, personal communications 1967 and 1968.

2. I have seen men at Acoma and Zia decorate pottery during the last decade; see also the genealogical charts in Maxwell Museum 1974; Dickey 1957; Frank and Harlow 1974.

3. A number of men and women artists trained principally at the Institute of American Indian Art in Santa Fe have, during the last decade, produced idiosyncratic art pottery often based on native decorative systems but using techniques and materials of modern, industrial ceramicists. Similar activity about three decades earlier had been aborted by market indifference.

4. Numbers of these have been found throughout the Southwest, particularly in dry caves. A storage jar, roughly contemporaneous with the Mimbres Phase but probably late Cibola or Reserve, in the collection of the Maxwell Museum was found in the lava beds south of Grants, New Mexico, with several pounds of dried corn in it. Those who ate some complained of its desiccation but suffered no ill effects.

5. This is particularly true of some Pueblo IV sites, such as Pottery Mound in the Rio Puerco Valley south of Albuquerque, and fifteenth-, sixteenth-, and seventeenth-century Hopi sites such as those on Jeddito Mesa.

Chapter 9. Representational Paintings

1. A number of Mimbres animal paintings are generically suggestive of the "proverb" themes of brass gold weights made by the Ashanti of West Africa.

2. The vessel illustrated here is at the University of Colorado Museum, Boulder. The other is at the United States National Museum and is illustrated as Figure 13 in Fewkes 1923.

Chapter 10. Ethnoaesthetic and Other Aesthetic Considerations

1. Bryan (1929:325) was neither the first nor the last to refer to Mimbres artists as "the first and original American cartoonists"; descriptive catalogs of Mimbres painted pottery in responsible southwestern museums refer to Mimbres animal pictures as "beasties," and an aura of cuteness pervades even Mimbres iconographic studies. Perhaps the classic of misleading ethnocentric commentary on the art was Watson's (1932), which babbles of the

"fun" it must have been "to draw the little comic people and the funny animals," the "gay good humor" in having "all the jokes of the villages. . . .painted on their bowls."

2. Fred Kabotie, an eminent Hopi artist, has published some interpretive comments on Mimbreño subject matter (1949). While certainly useful and thoughtful, they are both culturally and temporally too far removed from the Mimbreños for there to be any confidence in their validity as reconstructions of the original meanings. Rather, they are neither more nor less than speculations from a Hopi perspective concerning the iconography of an ancient and non-Hopi art. Without doubt they are far more useful to study of the Hopi than of the Mimbres.

3. The situation described is by no means confined to the American Southwest: "In Palau, each village was politically autonomous, but there was a great deal of intervillage competition for status and wealth. The style of architectural decoration on men's houses was quite uniform, though complex, throughout the 80-mile-long archipelago. I am convinced that the uniformity of style was greatly dependent on the fact that men's-house elaboration was one of the salient expressions of intervillage competition. In other words, you can't beat the people in the next village if you play football and they play baseball" (E. Wesley Jernigan 1976:personal communication).

4. Personal observations.

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