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Ceramic Art: An Introduction

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You are likely more familiar with ceramic than you think. Most of us have an intimate, often daily connection to the material through dishes, sanitary ware, tiles, bricks, and countless other sources. Ceramic art, a subset of the broader field of ceramics, frequently infuses our domestic lives through the vessels, vases, figurines, and many ceramic keepsakes sprinkled throughout the modern, and ancient, worlds.

This volume aims to transform the reader's casual familiarity with ceramic art into a deeper appreciation and understanding. It focuses on the material history of the art form, considering how ceramic expression is both bound and enhanced by the physical properties of clay itself. While art history as a discipline has long analyzed style, expression, and, more recently, the social context that gave rise to various art forms, this study centers the material history of art, which accounts for how the physical characteristics of a medium impact how artworks communicate. Ceramics is an ideal case study because the materiality of clay is never far from our experience of ceramic objects. These objects retain a strong sense of the earth, a kind of insistent *ceramicness*, which keeps us particularly aware of them as material objects. A greater understanding of clay and ceramic enables us to bring our haptic knowledge—a material fluency we have built up through repeated, intimate exposure to ceramics—into the realm of consciousness. From here, we can begin to unfold the stories these objects hold about the past, present, and ourselves. Ceramic art, both global and ancient, is unfathomable in its totality. So how to approach the subject in a volume of this scale?

Rather than a sprawling overview, this book offers individual episodes written from multiple points of view. The contributors write from the perspectives of art history, archaeology, material culture, conservation, museology, studio practice, and material science. We preserve the individuality of voices contained here to point toward the range of possible interpretative strategies. The first three essays anchor the text through a

close consideration of how histories of ceramics can be built out of global traditions, conservation, and the individual studio practice of a renowned contemporary artist. Four case studies follow, all of which focus on individual ceramic objects (or groups). While they can be read in any order, collectively the essays demonstrate the particular ways that ceramic art illuminates aspects of the past and the human condition. For the purposes of this book, ceramic art includes objects made with aesthetic, expressive, or artistic intent. The borders of this category are broad, somewhat porous, and not at all policed, yet we do intentionally set aside purely industrial applications (crucibles, insulators, etc.), high-tech ceramics (bullet-proofing, space shuttles, etc.), and architectural applications beyond tile.

This introduction will first describe the core materials and traditions of ceramics, followed by a consideration of the key themes of production and consumption. I will define the terms of the medium (clay, glaze, kiln, etc.), while pointing toward ways that specific materials, technologies, and human need gave rise to multiple traditions. The second section looks at cultural rather than material definitions of ceramics to offer ways of thinking about the broader forces that have shaped its histories. Taken together, this chapter argues that ceramic art has an internal logic bound by both its material and cultural histories. This logic informs how we understand and relate to the medium, at both a deeply human level and within the disciplines of art history and visual culture. Ceramic art—materially insistent, deeply human, and ubiquitous—meets us in the present moment with renewed complexity and relevance.

The power of a ceramic object to open questions about the world occurred vividly for me with a particular eighteenth-century jar [FIG. 1]. I was near the beginning of my training as a historian and curator when a mentor organized a handling session including the jar. I had been a professional studio potter for many years, so I knew clay well, but at the time I carried certain biases against eighteenth-century European ceramics as being overly decorative and fussy. When I held this jar as I would a pot on the potter's wheel, one hand on the inside and one on the outside, I was jolted by feeling finger grooves on the interior created when the potter made the form. Ceramic objects like this one are so highly finished, it is almost impossible to imagine how they come into being. Yet suddenly I found direct traces of the potter's hand, feeling how his fingers had made the grooves that my own fingers fit into so well. The whole object shifted at that moment, becoming something that had been wrought, or fabricated, rather than simply present. I could shift away from my preconceptions about style, and see how the pot was the result of certain decisions made by the makers and designers (objects like this were seldom made by one individual). The decisions embedded in the physical object—for example, that it had been wheel-thrown instead of cast in

[FIG. 1]
Garniture of three vases, ca. 1725–30. Meissen Porcelain Manufactory (Germany). Metropolitan Museum of Art, New York, 64.101.155a, b.

a mold, or had a tinted clay body as opposed to a colored glaze—soon opened onto broader, complex questions about the myriad social, political, and economic forces that went into an object such as this being created in Germany in the 1730s. How did they develop the technology to make it? Why did light blue semi-Chinese-looking objects become popular? Who would have bought this, and how did that person live with it? How did it help visualize a materialist and expansionist Europe? What was the value of the labor that went into it, and how was that labor organized?

This Meissen jar opened multiple lines of inquiry about how it came into being and the society that created it. Undergirding these questions is a materially based logic for constructing meaning through ceramics. Through both this chapter and those that follow, this book will acquaint the reader with the overall scope of expression in ceramic art, while enhancing perception of the nuances of the medium.

Materials and Traditions of Ceramics: What Is Ceramic?

At its core, ceramic consists of clay that has been transformed by heat into a dense, rocklike material. The heating up of clay, called firing, can occur in an open setting like a pit or in an enclosure, known as a kiln. The clays that go into ceramics are naturally occurring in the earth's crust and common enough that they generally have little commercial value in themselves. The cost of clay is connected more to its extraction, processing, and transportation rather than with the material itself. In fact, clay is often the waste material of other mining processes.

A wide variety of clays occur in the earth. They are composed of rock that has been broken down through geological processes such as erosion into small particles that are sticky and mud-like when wet. Other key physical characteristics of clay include plasticity, meaning it is bendable when wet and can hold its shape when dry. Chemically, clay is composed of silica and alumina, along with trace minerals such as iron and manganese. Unfired clay can always be wetted down (slaked) and returned to a plastic state, whereas fired ceramic will not become workable again. Clays differ from each other based on the composition of originating rock or rocks, the trace minerals, and the particle size and shape resulting from being worn down. Each of these factors, along with the inclusion of any organic material, impacts the clay's workability, firing temperature, and final appearance. While some clays are workable on their own, it is far more frequent that naturally occurring clays are combined to offer the particular characteristics needed. These combinations are called clay bodies.

Firing chemically transforms clay into ceramic. Heat melts some of the molecules so that they create a dense wall suspended in a lattice-like matrix, while the rest of the molecules create the matrix itself. This

partial melting process is called vitrification, and when fully vitrified, clay becomes relatively strong and absorbs little moisture—important for storing and serving liquids, especially in preindustrial times. Not all vitrified ceramic is fully impervious to liquid. Some objects are instead designed to absorb water into the clay wall, which can be useful; water storage jars often absorb and "sweat" a bit of water, keeping the contents cool.

Humans have been firing clay for at least twenty-eight thousand years. The earliest ceramics were fired in the open, likely near the fuel used for the firing itself, such as wood, brush, or dung. Eventually, people built enclosures out of clay for firing, which allowed for greater heat retention and higher firing temperatures, creating more durable and watertight ware. These enclosures became kilns, built out of more refractory (heat-resistant) clays. Kiln technology varied throughout the world, but for millennia potters in China had the most sophisticated kilns, able to reach the highest temperatures and exert control over the results. Kilns were fueled with wood or other plants, and later with coal, oil, or gas. Combustible fuels can have a dramatic impact on the appearance of ceramics. A kiln starved of oxygen gets smoky, and that excess carbon can infuse the clay with a variegated blackish surface at lower temperatures. At higher temperatures, the excess carbon actually draws oxygen molecules out of the ceramic matrix in order to burn, changing the material chemically and radically altering the surface of the ware. This process is called reduction and has the strongest impact on the glaze, as discussed below. The red and black of classical Greek vases, rich greens of Chinese celadons, and luscious metallic lusters of Islamic ceramics all depend on the deft manipulation not just of heat but also the kiln atmosphere.

Many of the approaches to firing developed over the course of human history are still in use today. Pit firing, smoke firing, and wood and coal kilns all occur in numerous traditional, workshop, studio, and academic contexts. Makers today often investigate how different firing approaches enhance their work. The majority of contemporary kilns, however, are powered by electricity, which creates a constant, radiant heat. Electric kilns can be highly sophisticated, with sensors and computers adjusting to the slightest variations in atmosphere or temperature. These kilns, alongside highly refined materials, can help deliver a stunning range of bold, vivid colors and elaborate surfaces for artists, smaller-scale manufacturers, and high-volume industrial producers alike. Even with the high degree of control available, firing ceramic art is inherently unpredictable. Materials melt and combine in unexpected ways; small variations of thickness and heat can yield new and surprising results. The materials in the unfired state rarely appear as they will when fired, so the artist

must imagine how the work will look. Many makers minimize this aspect of ceramics through training, skill, and experience, while others embrace it fully. Ceramics is not a medium of total control: all makers collaborate with materials and kilns, turning their work over to the elemental process of transformation through fire.

The Ceramic Surface

Part of what makes ceramics so engaging is the interaction of form and surface. As many commentators have remarked, ceramic combines attributes of painting and sculpture (and chemistry). Ceramic surfaces vary to a seemingly infinite degree in color, texture, character, and ornament, sometimes becoming a mass or entity unto themselves. The earliest ceramic surfaces were clay based, comprised of special, usually contrasting colored clays (called slips) that were watered down and brushed onto the surface. The meanings of these early patterns are obscure to us now, but archaeologists and art historians typically link them to ritual functions. This applied surface ornament frequently interacts in dynamic ways with an object's form, as with Neolithic Chinese Banshan ware, or variations in the surface from firing. Applied clay ornament that rises up from the skin of the form can also complement brushed-on slip, or stand on its own as a form of decoration or elaboration.

What Is Glaze?

Encountering ceramic art, we often see a surface made of glaze rather than clay. Glaze is glass formulated to melt onto and fuse with ceramic. Like clay, glass is comprised mainly of silica, which with the addition of alumina or clay can melt onto and shrink with a ceramic body in the kiln (all clays shrink a bit when fired). In addition to silica and clay, glazes have a fluxing agent, which lowers the melting temperature of the silica and other ingredients, and colorants such as iron, cobalt, chrome, or copper. Glazes are formulated to melt at specific temperatures, typically forming a hard surface impervious to liquids. If a glaze is overfired, it can melt off the side of an object; if underfired, it can remain pasty or dry.

Glazed ceramic surfaces originated thousands of years ago, but are not as old as ceramic itself. The earliest glaze-like material is called Egyptian paste or faience, which was developed from around the year 4000 BCE. Egyptian paste is unusual in combining the glaze-forming materials with the body rather than coating the surface. The process yielded hard, brightly colored objects that evoke precious stones and likely carried magical meanings. The earliest applied glazes were developed in China during the Shang dynasty (ca. 1600–1046 BCE). Translucent gray, brown, and greenish in tone, they appeared on or in early high-fired (so-called proto-porcelain) vessels. The glazes were made of clay, limestone, and

plant ash, and offered a smooth glossy surface that was more impervious to liquid than the already hard body. Lead-based glazes, which melt at a low temperature and thus are inexpensive to produce, came into broad use in the first century BCE in both the Roman Empire and China. Lead glazes can be clear or honey colored, or with the addition of minerals like copper and iron, take on a bright green, yellow, or blue hue. Many additional glazes now confront the ceramic artist, with a vast palette of colors and surface qualities.

Surface Ornament, Mimicry, and Medium Specificity

While the character of a glaze can be the dominant ornament in ceramic art, applied decoration also often appears. Contrasting glazes can be layered or put on side by side, creating elaborate patterns as seen on the ornamental tiles from Iznik, a pottery-producing town in Turkey. Cobalt, iron, and other metallic oxides can be applied under or on top of glazes, creating detailed imagery or patterns, as in the many examples of blue-and-white ceramics found globally. Similar to metallic oxides, enamels (or china paints) can be applied onto an already fired glaze surface, allowing for brightly colored and highly controlled imagery, as seen on many European porcelain figurines from the eighteenth century and later, and discussed further by Yao-Fen You in this volume. Transfer printing offers yet another source of imagery, mechanically reproducing scenery, portraits, and patterns ad infinitum for large-scale production and consumption; this technique is used not only for tablewares but also as a tool of social critique in the work of contemporary artists such as Paul Scott, explored in the chapter by Margaret Graves. While these and numerous other surface approaches cannot be exhaustively considered here, the sheer range points toward a key aspect of the medium: its ability to embrace and mimic an incredibly wide variety of forms and surfaces.

The imitation of other materials has long been central to the language of ceramics. The plasticity of clay—which can take on nearly any shape—and truly astounding range of surfaces combine to make ceramic a primary medium of trompe l'oeil, or fooling the eye. From Chinese teapots shaped like bundles of bamboo to European vessels in the shape of boar heads and leather suitcases, ceramic arts have a deep catalog of portraying other materials. This chameleon aspect plays with the gap between what we see and what we know, inviting us to touch the objects to reconcile, or perhaps relish, the cognitive dissonance. Adjacent to mimicry intended to fool the eye, makers of ceramics have long looked to other media, particularly glass and fine metals, to make copies. In most historical periods, ceramic art has conveyed less status and prestige than have objects made in more expensive materials. Goblets, ewers, chargers, and numerous other forms appear in ceramic, echoing the formal and

decorative properties of, say, raised silver. While a healthy exchange of influence has often prevailed, most scholars understand ceramics to be more frequently in the position of replicating the characteristics of other, more expensive media, rather than the reverse.

Ceramic as a medium of mimicry stands alongside an equally (if not more) complex history of emphasizing the unique character of the medium. Across the globe, makers of ceramics have long cultivated the aesthetic properties of the material itself, stressing forms and surfaces that look like fired clay and glaze. Perhaps the most vivid example of this approach in this volume is Magdalene Odundo's work, which evokes vegetable gourds, leather, and even human flesh, but is clearly and could only be fired clay. Similarly, blue-and-white porcelain has been prized for centuries in part because the hardness, tone, translucency, and vivid blue is a combination unique to the medium. Finally, several types of revered Japanese ceramics highlight the craggy and irregular surfaces that could only be ceramic [FIG. 2]. Taken together, mimicry and medium specificity can be considered horizons of ceramic aesthetics.

In the modern context, commercially available materials and the spread of digital computing are altering the historic balance of extrinsic versus intrinsic aesthetics in ceramics. Before the mid-nineteenth century, ceramic materials were generally processed by or directly for those who used them. Materials typically did not travel far, unless they were exceptionally rare, as with cobalt in the early years of porcelain manufacture. From the third quarter of the nineteenth century onward, though, ceramic supply companies have emerged that sell premixed clays, prepared glazes, portable kilns, and the like. These suppliers have progressively lowered the barriers of entry to ceramics, especially supporting hobby and part-time practitioners, academic studios, and individual workshops. This process has in particular opened the field to generations of women ceramists, many of whom entered as hobbyist decorators and have come to represent a significant proportion of the field. Such industrially processed materials are widely available, reducing the natural variation seen earlier in ceramics while also expanding the material palette dramatically. The possibilities available to makers for the last fifty or so years differ phenomenally from those in the past.

In tandem with a broader material palette, changes wrought by the digital revolution of society are impacting ceramics too. Many kilns, both electric and gas powered, are now controlled by computers, allowing for the precise modulation of surface effects even at a student level. Glaze calculation software helps artists develop entirely new materials that had not existed previously. And perhaps more than anything, the increased velocity of digital images has profoundly impacted the volume and perception of historical and contemporary objects. Ceramic history, long

[FIG. 2]
Water jar, named Yabure-bukuro (burst pouch), Iga ware. Japan, Momoyama period, ca. 1550–1600 CE. 24.1 × 11.6 × 11.9 cm. Gotoh Art Museum, Tokyo.

[FIG. 3]
Tea bowl. Takuro Kuwata (b. 1981). Japan, 2021. 54.9 × 53.5 × 51 cm. Salon 94, New York.

a lodestone for artists, is now widely accessible to anyone with an internet connection.

While these shifts are almost too large to grasp, one artist who embodies many of them is Takuro Kuwata (b. 1981), a young Japanese ceramist and international phenomenon [FIG. 3]. Kuwata's work draws from Japanese ceramic history, emulating forms seen in tea ceremony wares of the sixteenth and seventeenth centuries and cherished for their irregularities and rough surfaces. He also references *kintsugi*, the practice of repairing prized historical ceramics with gold to highlight, as opposed to hide, the damage. Like *kintsugi*, a process examined further by Vicki Parry in this volume, his luxurious cakes of gold and silver showcase rather than conceal split surfaces. Kuwata's use of glaze as an oozing mass rather than just as a surface is achievable through multiple, tightly controlled firings. His saturated palette depends on highly refined and accessible materials, and the work as a whole is arguably keyed to social media formats and the globalized art market at least as much as it is to domestic spaces. Honoring and building on the past, while fearlessly exploiting the present, ceramic art works within both its material history and the broader cultural present.

Material Distinctions in Ceramic Art and History

Moving away from the present and a focus on surface, I will now return to the core of ceramics—clay—to discuss how material distinctions have shaped global traditions. The aim here is to familiarize the reader with the three principal types of historical ceramics as well as their impact on current practice. These distinctions can lay the groundwork for further appreciation of the incredible variety within the medium.

Ceramic bodies divide into three main categories: earthenware, stoneware, and porcelain. While the three types are not absolute—there are overlaps, exceptions, and combinations—they do indicate the primary areas of global production. Distinctions between the three emerge from both the chemical properties of the materials and how they appear to the eye and hand of the end user.

Earthenware

Earthenware is the most common clay type and appears in (or as) the ground virtually all over the world. Many people are familiar with it through planters, pipes, tiles, and innumerable other objects produced widely. Others will know it from the red dirt of many deserts and exposed ridges. Also called common clay, the category refers to almost any clay that matures or becomes ceramic at around 750 to 900 degrees Celsius, or red heat. Earthenware clay typically has a red, yellow, or buff tinge caused by traces of iron and other minerals, but sometimes can be a milky white.

The final tone of an earthenware ceramic depends on both the clay itself and the firing process, with a cleaner-burning flame typically resulting in red or lighter-toned ware. Earthenware vessels, devotional figures, and funerary markers were among the earliest ceramics made by humans on account of the relatively low maturation temperature of the material.

Earthenware is closely tied with traditions of food and water storage, cooking, and housing—the vessels for the essentials of life. In these contexts, clay was dug, processed, formed, and fired usually within one locality, resulting in many discrete traditions. While the objects are utilitarian in origin, many have since been recategorized as art. Widely celebrated earthenware traditions include the many classical Greek vases that line the shelves of Western art museums; Chinese funerary figures, including the terracotta army of Emperor Qin Shi Huang (259–210 BCE); beer and water jars from southern Africa; elaborately and exquisitely ornamented vessels from Indigenous communities in the American Southwest; and the figurative, often narrative vessels from Mesoamerican and South American cultures, considered in this volume by Ulla Holmquist Pachas. In the classical Mediterranean, earthenware amphorae served as the shipping barrels of their day, used for transporting olive oil, fish sauce, and other liquids by water, like the vessels described in the case study by Carl Knappett. All of these traditions rely on clay and clay-based materials for both their form and surface.

Glazed earthenware traditions are equally vast and notable for their vibrant color palettes and luscious surfaces. Early lead glazing elevated earthenware by transforming it from being dirt-like to appearing vibrant and glossy, as in the glorious funerary horses and camels from Tang dynasty (618–907 CE) China. Later, these rich surfaces would animate the lifelike swamp tableaux of French Renaissance ceramist Bernard Palissy (d. 1589). Lead-based glazes were adopted into many folk traditions, such as those from Portugal and Mexico, and in some cases are still in use today. They were also integral to the global ceramics industry that emerged in England in the eighteenth century. Manufacturers such as Wedgwood used lead-based glazes on their early emulations of porcelain, while in the nineteenth century, Minton and other companies redefined the ceramic palette with brightly colored majolica, keyed to the new era of electrification.

A type of opaque-glazed earthenware originally emulating Chinese porcelain has had global impact too. Typically called faience or delftware, this type of ceramic was developed in the Middle East in the ninth or tenth century and consists of an earthenware body, which is often tan or buff, coated by a glaze opacified with tin oxide. This flat white surface echoed the whiteness of porcelain, becoming a clean ground on which to add ornament. Faience spread across North Africa and into Islamic Spain

by the fourteenth century, then into Italy and across Europe from the fifteenth century onward. Its ornament included highly reflective metallic lusters such as those made in Valencia; the richly painted polychrome *istoriato* of Renaissance Italy; and the blue-and-white wares of the Netherlands and elsewhere known as delftware. Faience continues as a global tradition, anchored by the ubiquity of earthenware clay and appeal of brightly ornamented surfaces in our daily lives.

Stoneware

Stoneware, the second principal type of ceramic, is distinct from earthenware in being harder and more durable. It is fired to a higher temperature than earthenware—around a thousand degrees Celsius—creating a fully vitrified, stonelike body that is virtually impervious to liquids. Stoneware developed first in China and later in other parts of the world as kiln technology improved. It tends to be tan, buff, or brown, and often somewhat gritty or rough. It occurs naturally in the ground, but is most frequently combined into clay bodies to achieve specific working properties, including maturation temperature, color, and toothiness. Most stonewares are glazed, such as the greenish Yue and brown-black Tenmoku wares of China, Oribe-type wares of Japan, or myriad twentieth-century studio ceramics inspired by them.

Stoneware tends to be impenetrable to liquids, and so has long been used for food storage and presentation. Examples include the early Chinese celadons that were developed on stoneware clays and have earned the appreciation of connoisseurs for over a thousand years, as well as the large kimchi jars of Korea dating back hundreds of years. The vast numbers of crocks, churns, and other storage vessels produced from the eighteenth to the early twentieth centuries in manufactories in the United States and elsewhere constitute another dimension of stoneware. Many of these containers—utilitarian in their day yet now considered art—were in fact glazed through the addition of salt to the kiln during the firing versus being applied individually to the pots. Salt vaporizes at high temperatures, forming a glaze with the surface of the pots as the sodium from the salt and silica from the clay bond. This process was initially discovered in Germany in the fourteenth century and is used now in artistic more than industrial production.

Porcelain

Porcelain is white, hard, cold, and impervious. Of all types of ceramic, porcelain has perhaps the most complex layering of cultural meanings, from imperial China to hotel china. Porcelain is ubiquitous today, yet it retains an association with elite status in part because of its relatively high cost of production and history of exclusivity. Porcelain also participates

in discourses of whiteness and purity, giving the material racialized connotations in some contexts.

Porcelain is a dense, fully crystallized ceramic. The body is typically translucent when thin and makes a ring when tapped as opposed to a "thunk" like many earthenwares. Materially, porcelain consists of china clay, or kaolin, and petuntse, a type of limestone also called china or porcelain stone, fired to about fourteen hundred degrees Celsius. Both kaolin and petuntse are notable for having few trace minerals, like iron, which accounts for the whiteness of the resulting ceramic. Kaolin is uncommon relative to other clays and requires greater processing than, say, earthenware. Examples of fired kaolin survive from Neolithic China, although porcelain as a material is generally considered to have originated in the seventh century, and then spread in the eighth and ninth centuries. Production in the famed city of Jingdezhen, China's porcelain capital, began in the tenth century and was soon highly sophisticated. Porcelain was exported from about the ninth century on, reaching South Asia, the Middle East, and the east coast of Africa. The porcelain trade increased sharply from the fourteenth century with the advent of blue-and-white porcelain ornamented by cobalt applied underneath a clear glaze.

Chinese porcelain has long been avidly and even obsessively collected. Imperial kilns produced literally hundreds of thousands of objects for Chinese emperors of all dynasties. Porcelain abounds in royal collections from the South Asian subcontinent to Central Asia and the Near East. European elites prized the material from the fifteenth century onward, and it became a cornerstone of Enlightenment visual culture throughout the eighteenth century. While early Islamic and later European potters emulated the look of porcelain with faience, it was chemists (actually, alchemists) sponsored by Elector of Saxony Augustus the Strong (1670–1733) who first created a true or hard-paste porcelain using kaolin in 1709–10. A lower-firing alternative, so-called soft-paste porcelain, had been developed in the sixteenth century, but was successfully produced only from the early 1700s on. By the mid-1700s, now well-known names such as Sèvres and Worcester began producing additional varieties of soft—or slightly later, hard—paste porcelain for elite and then mass markets. The artistic production of porcelain continues alongside mass-market and utilitarian ware in highly skilled manufacturing centers like Jingdezhen, legacy manufactories of Europe including Meissen and Sèvres, and academic and studio contexts, principally in Europe, North America, and East Asia.

Fritware

Early efforts by Middle Eastern potters to replicate porcelain gave rise to faience, as discussed above, and a ceramic body called fritware, also

known as stonepaste, developed around the eleventh century. In the absence of kaolin, or a hard-firing white clay, these early potters substituted ground sand and glass, with a little bit of clay to form a moldable body. The material has the same basic ingredients as clay (silica and alumina), but is closer to glass or glaze in its composition. Fritware paste can be formed into tiles and smaller vessels; larger and more elaborate forms are exceedingly difficult, so most works are of domestic scale. Its particular luminosity echoes the glassiness and translucency of true porcelain, serving as an ideal ground for colorful and delicate surface ornament, such as that seen on ware from Iznik. In twelfth-century Iran fritware potters borrowed a glass-ornamenting technique, first used on ceramics in ninth-century Iraq, to develop fine lusterware, whose thin sheens of luminous gold and silver have often been revived and elaborated by subsequent potters.

Key Themes of Production and Consumption

The differences between clays, glaze types, and firing traditions are grounded in the material properties of ceramics, yet have a deeply cultural function as well. As with hard- and soft-paste porcelain, definitions are not grounded entirely in chemistry or geology. Rather, they emerge also from how objects function socially—what discourses they participate in, and how they connect to patterns of production, consumption, and meaning making. Ceramic art has been studied, collected, preserved, modified, and handed down for generations. The meanings that ceramic objects accord often far exceed their material parameters, yet what they are made of and how they are made impact our readings of the objects. The next section considers cultural as opposed to material ways of understanding ceramics, focusing on the broad issues of production and consumption specific to the medium.

Production

A key aspect of ceramic is its ubiquity. Ceramics have been made in nearly every culture across the globe as one of the earliest human technologies. At times, individual types of ceramic art are highly valued, yet far more frequently it is relatively accessible—sometimes extremely so. The ubiquity of ceramic is reinforced by its persistence: while it can be easy to break, it is almost impossible to degrade. Sherds of ceramic objects remain intact for millennia, allowing for the extensive study of the deep historical past and long-dead cultures. Ceramic art historically was made in multiples, with individual objects being the exception and variations of an object type being the norm. There is not one Neolithic Chinese jar, Zulu beer pot, or commedia dell'arte figurine but rather hundreds or possibly thousands of each. Collectively, the accessibility, durability, and seriality

of ceramics have impacted how we perceive the value of individual objects along with the interpretative strategies we use to unpack them.

The character and scale of the workshop is a second theme related to production that impacts how we understand ceramics. As historian Paul Greenhalgh recently demonstrated, ceramic production has long thrived at the amateur, workshop, manufactory, and, more recently, individual artist levels. Amateur production can encompass local potters who were primarily farmers and made pots in the off-season. Similarly, it can include the legion hobbyist potters working in community centers and home studios today. Objects from these settings tend to be for immediate, local use in the historical context, and leisure consumption and individual expression in the modern. Workshop settings are often communal, based on family units or village structures, and comprising around ten or fewer workers. They also tend to produce more regularized forms frequently identified with a particular locality, such as the Renaissance potteries of Deruta, Italy, with their signature scallop-patterned edges. Workshop settings relied on specialized labor for different stages of manufacturing, and the wares met a regional and sometimes broader market. Making processes in workshops are often based on hand techniques, such as wheel throwing and press molding, yet as described above, involve repetition and seriality more frequently than one-off items.

Manufactories typically have over ten workers and sometimes thousands, and consistently produce high volumes of wares for regional and distant markets. The objects produced by manufactories tend to be extremely consistent and consumer oriented; they are made to be sold. In the preindustrial era, examples included the porcelain factories of Jingdezhen as well as European producers like Sèvres, whose royal patronage ensured a steady, elite clientele. With industrialization and the further development of global capitalism, brands like Minton in the nineteenth century and Homer Laughlin (makers of Fiestaware) in the twentieth became large-scale producers, often working at the intersection of ceramic art and product design. Manufactories lend name recognition to ceramics, especially collectibles, while also indicating a level of economic organization and market appeal.

Individual artist production is a relatively recent phenomenon. Around the turn of the twentieth century, ceramic artists mainly in France and the United Kingdom began working in individual studios, where one person, sometimes with the help of an assistant, was newly responsible for all stages of production. The rise in commercially available materials and equipment supported this transition, and the growth of what became the studio ceramics movement continued throughout the twentieth century, yielding many individually named, well-known artists, including Adelaide Alsop Robineau (d. 1929) and Peter Voulkos (d. 2002) in the

United States. From the late 1950s, studio ceramics in the West dovetailed (albeit problematically) with sculpture, so that contemporary ceramic art overlaps to some degree with the mainstream fine art world. In studio production, the individuality of the object and expressive force of the maker are at the fore. Whether manufactured through contracted specialists (as in the case of Jeff Koons) or made entirely through the artist's handwork (as in the case of Simone Leigh), contemporary ceramic sculpture emphasizes originality and vision. All types of ceramic production imply certain economic and social conditions, such as family-based labor, immigrant economic opportunity, access to export markets, industrial infrastructure, a developed fine art market, and the like. The other chapters in this book exemplify the ways that some of these stories embedded in ceramic objects can be revealed, drawing connections to many aspects of life in the past as well as present.

Consumption

How ceramics are consumed—used, repaired, maintained, and preserved—is equally important to the meanings they can hold. The paradigmatic functions of the medium are sustenance and ritual. Since time immemorial, ceramics have helped keep humans alive by holding and offering nourishment and refreshment. We touch ceramics to our lips billions of times a day. We have long created ritual objects out of clay, from the enigmatic earthenware figures of the Nok culture in Nigeria to the Roman ancestor effigies and the tomb figures of ancient China.

Related to symbolic meanings, yet more concrete, is the relationship between the haptic and optic in ceramics. Long a liability within modernist ideologies of art, ceramics has a deep association with the haptic, or tactile. As so many humans routinely handle ceramics, when we look at ceramic art, whether based on a utilitarian form or not, we can imagine (and perhaps cannot help ourselves from imagining) touching it. Most ceramic surfaces we know as well through touch as sight. The repeated physical handling of ceramics creates what we can call a haptic sympathy, such that when we view a ceramic object, we conceptually enact touching it: the surfaces feel to us rather than only look. While this material literacy may often go unrecognized, it contributes to how we perceive ceramic objects, creating a conceptual stickiness wherein we are less able to retreat to the purely optical in the work. Perceiving in our mind the feel of a ceramic work ties us to its material presence. An encounter with ceramics is never purely visual but instead carries with it what critic Philip Rawson called "memory traces" that are distinctly physical.

From about 1860 to 1960, mainstream modernism and its emphasis on opticality dominated ideas about art in the West, leaving ceramics with a contested status at best. Long relegated to the subaltern realms of the

manual, decorative, and applied, the insistent materiality of ceramic—rooted in our haptic sympathy—kept it tethered to the world and earth, unable to generate the autonomous aesthetic contemplation envisioned by Western philosophers like Immanuel Kant. Ceramic was not easily understood as a medium of fine art, in part because it so often kept one foot (or hand) in the realm of the physical.

In recent decades, we have witnessed the steady reappraisal of these long-standing ideological and material hierarchies. That insistent materiality of ceramic, so long a liability, is now becoming a locus of wonder and meaning. The elaborate histories, sheer physical ubiquity of the material, unstable distinctions between art and nonart, symbolic resonances with the core experience of being human, and haptic sympathy—all of these attributes that have made ceramics sing to a narrow band of advocates now resonate with emerging ideas about value and meaning in art as well as what roots us to being human. The very realness of ceramic is part of what we celebrate today, as many of our lives and relationships become dominated by screens. Ceramic art tethers us to our bodies and the earth, reminding us of the messy as well as glorious parts of being human. Hopefully, the individual objects considered in this book open further questions and a deeper exploration of ceramic art for you, the reader.

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