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The front page: Amber nuggets and semi-finished amber beads and pendants from pit-house 7/91 in Biskupice, Poland. Photo: Marcin Woźniak.
The back page: Suspension loop for gold bracteate S12625, from Hå on Jæren, Rogaland. Photo: Annette G. Øvrelid.

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Production, distribution and use of standard and "rogue" Migration Period gold bracteates

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Studies of Migration Period gold bracteates often have focused on the iconography of these fascinating yet enigmatic objects. An enduring secondary interest has been the attempt to understand the technology by which they were produced. In this essay, I examine how three approaches—close observation of bracteates and the dies from which they were struck, modern experiments to reproduce Early Medieval goldsmiths' techniques, and analysis of geographic patterns of the distribution of bracteate find places—can help us comprehend more about how and where bracteates were made. While most bracteates can be grouped according to iconographic and stylistic features, some examples depart considerably from typical bracteate iconographic choices or display unusual details produced by unconventional techniques. The term "rogue" is introduced by the author to refer to such bracteates, with the proposal that some of these rogue pieces may have been fabricated by smiths who did not have access to metal dies or did not have the ability to make beaded edge wire or sturdy suspension loops. In addition, it is noted that many pieces that iconographically deviate from established family groups have been discovered in locations geographically peripheral to other members of their iconographic groups, and in some cases, irregular iconography and atypical techniques intersect.

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"Standard", "bastard", and "rogue" bracteates

Well over one thousand gold bracteates of the Scandinavian Migration Period (ca. 450–540 CE) have been discovered within and beyond Scandinavia. The goal of this paper is to understand more about how and where bracteates were made and used via thorough inspection of unusual bracteates and their dies in light of knowledge gained from experimental reproduction of early medieval techniques as well as consideration of the geographic distribution of these atypical examples. In previous presentations and publications, I have discussed how we believe that Scandinavian Migration Period gold bracteates may have been made during the fifth and sixth centuries CE (Wicker 1994, 1998, 2006). In those works, I described production methods by which I believe most bracteates seem to have been created. Although there is no fixed definition for what constitutes a "standard" production technique, a norm has been implied by offering counterexamples to contrasting technical details that are considered particularly odd or unusual in any way. In contrast to various and varying proposals concerning bracteate technology, the foundational works by Christian Jörgensen Thomsen (1855), Oscar Montelius (1869) and Bernhard Salin (1895) established a standard classification according to general iconographic motifs of Migration Period bracteates as Types A (with a man's head), B (with one or more full human figures), C (with a man's head over a horse-like animal), and D (with animals) based on images in the central stamp. Bracteates of these types are indeed considered to exhibit standard iconography. However, my interest leaves the iconographical to deal with technological and decorative aspects of bracteates; consequently, I propose the term "rogue" to refer to anomalous bracteates that exhibit technical or decorative characteristics that are atypical or unconventional.

Due to the relatively large number of extant bracteates, it is convenient to group exemplars with similar characteristics, whether technical or iconographical (or both), and use various names to describe them. For instance, Morten Axboe (1982, 32–36) introduced the term

"de luxe" loops to describe the technical feature of large bracteate suspension loops richly decorated with filigree or granulation. Overall, there has been more interest in describing bracteates that show unusual imagery rather than uncommon techniques. Axboe (2017, 143) uses the word 'odd' to describe bracteates that he calls "outsiders" as he focuses on atypical iconography rather than abnormal technical or decorative features. In 2007, Alexandra Pesch introduced to bracteate studies groupings of *Formularfamilien* (which I will refer to as Formula Families and abbreviate as FF) composed of bracteates that are so similar iconographically and stylistically that it is difficult to conceive that they were made independently. Pesch (2007, 54) assigned the term "bastard" to refer to bracteates characterized by iconography that does not fully conform to her major family categories yet still appear to be related to or derived from examples in these categories. English usage of the term bastard, which means similar to—but inferior to or less typical than—some standard may not reflect the subtlety of German *Bastardformen*; however, in both English and German usage, the word expresses the idea of something debased from its original form. The word can also connote "hybrid" or "cross-breed", but few of these bracteates actually exhibit hybrid iconography.

While Axboe's and Pesch's designations of outsiders, odd, and bastard concentrate on the iconography of bracteate images, I propose the term 'rogue' to denote bracteates whose technical details diverge from standard examples. Rather than focusing on their iconographic features, I examine details including how the bracteate was stamped, what metal was used, whether and how an edge wire was applied, and what kind of suspension loop was used. Rogue bracteates, as I propose, are related to yet not identical with both what Pesch calls bastard bracteates and Axboe's outsiders. Although Axboe (2017, 143) acknowledges that some of the outsider bracteates are poorly made, he focuses on examples that exhibit inventive or unorthodox iconography. While I am indebted to both Axboe and Pesch for their contributions, rather than emphasizing unusual or innovative iconography as they do, I concentrate here on bracteates that were made with non-standard techniques, not necessarily poorly made but differently made, with non-standard dies, metals, suspension loops, and wire rims. We have many labels to refer to various iconographic issues, but until now have not had a name for technical oddities. Therefore, I introduce the alternate term rogue to highlight how some examples depart from customary or standard types not in their iconographic motifs but rather in technological details. However, some of the bastard pieces that Pesch recognizes, which are associated with—yet different from—certain of her presumably workshop-related family groupings, also have rogue technical details. Finally, I note that the find places of bastard examples often lie along the peripheries of maps of their respective Formula Families as delimited by Pesch. I will return to discuss implications of the geographic distribution of bastard and rogue bracteates later in this essay. In the following pages, I begin with some case studies in which the word rogue can be used to aid our investigation of technical features of bracteates.

Die technologies and experimentation

Close study of bracteates themselves and the dies used to stamp them—a few of which have been discovered in recent decades—has allowed archaeologists to expand their knowledge of the techniques by which most of these objects were made. An image on the front (obverse) of a Migration Period bracteate was produced by striking it directly against a matrix die to impress the central picture field so that the resulting bracteate shows the reverse of the image that had been carved on the die. A die can be used to make multiple impressions. After a bracteate is struck from a die, an outer rim of wire is usually attached to it, presumably to give the disk rigidity and strength as well as to enhance its finished appearance. The reinforced edge can then allow a loop to be attached firmly and securely so that the completed product can be worn suspended as a pendant. The die, and thus the central picture of the stamped bracteate, conveys the picture, that is, the iconography, of a bracteate. Making a die requires a many-stage process that is the most technically demanding stage of producing these objects, and several methods by which to produce dies from various materials are feasible. At least four copper alloy dies (informally referred to as bronze) for striking bracteates are now known, with the first discovered in 1990 at Postgården, North Jutland (IK 572; Axboe 1993), followed by finds in England from Billingford, Norfolk, in 1999 (IK 589; Behr 2010, 50–53), near the Essex/Hertfordshire border in 2004 (IK 609; Behr et al. 2014, 48–49), and at Morley, Norfolk, in 2007 (IK 637; Behr et al. 2014, 69–70). (All bracteates and their dies will be referred to by their "IK" catalogue numbers in the *Ikonographischer Katalog* initiated by Karl Hauck and colleagues, continued in Heizmann and Axboe 2011.) The Billingford die is unusual and could not have functioned like the other three dies enumerated above, thus reinforcing the supposition that not all bracteates were made by the same techniques.

Now that a few copper alloy dies have been discovered, it has become routine to assume that all Migration Period

Figure 1. Fuzzy lines suggest made against a wooden die. Bracteate from Tuvasgården, Halland (IK 356), 2.78cm diameter. Statens Historiska Museum inv. 2989. Photo: Bengt A. Lindberg. CC-BY.

gold bracteates must have been made with similar cast-metal matrix dies; however, following close inspection of the objects, it appears likely that not all bracteate dies were made of the same material or by the same method. Already in the late nineteenth century, Salin (1895, 29) proposed two types of dies, metal and perhaps wood. Use of alternate die materials was debated by Morten Axboe and Birgit Arrhenius (1982) more than a generation ago, before any metal dies were discovered. Arrhenius (1975, 102–7) presented evidence for the use of clay to copy images from existing bracteate models, which would result in slightly minimized results due to shrinkage of the fired ceramic body. Although her theory did not receive much traction, it is likely that some anomalous bracteates may have been pressed with dies made from materials besides metal, including wood and ivory, which would have been more available and more easily worked into a bracteate form than metal. Axboe identified impressions on the obverse of several bracteates (Axboe 1982, 21–23, Appendix III, 58–59) that may reflect the splintering and fraying of fibers, perhaps resulting from non-metallic dies. Fine "hairy" lines on the gold surface of a bracteate from Tuvasgården, Halland (IK 356) are easily observable, and this piece (Figure 1) is one of the primary examples raised by Axboe as evidence of fibrous dies (Axboe and Arrhenius 1982, 306). Pesch (2007, 326) considers this bracteate a bastard member of the Formula Family *F2,a* due to its unusual Type F bracteate imagery, which perhaps was misconstrued by the artist. (The lower case "a" after a FF number indicates that Pesch deems that bracteate a bastard member of the respective FF group.) For both iconographic and technical reasons I regard the Tuvasgården bracteate as a rogue bracteate. Axboe (1982, 58–59) describes visible fibrous lines on numerous additional bracteates, including examples from Espelund, Småland (IK 49) and Gyland, Vest-Agder (IK 67; FF C10,a), both which Pesch includes as bastard examples of FF C9,a and FF C10,a, respectively. While the find locations of these pieces are not remote in the context of the distribution of all bracteates, it is notable that both lie on the periphery of their corresponding Formula Families, as geographic outliers, a feature that is common to many bastard bracteates. In addition, the Espelund bracteate has an unusual loop with large-diameter applied wire which is placed nearly 90 degrees clockwise from the top of the person's head. While applied filigree wire routinely occurs on de luxe loops (Axboe 1982, 36), it is less common on simpler bracteates. Thus, in many respects, the Espelund piece is a rogue bracteate. We may question why a bracteate-maker might use a wood or ivory matrix. I propose that some craftworkers, such as those who made the bastard Espelund and Gyland pieces, may have made objects related to pieces with standard iconography but avoided the requirements of the complex technology of casting. Such examples may have been made where the technology for producing bronze dies was not available.

Experimental archaeology offers opportunities to try to reproduce early medieval metal techniques and thus contribute to our understanding of how certain techniques were carried out in antiquity and the early medieval period. Yet, modern experiments to attempt to reproduce early production techniques often have been criticized, as Arrhenius (1975, 104) complained that Mogens B. Mackeprang with William Larsen (1952, 96) used an anachronistic sand form for casting, an invention that was not used in Europe before the late medieval period. After the discovery of the die from Postgården (IK 572), use of deep, cylindrical dies instead of the newly found flattened example could be critiqued. However, the taller, cylindrical Morley die (IK 637) found in 2007 redeemed Mackeprang and Larsen for their choice. Experimentation proceeds iteratively. Through the years, I have worked with several smiths to try to replicate techniques used in producing Migration Period bracteates, and my first-hand experience at these processes may shed some light on the conditions and mentality that resulted in

unusual approaches to making objects.

The first bracteate-production experiments in which I was involved were carried out by a goldsmith who was accomplished at wire-work but did not have the ability to cast a die. Therefore, our trials focused on making wire for the edge rim, a suspension loop, and the border zones of the disk. Our goal was not to produce an ersatz bracteate but rather to investigate several stages in the production of such work. We spent time making appropriate tools and materials, including punch tools for the border zone of the bracteates, wire for the edge rim, an elaborate suspension loop, and solder to assemble the work. We mounted a glass setting in the center of the pendant since we had no die with which to stamp the central field of the piece, so the pendant we produced, strictly speaking, is not a bracteate (Wicker 2011, 40). Later, I collaborated in experiments with a team of metal smiths to produce and then strike a die. We experimented with various combinations of metals for the bronze and tried striking numerous bracteates from the resulting die with cloth and leather padding. Each of these trials had a specific, reachable goal. In a previous publication, I reported on a true one-sided bracteate that colleagues made for me many years ago (Wicker 2011, 35). They did not have the means to cast a metal die, so they improvised, carving a die in wood and then painstakingly pressing the obverse of the thin gold into the grooves of the wooden die. Using this non-standard method to produce a bracteate could not take advantage of the possibilities of stamping multiples with a metal die.

Despite technical limitations and lack of pertinent skills, the maker persisted. The pitfalls encountered in experimentation helped us appreciate the technical requirements for bracteate manufacture and recognize variance in Migration Period pieces; consequently, when unusual technical features are discernible on a bracteate, I propose that rogue die media and stamping methods should be considered as possible explanations for anomalies.

Some pendants found with bracteates depart entirely from one-sided bracteate stamping methods, and these specimens do not qualify as either bastard or rogue. Two unusual disks found in Sweden display bracteate-type imagery; however, rather than being stamped in true bracteate technique, designs were engraved lightly into the surface of the metal. Both of these objects were found with actual bracteates, at Djurgårdsäng, Västergötland (IK 418 and IK 419), and at Vä, Scania (IK 202 and IK 203). The Djurgårdsäng disk (Figure 2) exhibits an anomalous image and has been assigned a unique number in Hauck's corpus, IK 234, whereas the engraved piece from Vä is a close copy of Vä (IK 203). Pesch (2007, 176) includes it in her Formula Family C6. These examples could either be expedient imitations of existing bracteates, executed more easily than by preparation of a die with which to stamp a disk, or they could be accomplished preliminary sketches for designing bracteate images. Since both pieces were discovered in locations that have yielded finds of actual bracteates and that may have been areas important for bracteate production (Pesch 2011, 244, map), I tend toward the second explanation. Such unusual finds challenge us to consider reasons for their production.

Wire rims and suspension loops

Besides unusual dies, other non-standard bracteate features include atypical methods to make and attach suspension loops and wire edge rims, or alternatively, the complete absence of an applied rim. Additions can be decorative as well as functional, and they were attached after the flan had been struck from a die. An edge rim helps to strengthen a bracteate and deter, if not prevent, bending of the thin gold disk. The loop functions as a practical method by which to suspend a bracteate to be worn as a pendant. It often hides the overlapping of the two ends of an edge wire that curves around the circumference of the disk. Two ways to attach edge wires were commonly used. One method is to attach a circlet of wire with solder onto the top of the flan so that the wire sits on the surface of the piece and is entirely or nearly invisible from the reverse; the alternative is to solder the wire perpendicularly to the outer rim of the disk so that it is equally visible both from the obverse and the reverse of the bracteate.

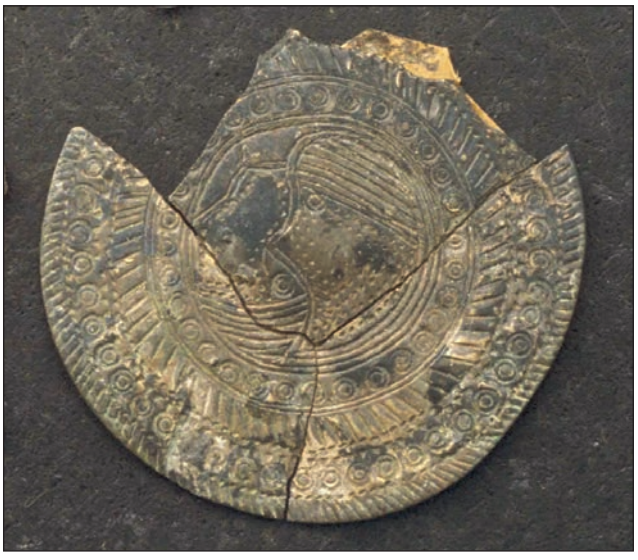

Figure 2. Engraved disk (not a bracteate) from Djurgårdsäng, Västergötland (IK 234), 4.0cm diameter. Statens Historiska Museum inv. 6563. Photo: Ulf Bruxe. CC-BY.

Figure 3. No rim on bracteate from Öland (IK 134), 1.86cm diameter. Pesch: Formula Family C14,a (bastard). Statens Historiska Museum inv. 4562. Photo: Ulf Bruxe. CC-BY.

Figure 4. Loop formed from part of the disk turned back on itself. Bracteate from Burge, Gotland (IK 365.3), 2.73 cm diameter. Statens Historiska Museum inv. 2617. Photo: Ulf Bruxe. CC-BY.

Application of a wire edge rim was standard in the areas of bracteate distribution in southern Scandinavia, especially on large, embellished bracteates. In a few cases, the wire may have been removed, whether pulled off forcibly or detached and lost due to gradual wear and tear; however, if remains of solder are not apparent, it can be difficult to ascertain whether a wire rim originally had been present. Some bracteates apparently never had an edge wire, for example, a small-diameter bracteate from Öland (IK 134) (Figure 3), where the image on the disk was trimmed very close to the outer edge, leaving no room for concentric circles of decoration or to apply a wire. Many Migration Period bracteates found on Gotland share the same features of the small, tightly trimmed flan lacking an edge rim, which may owe to the presence of Roman coins on the island (Lamm and Axboe 1989, 467–68, 475). Similarly, wire rims were not always customary on examples found in England and the Continent, all regions that were peripheral to the main bracteate areas, where small diameter disks are common (see below) and anomalous, rogue techniques occurred. Some bracteates designated by Pesch as bastard varieties of Formula Families—for instance examples from Kydland, Rogaland (IK 460, FF D3,a) and Achlum, Friesland (IK 405, FF D10,a)—lack edge wires, which can be considered a rogue characteristic.

The modern rogue bracteate made by my colleagues with a wooden die had no wire edge rim, apparently because its makers did not have the ability to produce or obtain appropriate wire to encircle the rim of the disk. In general, large standard bracteates in the central geographic area of bracteate distribution rarely lack an edge wire. Accordingly, a set of large die-identical bracteates (IK 594) without provenance that display typical iconography and multiple punched border zones but lack wire edge rims seems peculiar. This group surfaced on the antiquities market in the early 2000s, with one purchased by the Metropolitan Museum of Art (Holcomb 2002, inv. 2001.583) and the other four apparently now in private collections. Pesch (2017) discusses this set and others that have surfaced in recent decades, warning that they may be modern imitations or forgeries.

After the bracteate disk was struck and after the edge wire was attached to it, then a suspension loop was added to the piece. While standard loops are simple or embellished cylinders or tubes (see Figures 1 and 2), there are several rogue options for alternate methods to produce a loop. One alternate loop variety avoided the application of additional pieces of metal and was shaped by bending a portion of the bracteate over itself, as seen on a bracteate from Burge, Gotland (IK 365.4, Figure 4). Another loop type has a flattened tab that extends onto the reverse of the bracteate, as from Hjørring (IK 83). The appearance of a tab-attachment may not be as elegant as the typical cylindrical loop, but it is strong and serviceable, although an unusual, rogue choice to enable suspension.

Figure 5. Loop fixed into place with a pin. Bracteate from Söderby, Uppland (IK 176), 3.88cm diameter. Statens Historiska Museum inv. 5802:A2. Photo: Christer Åhlin. CC-BY.

My colleagues who made the modern rogue bracteate created a suspension loop with tabs that extend over both the obverse and reverse of the disk. The resulting loop was then secured into place through the bracteate with a pin or small nail, which allows the loop to pivot in relation to the disk. This type of loop attachment, with either one pin (allowing pivoting) or two pins (which stabilize the loop and prevent pivoting), is known on a few Migration Period bracteates, including die duplicates from Söderby, Uppland (IK 176) that display both one nail (Figure 5) and two nails. Various unusual bracteates display a flat-tabbed loop, as from Sablonnière, Ile-de-France (IK 398), and a pinned-loop, as from Schretzheim, Bavaria (IK 500). Notably, rogue bracteates with a tab-style attachment have been found in the geographical peripheries of the overall bracteate find distribution—in Uppland, a prominent center but well north of the largest area of bracteate distribution, and in France and Germany. These alternate methods to attach suspension loops to bracteate disks require fewer complex techniques than producing small cylindrical tubes of gold and therefore could be created with simple tools that local smiths may have had available.

Physical characteristics and iconographic distinctions of rogue bracteates

Besides unusual dies, rims, and loops, additional rogue details include non-standard materials and dimensions, as well as iconographic variations. While most of the over one thousand extant bracteates found in Scandinavia and spread across Europe are made of gold, some rogue pieces were made of other metals, namely silver and copper alloys. Although numerous gold bracteates have been discovered in England, several rogue examples in other metals also have been found there (Behr 2010, Behr et al. 2014). In addition, a broken gilt silver bracteate was discovered in a grave at Schönebeck, Saxony-Anhalt (IK 497). This small diameter (2.42cm) bracteate cannot be weighed accurately since it was encased to protect the fragments of this broken disk. The shift to other metals may testify to a restriction of access to gold, as also indicated by the well-documented physical

distinction that bracteates found in Central Europe consistently have smaller diameters and consequently weigh less than Scandinavian examples (Axboe and Hauck 1985, 98–102). These anomalous, rogue small and lightweight bracteates insinuate that the supply of gold was insufficient to meet the desire for golden pendants, so craft workers could respond by limiting the diameter of the disks, restricting the number of concentric rings of punched border zones, trimming the disks very closely, and shifting to alternate metals rather than gold.

Various Late Roman medallions appear to have inspired standard bracteate Types A, B, and C, whereas the imagery of the Type D examples reflects familiarity with Scandinavian animal styles as used on other objects including fibulae and horse-trappings. Some departures from the standard A to D Scandinavian-type bracteate iconography are characteristic of both bastard and rogue bracteates. The bastard variations of Formula Family groups classified by Pesh (2007, 287) emulate standard bracteate imagery but diverge from basic iconographic types in various ways. Pesch notes that there are bastard variations of Type D bracteates in which animal style motifs might have been misunderstood, especially in locations far from the Scandinavian homelands, for instance, examples from the FF D10, a group from Achlum, Friesland (IK 405,1) and East Leake, Nottinghamshire (IK 601). Pesch also describes the copper alloy matrix die found at Billingford, Norfolk (IK 589) as a member of this same bastard group, in which the animal parts are depicted as disconnected and nearly disintegrated.

Occasionally, Pesch's bastard members of Formula Families, defined iconographically, intersect with what I have called rogue bracteates based more on technical and physical characteristics than on iconography. Axboe (2017, 143) refers figuratively to designs "at the edge" of recognizable Formula Families. He distinguishes bracteates that may be considered "second-rate" or "degenerate" from those that may depart from well-established iconographic types but are iconographically productive, leading the way to new image types (Axboe 2017, 152). However, he does not offer a list of all those he considers second-rate. I piggy-back on this mention of odd bracteates; when the iconographic type becomes obscured or unreadable, even the motifs can be considered rogue.

Central places and the distribution of rogue bracteates

Large numbers of standard Migration Period gold bracteates may have been produced in workshops located in so-called "central places", which were important centers often located in recognized navigable coastal or riverine regions. Bracteate dies most likely were initiated and manufactured in workshops at such locations, as proposed by Pesch (2007, 355, map), where dies could have been made under strict guidance and control. She notes that bracteates from various FF groups rarely have the same distribution, and in fact, most of these groups are centered around and near conjectured central places. In these locations, a standard technology of stamping gold disks and their multiples from cast bronze dies may have been employed. We can hypothesize from a workshop point of view that many or most standard gold bracteates and their multiples likely were stamped in the same central places where the dies had been made, although dies also could have been transported to satellite workshops. Pesch (2007, 349) demonstrates that bracteates she assigns to most Formula Families have distinct and only somewhat overlapping distribution areas, reflecting various communication networks, some wider and some narrower. The standard models that form the foundation for the Formula Families of bracteates stimulated the production of closely related pieces within geographic regions. Many of these bracteates subsequently may have been distributed to secondary satellite locales by trade, gifting, or other means, where they inspired further interactions—both bastard and rogue pieces—that reflected the technology and materials available. Beyond the central places, bracteates often were copied, adapted, and interpolated with relative freedom, sometimes exhibiting misunderstandings and improvisation of both iconography and techniques in such locations.

Many anomalous bastard and rogue bracteates have been discovered at some distance from conjectural central places, in areas peripheral to the main distribution of established FF types, sometimes including somewhat remote and marginal inland regions. This does not mean that all bastard bracteates were discovered in remote places. Rather, an examination of Pesch's FF maps reveals that find spots of bastard pieces often lie beyond the locations of the standard examples for several Formula Families (see Pesch 2007, maps B1, B3, B4, C2, C5, C9, C10, C11, C12, C 14, C15, C16 and D10). Each of these maps indicates that FF bastard bracteates were distributed geographically beyond the central concentration of the associated standard groups. For instance, Map C10 (Pesch 2007, 198) shows dispersal across western Sweden with bastard outliers on Scania, Öland, and Jutland, as well as along the southeastern coast of Norway. Another example is Map C11 (Pesch 2007, 207), which reveals a coastal Norwegian spread with outliers extending into deep valleys. In some of these cases, bastard examples also display rogue technical details.

Whereas die duplicates are often unearthed together, attesting to bracteate sets that did not get dispersed, bastard pieces tend to be found individually rather than together with multiples. Perhaps they were produced as lone examples due to irreproducible technologies (including wooden dies) or were circulated and then discovered as singletons as due to accidents of survival. Bearing in mind that our distribution maps show where bracteates were found, not where they were made, most bracteates—whether duplicates or solitary products—likely remained close to where they were produced. Finds of die-linked bracteates, separated from each other and then scattered widely and individually, are informative about long-distance trade and likely exogamy (Andrén 1991; Arrhenius 1992; Behr 2007; Wicker 2019), although they also may testify to the distribution of dies, reflecting that die-identical bracteates could be struck in various locations. In any case, discoveries of die duplicates in separate locations are exceptional, and any bracteates, whether standard, bastard, or rogue, may have stimulated the production of closely related pieces whether at workshops at close or distant locations. While standard bracteates of iconographic types belonging to various Formula Families were likely made in central places where iconography, gold, and skills could be regulated and strictly controlled by an organizational structure, some rogue pieces may have been made—perhaps even covertly—by smiths managing the best they could with the materials and knowledge they had available. Besides considering where standard, bastard, and rogue bracteates were made, we should consider why they were made, for whom they were produced, and whether they were used differently in central places or in locations on the fringes of the distribution of established FF types.

Use of bracteates, whether "de luxe", standard, bastard, or rogue

Bracteates must have been seen and appreciated, perhaps in rituals in the halls and in the context of funerals—even if from a great distance, but close contact with these objects necessarily must have been limited to the makers, the patrons, and the wearers. The largest bracteates with multiple border zones and decorative loops may have been commissioned and used differently than the irregular pieces I have discussed here. While impressive bracteates may have been given publicly as gifts, awards, or honors, more modest examples (even though all gold jewelry must have been stunning) may have been hidden under clothing when worn as an amulet around the neck (Wicker 2020, 366). Some of these examples may have had insufficient loops that allowed the bracteate to fail and consequently fall to the ground. Since we lack sound find contexts for numerous bracteates, we can only conjecture about how they arrived at their locations in the earth. The most spectacular bracteates may have been heirlooms placed in graves or gathered as hoards, while simpler ones, including rogue bracteates, more likely may be discovered as single finds, whether during agricultural work or construction, or by metal-detecting—which might indicate settlement debris.

It is difficult to imagine that a patron would specifically have ordered a rogue bracteate to be made, but a client might accept an odd example or even a defective piece if standard examples were unavailable when the supply of bracteates could not meet the demand for these objects. As we try to understand the instigation for why rogue bracteates were made, we can imagine a metalworker who viewed a magnificent bracteate worn by a woman or displayed in a ritual occurring in a central place who then tried to reproduce the glittering object from memory upon return to the craftworker's home place. This inventive craftworker may not have had appropriate materials, tools, and skills to produce a high-quality piece or even a standard bracteate. However, someone—presumably either the smith or a patron—wanted a bracteate even though lacking the wherewithal to produce one by traditional methods and materials. Some goldsmiths lacked sufficient skill whereas others lacked resources; undoubtedly, some artisans were more skilled than others, and some did not have access to bronze or gold. If metalworkers did not have command of all the necessary technologies to cast a die, did not have appropriate materials, or were not familiar with the conventional iconographic subject matter, they may have improvised. Rogue bracteates reflect unorthodox solutions to the construction details of dies, loops, edge wires, materials, and even iconographic formulas that may have been carried out by makers who did not work through customary channels. Although some viewers of these objects may disparage these smiths as hacks who perhaps displayed excessive, self-assured hubris in the face of limitations, with empathy we can regard them as inventive and creative, devising new techniques of production and displaying independence in iconography.

Weighing all the variables of iconographic and technical details, along with find contexts, workshop identifications, and chronology is a multivariate challenge. The present essay is a case study proposing a nomenclature to convey the significance of technically "different" bracteates. A larger planned comprehensive study will enumerate possible rogue pieces and take into account various find contexts (graves, hoards, settlement finds) as well as

the chronology and even iconography of the rogue pieces. Whether "de luxe" or rogue, all bracteates must indeed have been highly regarded objects that were made, used, and imitated in various ways across northern Europe. Those made by unusual techniques warrant a label by which we can refer to them.

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