Burying the Hatchet*

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Abstract

Why do people bury items with their dead? We provide a theory of grave goods as a mechanism to mitigate internal conflict. Where inheritance laws are ambiguous and low-cost mechanisms for dispute resolution do not exist, deliberately destroying wealth can prevent conflict over the redistribution of assets following a death. Rather than engage in costly infighting over inheritance, the parties agree to mutual destruction through a shared cultural practice of grave goods. We test our theory using evidence from saga era Vikings.

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1. Introduction

Most societies engage in the practice of grave goods, burying valuable items with their dead. The colloquial explanation of this practice historically refers to the nominal religious function grave goods play as items to be used in the afterlife or as gifts for the gods. More modern explanations address the psychological motivations behind the act. Solberg [2004], for example, argues that grave goods allows us to cope with, remember, and honor a passing. Alternatively, Taylor [1993], Walter [1999], and Williams [2001] suggest that the practice allows us to move on in life without a constant reminder of the deceased. Yet both the religious and psychological explanations leave much to be desired, particularly in their ability to address the time and locational variation in the practice.

Even if these explanations are true, a further puzzle exists. A wealthy society may be able to afford to honor the gods or grieve the dead through lavish graves, but why would any sufficiently poor society choose to destroy real resources when less expensive options are available? The Lober people of Ghana, for example, believe that simply displaying the good at the funeral is enough for the dead to take ownership. Even the Egyptians, notorious for their extravagant tombs, were content with cheap effigies throughout the Middle and New Kingdom periods (Härke [2014]). To address this puzzle, a set of rational choice theories place the high value of the foregone items at the center of their explanation, modeling grave goods as a form of conspicuous destruction.

Bradley’s [1982] potlatch theory suggests that the deliberate destruction of wealth can display power and enhance one’s social status. Whereas gifts given during a traditional potlatch feast can be cancelled out by counter gifts, the conspicuous destruction of grave goods cannot. Opulent graves, more so than generous feasts, built and displayed social status. Leeson’s [2014] theory instead frames wealth destruction as a mechanism to enforce property rights against external threats, building on Allen’s [2002] recognition that reducing the value of an asset can reduce the cost of enforcement.1 Conspicuous destruction reduces the expected payoff to a potential attacker, deterring external threats and protecting the wealth that remains.2

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1 Leeson [2014: 139] developed his theory to explain human sacrifice as practiced by the Konds in Eastern India, yet in doing so provides a theory broad enough to explain a range of wealth-destroying behaviors including “why persons in ancient societies expended inordinate resources building monumental tombs, such as pyramids; and why these same persons buried their most valuable goods with the dead”.

2 A related example of Leeson’s external deterrence theory can be seen in Scott’s [2011] exploration of the peoples of Zomia who intentionally suppress their wealth to deter the state from interfering in their community.
Compared to the religious or psychological explanations, conspicuous destruction theories address the puzzle of why people destroyed real wealth and provide an explanation for the variation we see in the practice, allowing us to adjudicate between the different theories, difficult though it may be (see Leeson and Harris [2018]). Whereas grief is a constant, social status and external threats are not. If the social structures of a society are rigid, there is little purpose in destroying wealth to display and enhance status. If the potlatch theory was correct, individuals and societies which lack the prospect of social mobility would not engage in the practice of grave goods. Alternatively, for the deterrence theory, if there is no external threat there is little purpose in destroying wealth to disincentivize attacks. Still, relevant though these theories may be to many burial practices throughout history, there remain burial customs which seemingly do not fit neatly into the above explanations.

Consider the conditions and burial practices of the saga era Vikings in medieval Iceland. Most Vikings were poor farmers, yet they buried valuable goods like swords, horses, and boats, rather than cheap effigies. And even though real wealth was destroyed, it was not done conspicuously. Unlike the famous depictions of grave goods as lavish, public displays of wealth, the average Viking burial practice was modest and only observed by close friends and family (Price [2008]). The typical Viking grave mound was small, no more than “a shallow pit”, with no stone settings, markers, or memorial stones, and was “generally built with techniques and materials that didn’t require a lot of labor” (Short [2010]: 70). Finally, compared to the other raiding groups at the time, the Vikings were the external threat due to their superior ships and ability to raid well outside of their borders (Short [2010]). Conflict or raids between different groups within Iceland was possible, but the Icelandic institutions of blood-feuding and outlawry largely prevented such intergroup conflict (Friedman [2019]).

To explain the phenomenon of Viking grave goods, we provide a theory of wealth destruction as a mechanism to mitigate internal conflict—conflict between codependent relatives rather than warring clans. Our theory is simple: where inheritance laws are ambiguous and low-cost mechanisms for dispute resolution do not exist, deliberately destroying wealth can prevent

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3 We consider a time period roughly between the late 8th century to the early 12th, though the practice of grave goods ended in Iceland by the beginning of the 11th century (Leifsson [2018]). Our primary focus is on Icelandic Vikings as “[m]ore is known about laws and legal procedures in Iceland than in other Viking lands” (Short [2010]: 25). However, as we discuss below, our data expands to Viking graves outside of Iceland.

4 Though as Geloso and Leeson [forthcoming] suggest, perhaps not as poor as we are led to believe despite their anarchistic governance structure.
conflict over the redistribution of assets following a death. Rather than engage in costly infighting over inheritance, the parties agree to mutual destruction through a shared cultural practice of grave goods. In order to “bury the hatchet”\(^5\) and avoid conflict, the Vikings chose to literally bury their father’s hatchet.

Evidence from a sample of 261 Viking graves is consistent with the predictions from our theory. Our theory also helps explain the sudden decline of Viking grave goods in the 11\(^{th}\) century. In section 2 we detail the institutional features of Viking society, highlighting the ambiguous nature of their inheritance laws and the absence of low-cost mechanisms for resolving disputes given their anarchistic governance structure. We then lay out the predictions of our theory related to what is buried, who buries goods, and when the practice ends. Section 3 describes our data and evidences our predictions. Section 4 concludes.

2. Burying the Hatchet

When a Viking died, a burial feast was held in their honor. The feast had to be held within seven days of the death and it is there that the deceased’s heirs would settle any outstanding debts before laying the body to rest. Only after the debts were settled would the heirs be able divide up what remained of their inheritance (Dougherty [2013]). Inheritance in Viking society was a cluttered affair. Viking custom allowed for property to be divided amongst multiple heirs, including spouses, children, siblings, and extended family members (Sawyer [2008]). Sons tended to receive a larger share of the inheritance, but it was not uncommon for women to inherit a significant amount (Spatacean [2006]).\(^6\) With no set rules as to who should receive what, inheritance had to be negotiated.

Presumably negotiation within a family was low cost, but this was not always the case. The Viking family unit consisted not just of the “husband, wife, and children, but other couples related by blood or marriage”, all of whom worked the same farm and lived in the same longhouse (Short [2010]: 74). Many of the siblings “had diverse backgrounds and differing parents” due to frequent deaths and the need for “the remaining spouse to remarry in order to keep the farm running” (Short [2010]: 67). And while bigamy was technically prohibited within Iceland, a second wife in Norway was allowed. If both marriages resulted in children, both sets of children had a right to claim

\(^5\) “Bury the hatchet” is an American English idiom meaning to end a dispute and make peace with someone.

\(^6\) The wealthiest Viking grave found to date belonged to a woman.
inheritance. Illegitimate children had no such right, but they could be gifted property with the consent of the legitimate ones. Divorce was also permitted and could be initiated by either partner. However, attempts to “straighten out the finances between the two families could result in blood feuds that lasted for generations” (Short [2010]: 67).

Costly negotiation over the distribution of inheritance does not imply that destruction is the best alternative. Why destroy the assets rather than sell them and distribute the funds equally? The simple answer is that the Vikings could not easily sell their items. Except for in a few coastal trading ports, a stable, liquid currency did not exist. Minted silver coinage was not widespread in the Viking world until after 1000 C.E. and the Icelandic cloth currency, wadmal, didn’t come into use until around the late 11th century or early 12th century (Williams and Graham-Campbell [2010]; Smith [2014]). The typical Viking might have had a little silver “cash on hand,” but most of the economy was structured on gift-giving and barter (Bell [2009]). Most of the wealth to be inherited would have been illiquid physical assets, each with a relatively high value that could differ significantly from the other items left behind and be valued differently by the potential heirs. This means that even if a fair distribution of value was agreed upon, it may be physically impossible to achieve with the bequeathed assets.

Imagine two brothers divvying up the assets of their recently deceased father. For simplicity's sake, assume they mutually agree upon the value of each item. The father leaves them a fine sword valued at 60 law-ounces of silver, a horse valued at 20 law-ounces, and various amounts of lower value items like coins, food, and jewelry with a combined value of 10 law-ounces of silver. For obvious reasons consider the sword and the horse to be indivisible, but the jewelry, food, and coins to be liquid. Even if the brothers wished to divide the inheritance as equally as possible, there would still be a disparity of at least 30 law-ounces between them, or just

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7 There is some uncertainty in the literature regarding the average price of a sword which is compounded by the wide variance in their quality. The Laxdæla saga recounts a King gifting a sword worth half a mark of gold. Following Dennis et al. [1980], a mark was a unit of weight equivalent to eight ounces. One ounce of gold was worth 60 law-ounces of silver so half a mark of gold would be valued at 240 law-ounces—about 30 times the average yearly wage (see fn. 8). Given this was the sword of a king it likely sets the upper bound on sword prices. For a more common price, a legal decree from Northern Germany during the early Viking-era sets the price of a sword without a scabbard to be worth three cows and a sword with a scabbard to be worth seven cows, with a cow being valued at 20 law-ounces (Beyerle & Buchner [1997]). A similar document from the Netherlands during the same period assesses the price of a sword to be the value of three and a half cows (Sohm [1925]). Assuming the relative prices were fairly similar in Scandinavia this would put the standard value of a sword at between 60-140 law-ounces depending on the presence of an ornamented scabbard.
under four years of wages for an average male Icelander. A potential solution would be for one brother to pay into the pot to equalize the values, yet this too is made difficult by the illiquid nature of Viking wealth. Unless one brother had the equivalent of 15 law-ounces of silver on hand—around two years of income or about the value of 5 sheep—he has to return home, gather his flock and other goods, and return to negotiate, all while hoping his brother hasn’t ran off with the pot. Further, this solution assumes the brother is wealthy enough to pay that amount up front, which most Vikings were not. And beyond debt slavery, robust capital markets did not yet exist.

The potential value-disparity problem becomes even more complex if we add back in the multitude of potential heirs. Of course, there are plenty of scenarios where the math did add up and an agreed upon distribution of the illiquid assets was possible. Accordingly, not all Vikings were buried with grave goods and it was not uncommon for certain items to be passed down for several generations before being laid to rest (Raffield [2014]).

Undoubtedly though, disputes over inheritance will arise. How are these to be resolved? Likely not by recourse to a court. Medieval Iceland was founded on an anarchic clan system—the King of Norway replaced by an assembly of locals. The region was separated into four quarters each with nine chieftains (goðar). Disputes within a quarter were settled at a regional assembly held in spring known as várþing. For unsettled disputes at the regional level or disputes between those in different regions, the chieftains were to argue the case at the Quarter Courts (fjórðungsdómur) during the annual national assembly, the Althing (Alþing) (Short [2010]; see also Friedman [1979], [2019]). All cases brought to the Quarter Courts were judged as civil cases by thirty-six jurors. A case with less than thirty jurors in agreement was dismissed; deadlock was frequent (Brink [2002]). Yet even if the case was ruled in your favor, enforcement remained an “entirely a private affair” (Friedman [1979]: 400). The anarchistic Vikings had a formal judicial and legislative system but lacked an executive. A dispute over inheritance could presumably make it through the lengthy process to receive a verdict by the quarter courts, but there would likely be little point. The victorious family member would still have to negotiate a mutually agreeable

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8 Friedman [1979] attempts to measure a year’s wage for an average Icelander c. 1200 C.E. and arrives at 8 law-ounces of silver.
9 The Gragas provide a list of standard prices for common goods of the time. A new iron cauldron was listed as being worth 15 law-ounces, three scythes cost two law-ounces, a cow was valued at 20 law-ounces, horses were valued at the same price as a cow, and six sheep were considered equal to one cow. See Dennis et al. [1980].
settlement with the opposing party or violently enforce their claim—which are the two primary options to begin with.

Violence either during the initial stage of the dispute or to enforce the court’s verdict was always an option. However, while the Vikings had a reputation for violence due to their raiding prowess abroad, there were different standards for violence at home. As Short ([2010]: 52) notes, “Within Icelandic society, custom and law served to restrain violence, but no such restrictions applied outside of their homeland.” One such custom that restrained violence, but could end up equally as bloody should it occur, was the blood feud, a form of tit-for-tat violence and revenge following an initial wronging. Tellingly, the Icelandic Vikings had seventeen words to describe different types of feuds and vendettas (Byock [2003]). While a full-fledged blood feud was rare—meaning the system largely worked to prevent escalating violence—major disputes could end in a trigger strategy of conflict lasting generations. A more likely outcome should an agreement not be reached and the losing party fail to comply is a sentence of outlawry. Once declared an outlaw, the losing party “could be killed without penalty by anyone” (Short [2010]: 29). The costs of blood feuds or outlawry are amplified with intrafamily conflict as either option severely altered the family’s productive ability to ‘keep the farm running’—family members have strong incentives to avoid feuds and vendettas as they are “codependent” “residual units” who recognize the “need for moderation in order to live together” (Byock [2003]: 233). In the event of a family feud, not only would the loser lose, but the winner would too.

The cost of a generational feud or declaring a literal death sentence on your brother likely outweighed the divergent value between who should get the sword and who should get the horse. In other words, the existing mechanism for dispute resolution was too costly to utilize effectively for intrafamily conflict over inheritance. Still, the problem remains. Who should get the sword? Perhaps no one. Without clear inheritance rules easily enforced, bequeathing indivisible and illiquid assets to multiple parties is likely to cause conflict. If people are unwilling to risk

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10 See Volckart [2004] and Leeson [2009], [2013] for discussions on blood feuds as mechanisms to enforce law in the absence of a centralized government.

11 The typical punishment assigned by the court was a fine, even for manslaughter. However, if the guilty refused to pay, the victim could go back to court to have them declared an outlaw (Friedman [1979]).

12 Short ([2010]: 29) describes the sentence of full outlawry as effectively being banished from society. “[An outlaw] was no longer protected by law, his property was stripped from him. He could not be fed or sheltered or assisted. Whether at home or abroad, he could be killed without penalty by anyone… The sentence of full outlawry was effectively a death sentence”.
generational blood feuds, some other mechanism is needed to prevent this conflict. That mechanism, we argue, was the shared cultural practice of honoring their dead with grave goods.

2.1. Predictions

Our theory of grave goods as a relatively low-cost mechanism for dispute resolution can be contrasted with the potlatch and external conflict theories. The main point of difference between the theories relates to the central claim of a conspicuous destruction theory: what matters is the amount of wealth destroyed, not the type. Conspicuous destruction, either to prevent attacks or to gain social status, implies an indiscriminate destruction of wealth. In contrast, our theory suggests grave goods should primarily be indivisible items of high value likely to result in a dispute if bequeathed. As such, our central prediction relates to what should be buried.

Prediction 1: Grave goods should primarily consist of single, indivisible items. People may disagree about who should get more, but any negotiated distribution is possible with a liquid asset. Only indivisible and illiquid assets result in a disparity in value that cannot be easily negotiated. Because the redistribution of indivisible goods is more likely to invoke conflict, these goods will be buried more often than liquid assets. Grave goods should thus consist primarily of unique, high-value goods that are difficult to distribute rather than hordes of wealth like coins or multiples of one single type of good. The Vikings should bury ‘hatchets’, not silver.

Our second prediction relates to who should be found with grave goods and is in primary contrast with the potlatch explanation.

Prediction 2: Grave goods should be practiced by any person with property, regardless of their social status and prospects for social mobility. Any bequeathed property has to be redistributed and the redistribution of any indivisible and illiquid asset has the potential to result in conflict, regardless of who does the bequeathing. Grave goods should thus be practiced by all social groups with property and ambiguous inheritance rights. If a social group owns property but there is a clear line of succession if they were to die, they should not be found with grave goods. If a social group owns property but there is not a clear line of succession and inheritance claims are ambiguous, they should be found with grave goods regardless of their social status or prospects for social mobility as these latter groups still
face the problems of ambiguous inheritance even if they cannot improve their status through conspicuous destruction.

Our last core prediction relates to when the practice should cease to be practiced.

Prediction 3: *Grave goods should no longer be practiced once a low-cost alternative for settling disputes over inheritance becomes feasible.* Conflict over inheritance in Medieval Iceland primarily stems from two sources which raise the cost of negotiation: ambiguous inheritance laws and an inability to liquidate assets. Once these problems are solved, grave goods no longer serve their function. Grave goods should thus cease following the introduction of clear inheritance laws and a stable currency.

To test these predictions, we examine a sample of 261 recorded Viking graves. Additionally, we draw on the general literature about Viking burial practices where quantitative measures are unavailable. Our data are limited, as one might expect from graves over a thousand years old. Consequently, there are several implications of our theory that we are not able to test.

For example, we expect Vikings with more children to be buried more often with grave goods as an increase in the potential number of heirs can increase the difficulty of distributing indivisible items. Similarly, we believe we could explain the timing of why a sword passed down for generations gets buried when it does. Our theory also implies that grave goods should be practiced more in times of hardship than of plenty given the codependency of the parties involved raising the cost of potential conflict.\(^\text{13}\) Additionally, in contrast to the external deterrence hypothesis\(^\text{14}\), it’s plausible we would see fewer instances of grave goods following a larger positive shock (more bequeathed goods) as a great number of items of differing values could help achieve an agreed upon but physically difficult distribution. Nevertheless, given what we can observe, the evidence appears to fit better with our explanation than the other rational choice explanations.

3. Viking Grave Goods

Our data of Viking grave goods come from several sources. Each collects, reports, and remarks on separate attributes of the archeological finds fitting for their own purpose of investigation. For

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\(^{13}\) Randsborg [1980] found an increase in the quantity of grave goods in Viking-era Denmark following economic difficulty, but that is the best we could find on the topic.

\(^{14}\) A prediction of the external deterrence hypothesis that Leeson ([2014]: 148) similarly could not test is that communities should destroy more wealth following a larger positive shock.
example, several sources (e.g. Sikora [2003] and Stalsberg [2001]) specifically looked at graves containing boats, horses, or other specific goods. This likely means the graves of the wealthy are overrepresented since horses and boats required a high income to have and maintain. Nevertheless, these data are still useful as we are not looking for the absolute preponderance of any one good across all graves, but rather at the pattern of goods present in any one grave. Other sources (e.g. Anderson [1880]; Grieg [1940]; Fanning [1840]; Redknap [2000]; Richards [2004]; and Wilson [2008]) do not catalogue the small trinkets, food content, feast remains, or jewelry rigorously.

It should also be noted that the graves are over 1,000 years old, so the content that is recorded is only what has lasted the course of time. This could mean a greater number of easily divisible items were buried, but either left little evidence or were not recorded. There is no way to counter the effect of time, but evidence where sources did record the lesser items suggest hordes were uncommon.

Lastly, while our focus thus far has been on Icelandic Vikings, we also draw on archeological finds of Viking graves elsewhere in the region including Norway, Sweden, Russia, England, Wales, Scotland, Isle of Man, and Ireland. This allows us to extend beyond the few available Icelandic graves with detailed recorded content. Despite some differences, the immediate socio-cultural and economic conditions of Viking raiders in Northern Europe between 800 and 1100 C.E.\textsuperscript{15} were sufficiently similar to suppose the grave goods were left in response to the same incentives. Further, since Icelandic Viking graves tended to be less ostentatious than continental ones (see tables 2 and 3), we believe that the choice to extend our sample likely biases against our results as it could select for more conspicuous burying behavior. Nevertheless, we report our evidence for the entire sample, only graves found in Iceland, and all other non-Icelandic graves.

To compile our dataset, we first collected all statements of items found in a recorded grave. We then grouped these items into high-value and low-value goods based primarily on the estimated values in the \textit{Gragas} (see fn. 9) as compared to the average yearly income (see fn. 8). Our high-value goods include swords, horses, cows, boats, ships, slaves, and armor pieces (e.g. shields, helmets, and mail). Our low-value goods include items like small animals (e.g. dogs and sheep),

\textsuperscript{15} Following the unification of Norway under King Harold Fairhair, and the subsequent Christian monarchs more generally, the anarchistic features of Iceland particularly stand out. However, prior to 9\textsuperscript{th} century during the early Viking age, “there was no central authority in the other Scandinavian lands, either” (Short [2010]: 54). Similarly, as Williams and Graham-Campbell [2010] point out, these lands also did not extensively mint their own liquid currency until at least 1000 C.E.
small weapons (e.g. spears, knives, and hatchets), jewelry, and tools or personal items (e.g. hammers, sickles, riding gear, and combs). Coins were recorded as a separate category. Small, incomplete items such as beads or arrow heads were recorded but are excluded from our analysis. Summary statistics are reported in table 1. Table 2 reports the summary statistics for high-value grave goods and table 3 reports the summary statistics for low-value goods.

Table 1: Summary Statistics for Total Grave Goods

<table>
<thead>
<tr>
<th>Location</th>
<th>Number of Graves</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Max</th>
<th>Min</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>47</td>
<td>3.66</td>
<td>2.85</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>Iceland</td>
<td>77</td>
<td>4.19</td>
<td>3.78</td>
<td>16</td>
<td>1</td>
</tr>
<tr>
<td>Ireland</td>
<td>5</td>
<td>2.6</td>
<td>0.89</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Isle of Man</td>
<td>19</td>
<td>3.32</td>
<td>3.76</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>Norway</td>
<td>39</td>
<td>4.72</td>
<td>3.79</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>Russia</td>
<td>29</td>
<td>12.69</td>
<td>15.78</td>
<td>74</td>
<td>1</td>
</tr>
<tr>
<td>Scotland</td>
<td>41</td>
<td>4.44</td>
<td>2.78</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>Wales</td>
<td>4</td>
<td>1.5</td>
<td>0.58</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Non-Icelandic</td>
<td>184</td>
<td>5.36</td>
<td>7.53</td>
<td>74</td>
<td>0</td>
</tr>
<tr>
<td>All</td>
<td>261</td>
<td>5.02</td>
<td>6.66</td>
<td>74</td>
<td>0</td>
</tr>
</tbody>
</table>


Table 2: Summary Statistics for High-Value Grave Goods

<table>
<thead>
<tr>
<th>Location</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Max</th>
<th>Min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iceland</td>
<td>0.82</td>
<td>0.88</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Non-Icelandic</td>
<td>1.63</td>
<td>2.07</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>All</td>
<td>1.39</td>
<td>1.84</td>
<td>16</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 3: Summary Statistics for Low-Value Grave Goods

<table>
<thead>
<tr>
<th>Location</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Max</th>
<th>Min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iceland</td>
<td>3.38</td>
<td>3.30</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>Non-Icelandic</td>
<td>3.74</td>
<td>6.49</td>
<td>60</td>
<td>0</td>
</tr>
<tr>
<td>All</td>
<td>3.64</td>
<td>5.73</td>
<td>60</td>
<td>0</td>
</tr>
</tbody>
</table>
3.1. Hatchets, Not Silver

In contrast to either conspicuous destruction theory, we predict the Vikings will primarily bury high-value, indivisible goods rather than liquid assets or a multitude of one type of good. Over 70% of our sample contained at least one high-value item. The most common high-value item was a horse or a cow. The second most common was a sword—likely the most valuable item a Viking would own (Hayward [2013]). A sword was found in just over a third of the graves.

However, the more confirming evidence of our thesis has less to do with what was buried and more to do with what was not. With very few exceptions, even with a potential bias towards wealthier graves, hordes of goods were almost never found. Only 6.9% of graves contained more than one high-value good of a single type, such as two swords or two horses. From our entire sample, only 1.5% contained more than one sword. Of these, zero graves contained more than two swords. In Iceland, no graves contained more than one sword. The same holds for most of the other high-value goods. There were no graves in our sample with more than one ship, boat, or slave. Table 4 summarizes the presence of high-value goods.

Table 4: High-value Grave Goods (swords, horses, cows, boats, ships, armor pieces, and slaves)

<table>
<thead>
<tr>
<th>Location</th>
<th>Graves with at least one high-value good</th>
<th>Graves with more than one high-value good of a single type</th>
<th>Graves with at least one sword</th>
<th>Graves with more than one sword</th>
<th>Graves with at least one horse or one cow</th>
<th>Graves with more than one horse or one cow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iceland</td>
<td>45 (58.4%)</td>
<td>4 (5.2%)</td>
<td>10 (12.9%)</td>
<td>0 (0%)</td>
<td>37 (48.1%)</td>
<td>3 (3.9%)</td>
</tr>
<tr>
<td>Non-Iceland</td>
<td>142 (77.2%)</td>
<td>14 (7.6%)</td>
<td>77 (41.8%)</td>
<td>4 (2.2%)</td>
<td>65 (35.3%)</td>
<td>9 (4.9%)</td>
</tr>
<tr>
<td>All</td>
<td>187 (71.6%)</td>
<td>18 (6.9%)</td>
<td>88 (33.7%)</td>
<td>4 (1.5%)</td>
<td>102 (39.1%)</td>
<td>12 (4.6%)</td>
</tr>
</tbody>
</table>

While the low percentage of graves with more than one high-value item is consistent with our theory, it may instead simply reflect poverty—most Vikings simply didn’t own more than one

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16 Throughout their Bronze Age (1700-500 B.C.E.) and subsequent pre-Roman and Roman Iron Ages (500 B.C.E.-500 C.E.) the Norse practiced a similar, but functionally distinct practice known as hoarding (Bradley [1982]). Hoards contained large deposits of metalwork, either buried or thrown in bogs, which were continuously added to over time. Rarely has a body been found accompanying a hoard unit (Myrberg [2009]). Bradley [1982] considers hoards to be distinct from grave goods and suggests they were more likely utilized as a stash unit rather than an honorary burial practice. Our data and concern are limited to the investigation of items deposited in graves with bodies.
sword. However, if the conspicuous destruction theory was correct, it would still be beneficial to destroy large amounts of wealth by burying a lot of smaller items, including any currency they might have had. This is not what we observe. Table 5 summarizes the findings for low-value goods and coins. Just under 30% of the graves had more than one low-value item of a single type, which includes graves with multiples of really low-value goods like combs or drinking horns.

In Iceland, 20.8% of graves contained at least one item of jewelry. However, only five graves contained more than one jewelry of a single type—typically a pair of brooches. And while jewelry is often used to display status, this was likely not the case for the jewelry buried during this time period. As Short ([2010]: 123) notes “jewelry found in graves from saga-age Iceland tends to be crudely fashioned. Rather than being made of gold or silver, pieces tend to be made of copper alloys, gilded to give the appearance of something far richer. … Some of the jewelry found in Iceland shows evidence of having been repaired.” Poorly made and needing-repair faux-gold invokes images closer to family keepsakes than what was buried with the opulently displayed King Tut.

Table 5: Low-value grave goods (Small weapons, small animals, jewelry, personal items, tools)

<table>
<thead>
<tr>
<th>Location</th>
<th>Graves with more than one low-value good of a single type</th>
<th>Graves with more than one smaller weapon of a single type</th>
<th>Graves with more than one smaller animal of a single type</th>
<th>Graves with more than one jewelry of a single type</th>
<th>Graves with at least one personal item or tool of a single type</th>
<th>Graves with at least one coin</th>
<th>Graves with more than one coin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iceland</td>
<td>20 (26%)</td>
<td>4 (5.2%)</td>
<td>0 (0%)</td>
<td>5 (6.5%)</td>
<td>14 (18.2%)</td>
<td>2 (2.6%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Non-Iceland</td>
<td>52 (28.3%)</td>
<td>13 (7.1%)</td>
<td>1 (0.5%)</td>
<td>29 (15.8%)</td>
<td>27 (14.7%)</td>
<td>11 (6%)</td>
<td>5 (2.7%)</td>
</tr>
<tr>
<td>All</td>
<td>72 (27.6%)</td>
<td>17 (6.5%)</td>
<td>1 (0.4%)</td>
<td>34 (13%)</td>
<td>41 (15.7%)</td>
<td>13 (4.9%)</td>
<td>5 (1.9%)</td>
</tr>
</tbody>
</table>

The data show it was common to be buried with an animal (42.1% of all graves), but rare to be buried with multiple animals regardless of their type (5%). Other than an outlier grave in Russia which had a large number of horses and dogs and an outlier grave in Norway which had a large number of horses, if a grave had multiple animals, they were almost always of varying species rather than a single type. Only twelve graves had more than one animal of a single type of any
value. The only grave with more than one low-value animal of a single type was the outlier grave in Russia with six dogs.

Thirteen graves in the entire sample contained coins, only five of which contained more than one. The most amount of coins found in a grave was 27 in a grave in England. Another English grave had 23 coins. All other graves with coins had fewer than seven. The modal grave with coins only had one. In Iceland, two graves were found with a single coin each.

The evidence of the items buried in Viking graves suggest a trend towards high-value, indivisible items rather than a large number of goods of a singular type.

3.2. Social Mobility
Compared to other medieval societies, the social structure of the Icelandic Viking society was not rigidly set. As such, we cannot rule out the potlatch theory. However, while social mobility was possible, the opportunity was not equally distributed among all individuals. We use this variation to evidence our second prediction about who should be found with grave goods.

Traditional Norse society was composed of three broad social classes: Jarls (earls or lords), Karls (free tenants), and Thralls (slaves). The Icelandic settlers eschewed this hierarchy, replacing it with their own: free and not free. Yet even within this binary system there were distinctions. The highest class of free men was the goðar. The lowest class was the vagrant. In between were two other classes, free farmers and freed slaves. The ‘not free’ category was constituted by current slaves, but even this position was not completely static. Slaves could own personal property and had the ability to purchase their freedom, becoming a freed slave. Vagrants, though technically free, had even fewer rights than a slave. A slave could get married, and as the “property” of their owner had legal standing. A vagrant on the other hand, could not. Vagrants lacked a fixed abode, and without one could not be summoned to the proper court to face legal charges. Vagrant were legally unaccountable (Dougherty [2013]).

Our theory has a simple implication when it comes to social class: if the class lacked property or their property had a clear line of succession, they should not be found with grave goods. And this is what we find. Vagrants—"criminals, witches and other undesirable elements of society”—effectively lacked both and were buried without grave goods (Spatacean [2006]: 120).

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17 Vagrants technically could own property as free men; however, they could not marry. It was also legal for others to take their property or even castrate them without penalty (Short [2010]; Dougherty [2014]).
Slaves could own property, but they could not bequeath or inherit goods until they purchased their freedom. If a slave died a slave, their property would go to the master. Accordingly, slaves were also not buried with goods (Short [2010]). In fact, it was more probable a slave would end up as one of the “goods” buried. But these results alone are uninteresting as it’s also consistent with a potlatch explanation.

The problem for distinguishing between the potlatch theory and our theory is that social mobility for the most part accompanies property and inheritance rights. Slaves and vagrants, in addition to lacking property or inheritance, lacked social mobility, so from a potlatch perspective it is no surprise that they did not engage in the practice. The remaining classes had property and inheritance rights, and thus presumably social mobility so their practice of grave goods is also consistent with either theory. However, there were two groups for which social mobility was fairly limited despite their free status: freed slaves and women.

As a free man, a freed slave could own and leave property to their heirs. The sagas even tell stories of great and powerful families descending from those who were once slaves. However, for most freed slaves, “their status remained low” as “once tainted by slavery, no man’s honor could ever be spotless” (Short [2010]: 35). From our grave data, there is no definitive way to tell who was a freed slave or who lived their entire life free. The more lavish graves were likely not from freed slaves, but the poorer graves with only a single set of standard goods could have been. Even if we could distinguish between freed and free people, there is yet a further problem if we were to use this class distinction to adjudicate between the two theories: honor and status tended to be associated with the family’s name, not just the individual’s.\(^{18}\) Even if a freed slave’s mobility was severely limited, his children’s may not be, and so freed slaves may engage in grave goods to improve their family’s status rather than their own.\(^{19}\)

Women were generally treated with a higher level of respect in Iceland than in contemporary medieval societies, but the Icelandic society was still markedly patriarchal. Consider the social limitations placed on an Icelandic woman as described by Short ([2010]: 36):

\(^{18}\) A man’s honor and reputation were important in Viking society. It was also not just his: “A man of honor lifted his entire extended family’s reputation, while a dishonorable man shamed every branch of his family tree” (Short [2010]: 41)

\(^{19}\) This was particularly the case for the children of freed slaves in Iceland. Whereas in other Viking lands “it could take four generations to be free from the taint of slavery”, “the children of freed slaves were completely free in Iceland” (Short [2010]: 35).
Women could own property and even become wealthy; however, their social mobility was mostly tied to their husband. Their marriage was arranged between the husband and the woman’s father, more often for strategic alliance than anything else. The woman’s consent was not often sought or considered (Short [2010]: 65). A widowed woman could become an important landowner, but never a chieftain. A woman wealthy enough to own a goðorðd had to choose a male proxy to serve as the goði as they were legally prohibited from taking on this position themselves. Women were to “loo[k] inward, to the home and the family” while “men looked outward, to the farm and the community” (Short [2010]: 36). Women could have property and inherit, but their social mobility was limited.

Overall, there have been approximately half as many female burials found as male burials (Stalsberg [2001]); however, there is a surprising level of parity between the content found in male and female graves. In our data, of the 156 graves with an identified sex, 56 graves contained the remains of a female (8 of which were in Iceland). Women tended to be buried with more domestic items but were equally likely to be buried with riding gear, horses, boats, and slaves (Sikora [2003]). Related findings from Jesch [2006] also suggest women were buried with a similar value of grave goods as men. Of course, like with freed slaves, it’s plausible that burying your wife or mother with extravagant wealth was a way to build status for the family name. In other words, these results are also potentially consistent with the potlatch explanation. But consider one last social group: children.\footnote{\textsuperscript{21}}

\footnote{\textsuperscript{20} The goðorðd was the office of the goði. The office, along with its rights and responsibilities, could be shared by several people, but only one man could serve as goði for that area at the Althing. The holder of the goðorðd had the privilege of appointing judges, sitting on the legal assemblies, arbitrating disputes, and acting as a priest. Since in Iceland any freeman could choose which goði he wanted to follow, anyone wishing to hold the office of goðorðd had a strong incentive to act in the interest of his constituents and even offer financial reward for following him. In this sense, the office became a marketable property, with its own bundle of rights and responsibilities, that could be bought and sold, directly or indirectly.}

\footnote{\textsuperscript{21} Teenagers present a more difficult case. The ages 12 and 16 were significant thresholds of maturity according to the legal texts with the latter age likely signifying a full transition to adulthood (Callow [2006]). The evidence for teenage grave goods is also more inconclusive than for children. Only two well-stocked graves belonging to teenagers between the ages of 13-17 have been discovered.}

“The legal, governmental, and domestic authority of the society rested in male hands. By law, a woman was under the authority of her husband or father. She was prohibited from participating in most political or governmental activities. She could not be a goði [singular of goðar], a judge, or a witness, nor could she participate in a legal assembly. She had only limited freedom to dispose of property belonging to her.”
Children ‘owned’ very little and had very clear heirs in the case of early death—their parents. Free children and their family name also had social mobility. Our theory predicts that children would not be buried with any significant amount of grave goods as the probability of conflict over their possessions is very low. In contrast, if grave goods constitute status symbols for the family’s reputation then it makes just as much sense to invest in a deceased child’s grave as any other—perhaps even more so. Amongst the discovered Viking graves, there is no evidence that children under the age of 13 were ever buried with any significant grave goods beyond a few trivial toys and trinkets\textsuperscript{22} (Callow [2006]). In our data, only two graves in Iceland contained children, one of which was accompanied by an adult male. The grave for the single child contained only one good, a low-value knife. Similarly, for our entire sample, seven graves contained children, four of which were not accompanied by an adult’s remains. Of these four, two had only one low-value good and a third had just a single coin.

The evidence in this section is not definitive, but perhaps together it is suggestive. The social class which could not own property and had no heirs were not found with grave goods (vagrants). The social class which could own property but had a clear line of succession were also not found with grave goods (slaves). Those with ambiguous inheritance claims were found with grave goods, including those whose social mobility was limited (women, freed slaves). Most importantly, those with social mobility but whose death was unlikely to cause dispute due to the clear line of succession were not found with grave goods (children).

3.3. The End of Grave Goods
The end of Norse grave goods coincided with the introduction of Christianity to Scandinavia beginning in the mid-10\textsuperscript{th} century (Carver [2005]). In Iceland, the practice all but ended by the early 11\textsuperscript{th} century (Leifsson [2018]). Similar to the common explanation of the practice, the standard explanation of the decline relates directly to the change in religious beliefs. Pagan-style burial mounds were replaced by Christian graves as pagan beliefs were replaced by Christian ones. Yet the presence of transitional 10\textsuperscript{th} century burial mounds containing Christian artifacts suggest the early Viking Christians had no theological objections to utilizing traditional burial practices with their new faith (Lund [2013]). Further, as Short ([2010]: 58) notes more generally, while

\textsuperscript{22}Toys in this era were often little more than roughly carved, simple wooden figures or even just plain unaltered animal bones and almost certainly had no significant commercial value (Callow [2006]).
“[s]ome of the pagan practices were replaced with sacraments of the church. … in some cases, Icelanders continued their accustomed practices well past the official conversion and past the end of the saga age.” What might’ve been more impactful than the change in beliefs is what Christianity eventually brought along with it. In particularly, we highlight two accompanying changes: the introduction of a stable currency and clear inheritance laws.

Elsewhere in Viking lands, the introduction of the new religion paralleled the transition from government by chieftainships to a centralized state monarchy, and with it a division of their kingdom into organized administrative districts to aid in the process of collecting taxes (Sharpe [2002]). Accompanying general taxation was a widespread adoption of minted currency (Williams [2007]). Iceland remained anarchistic and lacked the central features of an executive branch until around 1262,23 but the widespread minting of Scandinavian coinage in Norway, Denmark and Sweden beginning around 1000 C.E. likely increased the amount of liquid currency in circulation in Iceland given the extensive trade and migration between the Norse countries (Williams and Graham-Campbell [2010]).

The Christian state also brought with it a change to the laws governing inheritance. Under traditional Norse customs, a Jarl’s territory would be divided amongst multiple claimants either before or upon his death (Sawyer [2008]). Following the delegitimization of bastard children and primogeniture, land and wealth could remain concentrated in a single family, generation after generation (Sharpe [2002]). The Norse’s free form “family property” system gradually evolved to a more rigid system where male and female children received fixed shares as determined by the church, who also reserved a portion for themselves as alms (Sawyer [2008]).

A similar change to inheritance customs can be found in Iceland. Beginning in the 10th century and continuing into the 11th, the Icelanders gradually introduced a new set of oral laws called the Grágás, sometimes referred to as “The Gray Goose Laws” (Dennis et al. [2010]). In the Grágás were enumerated inheritance laws, listing a rigid line of succession beginning with any male sons of the deceased. It is difficult to precisely date when the new inheritance rules were first introduced given the long oral tradition, but given the rule’s alignment with Christian primogeniture and the later written version containing several references to a “bishop” in the same

23 Friedman’s [1979] main source depicting Iceland’s anarchistic governance structure was a law code, initially orally transmitted but not recorded in written form until around 1200 C.E, close to 200 years after the introduction of Christianity and the end of grave goods.
section, it is probable it was a post-Christian introduction (Dennis et al. [2010]). If this were the case, the clarity in inheritance rules coincides closely with the end of grave goods.

Taken together, clear inheritance and a more liquid currency decreased the cost of negotiating inheritance distributions significantly. Clearer inheritance laws provided a focal point of agreement, while the introduction of a currency allowed for easier bargaining and contracting to achieve the agreed upon distribution.

4. Conclusion

Conflict is costly. Yet so too is resolving conflict. Trigger strategies, collective punishments, and severe ostracism may effectively restrain conflict between independent adversarial groups, but they work less well when the two in conflict are dependent on each other. Internal conflict often demands alternative solutions. Focal points, reduced transaction costs, and third-party arbitrators and enforcement can help limit the severity and likelihood of internal conflict, yet in many instances these mechanisms lie outside the available institutional opportunity set.

Prior to some point in the 11th or 12th centuries, medieval Iceland lacked rigid inheritance laws to help expectations converge; it had no common currency or credit markets to reduce the transaction costs of distributing indivisible goods; and prior to around 1250 C.E., it had no state to settle and enforce agreements (Friedman [1979]). What it did have was blood feuds and outlawry. Should negotiations reach an impasse, recourse to a dispute was bloody. These institutions worked to effectively restrain violence overall but provided few options for familial, codependent affairs. The Vikings had no other option but to figure something else out. We argue that the solution they stumbled upon was the practice of grave goods.

Consistent with our theory, grave goods primarily consisted of goods more likely to invoke conflict due to the difficulty of their distribution. It was also practiced by all social groups who could potentially face this problem, but not by those who could not. The decline of grave goods in Iceland coincided with the reduction in transaction costs following two major institutional reforms which affected the ability to bargain over the distribution. Perhaps paradoxically, destroying wealth may have been an efficient way of “burying the hatchet” and preventing costly familial

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disputes. Taken literally, the Vikings chose to avoid conflict by burying what could’ve been their hatchets.
References


Anderson J. [1880], Notes on the Contents of Two Viking Graves in Islay, Discovered by William Campbell, Esq., of Ballinaby; with Notices of the Burial Customs of the Norse Sea-Kings, as Recorded in the Sagas and Illustrated by their Grave Mounds in Norway and in Scotland, Proceedings of the Society of Antiquaries of Scotland, 14, 51-89.

Bell A. [2009], Coins from Viking-Age Iceland, Reykjavik, University of Iceland.

Bersu G., Wilson D.M. [1966], Three Viking Graves in the Isle of Man, Oxfordshire, Society for Medieval Archaeology.


Bradley R. [1982], The Destruction of Wealth in Later Prehistory, Man, 17(1), 108-122.


Callow, C. [2006], First Steps Towards an Archaeology of Children in Iceland, Archaeologia Islandica, 5, 55-96.


Dougherty, M. [2013], A Dark History—Vikings: Raiders, Pillagers, Explorers, and Traders, the Truth Revealed, New York, Metro Books.


Friedman, D. [2019], *Legal Systems Very Different from Ours*, Independent.


Leifsson, R. [2018], *Ritual Animal Killing and Burial Customs in Viking Age Iceland*, Háskóli Islands, University of Iceland.


Myrberg, N. [2009], The Hoarded Dead: Late Iron Age Silver Hoards as Graves, in: Danielsson I., Gustin I., Larsson A., Myrberg N., Thedeen S., (eds.), *On the Threshold: Burial*
Archaeology in the Twenty-First Century, Stockholm, Institutionen för Arkeologi och Antikens Kultur


Raffield, B. [2014], ‘A River of Knives and Swords: Ritually Deposited Weapons in English Watercourses and Wetlands During the Viking Age, European Journal of Archaeology 17(4), 634–655.


Redknap, M. [2006], Vikings in Wales: An Archeological Quest, Cardiff, National Museums and Galleries of Wales.


Rosedahl, E., Graham-Campbell, J. [1981], The Vikings in England and Their Danish Homeland, York, Anglo-Danish Viking Project.

Sawyer, B. [2008], The Viking-age Rune Stones: Custom and Commemoration in Early Medieval Scandinavia, Oxford, Oxford University Press.


Spatacean, C. [2006], Women in the Viking Age: Death, Life After Death and Burial Customs, Oslo, University of Oslo.

Speed, G., Rogers, P.W. [2004], A Burial of a Viking Woman at Adwick-le-Street, South Yorkshire, Medieval Archaeology, 48(1), 51–90.


Taylor, A.C. [1993], Remembering to Forget: Identity, Mourning and Memory Among the Jivaro, Man, 28(4), 653–678.

Walter, T. [1999], On Bereavement: The Culture of Grief, Buckingham, Open University Press.

Williams, G. [2007], Kingship, Christianity, and Coinage: Monetary and Political Perspectives on Silver Economy in the Viking Age, Walnut Creek, Left Coast Press.

Williams, G., Graham-Campbell, J. [2010], Silver Economy in the Viking Age, Walnut Creek, Left Coast Press.

Williams, H. [2001], Lest We Remember, British Archaeology, 60, 20–23.

Wilson, D.M. [2008], The Vikings in the Isle of Man, Aarhus, Aarhus Universitetsforlag.


Volckart, O. [2004], The Economics of Feuding in Late Medieval Germany, Explorations in Economic History, 41(3), 282-299.

Zugaiar, A. [2012], The Orientation of Pagan Graves in Viking-Age Iceland, Háskóli Íslands, University of Reykjavík.