Why did Norse Greenland fail as a colony?

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Since the discovery in 1721 by the Norwegian missionary Hans Egede that the Norse no longer inhabited the two settlements they had established in Greenland around the year 1000, their decline and eventual disappearance has been much debated. Until the twentieth century, theories were generally based upon interpretations of Inuit oral tradition and primarily attributed the demise of the Norse colony to the aggressive nature of contact between the ancestors of the modern Inuit and their Norse contemporaries (Seaver, 1996, 119). More recently, however, in addition to theories emanating from both the limited documentary evidence for the period and the expanding archaeological record, a number of scientific advances have allowed for a more thorough and directed debate as to the plausible causes of their demise. In this way, theories have diversified in content, bringing Brunn's hope of a multi-disciplinary solution to the mysterious extinction of the Norse much closer to realisation (McGovern, 2000, 328).

Most notably, for example, recent analyses of the central Greenland ice-core, largely corroborated by data obtained from tree-ring studies and sea-sediments have produced an apparently incontrovertible paleo-climatic argument for the failure of the Norse colony in Greenland. Additionally, the idea that the Norse colony fell victim to external influences is equally encapsulated in Euro-centric economic theory; that a downturn in North Atlantic trade contact rendered Greenland unable to sustain herself. There are, as will be argued, fundamental limitations to any theory which cites either an external or environmental factor as a main force behind the failure of the Norse settlements. Indeed, the impact of human agency within Greenland including the ability of the populous to subsist effectively and to adapt to their natural environment when necessary should not be so readily excluded from the debate. Instead, it is crucial to

advocate a Greenland-centric approach which takes into account the internal dynamics of the settlers' society from a political and cultural view point. In this way, McGovern's model, based on topographical and bio-archaeological data, of a hierarchical society constrained by elite enforced cultural values will be scrutinised and the impact of Norse contact with the Inuit re-evaluated. To this end, it appears possible to present a strong frontier community which began to perceive a need to inwardly retract and confirm their racial identity in the face of increasing Inuit presence.

An abstract digression into the definition of the term 'colony' is helpful when attempting to establish the necessity of a Greenland-centric approach to the failure of the Norse colony. Although in geographic terms 'colony' refers to the two settlements, East and West, which the Norse established in Greenland in approximately A.D.1000, the word 'colony' is usually explained as 'a name vaguely applied to a state's dependencies overseas or abroad' (Schwarz, 1993, 204). Ostensibly, this angle provokes a consideration of the failure of Norse Greenland from an external, Norwegian perspective. From this standpoint, it would be plausible to argue, quite simply, that Greenland failed as a colony at the point when Norway perceived her to have become a less profitable venture. The documented downturn in European demand for Walrus Ivory in the fourteenth century, as a result of increasing Asian and African imports, would certainly have reduced Norwegian interest in her North Atlantic colony (Arneborg, 2000, 310). As the possession of Norway, thereby subservient to her and consequently heavily reliant upon her, Greenland could, very possibly, have been affected by such a decline in contact with Norway. Indeed, Keller argues that the decline in trade in luxury items resulted in a loss of prestige for the Norse hierarchy which fundamentally damaged their authority and led to the disintegration of society from the top-down (Keller, 1990). Although this conclusion is, almost certainly, not a fair description of events, (the hierarchy neither relied on trade for their actual

subsistence nor held the more marginal land), a theory that neglect by the parent power may have brought about the end of Norse Greenland cannot be ignored.

Debate remains contentious, however, over the dependence of Greenland on Norway throughout the settlement period. Although imports to Greenland would have been severely reduced as a result of the upset in cross-Atlantic relations, especially considering the economic monopoly held by Norway in respect of Greenland after 1264 when Greenland officially became a part of the Norwegian state, it is not sufficient to rule out the continuation of illicit, and therefore, undocumented, trade between Greenland and, for example, Icelandic or English merchants. Additionally, it would seem that contact between Greenland and Norway had been intermittent and unreliable. Under these circumstances the impact of a decline in contact becomes debatable. Even if external contact was completely lost, however, economic subsistence seems to have continued until at least the mid-fifteenth century in the Eastern Settlement. Crucially, describing the failure of Norse Greenland from the perspective of the Norwegian homeland does not allow for a recognition of the impact of factors directly influencing the internal Greenlandic scene. These could include environmental and ecological issues and the Norse reaction to them as well as the importance of the internal social structures of the colony. In order to take into account these significant factors, it is imperative to define the word 'colony' as; 'a body of persons settled in a foreign country' (Schwarz, 1993, 204). This is the context from which the failure of the Norse in Greenland will be approached here.

The impact of climate change in this field of study has been much debated in recent years and has gained itself a reputation as the 'most durable' of the solitary cause explanations for the failure of Norse Greenland as a colony (McGovern, 2000, 330). Emanating primarily from a study of the paleo-climatic data gained through the extraction of isotope levels in Greenlandic ice-cores, this explanation became popular

as a result of an apparently neat temporal correlation between fluctuations in the climate and the Norse disappearance. Indeed, early indications seemed to point toward a warmer period occurring between 800 and 1300 which was followed by a steady decline in overall temperature until 1850; a period now described as the 'Little Ice Age'. Despite the apparent convenience of this original correlation, this stance remained, to a great extent, geographically unsatisfactory as well as, in terms of the Western Settlement, chronologically inaccurate. As Seaver correctly acknowledges, there is a definite need for further research before it can be said without doubt exactly what the climatic conditions were in a specific region of Greenland at a particular point in the past (Seaver, 1996, 115). Nevertheless, certain documentary evidence can reveal an amount of geographically specific information. The account of Ivar Bardarson's journey to the Western Settlement, as expressed by Seaver, reveals that navigation to the Eastern Settlement was hampered by large amounts of drift ice (Seaver, 1996, 132). Although this superficially clarifies that sea temperature in the fourteenth century had dropped significantly, it is perhaps more enlightening to observe that the Eastern Settlement seemingly fell victim to at least one manifestation of climatic variability prior to the Western Settlement. Yet, it is widely accepted that the Western Settlement was, in fact, deserted first (Seaver, 1996). Both the documentary source and the archaeological result are, in this case, corroborated by the results from the Greenland Ice Sheet Project of 1992 and 1993 which concluded that 'the extinction of the Western Settlement pre-dated the most profound changes in atmospheric circulation' (Buckland, 1996, 95). Thus, the climatic record does not, at present, chronologically or geographically correlate conclusively with the demise of the Norse settlements.

Having said this, recently assimilated precise data from Greenland's Central Ice Core has allowed for a more detailed analysis of past climatic fluctuations, resulting in the calculated observations of, amongst others, Buckland, Barlow and Ogilvie

(McGovern, 2000, 330). It can now be said with some certainty that temperatures fluctuated frequently during both the warmer and the colder periods thus making the relationship of climatic change to Norse extinction much more complex. Ice Core data compiled by Lisa Barlow in 1997 showed extremely low temperatures between 1308 and 1319, 1324 and 1329, 1342 and 1362 and finally, 1380 and 1384 (McGovern, 2000, 335). Results from Poul Norlund's excavation at Herjolfsnes' churchyard, which uncovered plant roots in shrouds covered by a layer of permafrost, indicated that the land, at the time of these Norse burials, had been subject to fluctuating temperatures (Seaver, 1996, 247). Thus, it would seem that the Norse had actually been able to survive earlier periods of low temperatures successfully, perhaps, as the archaeo-faunal data suggests, by altering their diet to more marine based sustenance (McGovern, 1992, 196). It would, then, be far too simplistic to assume that in the long-term, the Norse basically 'got cold and then died' (McGovern, 1991, 77).

In this respect, McGovern warns the scholar away from accepting such an over-simplified description of events as explanation (McGovern, 1991, 77) and presents a strong case for disregarding an environmentally deterministic stance. McGovern goes further than this, however, and by recalling that the Inuit did not die during the colder period but in fact flourished, he suggests that 'culture as well as climate was responsible' for the outcome of environmental fluctuations (McGovern, 2000, 331). By means of a cross-cultural comparison of Norse and Inuit survival techniques, McGovern's approach emphasises the role of human agency in the process of climatic deterioration. He stresses the impact of cultural values on the choices made by the Norse population during this period of ecological demise and attributes their failure to an inability to adapt to the more effective Inuit harpoon-hunting technique (McGovern, 2000, 334). Despite the obvious advantages of recognizing the impact of a community in determining its own reaction to changes beyond its control, three points must be

made regarding the nature of McGovern's argumentation. Firstly, McGovern perhaps relies too heavily upon the benefit of hindsight when comparing the decline of the Norse with the success of the Inuit and could therefore be criticised for passing judgement on the effectiveness of the Norse as set by Inuit standards. Secondly, it is possible to argue that the Norse, in fact, subsisted for a reasonable length of time in contact with the Inuit but without adopting their survival techniques.[1] Furthermore, it ought to be remembered that McGovern's argument relies, not on the physical archaeological record, but rather wholly upon negative evidence. Yet, despite the fact that McGovern's theory can be criticised, his recognition of the role of human agency thankfully serves to undermine the importance of the deterministic paleo-climatic explanation of the decline of the Norse.

It would be impossible, though, to completely eliminate the role of climatic deterioration in this context. As such, although the environment did not become immediately uninhabitable, it undoubtedly did become 'more hostile to the established Norse subsistence system' (McGovern, 1991, 94). Ecologically speaking, the Norse did not alleviate this situation by encouraging a subsistence economy which could remain stable in times of climatic or environmental flux. Instead, a reliance on migratory seals rather than cereal production rendered the colony susceptible to any alteration in average climate-temperatures, however slight (McGovern, 2000, 334). It could, thus, be proposed that the way in which the Norse interacted with their environment, in a period of climatic deterioration, alienated them from their means of subsistence. Indeed, there is evidence, albeit geographically limited, which suggests Norse extinction due to hunger. The skeleton of a hunting dog with cut marks on its bones found at the site W54 in the Western Settlement, in addition to a mixture of cattle hooves and ptarmigan (usually not eaten in times of plenty), have been interpreted as an indication of famine.

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[1] This point is expanded below: see page 11.

Furthermore, an analysis of the insect remains and their distribution at the same farm revealed that carrion-eating flies had penetrated the entire dwelling, thus signifying that the settlement 'had not just been abandoned, it had died' (McGovern, 2000, 337). A similarly grim sequence of events seems to explain the fate of nearby farmsteads. Despite Seaver's misguided declaration that 'there is no evidence that people in the Western Settlement starved to death' (Seaver, 1996, 138), and the fact that the findings in the vicinity of Sandnes may only represent one region, there is reasonable evidence that the Norse may have suffered as a result of a failing subsistence economy; a situation which was exacerbated by deteriorating environmental conditions.

The question as to whether the Norse undermined their own colony in Greenland from the outset, due to an ignorance of the marginal nature of their natural surroundings, adds an equally fascinating spin to this debate. The Norse did import European live-stock, thereby establishing a community based upon animal husbandry and this could, quite possibly, have led to irreversible soil erosion. A similar pattern of events as regards grazing animals occurred in the mid-twentieth century when European farming habits were re-introduced into Greenland. In spite of this seemingly effective correlation between the economic basis of Norse society and soil erosion, their causal relationship ultimately remains unclear. Excavations at the Farm Beneath the Sand situated in the Western Settlement, for example, did not enable archaeologists to report with any certainty whether erosion had caused the Norse evacuation of the site or conversely whether the Norse had abandoned the farm prior to its exposure to the elements (Seaver, 1996, 117). That the Norse initially undermined their ecological niche is, therefore, difficult, if not impossible to prove. What is worthy of note, however, is the fact that the Norse probably did not regard Greenland as marginal when it was first settled as a colony. The climate was, indeed, warmer in the early Middle

Ages. Therefore, the Norse did not fail due to an ignorance of the marginality of Greenland, but rather, they later suffered due to their original perception of it.

From a demographic point of view it could again be conceivable to assign the failure of the colony to the colonists themselves. Lynnerup's model of the possible scale of the population, estimated from a calculation of the number of Norse burials throughout the period, indicates a much smaller colonial population than had previously been reckoned (Lynnerup, 1996, 122).[2] Placing the population peak at around 2250 individuals, as he does, provokes him to conclude that an emigration rate of just ten people per year would have brought the population to a size at which it would have been unable to sustain itself (Lynnerup, 1996, 133). Accounting for the failure of the Norse settlement, in this way, seems to be negatively supported by the archaeological record. The absence of religious objects in churches led Gad to the conclusion that they had been removed by those leaving the colony (Gad, 1970, 162). Yet, whether this is absence of evidence fitting theory or theory corresponding to an absence of evidence remains a fascinating point of contention.

Even without the continual loss of individuals through emigration, other checks upon the population, such as disease, accidental death through hunting in the Nordrsetr region, or aggressive contact with the Inuit, may have reduced the population significantly enough to render the Norse unable to sustain Greenland as a viable colony. By extension then it would not be hard to present Lynnerup's figures in such a way as to support the theory that the Norse colony was never viable as the population was barely large enough to absolutely assure its continuation. While this remains an interesting standpoint from which to present the failure of the colony, the theory of

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[2] Estimates of the size of the Norse population in Greenland have ranged from a low of 3,000 individuals to a maximum approximation of 6,000 inhabitants (Lynnerup, 1996, 131).

emigration, if it is to be believed, in essence only amounts to an explanation of 'how' the colony was depopulated, not 'why' it became abandoned.

In order to begin to understand why the colony failed, it is necessary to build up a picture of the nature of Norse society in Greenland from its conception. Seaver recognises this point by declaring, 'we cannot hope to understand the end of the Greenlanders' tale without knowing the beginning' (Seaver, 1996, 6). The hierarchy, which McGovern so readily observes in the archaeological record, was arguably established in the initial landnam period by Eirik the Red (McGovern, 1991, 80). The social distinction which was created then in the land-holding pattern of Norse settled fjords was reflected in the name of the region. Landnamabok, for example, relates that Herjolf took Herjolfsfjord, Ketil Ketilsfjord and Rafn Rafnsfjord (Keller, 1990, 130). Although the geographical nature and ecological basis of this social hierarchy cannot be categorically proven by specific archaeological data, an examination of the type and distribution of animal bones could be used as evidence to support a theory of Norse social hierarchy. McGovern models Norse Greenland in this way, arguing that on the more marginal sites, seal was certainly used as a dietary supplement whereas the larger, more sheltered farms relied more heavily upon cattle for their sustenance. By comparing the available pasture areas of a number of farms with their byre floor area he was able to conclude that the larger farms had access to a greater stretch of low-altitude pasture. (McGovern, 1991, 218). In this way, McGovern believes that diet as well as ecological setting could indicate social status.

Thus far, McGovern's model is effectively supported by both early documentary evidence and interpretations of the archaeological record. His subsequent point, that the Norse failed primarily due to the decisions taken by this hierarchy, is debatable.[3] In the

[3] For a discussion on McGovern's argument, see Seaver, 1996, 239, McGovern, 2000, 338 and importantly, Arneborg, 1991, 143.

first instance, it is difficult to discern from the material evidence, exactly how the presumed hierarchy and the populous interacted with each other. As such, the ability of the hierarchy to enforce any particular view upon the inhabitants of the colony cannot be proven. While the existence of large storage halls within each community (the largest being that at Gardar) could illustrate the power the hierarchy wielded over the rest of the population in terms of food distribution in times of crisis, the assumed subservience of Greenlanders to authoritative structures is overtly challenged by Arneborg (Arneborg, 1991). Grounded in the organisation of the Greenlandic church and relations with Norway, Arneborg presents a hierarchical social system in which 'the chieftains seem to have maintained a successful barrier', to the Roman Catholic Church of Norway (Arneborg, 1991, 149). To this end the intermittent presence of the bishops in Greenland is accounted for by the hypothesis that they disliked residing in a community in which both they and 'their' farm at Gardar[4] were, 'under some kind of control by the secular owners' (Arneborg, 1991, 148).[5] Zooarchaeological evidence of a number of Walrus skulls found in churchyards at both Sandnes and Gardar (McGovern, 1985, 300) could, in this manner, expose a link between the secular elite and the religious institutions of Greenland, especially if the chieftains are credited with the control of external trade in luxury items. Although based solely upon research into the available documentary sources concerning the period in question, Arneborg's theory, in combination with that of McGovern, enables one to view the internal organisation of Greenland as strong and the populous, in its entirety, obstinately insubordinate. By extension, it is perhaps then, plausible to portray the colony of Norse Greenland as a disciplined community with an organised internal social structure and a need to

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[4] The farm at Gardar is by far the largest farm-stead in Greenland (McGovern, 1991, 211), and, due to the discovery in 1926 of a bishop with crosier and ring, it is widely accepted as the site of the bishop's residence (Arneborg, 2000, 312).

[5] This point is supported by Keller (1990, 128).

maintain their independence as a frontier community in the face of Norwegian political and religious encroachment.

Although the idea of Greenland representing a frontier community cannot explain their failure as a colony when placed in a European context, the ramifications of such a theory are legion when set firmly within a Greenlandic framework. The nature of Norse contact with the Inuit thus becomes the focus of the debate and subsequently raises questions concerning the existence of political and economic boundaries, the exchange of material culture as it is evidenced in the archaeological record, the effect of increasing competition for resources within the same ecological niche and the subsequent means by which the Norse expressed a shared cultural identity. This is not easily achieved because, as McGovern states, 'we know frustratingly little about the nature of this…contact', there being a real need of further archaeological evidence indicating Norse-Inuit relations (McGovern, 1985, 331). The evidence which does exist, however, appears to indicate a reasonably lengthy period of largely peaceful contact. Research, including the dating of various finds in the Ellesmere Island region, shows that Thule culture began to spread South around AD 1300, suggesting a period of Norse-Inuit interaction of almost three hundred years (Gullov, 2000, 324). Additionally, excavation in the Western settlement has not revealed any signs of violence in the last stages of its inhabitation (Seaver, 1996, 131). Rather, it would appear that relations did, to some degree, exist through barter or trade. The archaeological record convincingly supports this theory as it relates to the Inuit possession of items of Norse origin. To date, one hundred and seventy Norse objects, for example ornamental pins, have been found in Inuit house ruins, in particular near the Disko Bay region which was the likely home of the Norse hunting ground (Gullov, 2000, 325). Although these remains, as well as Norse chess-pieces, knives and wool-shears, may have been stolen from Norse sites after their abandonment, the appearance of metal (iron and copper) as far north as

Ellesmere Island arguably testifies to the fact that relations were, in fact, based on trade. Arneborg adds weight to this theory by postulating that the lack of Inuit items in Norse sites[6] can be explained by the fact that they were exported (Gullov, 2000, 325).

As such, then, it seems reasonable to support trade-based Inuit-Norse interaction. This contact, however, did not end in Norse-Inuit cultural, followed by biological assimilation,[7] but rather in the Norse desire to relocate in an attempt to re-affirm their frontier identity. At this juncture it is useful to examine Barth's model of the attributes of ethnic identity with regard to the Norse in Greenland (Barth, 1969). With reference to territorial, trade related and social boundaries, Barth explains that when one group interacts with another, a group identity is only maintained by setting internally acceptable standards of membership and exclusion (Barth, 2000, 15). In such a way, it is possible to regard the annual Norse hunt in the Nordrsetr region as a means of reaffirming Norse social and cultural identity. Participation in the hunt, could, as McGovern advocates, be regarded as a means of 'positive social reinforcement', perhaps a rite of passage for the male members of the community (McGovern, 1985, 308). The luxury items, like Walrus ivory, which could be gained there would, by extension, enforce the hierarchical social system and thus the feeling of cultural belonging for the individual. The loss of this aspect of Norse society then, due to the increasing presence of the Inuit, would have serious repercussions on the ability of the Norse to maintain a distinct cultural identity in an ecological niche which was, to all intents and purposes, shared with their Inuit contemporaries.[8] As a result, it seems that

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[6] Gullov does identify one object of, probably, Thule origin in the Norse sites; an antler comb at Austmannadal in the West Settlement (Gullov, 2000, 325).

[7] McGovern (1985, 313) recognises the complete absence of evidence for the biological absorption of Norse Greenlanders by their Inuit counter-parts despite the excavation of almost fifty sites in a ninety year period.

[8] Allegedly, it was the mobile Inuit who retained the ecological advantage over the static Norse. Greenland to the Inuit represented a much larger environment in terms of the potential exploitation of natural resources.

the Norse made a collective decision to re-locate first from the Western Settlement to the Eastern Settlement and then, when the Inuit encroached further South, from Greenland itself.

In conclusion then, it seems pertinent to rely on the words of Seaver who extols, 'it seems unlikely that people who appear to have been in control of their lives to the last…would allow themselves to perish quietly and patiently as a group' (Seaver, 1996, 138). As such it would be short-sighted to attribute the ultimate failure of the Norse colony to the influence of an external factor such as a deteriorating climate or the decline in demand for Greenlandic trade. Alone, trans-Atlantic trade was unable to directly affect the relationship of Norse settler to subsistence economy, whilst the colder climate of later years cannot be regarded as the primary factor causing the internal collapse of such a strong society. Rather a combination of human agency and environmental change should be explored if a clearer picture of the nature of this society and its eventual failure is to be gained. An examination of the ways in which the Norse interacted with, and adapted to, their surroundings, both environmental and social, undoubtedly provides a more viable approach than the entirely deterministic. It therefore seems reasonable to put forward an explanation of the failure of the Norse in Greenland which relies upon the cultural interaction of the Norse and the Inuit. Rather than concur with McGovern, on the point that the Norse failed as they would not adapt to Inuit hunting techniques, it seems equally plausible to suggest that a need to reaffirm their frontier identity forced the Norse to retract from their Settlements in Greenland.

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