**TAINTED BODIES: SCURVY, BAD FOOD AND THE REPUTATION OF THE BRITISH NATIONAL ANTARCTIC EXPEDITION, 1901–1904.**

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**ABSTRACT**

This paper investigates scientific and public understandings of scurvy at the turn of the twentieth century in order to examine the cultural meanings attached to explorers’ bodies. I analyse the medical and moral debates around outbreaks of scurvy on expeditions, the different and conflicting meanings attached to male explorers’ bodies, and how these different understandings shaped the response to an outbreak of scurvy on the British National Antarctic Expedition (1901–1904). Scurvy, I demonstrate, could be rendered as an inevitable part of an explorer’s heroic, masculine adventures, in narratives of suffering for science, or as a source of shame. How scurvy was represented depended, however, on where it occurred, what its causes were understood to be, and the motivations of those representing the scurvy outbreak on an expedition. More fundamentally, I suggest that these different representations of scurvy exposed underlying disagreements about the purpose of exploration and the relationship between suffering, heroism, science and national pride on British polar expeditions in the Edwardian era.

**Keywords:**

Exploration, heroism, the body, scurvy, authorship

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How shameful was it for an explorer to suffer from scurvy? This paper examines late nineteenth- and early twentieth-century public and scientific responses to this question. In doing so, it offers a new perspective on the historical geographies of exploration that is attentive to the body and provides an original analysis of the historical meanings attached to scurvy. Through examining debates around this condition, I reflect on the different, and sometimes incommensurate, meanings attached to explorers’ bodies at the turn of the twentieth century. I argue that their bodies played a central role in explorers’ public and scientific reputations, but that there was no consensus on how an explorer should use their body, or on how much (or what kind of) suffering they should endure. The dilemmas were particularly acute around outbreaks of scurvy –= a disease loaded with medical and moral meanings of its own.

I also develop historical understandings of scurvy. Much of the existing literature on scurvy argues that by the late nineteenth century an outbreak of scurvy posed a threat to the reputation of an expedition, as the disease was generally seen as avoidable. However, I demonstrate that there were, in fact, several ways of explaining and representing scurvy shaped by conflicting medical explanations for the disease and by different understandings of how explorers should use and represent their bodies. In examining these issues, the paper also contributes to historical understandings of the British National Antarctic Expedition, (BNAE, 1901–1904) and the contemporary response to scurvy on other British polar expeditions.

I examine these issues in three sections: the first explores debates around scurvy in the late nineteenth century, particularly in relation to an outbreak on the British Arctic Expedition (BAE, 1875–1876); the second examines the cultural meanings attached to explorers’ bodies; the third explores how these issues played out in the public and private responses to scurvy on the BNAE. In short, through examining responses to scurvy, I highlight the growing tensions between suffering, science, heroism and national pride on British polar expeditions around the turn of the twentieth century.

SCURVY: SCIENTIFIC AND CULTURAL MEANINGS

Today, scurvy refers to the symptoms of vitamin C deficiency. However, vitamin C was not discovered until shortly before the First World War and was not isolated until the 1930s.[[1]](#footnote-1) Before these breakthroughs, the disease had different medical and cultural meanings. These have been explored by Jonathan Lamb, who argues that explorers struggled to convey their embodied experience of the disease, a challenge that shaped their accounts of travel and contributed to the emergence of new literary styles. Lamb reports that while scurvy was a common feature of many maritime expeditions in the eighteenth century, it was a shameful affliction for an explorer to suffer. This shame was partly a result of scurvy’s unpleasant physical and mental symptoms, which included blackened gums, ‘revolting lesions’ and personality changes (Fig. 1). These symptoms meant that the disease was often associated with ‘dirt, depression, caprice and laziness’. But scurvy was also shameful because it was more common in certain bodies – working-class sailors, alcoholics and Irish convicts transported to Australia – who developed it due to poor living conditions. At the time, though, many suggested the disease was a sign of its victims’ moral failure. Consequently, scurvy was often ‘deliberately misdiagnosed, or misreported’ by explorers.[[2]](#footnote-2)

Lamb argues that scurvy was also feared because it appeared inexplicable. Despite concerted efforts made to find a cure during the eighteenth and nineteenth centuries, the exact causes of the disease proved impossible to establish. While these insights hold for much of the eighteenth century, they appear less true in the nineteenth. Following the Royal Navy’s late eighteenth-century investigations into the causes of scurvy and the introduction of the antiscorbutic lime juice into naval rations in 1796, incidents decreased. Improvements in naval diets and the shortening of sea journeys due to steam technology also reduced outbreaks of scurvy, giving the impression that the disease was on the retreat.[[3]](#footnote-3)

This confidence was thrown into question by an outbreak of scurvy on the BAE. The expedition, led by George Nares, comprised of two naval ships – HMS *Alert* and HMS *Discovery* – and headed to the Arctic in 1875 tasked with making an attempt on the North Pole.[[4]](#footnote-4) However, the expedition returned after less than a year in the Arctic with half its 120 men having suffered from scurvy.[[5]](#footnote-5) Four men had died from the disease, which also scuppered the expedition’s attempt on the pole.

 The outbreak of scurvy on a well-equipped naval expedition caused outrage. Parliament called for an inquiry, leading to the formation of an Admiralty committee tasked with investigating the issue.[[6]](#footnote-6) Reporting in 1877, the committee argued that the disease had emerged due to ‘an absence of lime juice’ from the men’s diets on the sledging journeys. The report concluded that Nares had disobeyed orders, neglecting the men’s bodies by failing to provide this prophylactic. However, the committee suggested that the underlying causes of scurvy included ‘the long winter’, the ‘absence of sunlight’ and the ‘damp’ and ‘vitiated’ atmosphere on the lower decks, and attributed its higher rates in crewmen than in officers to the sailors’ poorer living conditions and less varied diets. But suffering from scurvy could also suggest moral failure and physical weakness. The committee noted that ‘the first two cases of scurvy occurred in men who were addicted to an immoderate use of alcohol’.[[7]](#footnote-7)

Despite the committee’s findings, the outbreak on the BAE reopened the debates about the cause of the disease. Patrick Black from the Royal College of Surgeons questioned the committee’s report, highlighting that ‘the Esquimaux’ managed to avoid scurvy without either lime juice or fresh vegetables. Black denounced ‘the doctrine of anti-scorbutics’, and noted that scurvy still occurred on ships where lime juice was issued. He instead argued that scurvy was the product of a general dietary deficiency, often caused by the poor food given to working-class sailors. Black claimed that explorers should follow the example of indigenous Arctic communities and adopt a diet high in blubber and fats, as only such concentrated food could provide the required energy.[[8]](#footnote-8) Scurvy could suggest neglect of the explorer’s body.

Sir Clements Markham, then secretary of the Royal Geographical Society (RGS), was also critical of the committee’s report and published a lengthy rebuttal.[[9]](#footnote-9) Although Markham later became president of the RGS and was instrumental in organising the BNAE, comparatively little attention has been paid to his views on scurvy. Examining them can contribute to understandings of the disease on polar expeditions in this period.

In his response, Markham accused the committee of being ‘prejudiced partisans’ in favour of lime juice and suggested they had ignored testimony that threw into question its efficacy. Scurvy, Markham claimed, had not been caused by a failure of the expedition’s leadership but by the practically inevitable strains of polar life, particularly in a ship overwintering further north than any previous expedition. Markham argued that if the expedition had wintered further south, or had not undertaken sledge journeys, its crew ‘would not have had scurvy’.[[10]](#footnote-10) So long as men experienced such hardship, Markham suggested, scurvy was almost inevitable: the disease could only be prevented by a comprehensive improvement in polar living conditions or by giving up exploration altogether.

Markham’s intervention highlights disagreements about the role of the environment in causing scurvy and the degree to which suffering was an inevitable part of exploration. Environmental factors were often seen as contributing to the disease: one late nineteenth-century medical textbook echoed conventional wisdom when it suggested that scurvy was aggravated by ‘depressing circumstances’ such as ‘damp, cold, fatigue, drink, [and] want of sunlight’.[[11]](#footnote-11) Many of these hardships (though not, of course, drink) appeared inevitable features of a Victorian polar expedition. However, Markham’s claims were treated with scepticism by many medics, who argued that while environment could exacerbate scurvy, its underlying causes were dietary.[[12]](#footnote-12) Even so, his views highlight that amongst non-medics the disease could still be portrayed as a common – and almost unavoidable – feature of polar exploration.

Criticisms of lime juice appeared to have some merit, as there were a number of cases of scurvy on ships where lime juice had been given out.[[13]](#footnote-13) This failure of lime juice was partly due to a switch from lemons to West Indian limes (which contained less vitamin C) but also because lime juice was often boiled, of poor quality, or badly stored, which damaged its antiscorbutic qualities.[[14]](#footnote-14) Consequently, the efficacy of lime juice was questioned, leading to new debates over the causes of scurvy.

The experiences of polar travellers played a central role in these debates. Benjamin Leigh Smith and the crew of his yacht, *Eria*, were trapped on the Arctic archipelago of Franz Joseph Land after their boat sank in 1881. The crew survived scurvy-free for ten months over the winter on a diet of fresh meat (which, if cooked lightly, contains a small amount of vitamin C). Their survival convinced many medics that scurvy could be prevented without lime juice and was caused by diet rather than living conditions, as the men lived in a damp, unsanitary and poorly ventilated hut.[[15]](#footnote-15)

In this context, other theories about the causes of scurvy emerged. These ideas were shaped by prevailing medical and moral concerns, particularly the growing interest in microbiological causes of disease.[[16]](#footnote-16) The correlation between scurvy and the consumption of tinned meats (which generally contained little or no vitamin C) led to suspicions that it was a product of some poison in the preserved meat. The idea that spoiled tinned food was a threat to the health of explorers was not new: infected tinned food was believed to have contributed to the failure of the Franklin expedition and sat easily with naval thinking that saw hygiene as the best way to preserve health on board ship.[[17]](#footnote-17) In the late nineteenth century, numerous medics and explorers took these concerns further and argued that scurvy was a product of a (now discredited) substance called ptomaine, a toxic product of microbial decay supposedly found in poorly preserved meats.[[18]](#footnote-18) Ptomaine allegedly ‘tainted’ the bodies of all who consumed it, causing the scorbutic symptoms. Scurvy now suggested a taint rather than a deficiency in an expedition’s provisioning, meaning perfect health could be preserved if impure food was avoided.

The polar explorer Frederick Jackson published an influential paper on the causes of scurvy with Vaughn Harley, a professor of pathological chemistry at University College London.[[19]](#footnote-19) Jackson drew on his own experiences leading the Jackson-Harmsworth Expedition (1894–1897). On this expedition,Jackson’s land party had subsisted on fresh meat over the winter. Meanwhile, the crew of the expedition’s ship, which had overwintered nearby, consumed mainly tinned meat and continued to use lime juice daily. The ship suffered an outbreak of scurvy while the land party did not, suggesting to Jackson that the tinned meats had caused the disease. During his time on Franz Joseph Land, Jackson also had a chance encounter with the Norwegian Arctic explorer Fridtjof Nansen who was returning from setting the new farthest north record on his famous *Fram* expedition. Jackson was impressed that Nansen had survived scurvy-free in the Arctic – in conditions ‘the most unsuitable possible for health’ and without either vegetables or lime juice – by eating fresh meat.[[20]](#footnote-20)

Reginald Koettlitz, the surgeon on the Jackson-Harmsworth expedition and later on the BNAE, also supported the poisoning theory but suggested that ptomaine contained a moral as well as a biological taint. Koettlitz argued that while tainted meat was often undetectable, it could sometimes be noticed through a ‘high-gamey’ flavour, suggesting that some sufferers may have knowingly consumed spoiled food. Koettlitz argued that the reason scurvy was more prevalent in ‘less civilised’ countries, such as northern Russia and Lapland, was those peoples’ ‘acquired or possibly semi-barbarous taste’ for ‘semi-putrid’ fish.[[21]](#footnote-21) The medical debate about the causes of scurvy merged into broader concerns about ideas of hygiene, civilization and taste.

Although many continued to argue that a want of fresh food was the main cause of scurvy, the ptomaine poisoning theory gained widespread recognition in the late nineteenth century.[[22]](#footnote-22) Importantly, both supporters and opponents of the theory presented the disease as avoidable. Commenting on scurvy, a late Victorian naval medical textbook claimed that ‘whenever it makes an appearance nowadays, some neglect or culpability will always be found in connection with it’.[[23]](#footnote-23) Koettlitz echoed this view before the BNAE departed for Antarctica, arguing that because the expedition’s tinned food supplies had been tested, and because fresh meat would be available, ‘no scurvy will be heard of in connection with this expedition however long it remains in the High South’.[[24]](#footnote-24)

By the early twentieth century, scurvy was the source of both medical and moral debates. As Lamb demonstrates, it was generally seen as an avoidable and shameful disease, even while its causes remained contested. These views were not, however, universal, and some non-medics still suggested that scurvy might be hard to avoid in the conditions of a polar expedition. Importantly, scurvy was increasingly seen as a product of external factors – tainted food and physical hardship – rather than as a product of a specific dietary deficiency, a view that influenced the response to scurvy on the BNAE.

In further examining the issue of scurvy on polar expeditions I have highlighted how understandings of it were shaped by changing views of the disease and the body. In what follows, I build on the existing literature on scurvy by examining how thinking about the condition interacted with ideas about explorers’ bodies and questions of masculinity, heroism and nationality in this period. I demonstrate that, by this point, it was difficult to describe scurvy in universally accepted language because it exposed underlying disagreements about the purpose of exploration.

THE BODY AND CULTURES OF EXPLORATION

The cultural and political meanings attached to male bodies in the Victorian and Edwardian era have been the subject of considerable academic attention. Historians and theorists have explored the growth of disciplinary regimes that sought to control and classify bodies in this period.[[25]](#footnote-25) This work has also addressed the colonial context, and how the management and representation of bodies was central to ideas of class, racial and gender difference.[[26]](#footnote-26) Others have sought to bring the ‘fleshy’ material body and questions of bodily experience to the fore.[[27]](#footnote-27) I am interested here in how explorers’ bodies were represented rather than questions of materiality or experience. However, explorers’ physical bodies do play a role within my argument, for scurvy often highlighted the limited ability of regimes of inspection, medicalised prophylactics and food testing to render explorers’ bodies ‘docile’.[[28]](#footnote-28)

The difficulty of disciplining the male body has been a major preoccupation of modern Western culture but became particularly pronounced during the Victorian period.[[29]](#footnote-29) Dominant visions of masculinity focused around the virtues of physical strength and self-discipline, leading to growing concerns that modern, sedentary, urban life was ‘degenerating’ men’s bodies and rendering them soft, flabby and feminised.[[30]](#footnote-30) Regimes of discipline to keep the male body ‘hardy’ and controlled were a growing feature of late Victorian society.[[31]](#footnote-31) Numerous clubs, reform movements and books attempted to halt this perceived trend of degeneration, particularly in the aftermath of the Boer wars.[[32]](#footnote-32) The conflict had seen the British army struggle to defeat two small southern African states and was accompanied by scandals about the number of working-class volunteers deemed unfit for service.[[33]](#footnote-33)

Concerns about degeneration influenced practices of exploration. Journeys to extreme and inhospitable environments became ways to demonstrate explorers’ masculine qualities, to test if the European male body was still hardy and robust, and to demonstrate the vitality of British bodies and the reach of the British Empire.[[34]](#footnote-34) By the early twentieth century, exploration was a way of ‘measuring manliness’ and Antarctica a ‘proving ground for national fitness’.[[35]](#footnote-35) The importance of bodies within exploratory cultures was not, however, a new development. Since the Enlightenment, explorers’ bodies – and the physical suffering they went through – have played a role in making or breaking travellers’ reputations and the credibility of their findings.[[36]](#footnote-36) Explorers’ observations in the field rested on their senses, meaning that debates about the validity of their findings often centred on an explorer’s identity, with the senses of upper-class European men typically privileged above others.[[37]](#footnote-37)

Within the geographical community, successful explorers were individuals who represented their bodies as disciplined and controlled. Felix Driver notes that the African explorer David Livingstone was seen as embodying many of the qualities of a good explorer.[[38]](#footnote-38) He cites an early twentieth-century biography that valorised Livingstone for having ‘toned his body to splendid trim and strengthened his body muscles till they were cable-like in their tireless strength’.[[39]](#footnote-39) Livingstone’s reputation was shaped not just by his physical prowess, but also by the fact that he had consciously disciplined his body and brought it under mental control. Because they threw this control into question, ‘sense-scrabbling’ illnesses required careful practical and rhetorical management if they were not to raise doubts about the validity of an explorer’s observations.[[40]](#footnote-40)

Despite the focus on discipline, suffering and vulnerability had long been a feature in explorers’ accounts of travel, helping to demonstrate the benevolence of their motives and their devotion to science.[[41]](#footnote-41) However, the role of bodies within journeys of exploration changed in the late nineteenth century as the leadership of the RGS attempted to professionalise geography and to direct explorers’ attentions away from adventure and towards more systematic research.[[42]](#footnote-42) These growing efforts to professionalise scientific fieldwork did not always sit easily with the idea of exploration as a test of male bodies, as science was often seen as a bookish, sedentary and not particularly manly pursuit. However, explorers could reconcile science with adventure through narratives of ‘suffering for science’ which focused on the manly hardship they went through to do scientific work.[[43]](#footnote-43) Research in an extreme environment became ‘a recognised species of adventure’.[[44]](#footnote-44)

The identity of the individual carrying out scientific research shaped the reaction to their suffering. Dominant visions of expeditionary heroism excluded ‘working men, professionals, women, and foreigners’. However, even professional scientists found it harder to become popular heroes, as they were thought ‘to lack the manly virtues of naval officers’, while the ‘dedication of naval officers to science (at which they were amateurs) increased their nobility’.[[45]](#footnote-45) Moreover, going on an expedition – and even suffering for science – did not inevitably lead to an individual becoming a hero. In what follows I develop understandings of suffering for science by demonstrating that there was no consensus on how much and what types of suffering were acceptable in the service of research. In addition, I suggest that these narratives of suffering, in emphasising the vulnerability of the explorer, could clash with portrayals of explorers as heroic and masculine.

Within these constraints, how an explorer represented their journey in print played a central role in shaping their popular reputation and personal finances, and in debates about the credibility of their findings. Indeed, Adriana Craiciun argues that authorship played a key part in the making of an explorer.[[46]](#footnote-46) Authors, publishers and editors went to great lengths to represent explorers’ bodies in ways that would confer credibility on their findings and appeal to popular audiences.[[47]](#footnote-47) Indeed, suffering featured centrally in narratives of adventure, allowing explorers to demonstrate their heroic, manly qualities – a trend that was also shaped by the growing role of the press in presenting narratives of exploration over the course of the nineteenth century.[[48]](#footnote-48) However, there was often a gap between how explorers behaved in the field and how they were represented in print: the contributions of guides and intermediaries were disavowed, certain types of illness omitted, and sexual transgressions downplayed.[[49]](#footnote-49) Despite these efforts, geographers still often disagreed on what counted as good scientific practice or acceptable conduct.[[50]](#footnote-50)

In investigating the different responses to scurvy on the BNAE, I develop these understandings of exploration in the early twentieth century by using debates over outbreaks of the disease to highlight the tensions between explorers’ roles as scientists, popular heroes and representatives of nation and empire. In particular, I suggest that these competing roles required explorers to use and represent their bodies in different ways, meaning that an account of exploration that appealed to one audience could provoke fierce criticism from another.

## SCURVY ON THE BNAE

The story of the BNAE is well known.[[51]](#footnote-51) Organised by the Royal Society and the RGS, and partially funded by the British government, the expedition encapsulated broader debates about the purpose of scientific fieldwork and how it should be conducted. The RGS thought naval leadership and geographical discovery were most important; the Royal Society saw the expedition’s scientific research as its main objective.[[52]](#footnote-52) These disagreements led to frequently heated (and often public) debates. On leadership, the RGS won out and the expedition’s commander, Robert Falcon Scott, and most of the crew came from the Royal Navy. However, when the expedition sailed to Antarctica in 1901 on the specially built ship, S.Y. *Discovery*, its orders reflected a compromise, combining an ambitious scientific programme with adventurous objectives, including a southern journey to explore the terrain towards the South Pole.[[53]](#footnote-53) The BNAE was influential in heralding the ‘heroic age’ of Antarctic exploration, a series of expeditions which occupied much of the attention of the geographical community before the First World War. The expedition, therefore, makes a good case study through which to explore the cultural meanings attached to explorers’ bodies.

The expedition suffered an outbreak of scurvy which brought to the fore underlying debates about how explorers should use their bodies. Scurvy first showed itself in the expedition’s geologist, Hartley Ferrar, on a sledging trip shortly after the first winter in Antarctica. A subsequent examination of the whole crew by the expedition’s medics revealed many officers and men were suffering from the scurvy ‘taint’.[[54]](#footnote-54) In opposition to the ‘usual experience’ of naval scurvy, the disease affected officers as well as men. As a result, the condition was not seen as reflecting the poorer diets or alcoholic tastes of working-class sailors as on the BAE.[[55]](#footnote-55) Before long, both the expedition’s medics thought scurvy was probably caused by a problem with the tinned food, much of which had spoiled.[[56]](#footnote-56) After a thorough cleaning of the ship and a change to a diet with more fresh seal meat in it, the disease seemed to abate.

There were, however, further outbreaks of scurvy on the sledging journeys, including on the expedition’s journey farthest south in early 1903. This was undertaken by Scott along with Edward Wilson, the expedition’s junior surgeon, and Ernest Shackleton, the third lieutenant (Fig. 2). The three men headed out with nearly twenty dogs to explore the terrain towards the South Pole, but the failure of the dogs and signs of scurvy in all three men (affecting Shackleton particularly severely) forced the party to turn north sooner than they had hoped.[[57]](#footnote-57) The men began to recover upon their return to *Discovery* and after resuming a diet containing fresh meat. However, Shackleton’s health remained a source of concern, meaning that he was sent back from Antarctica on the relief ship in March 1903 and did not stay a second winter.[[58]](#footnote-58)

The issue of culpability for the scurvy outbreak remains contentious. Roland Huntford has argued that the outbreak was caused by Scott’s refusal to listen to advice from the expedition’s surgeon, Koettlitz, about the importance of fresh meat in preventing scurvy. Huntford claims that Scott ‘obscured the scurvy outbreak’ after the expedition and failed to learn lessons from it, which contributed to his death on his return from the South Pole in 1912. Huntford also criticises Scott’s leadership and wider achievements, suggesting that the veneration of him reflects British attempts to ‘dress up incompetence as heroism’. Huntford’s use of scurvy within these debates highlights how, even comparatively recently, the disease was still seen as a shameful, meaning it could be used to question an explorer’s reputation.[[59]](#footnote-59)

Clare Solomon and David Yelverton have, in turn, criticised Huntford’s claims, highlighting that vitamin C was unknown in 1902 and that Scott’s approach to scurvy reflected contemporary medical knowledge. Moreover, Solomon argues that Scott learned from the scurvy outbreak, adopting a fresh-meat diet that prevented the disease the following winter. Solomon also questions Huntford’s suggestion that Scott misrepresented the outbreak.[[60]](#footnote-60) Others have suggested that the growing criticism of Scott’s leadership – and his conduct in relation to scurvy – in the second half of the twentieth century reflect changing attitudes towards heroism, leadership and masculinity rather than Scott’s decisions alone.[[61]](#footnote-61)

Scurvy on the expedition has primarily been approached through these issues of culpability and leadership, meaning that much less has been written on how the disease was understood and represented at the time. In the rest of this paper, I investigate responses to scurvy on the BNAE in the local and national press, in scientific journals, and in the public and private statements of the expedition’s leadership and organisers, and argue that it was incorporated into three main narratives: heroic adventure; suffering for science; and, finally, debates about national and organisational efficiency. This investigation sheds new light on the position of explorer-heroes at the turn of the twentieth century and on the cultural meanings attached to scurvy. However, examining these issues also contributes to the existing literature on the BNAE, showing that Edwardian responses to scurvy on the expedition were more varied than previous studies have suggested and that different assessments of the expedition’s performance are not just a recent development.

### Masculinity, patriotism and adventure

Scurvy on the BNAE was incorporated into narratives of heroic adventure, a portrayal of exploration as a means of testing (and ultimately proving) the hardiness of the British male body. A March 1903 report in *The Northern Whig* – ‘Adventures in the Antarctic’ – is typical of these reports.It focused on the southern journey, describing the party’s ‘dash to the south’ with limited provisions and a failing dog team. The paper reported that ‘[s]ome scurvy symptoms appeared in the men on the sledge journeys, but these disappeared on the parties returning to the ship’.[[62]](#footnote-62) Scurvy was rendered a product of travel in the harsh environment; the outbreak on the ship goes unmentioned. Moreover, scurvy is presented as something that the expedition overcame with ease, highlighting their physical strength.

*The Manchester Courier* also portrayed scurvy as part of the expedition’s polar adventures. The paper focused on a quote from Koettlitz which described how ‘[s]curvy showed itself amongst us last spring, but we have, by making more use of seal meat as food, got rid of it. Captain Scott amongst others was affected by scurvy following his long sledge journey to the southward, but he rapidly threw it off and has already got rid of it’.[[63]](#footnote-63) The focus on the scurvy outbreak during the ‘long sledge journey’, rather than on the ship, emphasised the strain the explorers’ bodies were put through, while the ease with which Scott ‘threw off’ the disease highlights his bodily resilience.

The expedition’s ability to overcome scurvy by consuming ‘seal flesh as food’ was used to highlight the party’s manly qualities of ingenuity and self-reliance.[[64]](#footnote-64) *The Manchester Courier*, for example,quoted Scott saying ‘another bogey has been banished in finding that seal is really palatable food. We shall lay in lots and thus stick to fresh food to avoid scurvy’.[[65]](#footnote-65) The expedition had survived by hunting for their own food, demonstrating that modern urban life had not stripped them of this masculine skill nor left them too reliant on modern luxuries. Through scurvy, Antarctica becomes a space where the ‘primitive’ aspects of white masculinity can be performed.[[66]](#footnote-66) Later, reports covering the return of the *Discovery* to the UK in 1904 also used scurvy to emphasise the explorers’ strength and ingenuity. *The Manchester Guardian* reported that ‘[t]here was only one outbreak of scurvy, and that was not very stubborn. This is a very remarkable record in Polar expeditions, and was brought home very strongly in the crew by the fact that when the *Discovery* was coaling at the Azores on the way home a Norwegian barque came in with five men dead from the disease’. The reference to the vessel’s Norwegian origin highlights the role of scurvy within ideas of national competition. The newspaperstory also drew attention to the health of the crew’s bodies despite their ordeal, noting that the explorers were ‘as vigorous men as any to be found in Portsmouth’.[[67]](#footnote-67)

Shackleton’s body – which was most affected by scurvy on the southern journey – proved more difficult to present as strong and masculine. Comparisons of the men’s bodies can be found in Scott’s book on the expedition, *The Voyage of the ‘Discovery’* (1905). At one point Scott claims that Shackleton was ‘extremely ill’ with scurvy while he and Wilson were ‘pretty fit’. Scott also suggests that Shackleton had to be carried on the sledge, a claim that Shackleton objected to.[[68]](#footnote-68) Shackleton’s breakdown not only emphasises the comparative strength of Scott and Wilson but also allows them to demonstrate their loyalty. However, Scott continued to praise Shackleton’s character, reporting that he was ‘very plucky’ about his suffering and was a ‘poor patient’ as he often refused to rest.[[69]](#footnote-69) The overcoming of bodily weakness through willpower and determination was a common trope within narratives of adventure, which often presented manliness as ‘an inner quality rather than as an expression of physical skill or strength’.[[70]](#footnote-70) Scurvy allowed Shackleton to demonstrate these qualities, although Shackleton himself remained embarrassed by having succumbed to it.[[71]](#footnote-71)

Scott, therefore, presented scurvy on the southern journey as a test that allowed the men to demonstrate their masculine heroism. Indeed,the men’s ability to overcome scurvy contrasts strongly with the party’s dogs. Scott reports that the dogs died of ‘what one can only suppose was a species of scurvy’. The dogs suffered, refused to pull the sledge, and died. Some were euthanized by Wilson. Despite these setbacks and their own symptoms, the men battled forward through their own ‘unaided efforts’. The dogs’ breakdown highlights the comparative strength of the men’s bodies and the ability of Scott and Wilson — and even Shackleton — to overcome scurvy through willpower and determination. Dogs die of scurvy; men overcome it.[[72]](#footnote-72) These themes were picked up in reviews of the book, one of which summarised the farthest-south journey as a tale of ‘dogged persistence and lofty courage in the face of unparalleled difficulties’.[[73]](#footnote-73)Likewise, *The Globe* reported how ‘[r]acked with scurvy, tormented with hunger and frostbite, the men dragged the sledge with all its load, until their task of nearly 1,000 miles had been accomplished’. ‘The sledging expeditions’, the report concluded, ‘tried human endurance about as far it could. And each member of the party bore his own burden’.[[74]](#footnote-74)

Scurvy, then, was often incorporated into narratives of adventure through a focus on its incidence during the farthest-south journey. The disease was rendered a product of the Antarctic environment that allowed the men to demonstrate their heroic, manly qualities, while outbreaks in sedentary men on the ship went unmentioned. In this way, exploration was presented as a test of the men’s bodies and characters, and scurvy was rendered one of the inevitable tests a successful polar explorer must overcome.

### Suffering for science

Scurvy could also be presented as the price of scientific and geographical discovery, a narrative that presented research as the most important aspect of exploration. The suffering for science narrative was often linked to efforts to raise funds for a 1904 relief expedition to resupply the *Discovery*. The government was initially unwilling to contribute to a second relief expedition, but the situation was complicated when the first relief expedition, which visited Antarcticain 1903, brought back news that the *Discovery* was trapped by ice and there had been problems with supplies and an outbreak of scurvy. Government funding for a second relief expedition was agreed but only on the humiliating condition that the mission was under Admiralty control and its objectives changed from relief to rescue.[[75]](#footnote-75)

Markham led the fundraising for the relief expedition and often employed the rhetoric of suffering for science in his appeals for support. Closing a speech to the RGS, he implored the audience to ‘[t]hink of them now, entering cheerfully upon a second winter! Think of the terrible hardships and sufferings they have gone through for science, and for their country's credit! Is there any tale of derring-doe surpassing the story of those who have planted the cross of St. George in 82 17' 5.?’[[76]](#footnote-76) The expeditions’ suffering is scientific, patriotic and adventurous, but scurvy is notably absent from Markham’s list of hardships.

The press sometimes linked scurvy and suffering for science directly. The Aberdeen-published *People’s Journal* carried a typical report of Markham’s speech, which quoted him on the ‘terrible hardships’ the expedition had gone through for science.[[77]](#footnote-77) However, the paper also noted the *Discovery* was in a ‘grave position’ and reported that ‘there had been threatenings of scurvy’. ‘The remedy was to resort to seal meat …. [W]ith this diet and the fresh mutton brought by the *Morning* the scurvy entirely disappeared …. But new and urgent provisions were urgently needed’.[[78]](#footnote-78) The continued safety of the expedition relied on outside help.

Markham also presented the expedition’s bodies as imperilled, comparing the BNAEto the Franklin expedition, which had been lost in the Arctic fifty years before.[[79]](#footnote-79) This comparison implied that the expedition could not look after itself and would be in mortal danger without outside help.

The idea that they needed rescuing also featured in press reports. *The Standard* claimed that the expedition spending another year in Antarctica would mean a ‘considerable gain to scientific and geographical knowledge’, but expressed ‘some anxiety about the safety of the expedition’, partly due to the outbreak of scurvy.[[80]](#footnote-80) Likewise, *The Yorkshire Evening Post* claimed that ‘the lives of the gallant explorers and scientific staff of the *Discovery* may actually be in peril if they have to stay out for another winter’.[[81]](#footnote-81) This line of reporting continued even after the release of the *Discovery* from the ice the following year. *The Evening Telegraph* claimed that the expedition had been ‘rescued’ from scurvy, frostbite and ‘bad provisions’ by the arrival of the relief ships.[[82]](#footnote-82)

A focus on the explorers’ suffering could, however, raise questions about the expedition’s organisation and management. Such criticisms reflected nationalistic concerns about Britain’s place in the world but were also linked to the public disagreements between the Royal Society and the RGS over the leadership and organisation of the expedition. In June 1903, *The Daily Mail* claimed that fundraising for a relief expedition was only needed because of the organising societies’ ‘mismanagement’.[[83]](#footnote-83) *The Times*, which described the expedition’s scientific achievements in glowing terms, argued that ‘it is clear that one hardship has had to be faced that should never had occurred. At least some of the food provided was so bad that not only did the men suffer, but all the dogs died’.[[84]](#footnote-84) Elements of the press asked if all the expedition’s suffering had been necessary.

In his book, Scott objected to the suggestion that the expedition ‘had been reduced to the direst need’.[[85]](#footnote-85) He was angered by the tone of Markham’s relief campaign, and felt that it cast doubt on his leadership of the expedition.[[86]](#footnote-86) Scott viewed the suggestion that the expedition needed rescuing as emasculating, claiming ‘[n]o healthy man likes to be thought of as an invalid’. Indeed, he employed the suffering-for-science narrative only sparingly, discussing the masculine hardships of sledge travel and the difficulty of collecting observations. He noted, for example, that collecting thermometer readings in very low temperatures was a task that could ‘appear attractive to no-one’. Overall, though, Scott argued that ‘life in the Antarctic Regions can be very pleasant’. The outbreak of scurvy was presented as a brief, isolated occurrence that ‘was banished with astonishing rapidity’.[[87]](#footnote-87) Scott, therefore, downplayed scurvy and suffering on the ship in order to highlight his leadership and control, and the expedition’s self-sufficiency.

Despite Scott’s efforts, commentators continued to link suffering, scurvy and science when writing about the expedition. In 1906, *The Speaker*, a liberal magazine, reviewed a book on the history of polar exploration that covered the BNAE. The reviewer commented that it was ‘little short of miraculous’ that individuals would put themselves at risk of ‘frost-bite and scurvy’ and saw the expedition’s suffering as demonstrating its ‘devotion to science’.[[88]](#footnote-88) However, not all commentators were so positive. In a review of Scott’s book, the American polar explorer and geographer, Angelo Heilprin argued that ‘[t]he geographer cannot but deplore the lack of earnest study in the preparation of the details’ of the farthest-south journey. Moreover, Heilprin suggested that ‘the breaking in of incipient scurvy’ pushed ‘the leader of the party to that degree of mental and physical strain which in the later stages of the journey precluded all interest in the enterprise beyond what touched the cares of the day and the hopes for the morrow’.[[89]](#footnote-89) To Heilprin, the party’s suffering was not heroic, but avoidable, excessive and damaging to its scientific achievements.

Scientific research could be presented as the main purpose of the expedition’s journey to Antarctica, particularly when fundraising for the relief expedition. Within these narratives scurvy was often portrayed as the inevitable price for the expedition’s scientific and geographical discoveries. However, these fundraising efforts could prove embarrassing and emasculating for those in Antarctica. Moreover, because scurvy was often seen as avoidable, such suffering was not always viewed in positive terms: the disease could suggest mismanagement. In this way, scurvy highlighted the tensions between the expedition’s dual and sometimes competing objectives: science and adventure. After all, did heroic suffering produce good research?

### Scurvy, the navy and national efficiency

Scurvy also became linked to discussions of national efficiency, institutional care and imperial security in which the expedition’s naval leadership often featured. These narratives focused on the role of polar exploration in national renewal and international competition. Before the departure of the BNAE, Markham claimed Antarctic exploration would provide a way to wake the navy ‘from the canker of prolonged peace’ and would demonstrate the ‘maritime supremacy of Great Britain’.[[90]](#footnote-90) Scurvy on the expedition shattered many of these hopes, highlighting the vulnerability of bodies at the margins of empire.

When news of scurvy reached London, the *BMJ* commented on the ‘somewhat humiliating’ fact that ‘the *Fram* [the Norwegian polar ship] was engaged in two Arctic expeditions each of about three years’ duration, [and] did not suffer at all from scurvy’, while the *Discovery* had suffered the disease in its first year. The article’s authorargued that scurvy had broken out because ‘some one has blundered’ in the provisioning of the expedition. The source of the blunder, it wassuggested, was linked to the expedition’s national and naval nature: ‘[a]ll previous British National Arctic expeditions save, we believe, Ross’s Antarctic voyage … have been crippled by scurvy, while private British, United States, and Italian Polar expeditions have escaped’. Indeed, the *BMJ* called for ‘a searching inquiry to discover who is the culprit’. [[91]](#footnote-91) Overall, it wassuggested that British institutions – scientific societies, the navy, and possibly the government – had failed to care for the explorers’ bodies and this failure was far from an isolated occurrence.

*The Daily Mail* was even more critical, claiming – inaccurately in the case of Frederick Jackson – that ‘neither Nansen on the sea nor Jackson on the land had a single case of scurvy. Yet the *Discovery*, in the very first year of her absence is visited by the scourge’. The papersuggested that scurvy was down to the expedition being provisioned with expensive luxuries rather than cheaper and more wholesome supplies, and that the root of the problem lay in the ‘bickering’ between the organising societies which distracted them from their duties.[[92]](#footnote-92) Here, scurvy reflected the inability of bureaucratic and divided institutions to care for the bodies of those they sent across the world. Similarly, *The Speaker* commented that while the scurvy outbreak ‘was not serious, and yielded readily to treatment … the expedition would certainly have starved to death’ if it were not for the relief ship and availability of seal meat. Like others, theysaw the near disaster as part of a wider problem – commenting that ‘[t]here have been too many scandals of the kind in connection with our Polar expeditions’ – andcalled for an investigation into the expedition’s provisions and for any negligent contractors to be ‘punished with all severity’.[[93]](#footnote-93)

The outbreak of scurvy provoked anxiety in private too. Maconochie, the firm that supplied much of the expedition’s defective tinned foods, was appointed ‘because they are contractors to the War Office, Admiralty and India Office’.[[94]](#footnote-94) Moreover, the tests employed on the expedition’s supplies were part of the growing regime of ‘sanitary surveillance’ used to control the movement of people and goods into the ‘national “body”’.[[95]](#footnote-95) Consequently, when Horace Walpole at the India Office heard about scurvy on the expedition, he contacted Markham requesting further details. This issue was of ‘considerable importance’, he claimed, ‘as large supplies of tinned provisions are from time to time sent out to India for use on expeditions to the frontier’.[[96]](#footnote-96) Scurvy on the expedition highlighted the fragility of the bodies at the edges of the empire and suggested wider weaknesses in imperial defences.

Scott answered the calls for an investigation in *The Voyage of the ‘Discovery’*,including a lengthy discussion on the scurvy outbreak and its possible causes. His discussion focuses almost entirely on scurvy on the ship, as he had less difficulty explaining it on the sledging journeys.[[97]](#footnote-97) Scott emphasises that all reasonable precautions were taken: food was thoroughly inspected, and no unsafe food consumed. Echoing contemporary medical knowledge, he concluded that the tinned food supplies were probably to blame for the outbreak, although his conclusions are cautious.[[98]](#footnote-98) Scurvy on a ship – even one in the polar regions – was an avoidable and embarrassing occurrence, requiring investigation, explanation and a search for blame.

Reviewers of Scott’s book showed an interest in these discussions of culpability. One noted that scurvy appeared ‘to have been caused by defects in some of the tinned food supplied to the expedition’.[[99]](#footnote-99) Likewise, *The Times Literary Supplement* reported that scurvy ‘seemed at first to threaten disaster’ but had been arrested by ‘by abandoning the tinned meats, which evidently caused the outbreak’. However, the report picked up on the ambiguities in Scott’s account noting that ‘Captain Scott hints that the unsatisfactory goods were supplied by one firm; and even at the risk of libel it is a pity he was not more explicit, though it is not difficult to read between the lines’.[[100]](#footnote-100) Scurvy required a search for culpability, but Scott’s suggestions that the tinned food suppliers were at fault helped to prevent it from tainting the expedition’s wider achievements.

Polar exploration was frequently linked to ideas of international rivalry, national pride and institutional efficiency. However, by the time of the BNAE, there appeared to have been too many cases of scurvy on naval-led British polar expeditions. Meanwhile, other countries seemed to be conducting similar expeditions with far less suffering. To some, scurvy raised issues all too similar to those raised by the Boer War: British bodies were failing, and cumbersome national institutions appeared to be outfoxed by their smaller, poorer rivals.

Several organisations were tainted by the outbreak of scurvy: the tinned food suppliers, the organising societies and the Royal Navy all, to varying degrees, appeared culpable. Indeed, I suggest that scurvy was at least part of the reason that the BNAE was ‘the last great naval expedition’.[[101]](#footnote-101) When Shackleton headed south on his own expedition in 1907, it was ‘very much a private affair’, and he innovated in several ways – ponies and motor cars were used for transport, more fresh meat was eaten, and the men overwintered in a hut rather than on a ship.[[102]](#footnote-102) Scott also made similar choices when he returned to Antarctica in 1911. But other aspects of the naval tradition continued – particularly the reliance on man-hauling for much of the southern journey – with disastrous results for Scott and his companions. This mix of innovation and tradition which characterised British Antarctic expeditions reflected not only personal choices but a fundamental ambivalence about how much suffering was a necessary part of exploration, the role of animals and machines on an expedition, and what the primary purpose of exploration was.

## CONCLUSION

At the turn of the twentieth century, scurvy posed a challenge for explorers. While its causes were debated, it was seen as an embarrassing and avoidable affliction. This paper has developed Lamb’s suggestion that scurvy was a disgraceful disease by showing that how shameful it was taken to be depended on where the disease occurred, what its causes were understood to be and how it was portrayed. In medical circles, scurvy was viewed as a disease that required a search for culpability and an allocation of blame. For non-medical audiences, however, scurvy could still be rendered as a heroic affliction and as an inevitable hazard of polar sledging. Whereas Lamb suggests that explorers struggled to convey their experiences of scurvy because of the effects of the disease upon the body and its apparently unidentifiable causes, I suggest the struggle to represent scurvy was also shaped by the conflicting cultural pressures on explorers and, indeed, differing visions of masculinity in general. The same representations of scurvy on an expedition provoked praise in some quarters and attracted criticism in others, making it difficult to represent this condition in a universally acceptable way.

The reaction to scurvy on the BNAE was more varied than previous studies have suggested. These differing portrayals were partly down to institutional and economic forces. Markham, in London, was trying to raise money for a relief expedition, and often used images of imperilled bodies to attract attention and funds. Scott saw being rescued as embarrassing and emasculating and was keen to portray the scurvy outbreak as minor and isolated. The differing responses were also influenced by the role of the press in shaping news of exploration. Different newspapers – often basing their stories on the same information – represented scurvy in contradictory ways, drawing on differing assessments of it as a disease and different understandings of the role of the explorer. When Scott wrote *The Voyage of the ‘Discovery’*,he was writing for an audience that already knew much about the scurvy outbreak, and he responded to many of the earlier press reports. By this point in the history of exploration, explorers’ books were shaped not just by their own experiences but also by press reporting.

More fundamentally, scurvy triggered various responses because there were conflicting ideas about how the explorer’s body should be used and represented, particularly in relation to the issue of suffering. Suffering was a central component of narratives of adventure – allowing the explorer to demonstrate heroic, manly qualities which appealed to domestic audiences. As one of Shackleton’s companions on the Imperial Trans-Antarctic Expedition (1914–1917) put it, ‘[p]rivations make a book sell like anything’.[[103]](#footnote-103) But while narratives of suffering could be commercially lucrative, some kinds of suffering were more acceptable than others. If suffering was seen to be avoidable, it was difficult to present it as either noble or heroic.

The different renderings of scurvy reflect a broader challenge that explorers faced. Because there was little agreement on how much suffering an explorer should experience or to what degree hardships like scurvy were inevitable, the very privations that would demonstrate masculine heroism and devotion to science to one audience could suggest mismanagement to others. Moreover, while descriptions of vulnerability and weakness had long been techniques used to stress the strength of an explorer’s character and their benevolent intentions, some – reflecting broader concerns about degeneration and national fitness – saw bodily breakdown as troubling rather than heroic, particularly when other countries appeared to be carrying out similar journeys with far less trouble. These disagreements reflected the fact that by the early twentieth century broader questions were being asked about the primary purpose of exploration: were Antarctic expeditions a matter of heroic adventure, scientific research or demonstrations of national and naval hegemony? It appeared increasingly difficult for explorers to embody these different purposes in the face of a scurvy outbreak.

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4. Not to be confused with the S.Y. *Discovery* discussed below. [↑](#footnote-ref-4)
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76. C. Markham, Address to the RGS, *The Geographical Journal* 22 (1903) 13. [↑](#footnote-ref-76)
77. Royal Geographical Society, *The People’s Journal*, 23 May 1903, 8. [↑](#footnote-ref-77)
78. The tainted food on the Discovery, *The People’s Journal,* 23 May 1903, 8. [↑](#footnote-ref-78)
79. South Pole finance, *Daily Mail*, 27 May 1903, 3. [↑](#footnote-ref-79)
80. Untitled article in *The Standard*, 15 May 1903, 6. [↑](#footnote-ref-80)
81. Antarctic explorers in peril, *The Yorkshire Evening Post*, 15 May 1903, 4. [↑](#footnote-ref-81)
82. Rescued from Antarctic ice, *The Evening Telegraph,* 2 April 1904, 3. [↑](#footnote-ref-82)
83. Antarctic mismanagement, *The Daily Mail*, 3 June 1903, 4. [↑](#footnote-ref-83)
84. The Antarctic expedition, *The Times*, 27 March 1903, 5. [↑](#footnote-ref-84)
85. Scott, *The Voyage of the ‘Discovery’*, 592. [↑](#footnote-ref-85)
86. The Admiralty’s frustration with Markham and the dispute between the Royal Society and the RGS did harm Scott’s career, and perhaps contributed to the decision to award him the Royal Victorian Order rather than a knighthood. See E. Huxley, *Scott of the Antarctic*,Lincoln, 1977, 126, 139–141. [↑](#footnote-ref-86)
87. Scott, *The Voyage of the ‘Discovery’*, 592, 315–344, 195, 586, 376. [↑](#footnote-ref-87)
88. The ends of the Earth, *The Speaker*, 27 October 1906, 113–114. [↑](#footnote-ref-88)
89. A. Heilprin, The British National Antarctic Expedition, *Bulletin of the American Geographical Society* 38 (1906) 178. [↑](#footnote-ref-89)
90. C. Markham, Address to the RGS, *Geographical Journal* 14(1899) 12. [↑](#footnote-ref-90)
91. Scurvy on the Discovery, *BMJ*, 4 April 1903, 807. [↑](#footnote-ref-91)
92. Farthest south, *The Daily Mail*, 27 March 1903, 5. [↑](#footnote-ref-92)
93. The week, *The Speaker*, 17 September 1904, 550. [↑](#footnote-ref-93)
94. C. Markham to W. Huggins, 2 April 1903, Royal Society MS 547/7/23. [↑](#footnote-ref-94)
95. The test were carried out by th Port of London Sanitary Authority. On the development of the authority, see K. Maglen, *The English System: Quarantine, Surveillance and the making of the Port Sanitary Zone*, Manchester, 2014, 42–43, 6; Harrison, *Contagion*. [↑](#footnote-ref-95)
96. H. Walpole to C. Markham, 22 April 1903, RGS, AA/6/4/1 [↑](#footnote-ref-96)
97. Scott, *The Voyage of the ‘Discovery’*, 366-367, 414, 452. Scott attributed the outbreak to the decay of the party’s bacon and the fact their cooked seal meat may have lost its prophylactic properties. [↑](#footnote-ref-97)
98. Scott’s caution was shaped by the Royal Society’s investigation into the issue, which advised against making public complaints against food suppliers. See A.B. Kempe, Report Memorandum as to Provisions, 11 March 1905, SPRI, MS 366/14/28. [↑](#footnote-ref-98)
99. Science: The Voyage of the ‘Discovery’, *The Athenaeum* 4070 (1905) 582. [↑](#footnote-ref-99)
100. The National Antarctic Expedition, *The Times Literary Supplement*, 13 October 1905, 334. [↑](#footnote-ref-100)
101. Jones, *The Last Great Quest*, 71. The expedition’s cost and the debacle over the relief expedition also played a role but, as I have shown, these issues were linked to scurvy in press reporting. [↑](#footnote-ref-101)
102. Riffenburgh, *Shackleton’s Forgotten Expedition*, 300. [↑](#footnote-ref-102)
103. T. Order Lees quoted in C. Alexander, *The Endurance: Shackleton’s’ Legendary Antarctic Expedition*, London, 1998,195. [↑](#footnote-ref-103)