

Research Article

The Archaeology of Forgetting, the Dorset, and Arctic Antiquity

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Abstract

Forgetting, an attendant to culture change, is the stuff of history. When cultural innovations, exchange and adoption occur, previous customs, knowledge, technology and other dimensions of culture are often lost—they are forgotten. This paper considers the phenomenon of forgetting and its permutations—the passive forgetting that is more or less an accepted outcome of change, the unintentional forgetting that is accidental and undesired, and the intentional forgetting of wilful erasure—as a way of contemplating agency and culture loss/change among the Dorset Paleo-Inuit peoples of the central and eastern North American Arctic, and more broadly, in Arctic archaeology.

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Forgetting

Forgetting offers something of an interpretative conundrum to archaeologists. It would seem at once to be the common stuff of history—that when culture changes, dimensions of it are lost and forgotten. Elizabeth Marshall Thomas (2006, 250–51) makes the observation in her book *The Old Way* that the ice-age hunters of Europe must have had an intimate understanding of mammoths. They would be familiar with their sounds, smells, temperament and behaviour, and how these things varied with the age and sex of the animal, composition of the herd, and season. And, they would have taught and shown their children and grandchildren these things—yet all this knowledge is effectively lost now. Far closer to the present, readers of a certain age might remember what it was like to be unreachable, and bored, and present, in a way that young and future generations of smart-phone users may never completely understand.

At the same time, memory can seem eternal. The past—in the form of artifacts, ruins, ritual traces and landscapes of familiarity and habit—constitutes a vast mnemonic reservoir from which societies can remember or re-remember (Bender 2002; Borić 2010a,b; Gosden & Lock 1998; Hendon 2010; Kahn 1990; Van Dyke 2019). The debris of the past can also inspire the constitution of new memories or histories (Iverson 2017; Van Dyke 2019; Van Dyke & Alcock 2003); when this happens, we could say that the past has not been so much ‘lost’ as only misunderstood by those rewriting or reimagining

it. And even when the past is truly obliterated—in the form of the purposeful discarding or destruction of things—the memory of the act can preserve the memory of the thing itself (Küchler 1997; 1999). Some go so far as to suggest that forgetting is only a modern, western phenomenon (Connerton 2009; Nora 1989).

Culture is often broadly conceptualized as enduring, accumulative and progressive. If anything is truly forgotten it is because it was beyond our control (mammoth go extinct) or something better (mobile phones) took its place. Powell (1888, 99) asserted long ago that cultures generally learn and improve their lot and that ‘retrogression in culture proper is rarely, perhaps never, exhibited on any large scale’. Wissler (1923, 40) likewise alleged that culture grows by accumulation and that ‘little of importance is ever lost’. Tylor (1865, 235–6) employed a similar logic to buttress his scepticism of claims that the Tasmanians did not know how to make fire. His position was that once something so important and critical as fire-making was learned, humans would never forget it. Taylor (2008) has recently revisited the apparent absence of fire-making among the Tasmanians and concludes that while it is not absolutely certain they made fire, it is ‘far more logical and probable’ that they did (see also Gott 2002). That the Tasmanians, more likely than not, knew how to make fire intuitively makes sense to many archaeologists; we are apt to be highly sceptical of claims for the loss of useful technologies and knowledge such as fire-making for the good reason that the ability to make fire would seem essential.

On fire-making, however, various claims have been made to the absence of the art among the Siriono (Holmberg [1950] 1969, 17), Yuquí (Stearman 1984, 643) and Guajá

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(Cormier 2003, 53) of the Amazon (Balée 2013, 106, 133), the Andaman Islanders (Radcliffe-Brown [1922] 1964, 472) and Mbuti (Duffy 1984, viii), with some reasoning that even Neanderthals living in Ice Age Europe could have managed without it (Dibble *et al.* 2017; Macdonald 2018). Our point is not to question fire-making by Tasmanians, Neanderthals, or anyone else, but rather to point out that claims for loss of 'useful arts' are apt to be met with significant scepticism, or even dismissed outright, by drawing on an underlying premise of progress or functional primacy/adaptation—the former inherited from the nineteenth-century cultural evolutionists and the latter from the processualists. Furthermore, the sense that fire-making and other useful technologies are achievements can make claims to the loss or absence of such technologies/knowledge seem like insults. Interpreting forgetting in the archaeological record is a fraught exercise.

Here we consider forgetting in several forms—passive, unintentional and intentional—as a way of thinking about the disappearance of technologies, practices and knowledge-systems in the archaeological past. We focus our attention on Arctic antiquity, and especially the archaeological record of the Dorset Paleo-Inuit culture of the Eastern Arctic of North America. The Dorset are famous for many things, including figurative art, exquisite small tools, snow-knives and long-houses, but also for what disappeared when they emerged on the archaeological scene—dogs, bows and arrows and drills. We consider these losses through the interpretive lens of various forms of forgetting, with attention to how human agency is in play in each instance. By doing so, we hope to clear a humanistic space for understanding forgetting in the Dorset context, and more broadly, in Arctic antiquity.

Passive forgetting

Perhaps the most common form of forgetting is the kind that happens without much care. It is forgetting how to surprise a mammoth, or use an atlatl, or read a map, or write cursive. In archaeological theory, such forgettings are often perceived to be the result of progress or adaptation—the offloading of ballast to make room for something better, or more useful, or relevant. We use the term 'perceived' here, because a rear-view-mirror value assessment seems inherent to making sense of what was lost. If it was merely the knowledge of how to use a dial telephone, we are apt to attribute it to the forgetting of the passive and inconsequential sort; but if it is how to make fire, it must be something else. Accordingly, interpreting forgetting in the archaeological record is difficult without a value assessment, and often that value assessment is reasoned in terms of progress or adaptation.

Arguments for progress are typically appeals to improvement devoid of context. Agriculture, for instance, was long believed to be so superior to hunting and gathering that no real interpretation was necessary to explain its development, people started farming because it was simply better (Cohen 2007). An adaptationist perspective on agriculture, by contrast, is apt to situate the transition in terms of population pressure, environmental change, or social—perhaps fitness-enhancing—aspirations. Similar thinking

can also account for the loss of 'superior' technology, like pottery (Kirch 2000, 220–22) or microliths (Costa *et al.* 2005; Potter 2008), or 'advanced' knowledge, such as plant terminology (Witkowski & Brown 1978; Witkowski & Burris 1981). It can also explain their re-invention and re-discovery when conditions change.

Archaeologists who rely on an underlying assumption of progress can be befuddled by evidence that deviates from an expected improvement trajectory. A century ago, W.H.R. Rivers (1926) noted how his (evolutionary) contemporaries struggled to understand how people could have settled Tasmania and other islands in the unseaworthy watercraft they possessed in historic times, with some going so far as to reason that that these islands must have been reached on foot, or alternatively, had been always occupied by people. Their underlying logic here parallels Tylor's (1865, 235) on fire-making—the art of superior watercraft, once learned, would never be forgotten. Even today the loss of sophisticated seafaring technology and complexity in the region offers something of a puzzle to some archaeologists. O'Connell, Allen and Hawkes (2010) respond to them by noting how well suited the simpler watercraft that Australian First Nations employed at contact were for the broad bays and estuaries in which they were used. Thus, the shift from sturdy vessels used for open-water navigation and deep-sea fishing in the late Pleistocene to the simpler rafts and canoes of the historic period is best understood as an adaptive pivot that required less energy and lower investment costs (O'Connell *et al.* 2010).

Similar explanations have been proffered to explain why the Tasmanians apparently stopped eating fish around 3500 BP. Rhys Jones (1978) interpreted the dietary shift as part and parcel of a broader de-evolution and regression of Tasmanian culture. Critics quickly countered that the shift in diet was likely adaptive and related to processes such as modifications to settlement patterns, economic re-organization, or environmental changes (Allen 1979; Bowdler 1988; Horton 1979; White & O'Connell 1982, 170). Others question the source material—maybe the Tasmanians never stopped eating fish (Taylor 2007). The assumption of the adaptationist position is laid bare by Bowdler (1980, 339), who, in grappling with the Tasmanian aversion to fish, presumes that if 'culture is a form of adaptation' and fish-eating was prohibited, then 'a fundamentally economic reason' (for doing so) must have motivated it. Such scepticism (fish-eating) and denial (fire-making) is apt to occur when the evidence is not easily explained in terms of adaptation. It seems especially common in hunter-gatherer studies, where cultural ecology and related theoretical positions dominate; to wit, we struggle to make sense of why the Tasmanians may have ceased eating fish in a way that seems less theoretically taxing when accounting for why Hindus may have stopped consuming cows, or Muslims and Jews, pigs (*cf.* Holly 2019).

Unintentional forgetting

Unintentional forgetting can be said to be forgetting of the undesired and accidental sort. It is apt to occur when knowledges (and associated technologies, practices and

rituals) that are highly specialized or secretive are lost when the small subgroups of people that know them pass on, and what they knew is not easily re-discovered or re-created. Rivers (1926), for instance, cites the disappearance of certain kinds of canoes in Melanesia and well-made adzes in Indonesia when the small group of craftspeople that made them died. Afterwards, people just managed without them.

Demography has been controversially invoked as a variable in explanations for both cultural loss and innovation. On loss, Rhys Jones (1977; 1978) infamously suggested that the ‘disappearance’ of Tasmanian cultural traits—the aforementioned cessation of fish-eating, but also fire-making, bone-tool production and the ‘deterioration’ and simplification of technology—was an effect of the island’s long isolation from Australia following sea-level rise at the end of the Pleistocene. Jones thought that isolation not only stifled innovation on Tasmania, but that it caused cultural regression and ‘deterioration’—a slow cultural dumbing-down of the maladaptive sort. His thesis was immediately challenged by reinterpretations that framed these losses and simplifications as adaptations (Allen 1979; Bowdler 1988; Horton 1979; Vanderwal 1978; White & O’Connell 1982, 170).

More recently, Henrich (2004) has resurrected aspects of Jones’ thesis by suggesting that low population numbers and isolation could indeed have worked to create a smaller and less-active pool of social learners and innovators, and led to cultural loss, simplification, stagnation and even maladaptation (see also Diamond 1997, 312–19; Flannery 1994, 264–70; cf. Vaesen *et al.* 2016). Similar demographic arguments have been made for the Yamana of Tierra del Fuego. Garvey (2018), for instance, posits that peoples moving southward through the Americas would have lost the art of how to make well-tailored cold-weather clothing as they passed through the tropics, and that on the other side, the small population size of the Yamana, together with their apparent isolation, worked against them reinventing it. As a result, they ended up poorly-equipped for the Subantarctic climate and paid for it with poor health and fertility (Garvey 2018). Inversely, some archaeologists have suggested that high population densities and frequent interactions stimulate innovations and could have generated a cultural florescence in the Upper Palaeolithic (Bar-Yosef 2002; Gilman 1984; Powell *et al.* 2009).

Even small groups of foragers, however, interact with many hundreds of people in the course of their lifetime (Hill *et al.* 2014). Mobile hunter-gatherers can be rather cosmopolitan, covering vast areas and interacting with far-flung neighbours in a way that more numerous but rooted farmers do not (see Holly 2013, 122–3). There is also little evidence to suggest that hunter-gatherer technological complexity, skills and knowledge are narrowly dependent on population size—witness the intricate sealing harpoon and other tool complexes of the Inuit (Oswalt 1987; Read 2008). Indeed, rather than a liability, the small size of hunter-gatherer groups may allow them to pivot to new technologies and practices faster than larger (Bettinger *et al.* 2010, 12) and less egalitarian groups, whose size and social structures can act as a force of inertia (see Hegmon *et al.* 2008). Accordingly, we are suspicious of broad characterizations of hunter-gatherers as isolated, innovation-resistant and at risk of cultural

regression due to low population densities. That said, it is not difficult to envision how cultural loss could occur in very small populations (Riede *et al.* 2009), especially if the knowledge it was based on was highly specialized, secretive and/or limited to a subgroup of individuals. In theory, such cultural drift scenarios could also occur in very large but specialized populations—the death of Aztec priests with the fall of Tenochtitlán (Arbaci 2011, 114) or the hypothetical plane load of astrovolcanologists that crashes on the way to a conference.

Unintentional forgetting may be indicated when the loss is sudden and great—as when a bundle of traits and technologies vanish simultaneously. In the Amazon, the absence of fire-making and musical instruments, relatively simple cosmology and rituals, and the abandonment of agriculture have been attributed to population collapse from disease, violence and displacement (Balée 2013; Cormier 2003; Isaac 1977; Stearman 1984). Something similar may have occurred among the Inughuit (Polar Inuit), an isolated Inuit group in northwestern Greenland. In the early 1800s, the Inughuit had lost several important categories of technology, including kayaks, the bow and arrow and some kinds of fishing gear. This has been attributed by some to population loss/knowledge loss caused by disease (unintentional forgetting); others connect their disappearance to the declining availability of wood (passive forgetting) during the Little Ice Age (see LeMoine & Darwent 2016). The case for disease among the Inughuit, however, is supported by the fact that epidemics, famines, natural catastrophes and violence are known to have greatly reduced other small Arctic communities in a short time (Burch 1998, 320–23; Corbett 2010, 41–2; Darwent 2004; McGhee 1994), and by the fact that declining wood availability alone would not have prevented the Polar Inughuit from crafting bows and arrows out of different raw materials (LeMoine & Darwent 2016; Walls *et al.* 2015).

Unintentional loss need not involve the forgetting of essential technologies and skills. It could be forgetting how to perform certain rituals, recall genealogies, or read an indigenous script. These things might be critical to the culture, even if they do not jeopardize survival in the way that forgetting how to make fire would. How might we interpret their disappearance? In Newfoundland and Labrador, an evident demographic collapse around 3500 BP resulted in the abandonment of a vast territory (including the entire island of Newfoundland) and a hard pivot that fundamentally transformed technological traditions, foodways, social organization, settlement patterns and exchange relations, with associated losses in technologies and practices (Holly *et al.* 2022). In the rear-view mirror, we may deem these radical realignments to be of the adaptive, resilient and passive sort, although it is doubtful that the people who lived through them would have thought about it this way.

Intentional forgetting

People can also actively work to forget what they or others know. One way to achieve this is through the deliberate targeting and killing of knowledge-keepers, as in the

Table 1. General chronology for Eastern Arctic archaeology.

Tradition	Period	Approximate dates
Inuit Tradition (Neo-Eskimo)	Recent Inuit	1500 CE–present
	Thule Inuit	1250–1500 CE
Paleo-Inuit Tradition (Paleo-Eskimo)	Late Dorset	500–1350 CE
	Middle Dorset	100 BCE –500 CE
	Early Dorset (includes transitional Dorset)	800–100 BCE
	Pre-Dorset	3000–800 BCE

aforementioned slaughter of Aztec priests by the Spanish (Arbaji 2011, 114), or the Khmer Rouge's mass killing of Cambodia's intelligentsia (Clayton 1998). In such cases, murder—or genocide—becomes a weapon of intentional forgetting. Languages, likewise, have been killed by the wilful erasure efforts of governments, missionaries and social engineering programmes (see Hinton 1996); they have also died the slower death of the wilful absence of practice at home.

Knowledge and memories of habit can be lost with religious conversion too. The Ayoreo of northern Paraguay wilfully ceased traditional chanting and self-consciously abandoned many other practices in the aim of assimilation and conversion (Bessire 2014). Indonesians stopped rearing pigs and consuming pork when they converted to Islam (Lape 2005). Religiously motivated forgetting can take more forceful forms (Connerton 1989, 14–15; González-Ruibal 2016; Schwartz 2013), as when the Spanish destroyed religious paraphernalia, burned books and erected churches on the ruins of Indigenous sacred spaces (Arbaji 2011) or when Pueblo peoples returned the favour following the revolt of 1680 (Liebmann 2008). Protestants removed, destroyed and white-washed Catholic imagery and assaulted the pagan stones of Avebury during the Reformation (Bender 1993). The Taliban obliterated the great Buddha statues of Afghanistan (Meskell 2002). Savonarola's devotees set fire to Florence's vanities (Strathern 2017, 224–5). Religious conversion, accordingly, can be a powerful catalyst for forgetting of the wilful sort. Political 'conversion' can be, too.

Intentional forgetting is difficult to infer from the archaeological record, but one circumstance where it has been interpreted convincingly is in the sphere of politics. Political successors or revolutionaries appear to have mutilated, defaced and buried the colossal stone heads of the Olmec which depicted previous leaders (Pool & Loughlin 2017). The Maya at La Sierra, Honduras, similarly vandalized and buried symbols of prior rulership (Schortman & Urban 2011). In a hunter-gatherer context, a related phenomenon is seen with the expansion of Numic peoples in the American Great Basin, which saw them intentionally deface or obscure the rock art of their predecessors (Bettinger & Baumhoff 1982; Quinlan & Woody 2003).

The Dorset

One particularly noteworthy instance of 'forgetting' in the archaeological record occurs with the emergence of the Dorset culture in the eastern North American Arctic (consisting of the Canadian Arctic and Greenland). This region's culture history consists of two quite different traditions (Table 1). The more recent is known as Inuit (or Neo-Inuit/Neo-Eskimo), and spans from c. 1250 CE to the present. The earlier tradition, Paleo-Inuit (also known as the Paleo-Eskimo or Arctic Small Tool tradition), extends from c. 3000 BCE to 1350 CE (Friesen 2017). Peoples of these two traditions are only distantly related, with the earliest Inuit, known as Thule, displacing the final Paleo-Inuit during the thirteenth and fourteenth centuries CE.

Our emphasis in this paper is on technologies and other archaeologically visible phenomena that were lost, or 'forgotten', midway through the Paleo-Inuit period during the 'Pre-Dorset–Dorset transition'. The earliest Paleo-Inuit are known in most of the Canadian Arctic as Pre-Dorset, in the High Arctic as Independence I and in most of Greenland as Saqqaq. Pre-Dorset arrived from Siberia by way of Alaska, and throughout most of the region are characterized by relatively small sites which were occupied only briefly, as indicated by sparse artifacts and faunal remains. However, based on pan-regional syntheses, as well as comparison with a particularly rich Saqqaq assemblage from West Greenland (Grønnow 2017), it is clear that they carried with them an elaborate technology allowing the production of warm clothing, small watercraft and a range of bone, antler and driftwood implements. Their hunting technologies were particularly elaborate and included the bow and arrow for terrestrial mammal hunting and harpoons and lances for hunting seals. Pre-Dorset demography shifted substantially over time, with regional surveys indicating periods of population peaks (as measured by numbers of dwellings) alternating with periods marked by population crashes or even abandonment of some regions (Dyke & Savelle 2009).

During the first millennium BCE, Pre-Dorset society developed into Dorset. While there is some uncertainty about the nature of this transition, Dorset is highly recognizable in the archaeological record due to such newly introduced elements as semi-subterranean houses, new harpoon head forms and new stone tool types. The poorly understood transitional/Early Dorset period begins between 800 and 500 BCE (Friesen 2016; Houmard 2018; Maxwell 1997; Schledermann 1990, 325–7; cf. Ramsden and Tuck 2001; Ryan 2016). By around 100 BCE, a widespread and distinctive horizon known as Middle Dorset had spread across most of the southern Canadian Arctic and deep into the subarctic regions of southern Labrador and Newfoundland. Finally, around 500 CE Late Dorset peoples, with distinctive new tool types and large 'longhouse' aggregations, reoccupied large areas including the High Arctic and northwest Greenland (Friesen 2017) (Fig. 1).

The end of the Dorset period is poorly understood, but it appears to have varied across different sub-regions. It is becoming increasingly clear, for instance, that it persisted in some places into the thirteenth or fourteenth century CE

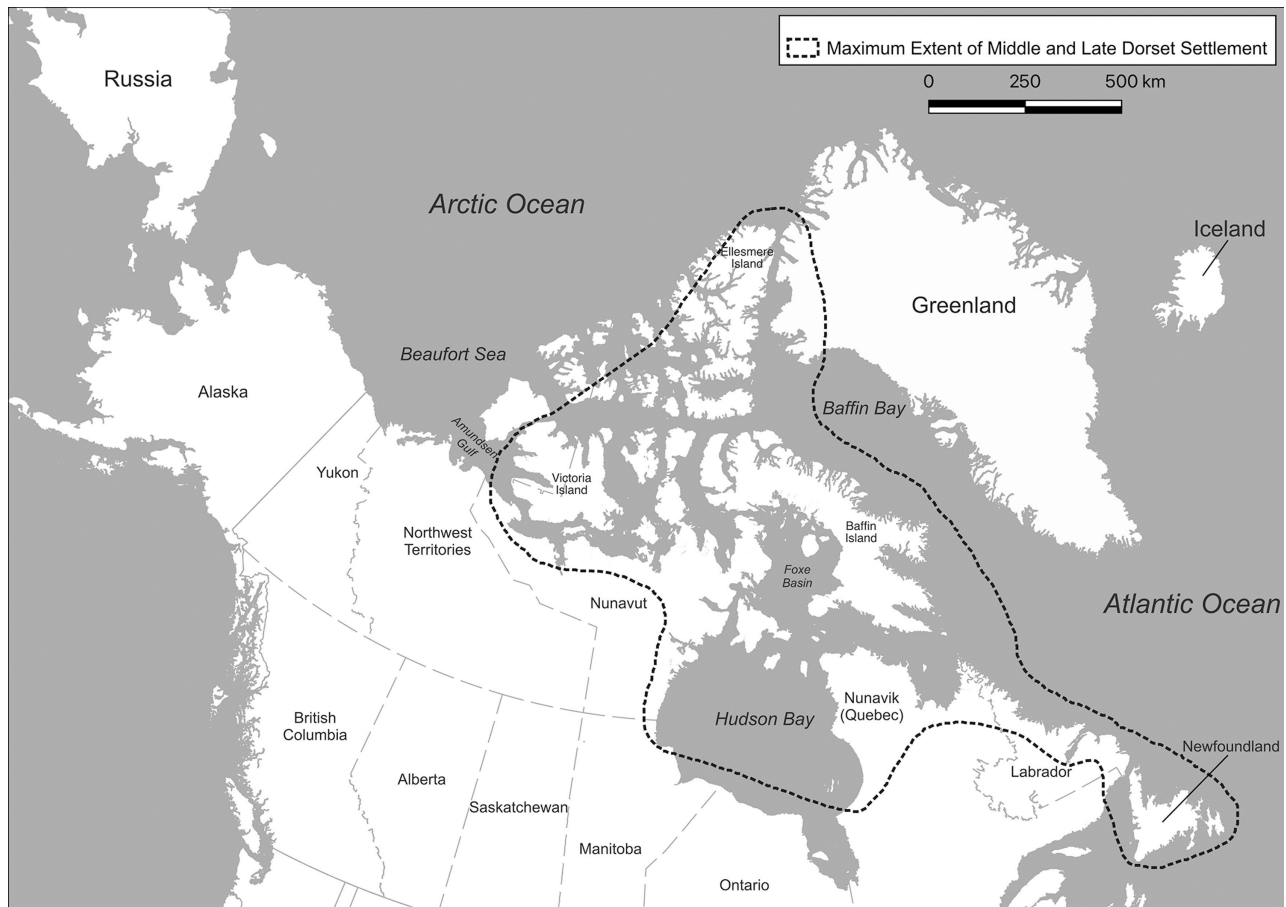


Figure 1. Map of the North American Arctic, showing maximum extent of Dorset settlement. This map includes regions occupied by Middle Dorset and Late Dorset; other related cultural phases are not included because their relationship with Dorset is less clear. (Map drafted by Susannah Clinker and Max Friesen.)

(Appelt & Gulløv 2009; Friesen 2020a; Labrèche 2015; Rowley 1994). Much debate focuses on the dating of the Dorset's demise, and whether they were still around when the Thule (direct ancestors of modern Inuit) first set foot in the Eastern Arctic, or if they had already disappeared by then (Appelt & Gulløv 2009; Appelt *et al.* 2016; Friesen 2020a; McGhee 1997; Park 1993; 2016; Pinard & Gendron 2009). Thule Inuit migrated east from Alaska in the thirteenth century CE, and recent studies indicate that Dorset and Inuit are not closely related (Raghavan *et al.* 2014). Modern Inuit tell stories of a race of giants, or alternatively dwarfs—the Tuniit—that occupied the country when they arrived (Bennett & Rowley 2004). These accounts likely reference the Dorset directly, though they may have also been inspired in some regions by encounters with earlier Dorset or Thule ruins or tools (Mathiassen 1927).

The Dorset are famous in Arctic archaeology for vanishing. They are also famous for what they gained, and lost, in the transition from the preceding Pre-Dorset period. In terms of gains, among many categories of new technologies, the Dorset saw the introduction or greatly increased frequency of semi-subterranean dwellings, snow knives (used to construct snow houses), ice creepers (attached to *kamiks* (boots) to increase grip on ice), ground slate tools, figurative art and implements associated with

shamanism. However, it is the losses, or 'forgettings', that concern us here. There is no good evidence that Dorset had dogs; at best they were extremely rare (Brown *et al.* 2013; Morey & Aaris-Sørensen 2002). Dorset sleds were likely pulled by humans (Maxwell 1985). Their Pre-Dorset predecessors did have dogs, though it should be noted that evidence for dogs is variable and relatively low throughout the Paleo-Inuit period (Darwent 2004, 65; Meldgaard 2004; Morey & Aaris-Sørensen 2002). The Dorset also did not have the bow and arrow, but their predecessors did (Desrosiers & Sørensen 2016, 166–7; Grønnow 2017, 47, 52–8; Maxwell 1985, 88, 138; Meldgaard 1962). Curiously, the Dorset also lacked drills, and so they instead arduously gouged holes into bone and antler (Fig. 2). The Pre-Dorset, however, had them (Grønnow 2017, 157–8; Maxwell 1985, 86). Diamond Jenness (1925, 435), who first described the Dorset culture, reasoned that it was old in part by the logic that gouging had to have pre-dated drilling, echoing the common progressivist refrain that 'no tribe that had once known the bow drill would have forgotten its use' (see also Rowley 1940, 496). Despite these losses, it is important to note that Dorset society can be seen as relatively successful in comparison with its Pre-Dorset predecessor, as indicated by periodic expansions to new areas during both the Middle and Late Dorset periods and the occupation of large and relatively permanent settlements.



Figure 2. Three Dorset artifacts from Victoria Island, Nunavut, showing the Dorset method of gouging linear holes rather than drilling round ones. Left to right: harpoon foreshaft (Middle Dorset); needle (Middle Dorset); plaque/box part with incised decoration (Late Dorset). (Photograph: Max Friesen.)

Dorset forgetting

Cultural hiatuses and territorial contractions are common in Arctic antiquity and likely mark periods when food resources were poor and environmental conditions marginal (see Darwent 2004; Desjardins & Jordan 2019; Schledermann 1990). Not a few of these appear to dovetail with population decline (Holly 2011; Holly *et al.* 2022; Jorgensen & Riede 2019; Maschner 2016; Savelle & Dyke 2009; Tallavaara & Pesonen, 2020). There is, for instance, evidence of a significant Pre-Dorset population crash around 2000 BCE in the central Canadian Arctic (Dyke & Savelle 2009; Savelle & Dyke 2002; 2009), at about the same time that large swathes of the High Arctic were abandoned (Grønnow 2016; Maxwell 1985, 110; McGhee 1996, 111; Schledermann 1990, 314). Another population crash and abandonment event occurred around 600 BCE in many areas of the Eastern Arctic (Dyke & Savelle 2009; Schledermann 1990, 314), at about the time of the Pre-Dorset/Dorset transition. Archaeologists have frequently noted that this period is associated with a cooling climate, with colder temperatures seen as driving change in sea ice conditions and terrestrial ecosystems with direct implications for human societies (Maxwell 1985; McGhee 1996). Recent Palaeoclimatic research continues to support generally colder conditions during the first millennium BCE, but they also indicate significant regional variability in the timing and severity of climate change (e.g. Briner *et al.* 2016; Finkelstein 2016).

Assessing continuity between Pre-Dorset and Dorset is greatly complicated by matters of geographic scale, fieldwork

and survey coverage, and temporal resolution—to say nothing of a dynamic resource environment which could also account for changes in the material record. Cultural discontinuities across the Pre-Dorset/Dorset transition have been identified in parts of Arctic Canada, Greenland, Labrador and Newfoundland, but not in others, and there are keen disagreements on dating and interpretation, as well as on the identity and origins of the direct predecessors of the ‘Dorset’ (Friesen 2017; Grønnow 2017, 390–91; Houmard 2018; Maxwell 1997; Meldgaard 1962; Milne *et al.* 2013; Nagy 1994; Odess 2002; Ramsden & Tuck 2001; Ryan 2016; Savelle & Dyke 2009; 2014). Environmental change and significant temporal and geographic gaps also occur during the subsequent Dorset sequence (Grønnow & Sørensen 2006; Holly 2011; Jensen 2005; Savelle & Dyke 2014). In short, with geographic and temporal gaps, cultural discontinuities and a dynamic Arctic environment, one can find in the Paleo-Inuit sequence ample opportunities for forgetting in one form or another.

Passive forgetting can be expected with a quick pivot to new environmental landscapes or conditions and resources. Indeed, some posit that changing climatic conditions can account for most of the archaeological changes witnessed across the Pre-Dorset/Dorset transition (Fitzhugh 1976; Maxwell 1985, 107–10). People may have responded to colder temperatures and the expansion of sea ice, for instance, by living more frequently in snow houses directly on the sea ice and closer to their prey, as indicated by the increased presence of snow knives and proliferation of stone lamps in the early Dorset period. In this context, snow houses and

portable light and heat are envisioned as innovations and adaptations to a changing environment. Yet Pre-Dorset peoples appear to have managed without elaborate snow houses—even in the bitterly cold High Arctic—for centuries, and portable lamps did not reach the Canadian Arctic until just prior to the Dorset period (Grønnow *et al.* 2014). The Dorset also retained these technologies when warmer weather set in during later Dorset times and when they occupied subarctic environments (Damkjar 2005, 162–3; see Holly 2011). Snow knives and lamps continued to be used on the island of Newfoundland, for instance, where both light and wood was plentiful (Erwin 2016). Accordingly, while it is hard to deny the utility of snow houses and portable light and heat, their absence, addition and retention in conditions where they were not narrowly necessary for survival suggests culturally informed agency too.

Paleo-Inuit peoples also ceased, or at least reduced, open-water hunting and stopped using the bow and arrow at the time of the Pre-Dorset/Dorset transition. This has also been explained as part of an adaptative shift from an emphasis on interior terrestrial resources, such as caribou, to coastal, sea-ice resources with colder temperatures (Maschner & Mason 2013, 135–6; Maxwell 1985, 110). Hunting of terrestrial resources did continue in many regions without the bow and arrow (Friesen 2020b; Mary-Rousselière 1976; Milne *et al.* 2013), but the loss of the bow and arrow arguably would have narrowed subsistence options and strategies and put small bands and families at greater risk of starvation (Howse 2019). In other places, the Dorset may have ceased hunting caribou for social rather than economic reasons (Holly 2019, 1443–5). That decision, together with the shedding of the bow and arrow, may likewise have narrowed their ability to adapt to changes in the resource environment and to access resources in areas occupied by neighbouring peoples (Erwin *et al.* 2005; Holly 2011).

Sharp changes in environmental and resource conditions could also have resulted in depopulation events, and *unintentional forgetting* of the undesired sort. Some have posited broad and sweeping human extinction events in Paleo-Inuit prehistory (Tuck 1976), but even the untimely demise of a small number of prime-aged hunters, knowledge-bearers, or craftspeople could have led to cultural and technological losses (see McGhee 1994). The disappearance of kayaks and essential hunting technology among the aforementioned Polar Inughuit, for instance, may have occurred when just a subset of the community perished (see LeMoine & Darwent 2016).

McGhee (1996, 146) takes the absence of dogs as an indication that the Early Dorset had difficulty feeding themselves, following the logic that dogs would have been the first to starve during times of food shortage; thus, the Early Dorset could not afford the luxury of dogs because they lived precariously at the edge of hunger. From an adaptative perspective, dogs would seem useful to the Dorset economy given that it was focused on sea-ice hunting and that they would have been immensely valuable in helping hunters locate seal breathing holes (Park 2012, 121–2; *cf.* Morey & Aaris-Sørensen 2002). Without dogs, the Dorset may have been compelled to focus more on ice-edge hunting, to their

detriment (Cox & Spiess 1980). Does the absence of dogs then point to some calamity? Following McGhee's (1996, 146) starvation logic, if there were a human bottleneck demographic event, the associated dog population presumably would have been hit hardest—maybe to the point of vanishing. Indeed, there is no good evidence for dogs during the Dorset period. Even the discarded bones of animals do not bear gnaw marks from them at this time (Howse & Friesen 2016, 4). Dogs are present (albeit rare) in Pre-Dorset contexts, however. Perhaps tellingly, some show signs of having been butchered for food (Morey & Aaris-Sørensen 2002).

It is also plausible that some Dorset losses were the result of *intentional forgetting*. Cataclysmic events and dire circumstances are known to inspire people radically to reimagine their cultures. Anthropologists have long noted the connection between cultural revitalization movements and episodes of social stress (e.g. Linton 1943; Wallace 1956). With this in mind, it is possible the Early Dorset sought transformative ideological and social solutions to their troubled times. McGhee (1996, 142–4) wonders if the Dorset drew a connection between a spinning drill, used to bore holes, and the winds that produced storms, and abandoned the former in hopes of preventing the latter. He also thinks it is possible that the Dorset blamed the bow and arrow for causing starvation because it was no longer proving as effective as other hunting technologies, and stopped using it. We note that McGhee's wind-storm theory could account for both the rejection of the bow and arrow and the drill, especially if the Pre-Dorset were employing a bow-drill and not spinning a drill between their palms (see Grønnow 2017, 158). Putting aside the fact that storms would have always occurred in the Arctic past (although their frequency and intensity might have varied), and the highly conjectural nature of McGhee's thesis, the case for the conscious rejection of technology as a mechanism of forgetting might better account for some Dorset losses than cataclysmic demographic events, given how relatively widespread the Pre-Dorset population was, at least during some periods (Maxwell 1985; Saville & Dyke 2009). The Dorset were not the Polar Inughuit. If the Pre-Dorset/Dorset transition occurred among a geographically more expansive and populous community, it would seem easier to infer the spread of an idea than it would be to account for the elimination of everyone who possessed the knowledge of what was lost.

That the Dorset may have engaged in selective, intentional forgetting as a response to stress also finds support in what was *added* to their culture. In addition to technologies such as 'ice creepers' for traction on ice and snow knives for construction of snow houses, there is an explosion of figurative art and shamanism-related objects, and the eventual appearance of longhouse structures during the Dorset period. These developments have been explained by archaeologists as magical and cultural efforts to respond to various social and environmental stresses—the arrival of the Thule, threats to an egalitarian ethic, a dramatically changing resource environment, the need to foster interactions over greater distances, and a dwindling population (Appelt *et al.* 2016; Friesen 2007; McGhee 1981, 51; Schledermann 1990, 332; Taçon 1983). We can think of them

as idea-driven solutions to stress too, but in the additive rather than subtractive sense.

Forgetting in Arctic antiquity, and forgetting

Two theoretical positions have long dominated Eastern Arctic archaeology—diffusionism and processualism (Holly 2002; 2013; Hood 1998). Each has its own way of understanding forgetting. In the former, ideas constitute culture; they can be lost when people die, gain traction and circulate with social interaction and stagnate with isolation. It was once thought, for instance, that snowshoes were invented in the Lake Baikal region of Siberia and then the idea/technology spread out from there, transforming cultures along the way. The (presumed) geographically isolated Kivallirmiut (Caribou Inuit) were believed to be late adopters, and thus to have retained aspects of a pre-snowshoe culture into recent times (Birket-Smith 1930). In the latter, ideas are not especially unique or culturally and historically contingent. The processualist expectation is that people generate similar ideas under similar conditions. Thus, the snowshoe would appear where it was needed and vanish where it was not; to wit, it was lost when the first indigenous Americans crossed through the tropics, and it was rediscovered when conditions once again called for it in the snowy interior of Tierra del Fuego (see Cooper 1945).

Passive forgetting of the adaptive sort had to have been a common occurrence in Arctic antiquity. One example is flaked burins. Burins are steep-angled stone tools used for carving implements out of bone, antler and wood. In the early Paleo-Inuit record, flaked burins are common, but over time they were gradually replaced by 'burin-like tools' on which the working facet is ground, not flaked. By the end of the Dorset period, many aspects of the manufacture of flaked burins had seemingly been forgotten, due to the adoption of the new, burin-like tools (Desrosiers & Sørensen 2016). Another example is the widespread loss of ceramic technology among Inuit groups (Pre-Dorset and Dorset peoples in the Eastern Arctic never made ceramics). Ceramic pots and lamps are relatively common in the earliest Thule Inuit sites, but by the nineteenth century they had become rare and geographically restricted (Savelle 1986). Their diminished popularity is often interpreted as the result of both the more difficult conditions in the east to make fired ceramics (colder temperatures, lack of driftwood) and the more frequent use of soapstone (steatite) suitable for making pots and lamps (Arnold & Stimmell 1983).

Unintentional forgetting may not have been uncommon either. As a consequence of any variety of calamities, the constitution of small Arctic communities can change dramatically in a short period of time (Burch 1998, 320–23; Corbett 2010, 42; McGhee 1994). By chance alone, analogous to genetic drift (see Koerper & Stickel 1980), tragic events could quickly eliminate an entire set of knowledge-keepers in a small community (Jordan 2015, 26). If that knowledge was highly specialized or secret, loss would be even more likely. Consider, for instance, how few Aleut possessed the esoteric knowledge and skills of their whale-hunting shamans (Corbett & Hanson 2023, 216–18). The demarcation of

knowledge, technology, and practice by gender (Jordan 2015, 347, 364), might also have worked to magnify losses in small populations. On Little Diomed Island, women sewed but never carved, and men alone hunted marine mammals (Jolles 2006; Phillips-Chan 2021, 26). Indeed, in many hunter-gatherer societies, men actively restricted women's access to hunting knowledge and technology (Brightman 1996)—practices that could prove catastrophic when small communities suffered the sudden loss of prime-aged hunters. We might inversely imagine how the loss of women could affect a community, if, for instance, they were the primary navigators (Chapman 1997, 82–3), clothiers (LeMoine 2003), or fire keepers (see Hrynck & Betts 2022). We may also consider how the vertical transmission of information—from elder to child—in small hunter-gatherer societies (Prentiss 2011, 18; cf. Hewlett *et al.* 2011; Jordan 2015, 111, 124–5, 202–3) could also compartmentalize knowledge. That said, people are apt to be familiar with practices even if they do not engage in them regularly and could probably get by in a pinch if they needed to. If, however, a society could manage without something, that 'something' could, feasibly, truly disappear if the people that 'knew it' did so.

Given the broad networks and high mobility of Eastern Arctic peoples, as evident in the wide distribution of cultural traits—for example, with the Dorset—it is perhaps more likely that forgetting was often intentional rather than accidental and unintentional. Here, as in the drift scenario above, sharp pivots in cultural practices are magnified by the small size of communities, but the process is different. In such cases, a small coalition of influential actors, or a charismatic individual (e.g. a shaman), or an affected and vocal community, successfully advocates for the discarding of a technology or practice so that in a short time a lightly populated but highly connected constellation of communities across a vast region wilfully abandons, for instance, their bows and arrows and bow-drills. Or, by a similar process, a contagion-like spread of ideas quickly adds traits to a cultural tradition—for example, portable art and amulets. For how this might actually work, we might consider how legends, rumours, and contrived evidence have conspired in ways that had people in the United States in the 1980s cancelling Halloween for fear of drug-laced candy, and on guard for satanic cults (see Ellis 1993; 1994). Could an analogous panic have put a wilful end to wind-causing Dorset drills and weapons?

Support for intentional forgetting on the part of the Dorset may be inferred from the shallow nature of the Arctic archaeological record itself. If we accept that artifacts and ruins can inspire new memories and histories (Borić 2010b; Hendon 2010; Iverson 2017; Van Dyke & Alcock 2003)—including even a later mythologizing of the Dorset by the Inuit (Mathiassen 1927; Park 1993, 220)—it stands to reason that a landscape littered on the surface with Pre-Dorset tools would have provided opportunities for the Dorset to rediscover some 'lost arts' that had disappeared previously if death alone (unintentional forgetting) had placed them there.

Forgetting

As the reader may have surmised by now, we are reluctant to assert a one-size-fits-all explanation for Dorset forgetting—

let alone for Arctic or archaeological forgetting in general. All kinds of forgetting are apt to have been in play in Arctic history—and more broadly in human history writ large. We would, however, go so far as to suggest that human agency was reasonably present almost everywhere forgetting occurred. Agents of passive forgetting of the adaptive or progressive sort were certainly mindful of what was happening and what would be lost. Such forward-thinking nostalgia could sometimes have inspired people to resist it. People were aware of bow-and-arrow technology in the interior of the western Subarctic for millennia before they adopted it (Kristensen *et al.* 2019, 14), and when they did, they surely knew what was being lost. Teachers that formerly taught spelling and cursive—and that still teach AI unassisted writing—do too. Archaeologists, in reading the material remains of culture change, should consider the weight of such decisions—even if they make ‘adaptive’ sense or are ‘for the best’—and look for signs of future-facing nostalgia in the form of the lingering retention of technologies and practices. Examples of this may include the Newfoundland Dorset’s seeming reluctance to abandon traditional seal-hunting places and to pivot to new subsistence strategies when warming temperatures affected resource availability, or the Dorset’s retention of snow houses and lamps (Erwin 2016; Holly 2011; 2013, 103–8).

By definition, intentional forgetting is a self-conscious, agent-driven form of memory erasure, but its realization is apt to vary by society and conditions. Societies can be wilfully progressive, or isolationist, or conservative (see Finkel & Barkai 2018; Hegmon *et al.* 2008; Holly 2011; Kristensen *et al.* 2019), with implications for how, and how often, forgetting occurs. Social conditions too may affect its prevalence. As already mentioned, periods of social stress are known to engender revitalization movements that often include efforts of intentional erasure as part of a broad effort at remaking society. The weaponization of intentional forgetting, likewise, may be more common with fragile political systems, such as chiefdoms, or at moments of political succession or conquest. And, as contemplated with the Dorset, efforts at intentional forgetting may be more common in small, tight-knit communities where messaging from charismatic individuals (e.g. shamans) or an unusual collective experience (e.g. a tragedy) could spark contagious messaging/panics and quick pivots in social or technological practices.

Finally, in a roundabout way, the ghost of human agency may even be present in some forms of unintentional forgetting. Unintentional forgetting that results from the sudden loss of knowledge keepers, for instance, may be traced to cultural practices that intentionally aimed to restrict information to specific subgroups. We are reminded of Hegmon and colleagues’ (2008) brilliant evocation of a rigidity trap, in which a society’s procrastination (rigidity) in addressing some small problem eventually leads to a critical inflection point (trap) in which a very hard cultural adjustment is required, if it is even still possible. The classic example is when failure to conduct regular controlled burns in a forest results in the accumulation of deadwood and underbrush that later fuels a conflagration. Humans may be faultless for the lightning strike, but not for the scale of devastation wrought

by it. Likewise, if a society deems only men, and only certain men, worthy of particular knowledge, the loss that comes from their sudden demise may be unintentional, but it is not without human responsibility—agency.

We recognize the conjectural nature of these scenarios, but offer them as examples of how to contemplate the process of forgetting. The Dorset case study is particularly useful in this instance since a series of archaeologically recognizable phenomena were demonstrably ‘forgotten’, but as with so many other archaeological instances, we lack the resolution to make fine-grained inferences about the precise social and environmental contexts that informed these losses. For archaeology more broadly, we advocate more attention being paid to understanding elements of past societies that have been forgotten. By considering the conditions that led to their forgetting, and the degree to which they were driven by passive, unintentional, or intentional processes, such work has the potential to bolster our understanding of deep underlying currents of change in past societies. It could also help clear a humanistic and human-willed space for agency and history in the arena of forgetting.

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