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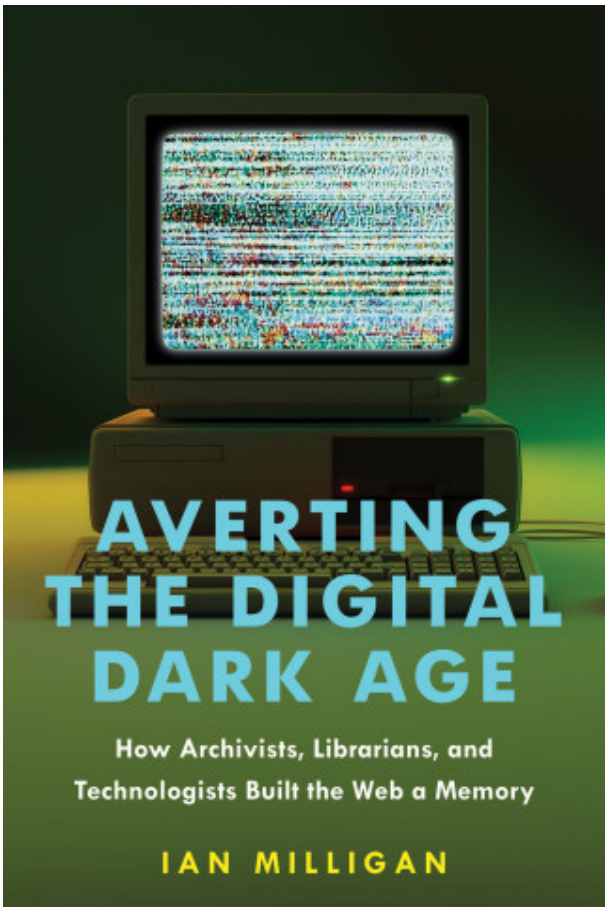
Book Review

Ian Milligan



Averting the Digital Dark Age: How Archivists, Librarians, and Technologists Built the Web a Memory (Johns Hopkins University Press, 2024), 230 pp., ISBN 9781421450131.

Reviewed *by*

Nathalie Fridzema

Ian Milligan's *Averting the Digital Dark Age* offers a timely historical account of how the earliest efforts to preserve the web took shape. Milligan states plainly that this is not a history of the web, but of web archives, and he reconstructs their formative years from the early 1990s to 2001 through interviews and institutional records. The narrative begins with the growing fear of a digital dark age, as users and information professionals saw how quickly websites disappeared. Chapter 1 links these concerns to wider archival debates in which archivists were increasingly understood as active makers of the historical record. Milligan's overview of pre-web digital storage introduces the book's key notion: '[d]espite a perception that digital preservation is a technical challenge, practitioners and scholars underscore the social and organizational challenges.'[1]

Milligan, Professor of History at the University of Waterloo, has long examined how the web reshapes historical research. His earlier book, *History in the Age*

of Abundance?,[2] urged historians to take web archives seriously as sources. In *Averting the Digital Dark Age*, he steps back to ask how those archives emerged in the first place. His historical training is evident throughout, particularly in the oral histories he conducted, which add depth to the narrative and reveal the labour behind early web preservation; work that often goes unnoticed within the humanities. By foregrounding archivists, librarians, and technologists as historical actors, Milligan positions the book within a growing historiography concerned with the infrastructures that condition digital memory.

Two chapters form the backbone of Milligan's history. Chapter 3 turns to the Internet Archive and its founder, Brewster Kahle, tracing how they developed the first large-scale web crawls and built the organisational framework that made early preservation possible. Milligan conveys the urgency that shaped the Archive's 'collect all' ethos, presenting it as a response to a rapidly vanishing web. The second anchor is Chapter 5, which examines archiving during and after the attacks of 9/11. The sheer volume of material gathered in this moment is presented as evidence 'that a golden age of memory had dawned,' according to Milligan.[3] Between these pillars sits Chapter 4, comparing national libraries in Canada, Sweden, Australia, and the United States. Here, Milligan shows how these institutions adopted more selective strategies due to limited resources, legal obligations, and public-sector responsibilities.

Although Chapter 4 is a welcome widening of an otherwise dominantly American narrative, Milligan's decision to place four national libraries into a single chapter is one of the moments where the book feels constrained by scale. As Hegarty has noted, this structure leaves limited room to explore how political cultures and legal conditions shaped each institution's approach.[4] The Dutch case underscores this. Without a legal deposit law, the National Library of the Netherlands (KB) has relied on negotiated permission and targeted collecting, keeping Dutch web archiving selective and often reactive.[5] Expectations shaped by the Internet Archive's scale and openness contrast sharply with the Dutch practice, which is grounded in manual selection and access restrictions tied to privacy legislation. These differences show how legal frameworks continue to define what national web archiving can be, producing distinct trajectories even within Europe. Milligan's historical framing helps clarify and historicise this ratio between more expansive and more constrained approaches, offering useful context for current debates on regulation and cross-border collaboration; the latter being further explored in the recently published *Companion to Transnational Web Archive*.[6]

Within Milligan's comparison of the Internet Archive and national libraries, questions of privacy and copyright recur. He returns to these in the conclusion, noting the ongoing tension between the right to be forgotten and the right to be remembered. The Internet Archive adopted a privacy through obscurity approach, which grows increasingly questionable as search and retrieval systems improve, and frankly, finding a website

becomes less arcane. Today, these dilemmas are not resolved, prompting Milligan to state that 'the lessons of the past serve as concrete inspiration about alternate visions of web archival access.'[7] His account makes clear that the idea of saving everything is a historical development rather than an inevitable one, which provides a useful basis for reconsidering that expectation today. This is especially relevant in light of current ecological concerns around digital preservation, as discussed by Miedema et al., for example.[8] The Internet Archive's 'collect all' ethos was steeped, nonetheless, in 90s Silicon Valley data-driven logic, raising the question of whether such an approach can be defended when it demands considerable environmental resources today.

The chapter on 9/11 is particularly illuminating, as it historicises the emergence of crisis collecting and shows how the attacks spurred rapid and inventive archiving efforts. The event underscored the web's role as a cultural record and its recognition as digital heritage. Milligan notes that 'the story of event-based capturing continues in our unsettled world,'[9] pointing to how crisis-driven strategies have since become a default approach, visible again during COVID-19. This raises a wider question: what becomes of everyday digital culture when preservation is activated mainly by crisis? The Dutch example of the XS4ALL homepages makes this clear.[10] The KB began preserving this material only after the provider announced it would stop hosting the sites. Without that moment of urgency, would this vernacular collection have entered the archive at all? At the same time, crisis-driven approaches leave little room for quieter forms of online culture that never produce a clear archival signal. Here, informal actors remain indispensable. Many early networks survive because individuals saved files, kept hardware, or mirrored content, and later donated their collections. A fuller acknowledgement of such efforts would offer a richer view of how digital memory has been sustained beyond formal infrastructures.

Averting the Digital Dark Age provides a strong historical foundation for understanding the present state of web archives. Its analysis of early decisions, institutional limits and competing visions offers valuable context for current debates, and its attention to social complexities is a welcome counternarrative to technological deterministic narratives. The use of oral histories is a clear strength, though the focus on thought leaders narrows the scope in places. Still, Milligan's framing brings long-standing tensions in web archiving into perspective, and the book provides a solid skeleton that future work can flesh out further with more transnational accounts.

Notes

1. Ian Milligan, *Averting the Digital Dark Age: How Archivists, Librarians, and Technologists Built the Web a Memory* (Johns Hopkins University Press, 2024), 25.
2. Ian Milligan, *History in the Age of Abundance: How the Web Is Transforming Historical Research* (De Gruyter Brill, 2019).

3. Milligan, *Averting the Digital Dark Age,* 3.
4. Kieran Hegarty, review of *Averting the Digital Dark Age: How Archivists, Librarians, and Technologists Built the Web a Memory* by Ian Milligan, Johns Hopkins University Press, 2024, 208 pp., ISBN 9781421450131, *Internet Histories* 9, no. 3 (2025): 312–315.
5. "Webarchief: het Nederlandse internet opgeslagen," KB, accessed November 17, 2025, https://www.kb.nl/over-ons/expertises/webarchivering.
6. Susan Aasman, Anat Ben-David and Niels Brügger, eds., *The Routledge Companion to Transnational Web Archives Studies* (Routledge, 2025).
7. Milligan, *Averting the Digital Dark Age,* 169.
8. Marije Miedema, Susan Aasman, Anne Beaulieu, and Sabrina Sauer, "An ecologically just future for personal digital heritage: three guiding statements," *Archival Science* 25, no. 2 (2025): 1-18.
9. Milligan, *Averting the Digital Dark Age,* 161.
10. "XS4ALL Home Pages (1993-2001) Web Collection," KB, accessed September 11, 2025, https://www.kb.nl/en/over-ons/projecten/xs4all-homepages-archivering.

Biography

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