

<b>Institution:</b> The University of Manchester		
<b>Unit of Assessment:</b> 28 (History)		
<b>Title of case study:</b> Sleeping on it: using history to understand and address today's 'sleep crisis'		
<b>Period when the underpinning research was undertaken:</b> 2012-2020		
<b>Details of staff conducting the underpinning research from the submitting unit:</b>		
<b>Name(s):</b>	<b>Role(s) (e.g. job title):</b>	<b>Period(s) employed by submitting HEI:</b>
Sasha Handley	Professor of Early Modern History Senior Lecturer Lecturer	2018-present  2014-2018 2012-2014
<b>Period when the claimed impact occurred:</b> August 2013-2020		
<b>Is this case study continued from a case study submitted in 2014?</b> N		
<p><b>1. Summary of the impact</b></p> <p>Handley's research on sleep's history established the importance of humanities perspectives within debates about today's global sleep crisis. It provided the basis for collaborations with The National Trust (NT), The Children's Sleep Charity, and The British Academy. At NT, the research: (1) delivered approximately GBP255,000 economic benefit; (2) changed the working practices of NT staff and volunteers; (3) increased NT visitor numbers and diversified audiences; (4) changed the visitor engagement strategies of two NT properties to prioritise research-led programming focused on health and wellbeing, with impact on programming for visitors at a third property; and (5) contributed to NT's successful award of Independent Research Organisation status. The research achieved further impact by raising public awareness of the importance of sleep quality to physical and mental health, and improving the sleep routines of school children and members of the public.</p>		
<p><b>2. Underpinning research</b></p> <p>The research was undertaken by Handley at The University of Manchester (UoM) from 2012 to the present.</p> <p><b>Defining a new field of study</b></p> <p>Handley's monograph <i>Sleep in Early Modern England</i> [1] and related articles represent the first in-depth historical investigations of sleep culture in any period or place. It is the first corpus of work to define the history of sleep as distinct from the history of night-time (Ekirch, 2005; Koslofsky, 2011). The work reveals how distinct bodies of medical knowledge, socio-economic forces, religious cultures, emotions and materials shaped people's sleeping practices and environments in early modern English households across the life-cycle [1-4]. The research intervenes in debates about the meaning and practice of sleep today by rethinking the balance between environment, culture and biology [5]. This work has defined a new field of historical scholarship, and particularly of social and cultural history, prompting an entirely new entry in the Bibliography of British and Irish History (BBIH) - a key point of reference in the discipline of History. Simon Baker, BBIH editor, noted that "<i>Sleep in Early Modern England</i> [1] <i>prompted the addition of 'Sleep' as an index term.</i>"</p> <p><b>Defining a new interdisciplinary methodology</b></p> <p>This boundary-crossing research demanded the design of a new interdisciplinary methodology for investigating sleep's history, one that combines analysis of sleep's nonverbal practice alongside its biological drivers, and broader social and cultural meanings. As such, it offers a new model for investigating the history of this vital part of daily life by drawing on insights from medical anthropology, chronobiology, neurobiology, psychopharmacology, phenomenology, sociology, literature and history [1]. The research also draws together an innovative combination of historical archival sources that include: material artifacts (e.g. bedsteads, mattresses, bedding textiles, bed clothes, charms and amulets, lighting devices), household recipe books; probate inventories; life writings and correspondence; and medical treatises [1, 6]. Handley's analysis of bedding materials and medicaments provided a model for new interpretative strategies at NT properties, and resulted in changes to their physical infrastructure and public displays.</p>		

### Sleep as Bio-culture

This research establishes an important role for humanities research in contemporary debates about the global sleep crisis by insisting that sleep, in times past and present, is a bio-cultural practice that arises from routine bodily and intellectual interactions between humans and the specific historical and material environments they inhabit [5]. Rather than treating ‘nature’ and ‘culture’ as separate entities, the research establishes the dynamic interactions between them to map how people shaped, sustained and altered their routines and environments to manage sleep opportunities and to optimise their quality. It draws attention, in particular, to the importance of sleep ‘value’ within specific historical contexts, by revealing the powerful motivations that early modern people had to regulate their sleeping practices, which they understood as central to physical, emotional and spiritual health [1].

### 3. References to the research

1. **Handley, S.**, *Sleep in Early Modern England* (Yale University Press, 2016), ISBN: 9780300220391. Available from HEI on request.
2. **Handley, S.**, ‘Sleep-piety and healthy sleep in early modern English households’, in *Conserving health in early modern culture: Bodies and environments in Italy and England*, edited by Sandra Cavallo and Tessa Storey (Manchester University Press, 2017), 185-209, ISBN: 978 1526113474, <https://doi.org/10.7765/9781526113498.00019>
3. **Handley, S.**, ‘Sociable sleeping in early modern England, 1660-1760’, *History: The Journal of the Historical Association* 98:329 (2013), 79-104, <https://doi.org/10.1111/j.1468-229X.2012.00577.x>
4. **Handley, S.**, ‘From the sacral to the moral: sleeping practices, household worship and confessional cultures in late seventeenth-century England’, *Cultural and Social History* 9:1 (2012), 27-46, <https://doi.org/10.2752/147800412X13191165982917>
5. **Handley, S.**, ‘Accounting for sleep loss in early modern England’, *Interface Focus* (Special Issue: ‘Sleep and Stress’), 10:3 (2020), <https://doi.org/10.1098/rsfs.2019.0087>
6. **Handley, S.**, ‘Objects, emotions and an early modern bed-sheet’, *History Workshop Journal* 85:1 (2018), 169-194, <https://doi.org/10.1093/hwj/dbx050>

*Sleep in Early Modern England* [1] was nominated for the prestigious Longman-History Today Book Prize and the Wolfson History Prize in 2017. The Wolfson judges described the work as “A book of sheer originality and novelty. Handley tackles an almost completely neglected subject with disarming modesty”. In 2018, the book won the inaugural book prize of the Social History Society, and it has received critical acclaim from international reviewers in the humanities, medicine and science (*London Review of Books*; *Literary Review*; *American Historical Review*; *Economic History Review*; *Renaissance Quarterly*; *Medical History*; *British Society for the History of Medicine*; *Zeitschrift für Historische Forschung*; *Nature: International weekly journal of Science*). The editors of *Cultural and Social History* selected [4] as one of the journal’s top five articles since its foundation in 2004 and included it in a virtual special issue in 2016 to celebrate the Social History Society’s 40<sup>th</sup> anniversary. Further evidence of the quality and importance of this research can be found in the award of a British Academy Mid-Career Fellowship (MD140021 ‘Sleep in Early Modern England’, 2015-2016, PI Handley, GBP83,438); an AHRC Follow-on Funding for Impact and Engagement award (AH/P00850X/1 ‘How we used to sleep’, 2017-2018, PI Handley, GBP80,613), and a Being Human Festival Small Award (‘Sleep: Lost and Found’, 2017, PI Handley, GBP1,601).

### 4. Details of the impact

*Sleep in Early Modern England* uncovered a world in which sleeping soundly was understood to be pivotal to physical vigour, emotional wellbeing, prosperity, personal reputation and spiritual health. It documented sleep’s critical importance within Christian beliefs and within a preventative culture of healthcare that was dominated by the principles of the six non-natural things – a set of environmental and dietary rules in which sleeping and waking patterns were central to long-term physical and mental health. Attitudes to sleep in early modern England present an instructive toolkit for the present day by showing that the way people think about sleep, and how they manage it, have a critical effect on sleep quality.

This research shaped current debates about sleep quality and 'value' by building an influential partnership with the National Trust (NT) and its audiences. NT is the largest conservation charity in Europe. It cares for more than 500 heritage properties, 780 miles of coastline and approximately 250,000 hectares of land. In 2019/20, NT attracted approximately 28,000,000 visitors and had 5,950,000 members; it generated GBP270,000,000 from members and GBP99,000,000 across its fundraising activities (NT Annual Report 2019/20). Further pathways to impact from this research included the development of educational materials and workshops to engage directly with schools and the delivery of radio and TV broadcasts and podcasts to shape public debate and sleep behaviour.

The research has delivered significant economic benefits and organisational change to the NT, whilst also supporting a range of educational and charitable initiatives to address today's 'sleep crisis' by improving public knowledge of sleep's history, and its importance to physical and mental health. Impact is evidenced in the following key areas:

### **Impact on the National Trust and its visitors**

Handley's AHRC award brought early modern sleep habits to life as part of a public programming project with NT entitled 'How we used to sleep' (HWUTS). It funded a year-long programme of sleep-themed exhibitions, workshops, outreach events, films, blog posts, and staff training exercises in partnership with the NT's Tudor property, Little Moreton Hall (LMH) in Cheshire. The project shaped programming and interpretation at LMH throughout 2017. As LMH's General Manager explains, "*all of our 2017 visitors benefited from the HWUTS installations and activities, which dominated all facets of the property's interpretation in that year*" [A.i]. 79,000 visitors to LMH in 2017 enjoyed a 'Sleep Walk' adventure trail that exposed visitors to historic bedtime routines, bi-phasic sleep patterns, and sleep remedies documented in the research [A.i]. Research outputs [1-4] and [6] underpinned the programme's design and produced new training for LMH's staff and volunteers in sleep's history and early modern healthcare. An increase in visitor numbers at LMH from 76,000 in 2016 to 79,000 in 2017 is attributed to the project: "*We strongly believe that the appeal of HWUTS explains this upturn in visitor numbers*" [A.i]. LMH's General Manager also describes the longer-term significance of the project, stating in September 2019 that Handley's research "*will inform our programming and interpretation activities until at least 2021*" [A.i]. The personal connections to the past that HWUTS generated improved visitors' 'emotional engagement' with the property, and increased visitor experience scores across NT's audience segments. Groups categorised as 'Young Independents' and 'Home and Family' saw respective increases in levels of visitor satisfaction of 48% to 58% and 35% to 57% from 2016 to 2017 [A.i].

The award of LMH's first ever North Star Award for Creating Amazing Visitor Experiences is evidence of the project's success in raising LMH's profile at regional and national level [A.i]. The project led to LMH's reclassification as an 'experience' property by NT, as a place where "*people can gain a deeper level of engagement and understanding of history*" [A.i]. LMH has also taken a leading role in the AHRC-funded Knowledge Transfer Partnership between UoM and NT. LMH's General Manager stated that "*the success of HWUTS*" was vital to this leadership role as the project was "*identified as a model of best practice within the KTP cluster for collaborative research and impact work*" [A.i]. So far, this partnership has led to three MA and PhD studentships at LMH that will enrich staff and visitor knowledge of LMH's history, support public programming until 2021, and build staff and volunteer capacity by delivering regular research training sessions [A.i]. The total direct economic benefit brought to LMH by Handley's research (through the AHRC award and value of two collaborative studentships) is approximately **GBP255,000** [A.i].

The project's success changed LMH's business strategy to prioritise research-led programming for the public with a particular focus on health and wellbeing [A.i]. LMH's South Chamber is now a permanent sleep-themed interpretation space and the 'sleep bed' of soporific plants created by HWUTS has been permanently adopted. The Key Stage 2/GCSE schools' materials/workshops developed by HWUTS are a permanent resource for LMH's education team to use. HWUTS helped to diversify LMH's audiences by brokering sustainable new relationships with charities, community organisations, healthcare providers, and the public [A.i]. It also contributed to NT being

awarded the status of Independent Research Organisation by the AHRC on behalf of UKRI in 2019 [B].

HWUTS' success led to Handley's appointment as historical adviser to NT's Tudor Merchant's House in Tenby, delivering staff and volunteer training at the property that was turned into a permanent training resource. The research directly inspired sleep-themed programming at Tudor Merchant's House throughout 2019, engaging 26,000 visitors [A.ii]. This was extended to the 2020 season following an upturn in visitor numbers of more than 1,000 in 2019 [A.ii]. Through an earlier collaboration, the research also enriched programming at NT's Ham House in Richmond, where Handley co-designed two sleep-themed guided tours for the public in 2013 and 2015/16. The first, 'Forty Winks: Sleeping Habits through the Ages' had 75 participants in August 2013 [A.iii]. A second tour exploring the sleeping arrangements of different occupants of the house according to their status was developed in 2015. 144 visitors participated in this tour during the 2015/16 winter season [A.iii]. The second tour helped Ham House to engage visitors at a time when the house had traditionally been closed: "*Sasha's research was enormously helpful in finding new ways to interpret the house that did not rely solely on the visual experience of these show rooms, but focused instead on these rooms as practiced spaces*" [A.iii]. The collaboration also produced a factsheet and new room guides for the bedchambers and Handley built staff and volunteer capacity at Ham House by training 30 staff members and producing training materials on sleep's history for ongoing use.

### **Impact on The Children's Sleep Charity (CSC) and The British Academy (BA)**

CSC is a national award-winning charity that supports children with sleep issues through accredited training programmes for families, professionals and commercial organisations. The charity's CEO noted that this research "*added another dimension*" to the charity's efforts to encourage healthy sleep behaviours among under-15s [C]. CSC adopted Handley's educational materials, mentioned in the previous section, to engage school communities with sleep's history for the first time, comparing past and present healthcare strategies. Handley's *Being Human* Festival award (School of Advanced Study, University of London/BA/AHRC) funded the collaborative event 'Sleep: Lost and Found' with CSC's sleep practitioners at Manchester Museum (2017). Handley partnered with CSC at the BA Summer Showcase (2018) that engaged 1,700 visitors. The BA's Head of Events noted: "*Handley's exhibit was the joint most popular exhibit as rated by visitors*". Her research installation helped "*raise the profile of the British Academy*", "*demonstrate the value of the humanities and social sciences*" and "*engage new and younger audiences*" [D]. Both events blended Handley's research with CSC's sleep expertise to improve public understanding of sleep's importance for physical and mental health. The CSC CEO stated that the partnership with Handley influenced the award of two prizes: the Foundation for Social Impact Award for 'Small Charity, Big Achiever', and the Royal Society for Public Health Award for 'Children and Young People'. The charity valued UoM's support for CSC's 'Sleep Manifesto' that aims to effect policy change around children's sleep issues [C].

### **Impact on broader publics**

Handley's impact strategy was characterised by two aims that were successfully achieved:

#### **1) Establish the importance of humanities research within debates about sleep culture and healthcare practices.**

The following media activities and events fulfilled the first aim: BBC Radio 4's 'Start the Week' (2017); BBC History Magazine, '6 sleeping tips and tricks from history' (2018); BBC History Magazine, 'The perils of sleeping in early modern England' (2016); BBC Historyextra podcast, 'The history of sleep'; article in *The Conversation*, 'Onions, embroidery and other historical lessons could help you sleep' (2017); double-page spread in Canadian daily newspaper *The Globe and Mail*, 'A smart night's sleep' (2017); blog post for BBC Tomorrow's World (2017); BBC Ideas film 'Five things we can learn from the past about sleep' (2018); British Academy Summer Showcase (2018); project website (blog posts, events, sleep videos, downloadable educational resources, media activities): [www.historiesofsleep.com](http://www.historiesofsleep.com) (from 2017); Life Butter Radio podcast (2016); Live Science, 'How did people wake up before alarm clocks' (2018). The audience reach for these activities has only been partially captured in some cases, but the total national and international

audience reached is nonetheless approximately 11,960,000 [E, F]. These activities opened pathways to new audiences for Handley. They led directly to her 'Sleep Like a Tudor' event at Salford's 'Not Quite Light' Festival (2019), and to the invitation to lead the Bradford Literature Festival panel 'How to sleep better', sponsored by the NHS (2019). See [E] and [F] for evidence of engagement statistics/comments.

## **2) Encourage healthier sleep behaviours in the present by drawing on lessons from early modern sleep culture.**

The qualitative impact of Handley's research on people's intentions to improve their sleep habits can be directly documented: Feedback from a sample of 246 visitors to LMH in 2017 evidences the positive impact of Handley's research on sleep behaviours: 87% of respondents answered 'Yes' when asked 'Has your knowledge of sleep's history improved after today's activity?'. When asked 'Did the activity change your view of how to manage your own sleeping habits?' 43.5% said 'Yes' and 31.7% said 'Maybe'. When asked 'Are you likely to alter your sleeping habits after today's event?' 39% said 'Yes' and 34.6% said 'Maybe' [G]. Some respondents stated that they would adopt historic sleep-management techniques by using herbal remedies, adjusting their diets, adopting restful bedtime routines, or by adopting a bi-phasic sleep pattern — the latter was most prevalent among older visitors. A handful of LMH staff even changed their sleep routines as a result of the project [A.i]. Students at Bury Church School to whom Handley delivered a series of sleep history workshops in 2017 as part of their annual 'Wellbeing Day' reflected that sessions: *"made me reflect on my sleep pattern"; "I learnt about herbs and spices and how they get you to sleep. It also helped me think about my night routine and how to get to sleep better and easier"; "It surprised me that I got 4 hours less sleep than needed"; "I learnt how to get a good night's sleep"*. Full comments at [H]. Students at Park Road School, Sale, have adopted the project's teaching materials and planted their own 'sleep garden' within the grounds [I]. An email from a listener of the Life Butter Radio podcast stated that it *"really helped me to understand the importance of sleep. Whereas before I was getting 5/6 hours a night, now I'm getting 7/7.5 hours"* [J].

## **5. Sources to corroborate the impact**

- A. i) Evaluation letter from Acting General Manager, Cheshire and Wirral Portfolio, documenting the impacts of the HWUTS project for Little Moreton Hall (8 September 2019);
  - ii) Visitor interpretation materials and evaluation letter from Operations Manager, Tudor Merchant's House (21 May 2020), documenting the impact of the collaboration with Handley;
  - iii) Evaluation letter from Ham House, documenting the impact of the collaboration with Handley (12 April 2016).
- B. National Trust awarded Independent Research Organisation status press release (6 June 2019). Archived at: <https://webarchive.nationalarchives.gov.uk/20200923114138/https://ahrc.ukri.org/newsevents/news/the-national-trust-have-been-awarded-independent-research-organisation-status/>
- C. Letter from CEO, Children's Sleep Charity, describing the impacts of the collaboration with Handley (9 September 2019).
- D. Letter from Head of Events, The British Academy, documenting the impact of Handley's contribution to the Summer Showcase in 2018 (25 October 2018).
- E. Report detailing media activities and viewer/listener figures.
- F. Analytics from project website [www.historiesofsleep.com](http://www.historiesofsleep.com).
- G. Results from Little Moreton Hall survey (2017).
- H. Comments from Bury Church School students (2017).
- I. Letter from teacher, Park Road Primary School, Sale, documenting the adoption of project materials and creation of a sleep garden (13 May 2019).
- J. Email from podcast listener, documenting changed sleep habits (27 September 2018).