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Cultural resilience and coping with disasters in the past. A theoretical framework

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ABSTRACT

This article proposes a novel theoretical framework for the study of cultural resilience in the context of historical disasters. Defined as the cultural practices by which communities cope with current calamities, past disasters, and possible future threats, cultural resilience can be divided into four basic elements: sense-making, charity, commemoration, and – as a result of the previous three – community building. We further distinguish both social and temporal dimensions. The social dimension pertains directly to those communities involved with the disaster, whereas the temporal dimension refers to the way in which sense-making, charity, and commemorative practices relate, not only to the past and the present, but also the future. The framework is illustrated with two historical case studies: eighteenth-century conflagrations – the devastating fires that befell several Dutch towns – and the 1953 North Sea Flood.

Introduction

The North Sea Flood of February 1, 1953 took the lives of more than 2400 people. In the Netherlands, 1836 people lost their lives. The largest number of Dutch casualties occurred in the province of Zeeland. In the small village of Oude-Tonge alone, as many as 305 people died.[1] At the time, citizens across the nation tried to make sense of what had happened by creating poems, novels, sermons, and songs. It also invoked many charity campaigns, which gave national solidarity a boost.

In 2023, 70 years after the North Sea Flood, the disaster was commemorated with many public events in the Netherlands, such as exhibitions, documentaries, public lectures, concerts, and school activities. A national memorial ceremony, attended by victims, their relatives and government authorities was broadcast live on TV. At this occasion, Mark Harbers, the Minister of Infrastructure and Water Management, emphasized the relevance of the past for the present. 'It was 70 years ago', he said, 'but still incredibly topical. It still touches us very deeply'. 'Everyday', he continued, 'we work on our safety, for now and generations to come'.[2] In short, the commemoration of the 1953 inundations built upon cultural heritage from the past, but also focused on future threats posed by climate change-induced sea level rise. Today, experts regularly point out that '1953' could happen again in the future due to climate change.[3]

In this article, we argue that post-disaster activities such as these – both immediately after the event and later memorial practices – are an important part of what one might call 'cultural resilience': the cultural values, practices, and artifacts via which communities cope with past disasters and possible future threats.

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[1] Kees Slager, *De Ramp: Een reconstructie* (Goes: De Koperen Tuin, 1992).

[2] Speech Mark Harbers at the National Commemoration of the North Sea Flood of 1953, https://www.rijksoverheid.nl/documenten/toespraken/2023/02/01/speech-minister-harbers-nationale-herdenking-watersnoodramp-1953-watersnoodmuseum–1-februari-2023 (accessed 16 July 2025).

[3] Adriaan Duiveman and Lotte Jensen, 'Warned by the Past How Dutch Media Commemorate the 1953 North Sea Flood as a Future Climate Catastrophe', *International Journal of Disaster Risk Reduction* 120 (2025), 105,338, https://doi.org/10.1016/j.ijdrr.2025.105338.

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Disasters are here defined as nature-induced and non-intentional human-made events that cause great damage or loss of life.[4]

Thus far, scholars have used the term 'cultural resilience' in two different ways. Psychologists, on the one hand, utilize the term to point to the means a given culture provides to individuals and small communities to cope with traumatic events in their lives.[5] Scholars of heritage and sustainability, on the other hand, use the term to encompass the ability of a culture to 'absorb adversity, deal with change and continue to develop'.[6] While the former focuses on tangible human beings, the latter addresses an abstract, emergent social fact. Inspired by both interpretations, we arrive at a middle position. Cultural resilience, as we understand it, is a specific form of societal resilience. It considers how culture, in a broad sense (values, customs, norms), as it manifests itself in cultural practices and artifacts (rituals, stories, art works), helps individuals and societies to cope with disasters.

We propose a novel theoretical framework to study the role of cultural resilience in coping with disasters. We focus on intersecting aspects of cultural resilience: (1) *sense-making* (placing the events in broader, meaningful contexts); (2) *charity* (relief, fundraising campaigns, benefit performances); and (3) *commemorative practices* (religious ceremonies, rituals, monuments, art works in commemoration of the dead). Applying this framework allows us to achieve a clearer understanding of how cultural responses contribute to a fourth, overlapping element of cultural resilience, namely, (4) *community building* by enhancing feelings of togetherness. Our framework is not limitative, but provides tools to operationalise the rather abstract notion of cultural resilience in relation to identity formation.

The article begins with an outline of current trends in historical disaster studies and the position cultural resilience holds within them. Proceeding, we further specify our framework by outlining the four elements and the related idea of socio-temporal extension. Finally, we apply our framework to two historical case studies: fire disasters in eighteenth-century Dutch villages and towns; and the North Sea Flood of 1953. This choice allows us to demonstrate that the framework can be applied to different types of disasters and various time periods. We also want to address local, national and international dimension of cultural resilience.

While the above examples encompass two distinct time periods and provide a wealth of empirical material with which to demonstrate how the framework works, we are critically aware that they cover a limited geographical area. That said, we believe that our framework has value for studying cultural resilience in other areas and epochs as well. In the concluding remarks we therefore reflect on the possibilities and challenges for future research.

The cultural turn in disaster studies

The term 'resilience' has become a buzzword in disaster studies.[7] Historical geographer Greg Bankoff has shown that the concept was used in disaster studies since the end of the Cold War, and was shaped by culturally specific, Western perspectives.[8] Nowadays, scholars are broadening its application. In general, resilience refers to 'the ability of communities to withstand external shocks to their social infrastructure and still persist'.[9] The relatively new interest in societal 'resilience', in contrast to a narrow focus on physical hazards, has attracted a new type of scholars to the field: historians.

Social and economic historians have taken the lead. They show that the past can be used as a 'laboratory' to gather data that help us to understand and predict which societies cope with and recover from severe crises better than others. Quantitative data on excess mortality, the growth and decline of populations, prices, and the distribution of wealth indicate how rural and urban communities dealt with crises in the past.[10] The recent comprehensive textbook *Disasters and History: The Vulnerability and Resilience of Past Societies* focuses primarily on economic, social, and demographic data to study the impact of, and recovery from, shocks and hazards in societies.[11] This prompts the question how other dimensions of resilience might be taken into account and become part of this historical 'laboratory'.

More recently, a cultural turn in historical disaster studies has taken place, based upon the recognition that disasters are as much cultural phenomena as 'natural' or material events.[12] This cultural turn is often interpreted sociologically, referring to the social behavior and customs of people and societies. As Bankoff has convincingly demonstrated, societies develop different 'disaster cultures' and coping strategies to deal with past and possible future threats.[13] He distinguishes three different types of coping strategies: preventive strategies; strategies that reduce the material impact of disasters; and strategies that reduce the psychological stress they create.

While the first two mainly entail practical measures, strategies that reduce psychological stress focus on the emotional and cultural level. Yet, how exactly activities at the cultural level may increase societal resilience needs further investigation. Further clarification and addition from a humanities perspective is needed as well as a deeper understanding of the multifaceted

[4] Bas van Bavel, Daniel R. Curtis, Jessica Dijkman, Matthew Hannaford, Maïke de Keyzer, Eline van Onacker and Tim Soens, *Disasters and History. The Vulnerability and Resilience of Past Societies* (Cambridge: Cambridge University Press 2020); Ronald W. Perry, 'Defining Disaster. An Evolving Concept', in *Handbook of Disaster Research*, ed. by Havidán Rodríguez, William Donner and Joseph E. Trainor (New York: Springer, 2018), pp. 3–22.

[5] Caroline S. Clauss-Ehlers, 'Cultural Resilience', in *Encyclopedia of Cross-Cultural School Psychology,* ed. by Caroline S. Clauss-Ehlers (Boston: Springer, 2010), pp. 324–326.

[6] Cornelius Holtorf, 'Embracing Change: How Cultural Resilience is Increased through Cultural Heritage', *World Archaeology* 50 (2018), 639–650, https://doi.org/10.1080/00438243.2018.1510340.

[7] Rosanne Anholt, Caroline van Dullemen, Julia Santos de Carvalho, Joris Rijkbroek, Stijn Sieckelinck and Marieke W. Slootman, 'Understanding Societal Resilience', in *Multisystemic Resilience*, ed. by Michael Ungar (Oxford: Oxford University Press 2021), pp. 551–564; Van Bavel etc., *Disasters and History.*

[8] Gregg Bankoff, 'Remaking the world in our own image: vulnerability, resilience and adaptation as historical discourses', *Disasters* 43 (2019), 221–239.

[9] Tim Soens, 'Resilience in Historical Disaster Studies: Pitfalls and Opportunities', in *Strategies, dispositions and resources of social resilience. A dialogue between medieval studies and sociology*, ed. by Martin Endress, Luka Clemens and Benjamin Rampp (Wiesbaden: Springer, 2020), pp. 253–274.

[10] Van Bavel etc., *Disasters and History*, pp. 31–37; Bas van Bavel and Daniel Curtis, 'Better Understanding Disasters by Better Using History: Systematically Using the Historical Record as One Way to Advance Research into Disasters', *International Journal of Mass Emergencies and Disasters* 34 (2016), 143–169.

[11] Van Bavel etc., *Disasters and History.*

[12] *The Cultural Life of Catastrophes and Crises*, ed. by Carsten Meiner and Kristin Veel (Berlin: De Gruyter, 2017); Gerrit Jasper Schenk, 'Historical Disaster Research: State of Research, Concepts, Methods and Case Studies', *Historical Social Research* 32 (2017), 9–31 (p. 19); G.R. Webb, 'The Cultural Turn in Disaster Research: Understanding Resilience and Vulnerability Through the Lens of Culture', in *Handbook of Disaster Research,* ed. by Hávan Rodriguez, William Donner and Joseph E. Trainor (New York: Springer, 2018), pp. 109–121.

[13] Gregg Bankoff, *Society and Natural Hazard in the Philippines* (London: Routledge, 2003).

manifestations that culture can take.[14] The most important question is why people cooperate at the level of preventive and damage reduction strategies in the first place.

We believe that research into cultural responses to disasters – artistic, charitable, religious, and ritual practices – is *the missing link* to explain it: people cooperate in disaster situations because they feel part of the same community. The feeling of belonging to a shared community depends on cultural expressions and rituals.[15] Such actions can promote a sense of solidarity and lead to charitable acts in the aftermath of catastrophes.[16] Cultural media and practices, such as commemorations and monuments, can also raise awareness of future risks.[17] In other words, the role of cultural practices and the arts, cannot be overlooked when studying coping strategies and the forging of disaster cultures, both past and present.

Cultural resilience: a framework for research

Cultural resilience, we posit, entails cultural practices by which communities cope with past disasters and possible future threats. It concerns how culture in the abstract sense (values, customs, norms), as it manifests itself in cultural practices and artifacts (rituals, stories, art works), helps individuals and societies to overcome disasters. In order to explore cultural resilience, we distinguish four elements:

1. *Sense-making*: placing the events in broader, meaningful contexts.
2. *Mobilizing charity*: calls to provide relief; donating goods and money to victims.
3. *Commemoration*: acts and artifacts to remember the events, including popular culture.
4. *Community building*: the sense of belonging together on local, national, or transnational levels.

First, in the immediate aftermath of a given disaster, people try to make sense of events by means of stories and images. By sense-making, we mean that people create representations of a disaster to (1) get the facts straight – or what they think are the important facts – and (2) give those facts meaning by employing larger models of interpretation and concepts already present in a given culture.[18] A common form of sense-making is storytelling. In stories, the chaotic jumble of happenings that characterise a given disaster is reduced to its most relevant events, which are placed in chronological and causal order. Furthermore, these events are then tied into larger frameworks, such as religious interpretations or political debates. In this process of integration, people make a catastrophe meaningful.

The earthquake of Lisbon in 1755, for example, led to a continuous stream of newsletters, broadsheets, sermons, and songs across Europe. Authors not only provided accounts of what happened in Portugal, but also made sense of the catastrophe by attaching all sorts of, sometimes contradictory, moral and religious meaning to the events. In particular, the philosophical interventions of Voltaire, Rousseau, and Kant, who questioned religious interpretations, sparked many 'mental aftershocks'.[19] Studies into the Dutch context have shown that orthodox religious responses dominated and were spread through a wide variety of cultural media, such as songs, poems, sermons, and treatises.[20]

The second element is charity. Researchers have widely reported acts of charity among those who identify with one another in contexts of catastrophe, referring to it as *disaster solidarity*.[21] The phenomenon is usually studied from a modern-day sociological perspective, but also needs to be addressed from a cultural and historical perspective.[22] In medieval and early modern Europe, post-disaster charity was organised primarily at the parish or community level.[23] From the eighteenth century and onwards, while local and national governments became increasingly involved, particular initiatives and church collections still made the largest contribution.

Cultural media, such as poems, sermons, songs, and prints, were an important way to mobilise people for these collections. Authors evoked a sense of solidarity, by stressing what their readers had in common with the victims: religious convictions, patriotic feelings, or a shared history. In the nineteenth-century Netherlands this even led to a 'cult of charity' and a specific form of 'disaster nationalism'.[24]

Third, commemorative practices play an indispensable role in cultural resilience. As research in a variety of disciplines has

[14] Lotte Jensen, Hanneke van Asperen, Adriaan Duiveman, Marieke van Egeraat, Fons Meijer and Lilian Nijhuis, 'Appropriating Disasters. A Framework for Cultural Historical Research on Catastrophes in Europe 1500–1900', *Journal of Historical Geography* 76 (2022), 34–41; *Disaster as Image. Iconographies and Media Strategies across Europe and Asia*, ed. by Monica Juneja and G.J. Schenk (Regensburg: Schnell & Steiner, 2014); *Natural disasters, cultural responses: case studies toward a global environmental history,* ed. by C. Mauch and C. Pfister (Lanham etc.: Lexington Books, 2009).

[15] Joanne Garde-Hansen, Lindsey McEwen, Andrew Holmes and Owain Jones, 'Sustainable flood memory: Remembering as Resilience', *Memory Studies* 10 (2017), 384–405; Webb, 'The Cultural Turn in Disaster Research'.

[16] *Dealing with Disasters from Early Modern to Modern Times. Cultural Responses to Catastrophes*, ed. by Hanneke van Asperen and Lotte Jensen (Amsterdam: Amsterdam University Press, 2023); Adriaan Duiveman, *Nature Triumphed: Disasters, Solidarity, and Identity in the Eighteenth-Century Dutch Republic* (Nijmegen: Radboud University, 2023), https://hdl.handle.net/2066/285507.

[17] Antoine le Blanc, 'Remembering Disasters: the Resilience Approach', *Journal of Art Theory and Practice* 14 (2012), 217–245; Christian Rohr, 'Disaster Memory and "Banished Memory". General Considerations and Case Studies from Europe and the United States (19th-21st Centuries)', in *Dealing with Disasters from Early Modern to Modern Times. Cultural Responses to Catastrophes*, ed. by. Hanneke van Asperen and Lotte Jensen (Amsterdam: Amsterdam University Press 2023), pp. 315–337.

[18] Gerrit Jasper Schenk, 'Learning from history: chances, problems and limits of learning from natural disasters', in *Cultures and Disasters: Understanding Cultural Framings in Disaster Risk Reduction*, ed. by F. Krüger, G. Bankoff, T. Cannon, B. Orloswiki, and E.L.F. Schipper (Routledge: New York 2015), pp. 72–86.

[19] *The Lisbon Earthquake of 1755: Representations and Reactions,* ed. by T.E.D. Braun and J.B. Radner, J.B. (Oxford: SVCE, 2005).

[20] J.W. Buisman, *Tussen vroomheid en Verlichting, Een cultuurhistorisch en -sociologisch onderzoek naar enkele aspecten van de Verlichting (1755–1810)*, vol.1 (Zwolle: Waanders, 1992); Lotte Jensen, 'Disaster upon Disaster Inflicted on the Dutch. Singing about Disasters in the Netherlands, 1600–1900', *BMGN – Low Countries Historical Review* 1342 (2019), 45–70.

[21] Wolf R. Dombrowsky, 'Solidarity During Snow Disasters', *International Journal of Mass Emergencies and Disasters* 1 (1983), 189–205; Adriaan Duiveman, 'Praying for (the) Community: Disasters, Ritual and Solidarity in the Eighteenth-Century Dutch Republic', *Cultural and Social History* 16:5 (2019), 543–560; Daniel Weinbren, Supporting Self-Help: Charity, Mutuality and Reciprocity in Nineteenth-Century Britain, in *Charity and Mutual Aid in Europe and North America Since 1800,* ed. by Bernard Harris and Paul Bridgen (London/New York: Routledge 2007), pp. 67–88.

[22] *Dealing with disasters,* ed. by Van Asperen and Jensen; Duiveman, *Nature Triumphed*; Ulrike Sasse-Zeltner, The Revival of Solidarity in Disasters – a Theoretical Approach, *Culture, Practice & Europeanization* 6 (2021), 158–178.

[23] Lex Heerma van Vos and M.H.D. van Leeuwen, 'Charity in the Dutch Republic', *Continuity and Change* 27 (2012), 175–197; Cornel Zwierlein, *Prometheus Tamed: Fire, Security, and Modernities, 1400 to 1900* (Leiden: Brill, 2021).

[24] Fons Meijer, *Verbonden door rampspoed. Rampen en natievorming in negentiende-eeuws Nederland* (Hilversum: Verloren, 2022).

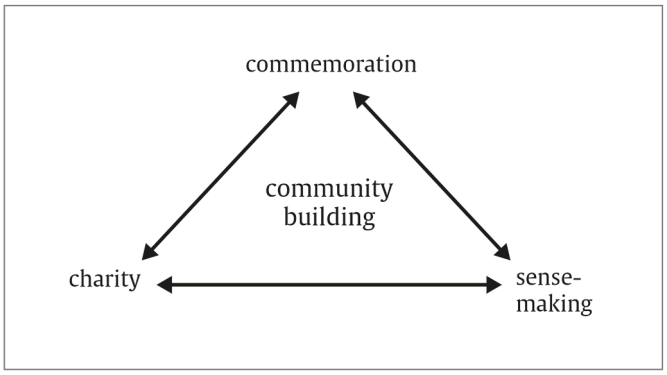

Fig. 1. Cultural resilience framework (design: Jensen and Duiveman).

shown, rituals, memorials, and other commemorative practices are crucial for coping with traumas related to disasters.[25] Trauma-expert and psychiatrist Berthold Gerssons argues that besides the treatment of individuals, a community-oriented post-disaster approach is also necessary, including giving attention to acts of collective mourning, remembrance, and monuments.[26]

The three just-mentioned aspects of cultural resilience are intrinsically linked and can reinforce each other. Religion often plays a role in sense-making and can be a driver of charitable activities as well, as was the case in pre-modern times. The opposite is also true: providing relief and organising commemorations may generate meaning, from a humanitarian or religious perspective. Charity and commemorations are also interconnected: relief actions are often remembered by plaques, monuments, or other visual tokens. Furthermore, the elements combined contribute to a fourth element: a sense of community.

Previous research has shown that disasters can produce strong communal bonds and play a pivotal role in shaping local, national, and transnational identities.[27] Their interaction makes it possible to specify the link between cultural resilience and identity formation in different historical, social, and geographical contexts (see Fig. 1.) We argue this has two dimensions: the social and the temporal.

The social and temporal dimension

Some disasters happen suddenly, such as an earthquake or a flood, whereas others gradually build before reaching a peak and then slowly fading away, as is the case in an epidemic. Some disasters hit hundreds, thousands, even millions of people, while others impact only a small community, or damage a specific building that holds particular value to that community. The human attention a disaster receives is not only determined by the physical impact of a given hazard, nor by the duration over which it was actually experienced. To give a modern-day example, the 2019 Notre-Dame-Fire in Paris did not take any human lives and, notwithstanding its vast scale, only one building was damaged. Furthermore, the cathedral was totally rebuilt in less than five years. Yet, the cultural impact was enormous.[28] Media around the globe reported the fire, indeed some even broadcasting it live. Donations for the restoration came from all continents and, even though it is probably too early to say for sure, we might reasonably expect that the Notre-Dame fire will be remembered for decades to come. Despite its negligible physical impact, the disaster extends socially and temporally.

The social dimension concerns which communities are affected by a disaster. Which community is impacted? Who receives news about the disaster? And who contributes to emergency relief and reconstruction efforts? The key mechanism here is identification. We maintain that cultural representations of catastrophes address certain groups in order to involve them in charitable activities. As such, authors and artists can nationalise or 'confessionalise' a local disaster in their representations, hence making it part of the narrative about larger, imagined communities such as a nation or a religious movement. Catholic communities, for example, were in particular addressed to help the starving people in Ireland during the famines of 1845–1848 and 1879–1880. Dutch Catholics were targeted with reports of the famine which emphasized their common religious beliefs.[29] In representing disasters in a particular way, members of these communities outside the disaster area can feel the urge to help.

Yet, as has been noted before, disasters do not always lead to cooperation. As pointed out by Oliver-Smith and Soens, we should also consider mechanisms of exclusion and vulnerability.[30] Which victims and disasters are overlooked in this process? And what socio-political contexts may serve as an explanation? Authors and artists can appropriate a disaster to their own political or economic needs and stoke up division, especially by pointing to a scapegoat. Consider, for example, the way Jews were blamed for The Plague that ravaged Europe in medieval times. This is also part of the social dimension. When a community is blamed for a calamity, it is dragged into the narrative and thus become part of its social scope.

Turning now to the temporal dimension. When people try to make sense of a disaster and locate it in a larger narrative, they typically engage in 'collective mental time travel'.[31] For example, people refer to earlier disasters, making a recent calamity part of a longer list of adversities. They stress that the community has been faced with similar threats before, or they emphasise that the recent catastrophe was exceptionally horrific.

Recent (and historical) disasters can also prompt communities to look forward. So-called 'Millenarians' interpret catastrophes as a warning of worse to come. Meanwhile, hopeful voices argue that a community can learn from a recent or historical disaster to mitigate future risk. In an earlier study on the commemoration of the North Sea Flood of 1953, for instance, we argued how historical disasters functioned as collective prospective memories,

[25] Anne Eyre, 'Remembering: Community Commemoration After Disaster', in *Handbook of Disaster Research*, ed. by Havidán Rodríguez, William Donner and Joseph E. Trainor (New York: Springer, 2018), pp. 441–455; Garde-Hansen, Mc Ewen, Holmes and Jones 'Sustainable flood memory'; David Kempe 'Mind the Next Flood!' Memories of Natural Disasters in Northern Germany from the Sixteenth Century to the Present. *The Medieval History Journal* 10: 1–2 (2007), 327–354.

[26] Berthold Gerssons, *Als een ramp ons raakt. Ervaringen en lessen van een trauma-expert* (Amsterdam: Balans 2024), p. 22.

[27] Lotte Jensen, *Water: A Dutch Cultural History* (Nijmegen: Radboud University Press, 2024); Christian Pfister, *'The Monster Swallows You'. Disaster Memory and Risk Culture in Western Europe*. RCC Perspectives 1 (Münich: Peschke Druck GmbH 2011); James V. Wertsch, *How Nations Remember. A Narrative Approach* (Oxford: Oxford University Press, 2021).

[28] Miguel Ángel Maté-González, Cristina Sáez Blázquez, Noelia Gutiérrez-Martín, and Myriam Lorenzo Canales, 'Evaluation of the Emotional Impacts of the Notre Dame Cathedral Fire and Restoration on a Population Sample', *Heritage* 8 (2025), https://doi.org/10.3390/heritage8060226.

[29] Marguérite Corporaal and Lotte Jensen, '"But most brothers when in misfortune": a transnational approach to natural disasters', *Nineteenth-Century Contexts* 44 (2022), 265–283. https://doi.org/10.1080/08905495.2022.2084959.

[30] Anthony Oliver-Smith, 'The Brotherhood of Pain: Theoretical and Applied Perspectives on Post-Disaster Solidarity', in *The Angry Earth: Disaster in Anthropological Perspective*, ed. By Anthony Oliver-Smith and Susanna M. Hoffman (New York: Routledge 2009), pp. 156–172; Soens, 'Resilience in Historical Disaster Studies'.

[31] Kourken Michaelian and John Sutton, 'Collective mental time travel: remembering the past and imagining the future together', *Synthese* 196 (2009), 4933–4960. https://doi.org/10.1007/s11229-017-1449-1.

remembered so as to prompt present-day action to create or prevent an expected future outcome.[32]

Commemoration, most obviously, is intrinsically linked to notions of time. Anders Ekström pointed out that the ancient disaster of Pompeii has been 'remediated' over the centuries.[33] Disasters from the past may be rediscovered and interpreted from new angles. Such rediscoveries are often triggered by present-day interests. The COVID-19 pandemic, for example, led to a wave of historical interest in historical epidemics, and prompted people to ask what lessons could be learned from the past.[34] Due to climate change and the worldwide increase in floods, forest fires, and extreme weather events, the scholarly attention to past weather events has increased and, as a result, forgotten disasters are being rediscovered, both within and outside academia. Of course, such memories show that the relationship between past, present, and future is dynamic.

Charity also has a temporal component. As we will demonstrate later in the case studies, past acts of charity were remembered and referred to when actors wanted to mobilise new relief campaigns. These findings align with Mauss' famous argument that gifts are never entirely free from self-interest, but are given with an eye to past or future reciprocal exchange.[35]

Finally, disasters not only strengthen communal bonds in the immediate aftermath of disasters, but also in the decades or even centuries afterwards. They are often configured as building blocks of a national self-image that is shaped through the many visual and textual media that communicated these events and link them to the nation's identity. Think, for example, of the Earthquake of Lisbon (1755) in Portugal, the Great Famine (1845–1849) in Ireland, or the North Sea Flood (1953) in the Netherlands.[36]

By studying the four elements of cultural resilience, one can also trace a disaster's socio-temporal extension. Through the two case-studies that follow we now show how sense-making, charitable, and commemorative practices gave meaning to the bereaved and to later generations and thereby contributed to sustainable community building.

Case study I: fire disasters in towns and villages, 1766

Leiden, the Netherlands. When one walks through the narrow Mandemakerssteeg to the Aalmarkt at the canal, it is not easy to miss. On the right hand, at a split in the canal, one can see a series of houses that share one cornice. On its frieze, in red letters, the following text can be read:

> The loyalty of the citizenry has here restored, that which was destroyed by the violence of the flames, to an improved state. AD MDCCLXVI[37]

Fig. 2. Rebuilt houses in Leiden with a commemorative inscription on their freeze, 1766. Photo by author.

The inscription refers to a major conflagration that happened there in 1766 (see Fig. 2). On 3 October of that year, a fire devoured a block with several houses and shops. Afterwards, the citizens excavated the corpses of a father and three children from under the debris. The inscription, however, also commemorates the aftermath. The citizens of Leiden collected funds to rebuild the houses – a fact that, to this day, their successors still bear testament. In the text, the fire of 1766 extends to a specific collective – Leiden citizens – and extends temporally through the centuries. After all, the disaster is still present in the heart of town.

The arguments in this section are based on a wider analysis of sources on eight conflagrations in Dutch cities, towns, and villages between 1759 and 1793.[38] In the context of this article, we particularly highlight two conflagrations that took place in the same year: 1766. One is the just-mentioned fire of Leiden. The other is a blaze that hit the village of Hilversum on June 25, 1766. This conflagration was even more impactful than the one in Leiden. It destroyed a large part of the village, including the central church and numerous houses. 'The large, the flourishing, the populous [village of] Hilversum', a contemporary reporter wrote, 'is one third rubble, and hundreds of people are dependent on charity now'.[39]

In addition to the fire's material impact, the conflagrations in Leiden and Hilversum left their cultural mark. In both cases, the disaster led authors, poets, and print makers to publish commemorative books, poems, prints, and pamphlets. In these sources, we argue, one can trace the four elements of cultural resilience as well as the socio-temporal extension of the event itself.

To start with the first element, contemporary authors tried to make sense of fire disasters. They told stories about the events to bring order to the turmoil. These stories included standard elements, such as the start of the fire, the way it spread, the efforts to extinguish it, whether these efforts were successful, and – depending on the moment of narration – the aftermath. In Leiden,

[32] Duiveman and Jensen, 'Warned by the Past'.

[33] Anders Ekström, 'Remediation, Time and Disaster. *Theory, Culture & Society* 33 (2016), 117–138, https://doi.org/10.1177/0263276415625336.

[34] Beatrice de Graaf, Lotte Jensen, Lotte, Rina Knoeff and Catrien Santing, Catrien, 'Dancing with Death. A Historical Perspective on Coping with Covid-19', *Risk, Hazard & Crisis in Public Policy* 12 (2021), 346–367; Bram de Ridder, 'When the Analogy Breaks: Historical References in Flemish News Media at the Onset of the COVID-19 Pandemic', *Journal of Applied History* 2 (2020), 1–16, https://doi.org/10.1163/25895893-bja10003; Alex de Waal, *New Pandemics. Old Politics. Two Hundred Years of War on Disease ant its Alternatives* (Cambridge: Polity Press, 2021).

[35] Marcel Mauss, *The Gift: The Form and Reason for Exchanges in Archaic Societies*. With a foreword by Mary Douglas (London/New York: Routledge, 2002).

[36] Corporaal and Jensen, '"But most brothers when in misfortune"', pp. 265–266.

[37] Original Dutch: 'De trouw der burgerij heeft hier, 't geen door geweld der vlammen wierdt gesloopt, in bet'ren staat hersteld. Anno MDCCLXVI.'

[38] Duiveman, *Nature Triumphed*, pp. 105–135.

[39] 'Den 7den July 1766', *De Philosooph*, ed. by Cornelis van Engelen (Amsterdam: P. Meijer en de Wed. K. van Tongerlo en Zoon, 1766), pp. 209–216 (p. 211).

an extensive commemoration book was printed a year after the fire. It summed up the events of the horrific night in great detail.[40]

Yet, facts alone do not yet give meaning. When discussing fire disasters, many contemporary authors fell back on religious motifs and logics to explain the recent catastrophe. For instance, some eighteenth-century preachers dissuaded their congregations from searching for a culprit. Instead, they argued that the fire was a divine punishment for collective sins. Not only did this religious interpretation suppress tensions within communities, but it also lifted the disaster from the blackened earth and located it in a larger, eternal story of salvation.

Second, the 1766 fires led to charity campaigns. In the case of Leiden, the town organised a door-to-door collection for the two widows. Beforehand, the local ministers and priest encouraged their flocks to contribute. Afterwards, a printed list stipulated the number of guilders each neighborhood had collected. In the case of Hilversum, nearby villages sent carts laden with bread. Citizens of cities in the surrounding province of Holland were also asked to donate. An anonymous correspondent in the contemporary magazine *De Philosooph* wrote a tear-jerking eye-witness report of the Hilversum fire that ended with a plea to the citizens of Amsterdam to donate.[41]

Third, the fire disasters were commemorated. In the case of Leiden, a commemorative book, published a year after the fire, served to remember the conflagration that hit the town. Furthermore, the rebuilt block became a monument that stands there to this day.

Taken together, these elements resulted in community building. In the case of Leiden, this encompassed the urban citizenry as a whole, with the commemoration book and the cornice praising the city as a community. As parts of that citizenry, the sub-identity of individual neighbourhoods was addressed in the published 'score board' with collection yields, mentioned earlier. Interestingly, that publication stated that both Protestants and Catholics contributed. This is notable because in the Dutch Republic at that time relations between the denominations were tense and co-religionists were deemed responsible only for the relief and aid of their own brethren and sisters. Yet, in this case, the disaster and the addressed identities of city and neighborhood provided an overarching community that suppressed such denominational loyalties.

In the case of Hilversum, the correspondent in *De Philosooph* also tried to circumvent denominational tensions. While Protestants were politically dominant in the village, Catholics constituted the majority of the population. The author stressed that, during the fire, Catholics and Protestants helped each other. Human '[n]ature triumphed', he asserted, as 'the spirit of sectarianism and partisanship, which usually divides Christianity so miserably, gave way to human compassion', furthermore noting 'Catholics and non-Catholics regarding each other as nothing less than fellow Christians and citizens'.[42] In times of disaster, the author emphasized, denominational identities cease to be important. Furthermore, he suggested that his readers in Amsterdam should follow the example:

> They [the inhabitants of Hilversum] are unfortunates; unfortunates in the highest degree; unfortunates through no fault of their own; unfortunates in the heart of your country; yes, your fellow compatriots and brothers.[43]

Here, the author addresses the overarching identity of nationhood. The victims were not only innocent, but also part of the same imagined community, because of which, the writer made clear, they deserved nothing less than compassion.

In all four elements, we see that the disaster extended both socially and temporally. Socially, because authors addressed wider, more encompassing identities and communities: they made sure that people regarded a disaster as being something their community experienced, even though they did not individually suffer from it nor knew any direct victims personally. Authors also extended the disasters temporally, because the events were integrated in a narrative about the past and the future of a community. In Leiden, the date of the fire was significant. The third of October was (and remains) a festive day on which the citizens of Leiden commemorated the liberation of the town after the famous siege during the Dutch Revolt in 1574. However, on that same day in 1766, the city mourned its losses. The significance of the date was mentioned in various publications.[44] The disaster therefore became part of the longer narrative of the urban community, being linked to an event from almost two centuries earlier. In the other temporal direction, the rebuilding of the block as a single, large, central monument in the town also stretched the disaster into the future. The eighteenth-century citizenry made sure that their collective efforts would not be forgotten. To this day, they are exemplary of civic loyalty.

Case study II: the North Sea Flood, 1953

Our second case study concerns the North Sea Flood of 1953. Cultural resilience also played an essential role in dealing with this catastrophe. As noted before, the 1953 disaster took the lives of 1836 Dutch citizens, mainly in the provinces of Zeeland, North Brabant and South Holland. Besides that, parts of England and Belgium were also affected, but we will leave these regions out of our current analysis.

As people tried to make sense of the events, organised charity events, and engaged with all sorts of commemorative actions, another process of community building took place. However, unlike the aforementioned fires, which were mainly responded to regionally, this flood had a major national and even international impact with regard to media attention and charity. Hence, the social and temporal dimensions of this disaster were (and are) far wider.

In this case too, the four elements of cultural resilience (sense-making, charity, commemoration, and community building) can be clearly observed. In the weeks following the disaster, numerous newspaper articles, poems, books, and stories appeared in which authors gave their views on the events. They often gave religious significance to the disaster. Full secularisation of society had not yet occurred, and thus many primarily sought answers and solace in their faith. 'The Lord has given and taken', the Dutch poet Gerard den Brabander for instance wrote.[45] In his well-known poem

[40] Anonymous, Afbeeldingen van de Hoogstraat en Vischbrugge te Leyden, *met de veranderingen veroorzaakt door den brand, op den 3. Octoberdes jaers 1766* (Leiden: C. van Hoogeveen Jr, 1767).

[41] Duiveman, *Nature Triumphed*, pp. 121–122.

[42] Original Dutch: 'De Natuur zegepraalde; die Geest van secte en partyschap, welke anders de Christenheid zo jammerlyk verdeelt, week voor een Menschelyk mededogen, en Roomschen en Onroomschen beschouwden malkanderen niet anders dan als Christenen en Medeburgers.'. Van Engelen, 'Den 7den July 1766″, p. 213.

[43] Original Dutch: 'Het zyn Ongelukkigen; Ongelukkigen in den hoogsten trap; Ongelukkigen buiten hunne schuld; Ongelukkigen in het hart van uw Land, ja uwe Landgenooten en Broeders.' *De Philosooph*, ed. by Van Engelen, p. 214.

[44] Duiveman, *Nature Triumphed*, pp. 129–134.

[45] *Na de watersnood. Schrijvers en dichters en de ramp van 1953*, ed. by Ad Zuiderent (Amsterdam: Em. Querido's Uitgeverij B V 2003), p. 55.

'Ballad of the Flood', the poet J. W. F. Werumeus Beuning concluded every stanza with 'that we are all in God's hand'.[46]

Only a few years after the disaster, a shift began to emerge with some writers openly questioning whether there was a higher purpose behind it. The poet Gerrit Achterberg, for example, wrote a poem about the destruction, grief, and emptiness after the disaster without any references to religion. To this day, his poem functions as a literary monument: it plays a role in numerous contexts, from education to commemorative events.

In the context of the flood, literature, films, stories, and poems have played an indispensable role in sense-making. Some children's books became instant classics and were reprinted until the beginning of the twentieth century, such as the books of the journalist Klaas Norel, who published two children's books in 1953: *Ik worstel en kom boven* (I struggle and survive) and *Houen jongens*! (Hold on, boys!). The titles already contain a clear message in terms of resilience. The content usually added a Christian message: in difficult moments, the protagonists prayed to God. Interestingly, the sense-making shifted in the 1970s. In 1976 politician and scientist Jan Terlouw published *Oosterschelde Windkracht 10* (Oosterschelde, windforce 10). His book targeted teenagers and did not contain any religious message, but took a stand in the discussions on whether to close the Eastern Scheldt. The government decided to install a storm surge barrier that could be raised and closed, preserving the Eastern Scheldt as a tidal and nature reserve. Because Terlouw had an ecological message to convey, he moulded the past in such a way that it supported his views.

Besides sense-making, another aspect of cultural resilience played an important role: charity. Charitable donations peaked significantly after the 1953 flood disaster. An unprecedented sum of money was raised with the national fundraising campaign 'Purses Open, Dikes Shut' (Beurzen open, Dijken dicht). Every Saturday evening the combined radio networks broadcast a programme in which businesses and private individuals could reveal how much they had donated. Famous artists and choirs gave live performances during the show. The cabaret artist Jules de Corte performed the same song every week, with an updated text, emphasising that solidarity was to be found everywhere in every province of the country, from Friesland to Limburg. The fundraising campaign ended with a live show in the Concert Hall in Amsterdam. The total amount of money raised, including all the other gifts and relief efforts, was approximately 138 million guilders (more than 534 million euros in today's money).[47]

Solidarity with the victims was also shown abroad. 'The whole world is helping', a Dutch newspapers wrote.[48] Indeed, money and goods were sent from everywhere. From Australia to Japan, from Indonesia to South Africa, gifts were sent from all over the world. People from the Dutch embassy in Washington arrived with vacuum cleaners, refrigerators, toothpaste and cigarettes. Relief supplies collected throughout Australia were shipped for free by the Holland-Australia Line.

Recent research has shown that donors were often motivated by their special ties with the Netherlands.[49] These bonds could be political, economic, or personal. Dutch immigrants in Australia, for example, joined forces following an appeal in the *Dutch Australian Weekly*. In addition, a commemoration was held in Australia at which 50 thousand Dutch people who had settled there came together to remember their countrymen. The Italian government donated 200 million lira to the Red Cross, and the mayor of Milan offered to take in a thousand Dutch children in return for the help they received during the floods in their country two years earlier.

One of the countries that excelled in charitable actions was Denmark. Measured in terms of population density and economic potential, the Danes surpassed every country. The major 'Hjælp Holland' campaign was incredibly successful. As was the case with the Italian relief effort, the past resonated in the present: during the Second World War, a successful initiative under the same name was established to help Dutch children who suffered during the Hunger Winter (1944–1945). Many children were sent to Denmark to recover. Thus, charity not only has a social, but also a temporal dimension. By referring to past relief actions, people were motivated to donate to suffering people abroad. Here, the reciprocity principle applied, as it has been called by the anthropologist Marcel Mauss.[50]

The third practice of cultural resilience, commemoration, already started immediately after the disaster. Afflicted communities organised local gatherings to mourn the dead. Remembrance was also intrinsically linked with charity through the publication of a commemorative book, entitled *De Ramp*. It contained more than 120 photographs of evacuations and aid workers in the afflicted areas. The book was published in February 1953 on the initiative of the Society for the Advancement of the Interests of the Book Trade. The total print run was an astounding 675 thousand copies and all the proceeds went to the National Disaster Fund. Queen Juliana wrote the foreword to the commemorative book. 'May this edition', she wrote, 'form a small monument to the sense of belonging of our people'.[51] An English translation was also printed, entitled *The Disaster*. Sense-making, charity, and commemoration came together beautifully in this book and with these words, the queen explicitly contributed to community building.

Commemorative practices continue to this day. Generally speaking, three phases can be distinguished in the culture of remembrance surrounding the Flood Disaster. The first period begins immediately after the 1953 disaster, when a boom in publications, articles, and books took place. Monuments and plaques also appeared near cemeteries, in villages and towns, and on embankments.

In 1993, 40 years after the disaster, the second phase begins. This phase is characterised by nationalisation and institutionalisation. In that year, the first national commemoration took place. On this occasion, Queen Beatrix laid a wreath in Ouwerkerk at the spot where the breach in the dyke was filled. She then attended a gathering of relatives at the reformed church in the small town of Nieuwerkerk in the province of Zeeland. The national broadcast platform NOS reported live on this national commemoration in a nearly 3-h broadcast. Eight years later, in 2001, the Disaster Flood Museum (Watersnoodmuseum) in Ouwerkerk opened its doors. That too was an important moment in the national anchoring of memorial culture. The museum was housed in the four caissons used to seal the breach. These were declared a National Flood Monument in 2003, 50 years after the disaster. With this, the 'anchoring' of this past was made final.

The third period, in which we find ourselves now, begins with the 70th commemoration in 2023. This event was many times larger than those of previous years and media interest was overwhelming. This had everything to do with the realisation that

[46] *Na de watersnood,* ed. by Zuiderent, p. 62.
[47] Lotte Jensen, *Water: A Dutch Cultural History*, pp. 135–137, 206.
[48] Jensen, *Water: A Dutch Cultural History*, p. 177.
[49] Jensen, *Water: A Dutch Cultural History*, pp. 177–185.
[50] Mauss, *The Gift*.
[51] *De Ramp. Nationale uitgave. Met een voorwoord van HM de Koningin* (Amsterdam: Vereeniging ter Bevordering van de Belangen des Boekhandels te Amsterdam, 1953).

fewer and fewer people could recount what happened then. The stories and memories of survivors needed to be told and heard while they still can. Yet, there were two other, remarkable aspects in the speeches and media portrayals. First, as mentioned before: many speakers, journalists and others referred to future climate change. Younger generations as well as water experts are invited to relate this disaster to climate change and sea level rise, and to reflect on issues such as intergenerational solidarity.[52] This becomes also evident from educational materials as well as the permanent exhibition about the flood in the Watersnoodmuseum, a museum which is dedicated to commemorate this flood and links it to present day issues.[53]

Secondly, international solidarity was, more than in other years, an emphatic theme at the commemoration. This is also reflected in the growing attention in the North Sea Flood Museum to the dangers of global sea level rise.

The social and temporal dimensions of cultural resilience exhibited after the disaster were variable in nature. Cultural resilience was local, national, and international. The international dimension was visible especially in the charitable activities: the entire world, so it seemed, came to the aid of the Dutch. Temporally speaking, an interesting shift can be witnessed around the 70th annual commemoration. Policy makers, journalists, and those involved in education and heritage now present the North Sea Flood of 1953 as a warning against future inaction in the face of climate change. They have appropriated the historical disaster to tell stories about the current climate crisis and, meanwhile, have 'anchored' fearful futures in collective memory.[54]

Concluding remarks

This article offers a robust framework for examining the multifaceted dynamics of cultural resilience across local, national, and international scales. By charting sense-making, charity, and commemoration as building blocks of community building, it is possible to analyse how cultural resilience takes shape after disasters. Our theoretical framework also allows us to identify the different dimensions of culture (values, customs, norms), as it manifests itself in cultural practices and artifacts.

We demonstrated it in our cases studies on eighteenth-century fires and a twentieth-century flood disaster. Yet, we are aware that this investigation is still rather limited. It is based on research examining rapid-onset disasters in a small corner of the European continent. We recognise the clear need to expand this analytical scope to encompass a wider array of geographical and temporal contexts. From previous research we know that disaster cultures take different shapes in various regions. In the Philippines, for instance, inhabitants deal in a different way with the risk of flooding than in the Netherlands.[55] How various practical measures relate to expressions of cultural resilience, would be interesting to investigate. Similarly, applying our framework of cultural resilience to slow-onset famines in sub-Saharan Africa or man-made Canadian coal mine incidents might reveal interesting differences as well as similarities. Songs as a means of sense-making, for instance, may play a similar role in very different cultures.[56]

Expanding the scope also includes investigating slow-onset disasters such as pandemics, where the mechanisms of resilience may operate in a wholly distinct manner. In these scenarios, resilience might paradoxically involve deliberate forgetting, as seen in responses to historical outbreaks of cholera or more recent experiences with COVID-19.

Another critical aspect of this research involves acknowledging and addressing vulnerability. It is important to recognise that certain groups are inherently more vulnerable than others, and community-building initiatives, while essential, can inadvertently lead to the conscious or unconscious exclusion of less-privileged populations. The use of cultural media to interpret events, initiate relief operations, and publicly commemorate disasters serves not only to strengthen communal bonds, but also, at times, to exclude specific groups.[57]

Future research should integrate a more critical analysis of these mechanisms of exclusion. This involves not only studying patterns of donation during relief efforts, but also actively investigating who was overlooked, the economic and political consequences for these communities, which disasters faded quickly from the collective memory, and the underlying reasons for these phenomena. This could also prompt an exploration of the extent to which 'exclusion' might function as a 'necessary evil' in fostering resilience within groups — a concept echoed in the work of Girard.[58]

Finally, and in particular inspired by the foundational work of historian Gerrit Schenk, we aim to open a theoretical discussion on what cultural and art historians can contribute to disaster history research.[59] Despite the growing attention to the role of culture as a coping mechanism after disasters, the field of historical disaster studies is still predominantly populated by social and economic historians. By actively engaging with key concepts, such as resilience and vulnerability, cultural and art historians can – and indeed should – join the conversation. After all, cultural responses to disasters – whether artistic, literary, and/or ritual – explain why people cooperate at preventive and damage reduction strategies in the first place: it is because they feel part of a community and want that community to persist and flourish.

Data availability

Data will be made available on request.

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[52] Duiveman and Jensen, 'Warned by the past'.

[53] See for instance Canon of the Netherlands, '1 February 1953, The Great Flood', https://www.canonvannederland.nl/en/watersnood and Watersnoodmuseum, https://watersnoodmuseum.nl/.

[54] Duiveman and Jensen, 'Warned by the Past'.

[55] Petra van Dam, *De amfibische cultuur. Een visie op watersnoodrampen* (Amsterdam: VU University Press, 2010); Gregg Bankoff, *Society and Natural Hazard in the Philippines*.

[56] On Canadian disaster songs, see Heather Sparling, '"Sad and solemn requiems". Disaster songs and complicated grief in the aftermath of Nova Scotia mining disasters', in *Singing death. Reflections on music and mortality*, ed. by Helen Dell and Helen M. Hickey (New York: Routledge 2017, pp. 90–104.

[57] Jensen, Van Asperen, Duiveman, Egeraat, Meijer and Nijhuis, 'Appropriating Disasters'.

[58] René Girard, *The Scapegoat*. Translated by Yvonne Freccero (Baltimore: John Hopkins Press, 1989).

[59] Schenk, 'Historical Disaster Research', Schenk, 'Learning from History'; Gerrit Jasper Schenk, 'Images of Disaster: Art and the Medialization of Disaster Experiences. Catastrophe and the Power of Art', in *Catastrophe and the power of art*, ed. by Kondo Kenichi (Tokyo: Catalogue Mori Art Museum, 2018), pp. 145–149.

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