“Trutz, Blanke Hans” – Musical and Sound Recollections of North Sea Storm Tides in Northern Germany

Britta Sweers

Abstract

Similar to other North Sea regions, the flat North German coastal areas have been shaped by severe storm tides and floods. Until present day, these extreme environmental phenomena have been playing a significant role in private and public memory. This article explores how these experiences are reflected in local cultural practices, particularly in traditional and popular music. As becomes apparent from a historical perspective, written and musical works that dealt directly the storm floods became only more clearly evident in the 19th century, such as Detlev von Liliencrons poem ballad “Trutz, Blanke Hans“ (1882/83). Songs dealing directly with storm floods only appeared more frequently in the 20th century. As is evident with German pop musician Achim Reichel and sea shanty band Santiano, von Liliencron’s ballad in particular became a central reference point. This article likewise explores perceptions of the actual sound of these events, which have been described as extremely or even physically loud, and which have been mostly responded by silence until present day. Analyzing the relationship between the actual threat, the sound environment, and musical practices, this article reflects on the localization of extreme environmental topics in human music making and the role of music within these extreme nature-related experiences.

Keywords: Soundscape, environmental disaster, storm tides, Achim Reichel, Detlev von Liliencron, Santiano, Northern Germany, “Trutz, Blanke Hans”, North Sea.

Heute bin ich über Rungholt gefahren,
die Stadt ging unter vor sechshundert Jahren.
Noch schlagen die Wellen da wild und empört
wie damals, als sie die Marschen zerstört.
Die Maschine des Dampfers schütterte, stöhnte,
aus den Wassern rief es unheimlich und höhnte:
Trutz, Blanke Hans!

I have sailed over Rungholt town today,
five hundred years ago it was washed away
The waves still pound there, wild and arsh,
just as before, when they destroyed the marsh.
The steamship’s engines shake and creak,
From the sea comes a weird and mocking shriek:
Trutz, blanke Hans!

This first verse of Detlev von Liliencron’s poem “Trutz, Blanke Hans” (1882-83) introduces one of the most significant literary re-narrations of a devastating storm tide in the German North Frisian North Sea region. Describing the destruction of the settlement Rungholt that presumably occurred in the 14th century, the poem is still interrelated with local environmental memory in the 20th and 21st centuries. Up to the

present day, storm tides, most specifically those of 1962 and 1976, have been playing a major role in private and public memory in Northern Germany that has been shaped, similar to the Netherlands, by the impact of severe storms and flooding.

Many music traditions, as well as modern folk bands, have been addressing the natural phenomenon of storms, also within an oceanic context, often as a means of describing inner emotional experiences. A good example is the Irish band Clannad that integrated depictions of storms at the Irish Atlantic coast as a central part of their songwriting, as evident on the album *Macalla* (1985) with songs like "Almost Seems (Too Late to Turn)", "In a Lifetime", and "Northern Skyline". Similarly, destructive storm events, particularly hurricanes, have inspired contemporary music making.

Recordings such as the interpretations of the German rock singer Achim Reichel (1978) and shanty band Santiano (2015) illustrate that Liliencron's poem has repeatedly been set to music. At yet, in contrast to hurricanes, the topic of North Sea storm tides was mostly avoided in North German music making until the late 20th century.[i] At this point, related debates became increasingly interconnected with environmental discourses addressing global climate changes, including the rising sea level that will affect the coastal regions of these areas.

Focusing on North Sea storm tides, this article explores the experience of extreme environmental phenomena in music and sound. The sound-related analysis addresses the actual soundscape that is interrelated with the physical experience of storm, which still requires traditional acoustic warning devices such as fireworks and church bells. Moreover, in analyzing the relationship between the actual threat, the sound environment, and musical practices, this article also reflects on the localisation of extreme environmental topics in human music making. This includes the role of music in the context of extreme nature experiences, but also the usage of sound references and onomatopoetic devices in literary works. At the same time, my analysis relates to trauma experience within the actual events and memory transmission through sound experience. As is argued here, the combined analysis of sound and music practices provides insights into a deep, cultural (shared) subconscious. In the case of North Sea storm tides, this has been shaped by factors such as avoidance and respect and superstition, which provide further understanding of how humans deal with environmental threats in the 21st century.

Destructive Natural Forces and Soundscape in Research

Natural disasters have been repeatedly addressed in ethnomusicology; yet often in relation with conflict management, as in the case of the Tsunami disasters (Haskell 2015), or, with regard to the broader complex of oceanic storm phenomena, such as hurricanes, mostly in relation with Hurricane Katrina. In the case of Katrina, most studies have been discussing the impact on local musical infrastructure and music-related aid/ relief projects (Sakakeeny 2013; Haskell 2015:461), but less the actual sound-related experience of the event. This article explores how humans have been dealing with an extreme natural phenomenon sound-wise in real-life-situations and in musical works. Also in reflecting on how sound, such as bell ringing, was symbolically interpreted, it hereby addresses the broader question of how sound experiences have been permeating culture and shared memory.

A further gap within the complex of ethnomusicology and extreme natural phenomena relates to the analysis of the actual storm soundscape, which has been mostly undertaken as part of practical (e.g. compositional) exercises, less so within ethnomusicological research, aside from music historical studies of musical scores depicting storms.[ii] The article thus also endeavours to look at and listen to the soundscape of storm and storm tides. Following Ingold's (2007) critical approach towards soundscape studies, the article likewise argues that the experience of soundscape cannot be separated from other environmental perceptions. Such an approach not only includes the *visual*, but also, in particular, the *haptic* (touch)

perception that is interconnected with the experience of physical violence in this context. Yet, this interrelation of extreme soundscapes with a physical-haptic side (the storms described here make it unable to stand upright, are painful on the skin or likewise interconnected with sharp rainfall and hail storms) has mostly been overlooked in music studies to date. This points to a third element, the *affective* side of soundscape experience (cf Ahmed 2004), particularly with regard to long-term memorisation in which sound-related recollections play a central role.

Descriptions of the major storm tides are evident in a variety of historical accounts and narrations. Given their central of role with regard to modern musical interpretations, I explore the usage of sound-related terminology to describe and evoke fictive images of storm tides acoustically. Besides selected mythological narratives, I will specifically focus on two central literary works by 19th century German authors Detlev von Liliencron and Theodor Storm in which acoustic literary descriptions play a significant atmospheric and psychological role. With regard to the contemporary situation, especially concerning the 1962 and 1976 events, I not only rely on informal interviews: I also draw on a large range of local newspaper, radio, and TV accounts, especially from the *Norddeutsche Rundfunk* (NDR). These, as well as informal research,[iii] have also constituted the major resource of public knowledge. On the one hand, as is evident from these modern accounts, storm tides are part of local (as in the case of Hamburg) long-term memory. On the other hand, retrospective journalistic accounts have likewise contributed to a deeper embedding of this long-term cultural memory during the re-narrations at anniversary dates and thus require a careful reading.

Since the first decade of the new millennium, soundscape studies have undergone a major growth in ethnomusicology and cultural studies. However, this area has likewise been a growing focus of other disciplines, such as technical studies interested in the improvement of the relationship between the aural space and living environment. As is, for example, pointed out by technical acousticians Schulte-Fortkamp and Lecher (2003:1), “The sonic environment is seen here as mediator between humans, their activities and the environment.“ The authors hereby point to the same core reference as ethnomusicological studies, specifically Raymond Murray Schafer’s works, most prominently *The Tuning of the World* (1977). In his seminal publication Schafer postulated the foundations of soundscape studies or “acoustic ecology” which analyzes the relationship between sound, humans, and the environment. Within this context, human-made sound, particularly since the Industrial Revolution, has been depicted negatively as acoustic pollution by Schafer. Yet, Schulte-Fortkam and Lecher also criticize Schafer’s philosophically grounded approach for a phenomenological and elitist perspective, apparent in a clear “aesthetic moralism” (ibid.:2). Rather, as they continue, more profound answers could be found in technical studies that set their core interest on psychoacoustics due to the focus on annoyance-related empirical research. Yet, this is likewise debated. For example, clearly acknowledging the emergence of soundscape studies in ecological studies, Matsinos et al. (2012:16,19) criticize the marginal and often isolated, decontextualised treatment, often within an urban context, by natural sciences, such as noise studies.

Despite interdisciplinary overlaps, ethnomusicological research methods have been largely absent in these studies – along with the analysis of the role and sociocultural context of acoustic perception. The situation thus raises the question as to whether ethnomusicology needs to interrelate music (performance), the sociocultural context, and soundscape analysis even more strongly in order to gain more attention within the interdisciplinary context, particularly with regard to natural sciences. Yet, as will also be explored in this article, the ethnomusicological study of extreme natural phenomena likewise calls for a deeper contextualisation not only at a sociocultural level, but also from a geographical and meteorological perspective. Before getting to the analysis of sound- and music-related issues, I first sketch the

broader environmental context of storm tides, while simultaneously offering some cultural perspective.

North Sea Storm Tides: The Physical and Geographic Framework

Storm tides can be defined as an elevated tidal ocean flooding caused by an onshore storm that can be further intensified by factors such as wind direction, coastal form, and moon position.[iv] Due to the interconnection with tidal rhythms, this phenomenon is called “storm tide”, rather than “storm flood” or “surge”.[v] In contrast to other natural disasters, such as earthquakes, storm tides can partly be calculated several hours up to 1-2 days in advance, which facilitates early preparation.[vi] While storm tides therefore appear like minor versions of comparably larger phenomena known as hurricanes, typhoons, and monsoons, the North Sea, located in the Westwind Zone and North Atlantic low-pressure systems, nevertheless counts as an area that is strongly threatened by storm-inflicted flooding disasters (Sündermann et al. 2000:15–24).

This article particularly focuses on the human interaction with extreme weather-inflicted conditions on the continent, and, more specifically, on the German coast of the North Sea. Geologically, the continental North Sea shore (from Belgium, the Netherlands, along the East Frisian and North Frisian shores up to Denmark) is mainly marshland. Consisting of washed-up sediments, the marsh regions are extremely fertile. This explains the continuing human settlement, despite the naturally unprotected location at sea level or (as in the Netherlands) even below.

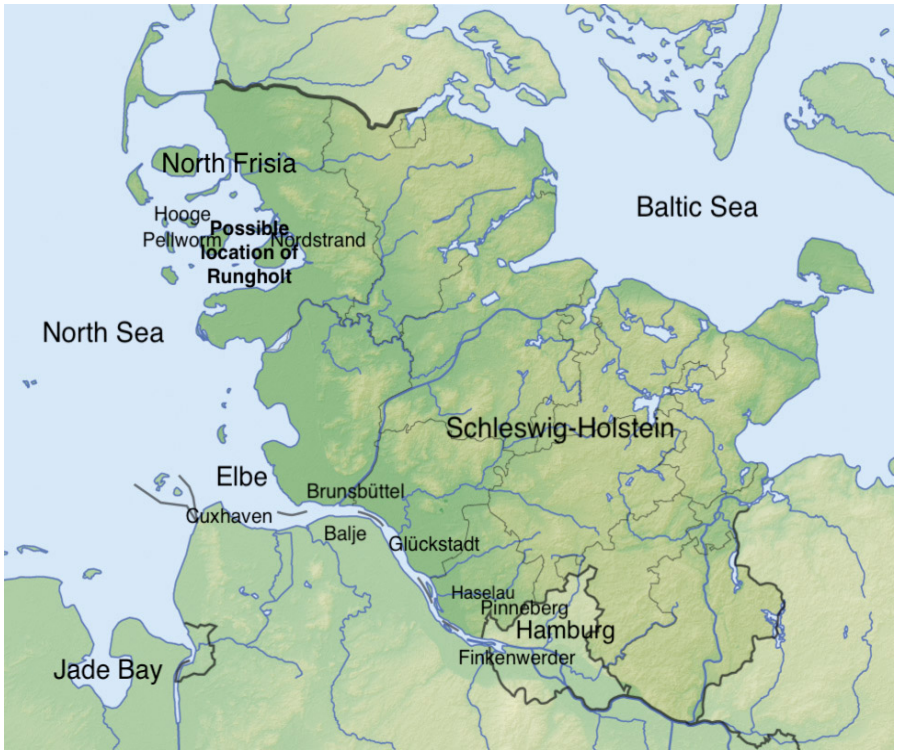

Figure 1: Map of Schleswig-Holstein, Hamburg and the Elbe Estuary, with the central locations mentioned in the text.[vii]

Meteorologically and geographically speaking, storm tides (see also the overview in Table 1 below) are the result of an interplay between four specific elements that also play a central role in the acoustic perception:

a) A specific weather condition in Northern Germany resulting from low-pressure systems that cause long-lasting northwest wind conditions.
b) Funnel-like estuaries, such as the river Elbe, resulting in northwesterly winds pressuring North Sea water deeply inland to Hamburg (which is about 142 km

away from the actual estuary region around Cuxhaven and Brunsbüttel – see Figure 1).

c) The extremely low land elevation.
d) A further impact of the tidal waves, which can additionally be severed by the bi-monthly spring and neap tides.[viii]

As has been evident on the whole continental North Sea coast, North Sea storm tides, documented since Roman times, have been exerting a strong impact on the land formation and constant transformation of the whole region. Table 1, below, helps demonstrate this point.

Table 1: Major storm tides in the continental North Sea region [Jensen 2012].

- January 16, 1219: Erste Marcellusflut (First Marcellus Flood)
- January 15–17, 1362: Zweite Marcellusflut (Second Marcellus Flood)
- October 9, 1374: Erste Dionysiusflut (First Dionysius Flood)
- October 8–10, 1374: Zweite Dionysiusflut (Second Dionysius Flood)
- November 1, 1436: Allerheiligenflut 1436 (All Saint's Flood 1436)
- November 1–2, 1570: Allerheiligenflut 1570 (All Saint's Flood 1570)
- February 3–5, 1825: Februarflut 1825/ Halligflut (February Flood 1825/ Hallig Flood)
- Januay 1–2, 1855: Neujahrsflut 1855/ Januarsturmflut (New Year's Flood 1855/ January Storm Tide)
- December 31/ January 1, 1953: Hollandsturmflut /Great North Sea Flood
- February 16–17, 1962: Februarsturmflut 1962/ Zweite Julianenflut (Febuary Storm Tide 1962/ Second St. Juliana's Flood)
- January 3-4, 1976: Erste Januarflut 1976/ Capella Orkan (First January Flood 1962/ Capella Storm)
- January 21, 1976: Zweite Januarflut 1976 (Second January Flood 1976)
- December 5–6, 2013: Sturm/Storm Xavier

For example, the shallow Dutch bay known as the Zuiderzee came into existence resulting from the storm tides of 1164 (*Julianenflut* or "St. Juliana's Flood"), of 1170 (*Allerheiligenflut* or "All Saint's Flood"), and, most significantly, of 1219 (*Erste Marcellusflut* or "First Marcellus Flood"), while the striking forms of the Dollart and Jade Bays were shaped by the storm tides that occurred between the 12th and 15th-16th centuries. Similarly, the coastal line and islands of the North Frisian Schleswig Holstein region took the shape as depicted in modern atlases only in the 17th century. The retardation of this process, which has been partly interconnected with artificial land reclamation, was the result of increasingly sophisticated techniques of dyke building that emerged in the Netherlands in the 15th century (for more details see Buisman 1995–2015, Essing 2009, Bantelmann et al. 1995).

Mostly occurring between autumn and spring, the storm tides have often been, as exemplified in Table 1, named after the saint or patron(ess) of the day. Until 1800, this was sometimes interconnected with specific locations or events (e.g. *Grote Mandränke* ("Big Human Drowning")). Only from 1800 did the naming start to be connected with specific seasons or months (e.g. "February Flood"), and since the 20th century, storm tides have been interconnected with the actual storm names (Nübling et al. 2015: 327–336). The most significant and remembered storm tides of the last century, with regard to collective memory, have been the following:

- 31 January – 1 February, 1953: In Dutch: *De Ramp* ("The Catastrophe"), *Watersnood*" ("Water Misery"); in German: *Hollandsturmflut* ("Dutch Storm Tide"); in English "Great North Sea Flood" (storm names were not yet introduced).
- 16-17 February, 1962: in German: *Sturmflut von 1962* ("Storm Tide of 1962"), *Februarflut 1962* ("February Flood 1962") or *Zweite Julianenflut* ("Second St.

Juliana's Flood"); the storm's name "Vincinette" is not yet interrelated with the event.

- 3-4 January, 1976: *Sturmflut von 1976* ("Storm Tide of 1976"); *Erste Januarflut 1976* ("First January Flood 1976").[ix] It was partly also described as the First January Flood, caused by the so-called "Capella" storm.[x]

Historical data indicates that the land-destruction was not only the result of natural disaster or an alterered North Sea level, but also of human-made transformation (Behre 2003). This became likewise apparent in the narrative of the drowning of the city of Rungholdt that might have been located close to what is now known as the island of Nordstrand and was thematised in von Lilienron's poem quoted in the introduction (see Duerr 2005 for further details on the following).

During the 13th century, North Frisia had been a relatively rich and, while associated with Denmark, politically independent region. While in part dependant on sea trade, whaling, and fishing, the region's main wealth had nevertheless been based on salt trade. Geographically speaking, the original island Strand (see figures 2 and 3) – the most likely location of Rungholt – had been a mixture of marshland, elevated *Geest* areas (sandy heathland that had emerged as a result of the glacial melting after the last Ice Age) with high moors that also provided the precious salt turf for heating. Extensive turf cutting, as well as the rising of the sea level during the Medieval Warming Period (ca. 950–1200) strongly contributed to subsequent disaster. Already heavily affected by the first *Grote Mandränke* or so-called *Zweite Marcellusflut* ("Second Marcellus Flood") in 1362 (Figure 4), the region saw the emergence of so-called tidal streams in the Wadden Sea, with the largest one being the *Heverstrom*, that remain a threat to the islands and *Halligen* (unprotected marsh islands, singular *Hallig*) in the present day. The *Heverstrom* devastated the island of Strand completely during the so-called *Burchardiflut* ("St. Burkhard's[xi] Flood") on October 11, 1634, when the island was cut into smaller pieces. Islands, such as Pellworm and Nordstrand, as well as the *Halligen* Hamburger Hallig and Nordstrandischmoor are remains of the former island of Strand. The region was economically ruined, while suvivors either fled to the remaining higher areas or the mainland.

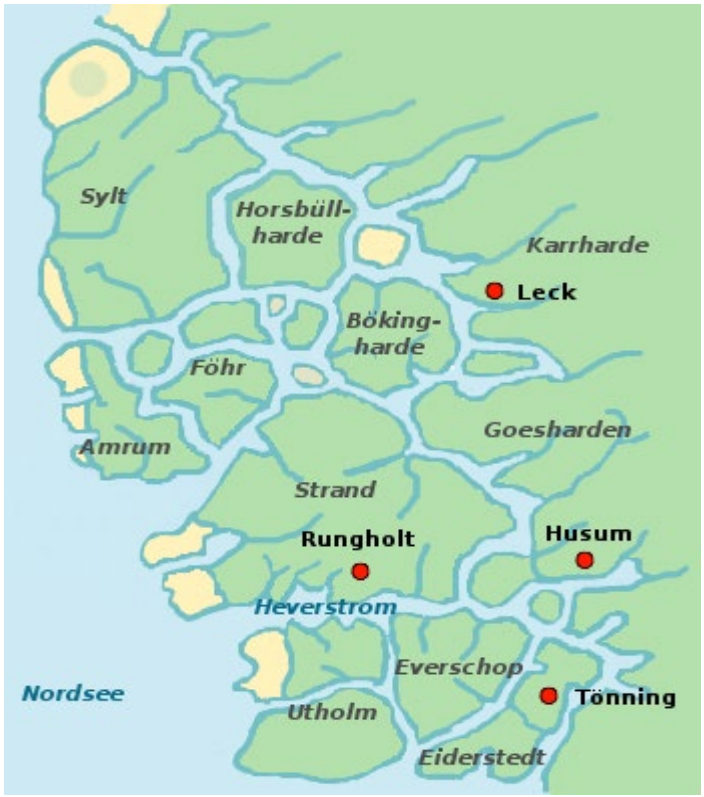

Figure 2: North Frisian coastline before 1362 with the presumed location of Rungholt.[xii]

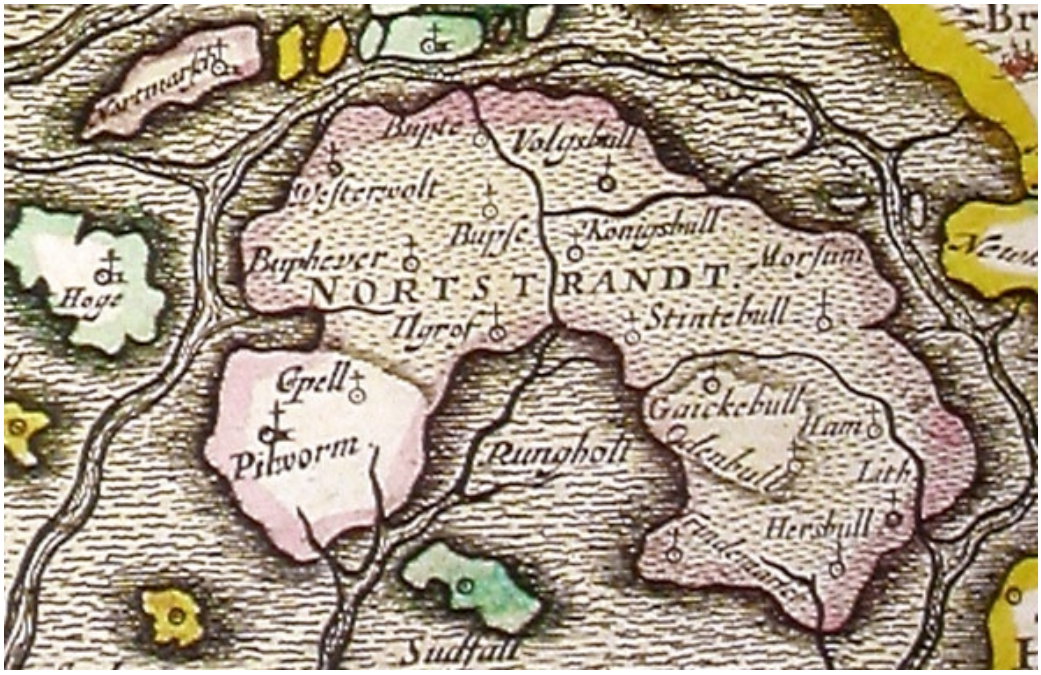

Figure 3: Map detail of Alt-Nordstrand (Strand after the destruction) with the presumed location of Rungholt. The island is encircled by the Heverstrom. [Map by Johannes Blaeu (1662)].

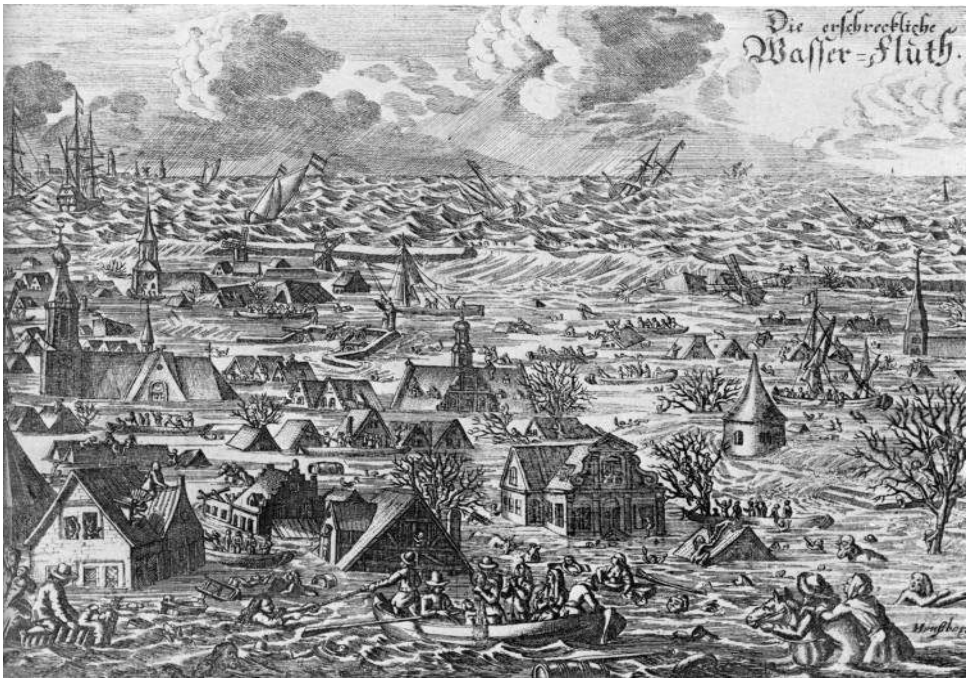

Figure 4: *Die erschreckliche Wasser-Fluth* ("The terrible water flood"). Historical depiction of the Buchardiflut (1634). [Copperplate, Henssberg aus Happel, Historische Kernchronik, 1682].

A central means of environmental survival on the *Halligen* have been so-called *Warfthäuser* ("terp houses") that have become modern touristic and cultural icons of North Frisia. Located on an artifical hill consisting of bran (a material similar to that of the dykes) that function like little elevated islands in dyke-less areas, particularly during "Landunter" ("land under", the flooding of the lower areas during storm tides), the houses are built with extremely strong wooden pillars. While the water might destroy the basement walls, humans and animals can survive on the upper floor,

which is further supported by the reet (thatched) roof that is more wind-safe than tiled roofs. Clearly, this broader environmental context has also been shaping the local sound-related experience.

The Sound Experience of Storm

Storm is audible – it howls and growls. Yet, at closer listening, the sound specifics of a storm also reveal many details about the actual forces at work. While especially high storm forces create a constant deep drone, the overall sound is not completely regular due to multiple gusts, i.e. a sudden, relatively brief increasing wind speed followed by a lull, due to pressure differences. The effects are similar to a physical push and often cause the strongest damage during a storm.

The perception of storm is an interconnected sound experience. Sound is the result of mechanical vibrations in an elastric medium, such as air or water. However, in this case, the air particles return to their original position after the physical impact. As is evident with the fluctiating sound of church bells during a stormy day, wind can influence the expansion of the sound waves. However, wind itself, as the result of air movement due to the air pressure differences, cannot be heard. It needs to interact with other – resonating – material to create sound. We thus do not directly hear the wind or storm, but perceive the storm force through the stirring of boat cables or flagpost cords, as well as through the banging of falling items. I specifically recall a major gale in the Hamburg area on 26 December 2016, where the wind gusts on the west front of my parents' house became particularly audible and physically experienceable due to the banging sound of the balcony sheathing. As is evident with many storm reports, this was, sound-wise, also interconnected with falling tiles and other objects, and, in this case, parts of our tin roof that hit a parking lot and nearby railway tracks.

Yet storm is also a haptic and physical experience; it is painful on the skin, especially when manifest with cold rain, and it can make it impossible to stand upright. This likewise relates to the indoor experience, as the storm often shakes and rattles less sturdy buildings. At the same time, the experience of wind and storm is interrelated with smell – especially at the ocean, but also with regard to the often-interconnected rain (ranging from ozone-like to "muddy" scents).

Both sound and sensory experience is strongly shaped by the specific environment, such as the tree vegetation. For example, the woods around Hamburg are a mixture of heavy beech and oak trees, while conifers are less frequent. On that December 26, 2016, the atmospheric disturbance first started in the higher levels. This actually enabled me to record the delicate, almost ocean- or wave-like sound of the ocassional fir trees that was set against a dark roaring sound of the oaks with their much heavier trunks and the silvery sound of the dry winter leaves on the hedges. As I can observe in my residential area in Bern (Switzerland), the storm sound is much lighter here, due to the stronger presence of conifers, mixed with birch trees, cypress trees and sycamores.

As storm tides can be described as an interrelation of forceful air and water impact, the turbulent sea likewise strongly contributes to the soundscape: For instance, during periods of moderate wind speed, waves on the shore can be individually distinguished on a sound level as a sequence of the hissing sound of the rising water that retreats over the sand, which is followed by a bang of the crashing water and the rushing sound of the water moving inland over the sand. During a major storm, these individual events become a continuum, resulting in constant, partly very deep drone or sound wall. Again, the specifics of the ocean sound also reveal much of the nature of the storm. This is clearly evident in the description of the approaching Galveston Hurricane (1900) in Eric Larson's popular non-fictional novel *Isaak's Storm* (2000:4). Here, Larson speaks of a thrudding sound caused by the deep-ocean swell

preceeding the hurricane, which is clearly different from the comparably lighter sound of wind-caused waves that only disturb the water's surface.

As is particularly evident in the case of the delicate sound of the fir trees, the recording of a storm and a sound-related representation through sound events provides a challenge. Even with microphone protection, it is difficult to record. Many storm tide-related documentaries have thus been adding overdubbed recordings that were not taken from the actual event (see below), often intertwined with sound of thick, heavy raindrops. The latter sound is also often not taken from the actual event, as, due to the likewise occurring wind, resulting in the interrelated rainfall becoming an almost horizontal movement. This all needs to be taken into account when re-analysing the documentaries with regard to actual representation.

The Soundscape of Storm Tides in 20th Century Descriptions

Conducting informal interviews about the sound- and music-related memorisation of the storm times in Northern Germany,[xiii] I noticed that the dates of 1962 and 1976 were immediately mentioned. One of the most devastating events was the storm tide of February 16–17, 1962, when about 340 people drowned after the dykes had broken in Hamburg. While the water level of the storm tide from January 2–3, 1976 (followed by a second one between January 20–21, 1976), was significantly higher than the 1962 event, the effects were less devastating. After the 1962 catastrophe, the dykes had been heightened and the security system had been expanded, although several dykes still broke in the Elbe marshes, which likewise resulted in severe flooding in 1976. I myself had experienced the storm tides of 1976. While quite young and more or less safely located ten kilometres away from the Elbe in Pinneberg, I nevertheless still recall the power with which the wind pounded against our west front windows to the extent of nearly breaking. And I sensed the concern of my parents, particularly of my mother, whose relatives were located directly behind the dyke north of Glückstadt on the estuary of the river Elbe. This, as well as other subsequent storm tides, was clearly evoked in her recollections of 1962.

In 1962, the most dangerous high tide occurred around midnight from a Saturday to a Sunday. Through the present day (2020), media accounts, news, and TV documentaries on this flood have often fallen back on a recurring trope, contrasting the violence of the storm with a protected world in which the citizens of Hamburg are depicted as coming out of the opera or – as it was carnival season – from parties and pub visits.[xiv] Particularly these Northern German reports also reveal the previously indicated problem of the actual recording process. Mostly, the sound in the TV accounts was added after the fact, as it was nearly impossible to be recorded live at the time (the same sound effects were used for the documentaries on the snow catastrophe of 1978/79).[xv] In speaking with those who remember the event, a real-life sound-related issue was evident: the interchangeability of water and storm sounds. As my mother, who spent that night in her family's house located directly behind the dyke of the river Elbe, recalled, she had finally fallen asleep after midnight, only to be woken up again by the intensifying storm and water drops splashing against the window. It was only in the morning that the family realised that the splashing water had not been the rain, as assumed, but the Elbe and the North Sea.

Another recurring recollection in many written accounts has not only been the actual storm and related noises, such as falling tiles or banging fuel canisters,[xvi] but particularly the screaming of humans and animals. The central role of the human voice in immediate danger can easily be forgotten, but is very prominent in many accounts of the rising water.[xvii] The crying of fearful and drowning animals is a likewise recurring theme in documentations. As is evident in contemporary and retrospective newspaper reports, this was reported by nearly all villages around the river Elbe up to Hamburg, as well as at other rivers flowing into the North Sea. As an inhabitant of Elsfleth in the Weser marshes recalled, he had only been woken up due

to the crying animals, having never heard the animals crying in such way. This actually saved his life, but not that of the animals (Zacharias 2012).

At the same time, church bells also played a central role in the warning process, as this account from Finkenwerker, north of Hamburg, indicates: "The pastor hurried to the church in Finkenwarder during the storm tide of 1962 to draw attention to the high tide. This is still gratefully recalled by locals of Finkenwarder" (Adolphsen 2014).[xviii] Something similar occurred in the Netherlands during the devastating 1953 storm tide – people started to ring the bells to warn locals. Retrospective newspaper accounts from Hamburg describe how, on top of the ringing church bells and howling sirens, the police also fired off pistols and smashed in windows (cf Trotier 2018). Yet, as a collection of contemporary witness accounts also indicates, none of that was actually heard by those in danger, mostly due to the noise of the storm.[xix]

Modern stormtide warnings reveal that several sound signals have maintained their significance until present day. The usage of sirens, as well as of fireworks and pistol shots as a means of warning is clearly implemented into several regulations that require a clear knowledge of specific signals, similar to the earlier church bell codes. For example, within the extremely vulnerable Hamburg harbour area, firecrackers are used as warning devices at a water level of 3.5 metres above mid-high tide, after 4.30 metres loundspeaker vans are used, and radio and TV announcements become central at a level over 5 metres. As the authority of the Freie und Hansestadt Hamburg (2012) further points out, sirens are used at a level over 7.30 metres – similar to many other areas. For example, a public information leaflet from Finkenwerder tells us that, once the water transgresses the 7.5 metre above the mid-high tide mark, people are warned by a siren sound of one minute which signals to switch on the radio (Inixmedia 2018). The usage of external signal devices even in the age of mobile phones is a result of the experiences from the 1962 storm tide. During this event, electric devices, including phones, TV, and radio, were interrupted (and this could also apply to 21st century mobile phone connections).

The seemingly anachronistic church bells thus remain a central means of warning in the 21st century, as is, for instance, evident in Cuxhaven, located on the mounting of the river Elbe. As an emergency leaflet points out, "These (siren) signals are repeated several times! The church bells must also ring continuously."[xx] The importance of the church bells in modern public memory became particularly apparent in 1976, when the dykes in the Haseldorfer Marsch, northwest of Hamburg, broke. As a description of the new bells acquired by the small church of Haselau attests: "The fifth and sixth bell sound on A sharp and C. Their special character: they remind us of the storm tide of 1976. Their inscription in German: 'To the memory of the storm tide of Jan. 3, 1976.' (...) Their decoration consists of two friezes depicting water waves."[xxi]

In contrast to sirens, church bells maintain a double function, which becomes particularly evident during memorial services. As can be read on a historical program leaflet from the official Hamburg memorial service from February 26, 1962, the ringing of all church bells of the city introduced the public event. Similarly, the fifty-year memorial service was introduced by a collective bell ringing in the whole region. Regarding the usage of musical works within this context, memorial events were mostly framed by pre-existent repertoires until the late 20th century. For example, the 1962 memorial event included Beethoven's *Third Symphony (Eroica)* and the funeral march of Handel's Oratorio *Saul* – very much in contrast to subsequent events. For instance, the Dutch composer Douwe Eisenga (b. 1961) composed a specific *Requieum Aeterna 1953* for the 50-year memorial service of the storm tide that devasted the Netherlands in 1953.

As is evident in the above-quoted recollections and memorial events, storm tides maintain a strong, often traumatic presence in collective memory. This is further negatively implanted due to the repetition of these accounts (cf Ahmed 2004). The traumatic side is also evident in sound-related recollections of the aftermath. The first

central sound recollection after the disaster was an unusual silence (Pawelko 2012). As my mother recalled, this peaceful weather-related silence was extremely confusing, especially when the family received notice of the previous night's actions, when soldiers already had to fill the dyke with hay bales. She did not dare to look at the river estuary on that day. In other areas, the silence was also the result of the complete flooding of the region and destruction of the infrastructure, followed by a combination of the sounds of the rescuing helicopter and visual images of corpses hanging in the trees in 1962 (Jacobs 2017). A deeper look at musical repertoires addressing storm tides reveals a further indication of the fear- and trauma-related perception of storm tides in a local context.

Musical Responses to Storms

The *Hurricane Rock Festival*, band names such as Hurricane or Typhoon, as well as song titles like "Rock you like a Hurricane" (The Scorpions), "The Hurricane"[xxii] (Bob Dylan), "Like a Hurricane" (Neil Young) – all these examples indicate that related threating natural forces are actually incorporated into songs, song names, or festival sites. This likewise applies to folk song material related to, for example, Atlantic/ Caribbean hurricanes. For example, the song "The Lost Boys of East Bay"[xxiii] that depicts a tragic event on on Sand Island (St. George's Sound, close to Panama City, Florida) was written after a hurricane in 1894 (Cohen 2008:322). The song "West Palm Beach Storm" that was written after the Florida Hurricane of 1928 is, like "Miami Hairikin," a call to return to godly faith and actions (ibid.:324). Similary, "Wasn't that a Mighty Storm," was most likely initially a spiritual relating to the devastating 1900 Galveston Flood. First recorded in 1934 by "Sin-Killer" Griffin for the Library of Congress, the song took on a life of its own in the folk scene. Having been revived and popularised by Eric von Schmidt and Tom Rush in the 1960s, it thus became a household folk song. As is evident here, the composition of these songs directly responded to specific natural disasters, which is also the case with Jim Cliff's "Hurricane Hattie" (1961) or Lightnin' Hopkins' "Hurricane Betsy" (1965) that addressed more contemporary events. Something similar can be observed in the Carribean, be it on Trinidad or Jamaica. For example, Calypsonian Lord Beginner's, "Jamaica Hurricane" relates to the devastating 1951 Hurricane Charlie, Calypsonian Lord Christo's "Hurricane Janet" to a category 5 hurricane that strongly affected the Lesser Antilles in 1955, while Jamaican dancehall DJ Lovindeer was one of serveral artists to address Hurricane Gilbert with his song "Wild Gilbert" (1988).

Similar reactions can be observed with regard to the Great Missisippi flood of 1927 – most likely also because songs of tragedy had been a popular theme of sheet music at that time. This even continues into the 20th century, as Randy Newman's "Louisiana 1927" (1974) demonstrates. There are likewise numerous songs about North Sea storms – such as "North Sea Storm" (1999) by the Swedish black/ dark metal band Amon Amarth – and one also finds a large number of historical written and illustrated descriptions of storm tides. However, musical material addressing the events directly is, especially from a historical perspective, comparably rare on the European continent.[xxiv] As it seems in the case of North Sea storm tides, a kind of unspoken – and unconscious – fear has been and is still partly prevalent in not evoking threatening forces by naming them.[xxv] Musical material dealing directly with the storm floods only became more evident in the 20th century. Major thematic reference points have often been pre-existent literary works, most prominently Detlev von Liliencron's (1844-1909) poetic ballad "Trutz, Blanke Hans" ("Defy, Blanke Hans," 1882/83) and Theodor Storm's (1817-1888) novel *Der Schimmelreiter* (1888; "The Rider on the White Horse" or "The Dykemaster"). Written during the late 19th century/ late Romantic period that was strongly inspired by naturalist movements, both literary works became – as evident with Reichel's song – central reference points for 20th century musical responses to storm tides.

Traditional Musical Reactions Towards the Threatening Elements

Within an earthquake- and volcano-safe region, storm tides remain one of the strongest examples of the limits we have in controlling nature, even in the 21st century. As can be deduced from historical accounts, novels and tales, traditional musical responses were often coded in religious practice. As storm tides have often occurred during the Christmas holidays, approaching storm tides have become connected to, for instance, singing Christmas carols during the communal assembly in the Hallig churches or schools. Within these contexts, the storm itself was not directly addressed in the musical works, but is rather associated with them, as is evident from an account from 1718 (cf Jakubowski-Tiessen 1992: 82–83), which describes a storm tide oratorio by the protestant cantor Johannes Jani (Aurich). Written from an abstract Christian perspective, it describes the final judgement of god and the different states of the soul. This account likewise indicates the importance of subsequent thanksgiving services, which has been continued until the present day.

Furthermore, historical reports stress the importance of the church bells, not only as traditional means of warning and thanksgiving, but also as indicators of sunken human dwellings. As will be illustrated below, this theme has not only been taken up by modern local and German performers (as evident in “The Bells of Rungholt” by Schlager singer Juliane Werding), but has also been a recurring issue in other regions. This is also apparent with Claude Debussy’s “La Catedrale Engloutie” (1910) that relates to the Breton myth of the sunken city of Ys. In the case of North Sea, the iconisation of storm tides as a punishing supernatural force in local mythology and arts is particularly interrelated with the destruction of Rungholt.

Rungholt and Detlev von Liliencron’s Ballad “Trutz, Blanke Hans”

As previously indicated, the destruction of Rungholt was the result of an interaction between global climate changes and human environmental destruction. The first coherent written version of the narration that is explicitly related to Rungholt was published in Anton Heimreich’s (1626-1685) *Nord-Friesische Chronik* [“North Frisian Chronicle”] in 1666. Following a comprehensive account of previous land destruction through storm tides (which also includes Rungholt, p. 166), Heimreich, a North-Frisian Protestant-Lutheran pastor, outlines the Rungholt saga separately (1666:171–181). Pointing to the large number of “wonderous tales” related to Rungholt’s destruction, he frames his account with descriptive titling, such as “superstition” and an “old women’s dream” [“Altweibertraum”] and specifically focuses on sinful behavior and subsequent punishment through natural forces. Clearly told as a Christian moralist narrative, this account points to a potential resurrection of the city and is concluded with the indication that, on wind-quiet days, the bells can still be heard from underneath. This is a further example of the central role of bells not only within local mythology, but also of their central role as markers for local communal life.[xxvi]

The Rungholt saga became particularly popularised in local oral narration through the poem “Trutz, Blanke Hans” [“Defy, Bleak John”] by the North German poet and author Detlev von Liliencron (1844–1909). Working in the Prussian administration,[xxvii] von Liliencron had written the poem between 1882/83 when working as *Hadesvogt* (bailiff) on the North Frisian island Pellworm (also a remnant of the former island of Strand). Von Liliencron’s poem is basically a condensed re-narration of the 1666 account, a symbolic account of human arrogance that is punished by the forces of nature.

Starting out with a contemporary (at that time, 19th-century) journey of the narrator over Rungholt by boat (verse 1, 10), the poem introduces the tale with a broader description of the North Frisian island region (verse 1, 2). This includes an allegory where the tidal changes are described as being caused by the breathing of a monster. Once every century, this monster, whose head close lies to England’s beaches and the tail around Brazil’s beaches,[xxviii] releases huge water masses at

great force (verse 3). Verses 4 and 5 describe the arrogance of Rungholt's rich population against the North Sea, resulting in the drowing of the city caused by one deep breath of the monster (verse 7, 8).

While von Liliencron omits the bell theme, the poem is rich in sound-related descriptions. This includes the ship that journeys over the city with shaking and creaking machines (verse 1), the repeated call "Trutz Blanke Hans" that can be heard from below the sea (e.g. verse 1), the bickering sea gulls (verse 2), and the yell of the dying city (verse 8). Similar to the real-life accounts of the 1962 storm tide, the disaster is followed by a complete silence, with the "mute fish" having replaced the cheerful tish round."[xxix] The sound-related effect of the poem is further enhanced by onomatopoetic stylistic means, such as words with sharp, hissing sounds (e.g. "*sch*ütteln" ("shaking"), "*stöh*nen" ("creaking"), "Tru*tz*, Blanke Ha*ns*") that further evoke an aggressive oceanic atmosphere.

Several expressions of the poem have either been or become local household phrases. For example, the title's "Blanke Hans", meaning "spray" as well as "bare" and "shiny" (here also a relation to the mud flat), can be taken as a personification and widespread synonym of the (raging) North Sea.[xxx] As is evident from Heimreich's *Nordfriesische Chronik* (1666), the expression had already been present in local culture, here in the description of a *Deichvogt* ["dyke reeve"] of Rysum who called out "Trutz, Blanke Hans" at the sea as a means of expressing human power over nature after the building of a new dyke. However, the dyke broke at the Buchardiflood from 1634. Still other phrases like "Nordsee, Mordsee" ["North Sea, murderous sea"] became household expressions, even being used as a title of a 1970s film.[xxxi] These phrases have relevance to the local tourism industry as well; in promotional material the poem's beginning, "Heut bin ich über Rungholt gefahren," ["Today I journeyed over Rungholt"] is often interconnected with images of the *Halligen*, and "Blanke Hans" is a common name for B&Bs.

While the poem is also a clear example of literarisation (i.e. the transfer of oral narration into written literature), it likewise questions the clear distinction between high and traditional art by having been part of many German school curricula for decades. When I interviewed locals in the region called "Bloomesche Wildnis" ["Bloomish Wilderness"] in the Elbe North Sea estuary north of Glückstadt, it became apparent that Liliencron's ballad, composed as a piece of high art, had been memorised at school by many who were born in the 1930s. This memorisation was so strong that many could still recall the poem decades later. While von Liliencron's name had partly disappeared, the poem itself had become part of a local traditional-popular canon. At the same time, the narration, interconnected with von Liliencron's poem, has been taking on further importance within the context of the global warming debate, as newspaper titles, such as "Friesisch Gomorrha" ["Frisian Gomorrha"] (Reichardt 2012) exemplify.

Theodor Storm's *Der Schimmelreiter* ["The Rider on the White Horse"]

The second example of a 19th-century literary adaptation of the storm tide theme is from the North German lawyer and author Theodor Storm (1817–1888), whose works count as part of German poetic realism. Storm, who wrote several novels and short stories that have strongly shaped the public perception of the North Sea region,[xxxii] was born in the North Frisian town of Husum.[xxxiii] While von Liliencron's Rungholt version is the best-known one, he had predecessors in the 19th century. For instance, the tale was already taken up by the Danish author Hans-Christian Andersen ("De to baronesser") in 1848-49. Almost a decade before von Liliencron, Storm published an account of the Rungholt events in his novel "Eine Halligfahrt" ("A Hallig Journey," 1871).

Storm also fell back on the collection *Sagen, Märchen und Lieder der Herzogthümer Schleswig, Holstein und Lauenburg* (1845), which had been collected

and collated by German mediaevist Karl Victor Müllenhoff (1818–1884). The collection provides a deep insight not only into local mythology that was later covered by the nationalist movements, but also into storm-tide related narrations and the role of sound and music. For example, it contains various accounts of the supernatural power of the bell. In tale 166 ("Die Brunsbüttler Glocke in Balje") a bell is stolen by citizens of Balje, located on the western side of the Elbe estuary, from Brunsbüttel, located on the eastern estuary shore. However, the stolen bell still warns Brunsbüttel of storm tides – until Balje gets destroyed in the storm tide of 1825. Suffering heavy flooding due to a broken dyke, the Balje population is nevertheless saved by Brünsbüttel, resulting in the bell becoming quiet for good.[xxxiv] The narration of Rungholt (tale 192), dated to the year 1300, strongly focuses, similarly to Heimreich (1666), on the detailed descriptions of the sinful behaviours and subsequent curse of the local priest, as well as on the bell that can be heard during quiet weather. Exactly this part was also taken up in Storm's novel "Eine Halligfahrt" that described the bells as "ghost-like" sounds. Within this novel, sound descriptions, particularly of the birds and the main protagonist (a violinist), likewise play a major role in setting the atmosphere.

Sound descriptions also play a central role in one of Storm's most popular novels, *Der Schimmelreiter* ("The Rider on the White Horse" or "The Dyke-Master" – the latter title referring to the major role of the Dyke Master as dyke administrator and, thus, protector of the region). Published in 1888, the novel is based on a local myth of the Rider on the White Horse, whose sighting predicts and indicates the spot where a dyke will break. Having been transferred to a mid-19th century context, Storm's novel is a broader reflection on the battle between modernity and tradition. The novel is centred on the young dyke master Hauke Haien, who tries to introduce new dyke building plans in order to master nature, but is met with local resistance. Riding a horse that had previously been sighted as a skeleton on a nearby Hallig (the animals here represented as possessing a demonic nature), he nevertheless forbids the locals to sacrifice a living being, in this case a dog, on the site, thus raising the wrath of nature. Consequently, his wife and daughter drown in the water that penetrates the old dyke, while he sacrifices himself to the ocean by which he saves the local population. The new dyke holds, while the horse skeleton is subsequently sighted on the Hallig again.

The novel took the storm tide of October 7, 1756, as a framework. This so-called "Markusflut" caused heavy devastation, especially in North Frisia, the novel's main location. In this novel that makes strong use of local terminology and dialect Storm uses sound especially as an expression of inner emotion. This is not only evident in the description of the angry storm tidal water (Storm, 1888/1984: 5), but also of wind and birds whose cries are described as "mocking" (ibid.: 5-6). The description of the actual storm tide is similarly strongly embedded into sound description, be it that the related sound of the approaching storm is first related to thunder (ibid.: 82), followed by a wind-still and momentary silence (ibid.: 96) and a subsequent "angry return" (ibid.: 61). While the novel has become the basis for several musical realisations since the late 20th century (see below), it is, similar to Liliencron's poem, also an indicator of the central role of sound descriptions in literature. As I would argue here, these sound descriptions likewise contributed to the vivid imagery and interrelated popularity of the poem and the novel until present day.

Achim Reichel – "Trutz Blanke Hans" (1978)

Musically speaking, the German pop musician Achim Reichel (b. 1944, close to Hamburg) marked a kind of beginning in modern storm-tide related music writing on the continent. Reichel released his most successful albums between the 1970s and 1990s. After having been drafted in German military service Reichel continued as solo musician. After a stint with experimental music he started to sing sea shanties and increasingly German-speaking songs from 1975 on. Reichel was strongly

inspired by English folk rock groups like Fairport Convention and also produced German folk rock bands like Ougenweide.[xxxv]

The ballad song “Trutz Blanke Hans“ appeared on his album *Regenballade* [“Rain Ballad“] that was released in 1978. Inspired to record old poets who had, as Reichel put it in his retrospective liner notes for the 2008 CD re-relase, “moved the from the ocean to the land,” *Regenballade* was a collection of historical classical poems with a mythological element, including Johann Wolfgang von Goethe’s “Zauberlehrling” (“The Sorcerer’s Apprentice“). The record became so popular that it was included in German school curricula, hererby further underscoring the memory of past events, such as the destruction of the island of Strand, not only for modern audiences, but also outside the North German context.[xxxvi]

Reichel re-narrates the complete poem, except for a minor alteration from “the city was drowned a thousand years ago” to the more accurate “six hundred years ago,” in verse 1. As he emphasised (Reichel 2008), his musical revival was clearly connected to the idea of medieval bards. Reichel thus performs the poem in a moritat-like style that clearly sets the narrative into the central focus; he employs a dark, almost speech-like voice with almost moaning-sounding line endings and explicit pronounciation, using a rolling beginning “r,” prolonged “ns” endings, with an emphasis on the “s” (as in “Hans”). This moritat-like impression is also implemented by a partly scratchy sound colour of the speech-like singing, by audible breathing between the verse lines, contributing to the dark atmosphere, and by a clear pronounciation of all syllables. The latter further enhances the sound-focused impression of the angry and dark oceanic atmosphere.

Set in E minor in combination with modal passages, the narration is set in a relatively slow tempo (ca. 82 BPM) that provides enough space for the delivery. The instruments are a classic rock line-up plus mellotron which, together with the sound production, make a clear reference to the rock sound preferences of the late 1970s. The accompaniment is successively built up, e.g. from muted (verse 1, 2) to clear drum sounds and a syncopated driving bass (verse 3, 4) that, further enhanced in verse 5, strongly carries the subsquent drama forward. The musical adaptation to the the textual context is also evident in the sudden switch back to muted drums and string-like synthesizer backing in verse 7, which depicts the silence before the incoming storm. This is followed by the increased presence of drum/bass group that almost drowns the voice describing the water rolling inland. Furthermore, the verses are subdivided by a dramatic narrative instrumental between verse 4 and 5. This is not only a clear reference to English folk rock groups like Fairport Convention and Steeleye Span, but also allows a deeper reflection on the actual story. As is evident here, the poetic delivery and textual understanding remain very much at the core of Reichel’s interpretation.

Storm tides have remained a recurring topic in Reichel’s rich output, as evident in album titles like *Melancholie und Sturmflut* (1991). One of the album’s tracks, “Sturmflut” (“storm tide”) also exemplifies how Reichel has been adapting this topic to the contemporary situation. The track is a criticism of modern media, which he contrasts with the warning devices of 1962, which were so different from the format of the emergency special broadcasts that have been so central for modern TV and radio (“But you are sitting on your sofa/ there is a special report/ you experience it live when the dyke is breaking”).[xxxvii]

Rungholt After Reichel

Other German bands followed to address storm tides with the Rungholt remaining a central topic only after Reichel. A good counterexample to Reichel is the interpretation of von Liliencron’s ballad by Santiano from 2015. Santiano, who recorded their version for the album *Von Liebe, Tod und Freiheit*, can be described as a modern German sea shanty band who became extremely popular beyond genre

division with a mix of traditional songs, shanties, and Schlager (catchy pop). Founded around 2011, the band is also audibly influenced by English-Irish-Scottish folk music, not least because of bandmember Peter David Sage, a violin/ accordion/ bouzouki and tin whistle player, who had accompanied, among others, Mike Oldfield.[xxxviii]

Santiano's "Rungholt" version is audibly oriented towards dancing, which is evident in the high upbeat pulse of the drums (124 BPM) and faster instrumental accompaniment However, the syncopated singing that is set against this beat still allows for a very good textual understanding. The poem itself is reduced to the story's skeleton and mostly the visual and dramatic elements. It is, particularly in the beginning, narrated in a syncopated, solo speech-like singing style, but is then transformed into male shanty-like chorus for the dramatic ending, returning only to the more quiet, solo, sung delivery of verse 8.[xxxix] The mystic references in the song's narrative are introduced by bell sounds and didgeridoo playing, while the song is also framed by a melodic instrumental that likewise functions, together with the as poem's title "Trutz, Blanke Hans," as a refrain. This refrain is later textually expanded into a broader sing-along refrain of "Rungholt calls loudly your name/ Rungholt calls loaudly over the sea/ Rungholt calls since thousand years/ Blanker Hans we defy you."[xl] Due to the more dance-oriented approach, in addition to the framing of male chorus singing, the spookiness of Reichel's version is mainly gone. Rather, the tale has become a narrative of man versus nature that strongly emphasises a male power perspective through the serious, almost pathetic singing style and the resemblance of the raw ensemble-singing style to a (male-connotated) shanty choir.

Several other artists have taken up the theme of Rungholt's bells that likewise appeared in the sound intro of Santiano, yet often abstracted the actual tale into an atmospherical, emotional theme. For instance, in "Die Glocken von Rungholt", Schlager singer Juliane Werding addressed the bells as representing sounds of the past, which can be heard at a quiet day (*Ruhe vor dem Sturm*, DA Records 2008). The melancholic, almost sentimental impression is conveyed through a strong emphasis on melody. While this interpretation is not only an example of the intersection between Schlager and folk revival of North German folk repertoires, it likewise illustrates a continued fascination with the theme of storm beyond the actual historical narration – particularly from a safe, distanced position.

In the case of the band Godewind (Low German: "good wind"), the theme has been abstracted to a more psychological level, through which sound and associations (similarly to Werding, only the bells are mentioned) also reflect an inner state of the narrator. Founded in the late 1970s, Godewind count as one of the major modern North German folk bands, singing in Low German. The song, entitled "De Glocken vun Rungholt" ["The Bells of Rungholt"] appears on the band's 1989 album *Keen beten möód*. Set in a major mode and performed in singer/songwriter style, the song depicts a walk on a dyke after a storm-tide in November. Again, the silence that was evident in Liliencron's ballad, as well as in Theodor Storm's narrations, plays a central role; in an abrupt silence, the narrator suddenly seems to hear something through the noise. Set against an instrumental melody, the narrator recounts, "And then I turned around, and I mean.., one tells."[xli] Remaining extremely vague in terms of content (Rungholt is only hinted at), the song sets a post-storm-tide atmosphere specifically through the choice of words.

Godewind is also an example of the growing interconnection of the Rungholt disaster with global warming. In 2009, the band supported a memorial day for the "Grote Mandränke" on 11th October, 1634, for their band's 30th anniversary. At that time, journalists in particular linked this event, as well as the storm tide, to environmental disasters (Rahn 2009a and 2009b). This emerging topical interrelation of storm tides and global warming became further evident in the special edition, a *Sturmflut-CD*. The CD included further songs on the "oppressing feeling at the beginning of the storm,"[xlii] and was only available on Nordstrand, a remnant of the

destroyed island of Strand, hereby drawing further modern attention to the link between past and present events.

Within art music, Theodor Storm's dykemaster novel in particular became a central reference point, thematised, for instance, in Wilfried Haller's opera *Der Schimmelreiter* from 1998. Yet, again, this musical treatment only occurred during the last three decades. Rungholt likewise remains a central theme in contemporary composition. However, as is apparent here, composers rarely ever address actual events, but fall back on more distanced narrations.

While these themes are emerging more and more in music, maybe also due to the increasing intensity of global warming discourse, a certain degree of caution towards a direct integration of storm tides into musical performance is still evident among younger musicians. For example, North German bands prefer to be named after the dyke (such as the band Deichkind, for festivals like *Musik hinterm Deich*). Band names that are directly related to the act of devastation, such as Sturmflut, are still rare. If modern bands thematise the topic, it is still partly coded, as evident in titles like "Wenn das Wasser kommt" ("When the Water Approaches"), or it has appeared very recently, as is evident with musical depictions of the 1953 flood in the Netherlands. This was not only the case with Douwe Eisenga's oratorio, but likewise with rock and popular music in other regions of the North Sea area. The dark ambient project "1953," a sound collage about the experiences of the victims, by the The [Law Rah] Collective only appeared in 2004, while the UK band British Sea Power released a song "Canvey Island" that related to the 1953 event only in 2008 – at a seemingly safe historical distance. This might be coincidence, yet the parallels are striking and might be further reflected in a brief final counterexample from Northern Germany, this time from the Baltic Sea.

A Counter-Example: The Sunken City Vineta in the Baltic Sea

In contrast to the North Sea events, the tale of the sunken city of Vineta that is strikingly similar to that of Rungholt has received a different reception in music. Having probably been located on the Pomeranian Baltic Sea shore between Barth and Wolin, Vineta was likewise destroyed by a stormflood.[xliii] This example is clearly differentiated from North Sea storm tides, as there are almost no tidal alterations in the Baltic Sea. Consequently, flooding is only caused by storm effects. While the storm force is less strong than in the North Sea (only up to 11 on the Beaufort Scale[xliv]), it can be similarly devastating due to the bath-tub like form of the Baltic Sea.[xlv] One of the major events was the storm flood of November 12th/13th, 1872, that devastated vast areas of the Danish and German coasts.[xlvi] In contrast to the North Sea, recollections are less sound-oriented, which parallels the observation that the Baltic Sea is described as much quieter than the North Sea. Rather, the major sound-related recollection is centred on the previously mentioned snow catastrophe of 1978-79 that was strongly intertwined with storm and was particularly devastating in the areas around the Baltic Sea.

The destruction of Vineta might have been the result of such a storm flood in the 12th century, thus time-wise relatively close to the Rungholt event. The tale of the deluge-like flooding and drowning of Vineta is identical with Rungholt in many passages, yet it is elaborated by further elements, such as a preliminary warning in the sky and a water woman giving out a warning which was ignored due to the arrogance of the citizens. Also in this case, the bells can still be heard.

Referred to as the "Venice of the Baltic Sea," Vineta – which could never be as precisely located as Rungholt – had received more widespread recognition than Rungholt by the 19th century. This is not only evident with a choral composition by Johannes Brahms (1860), a comparably large range of opera compositions (by Heinrich Frankenburger, 1851; Richard Wüest, 1853; Feliks Nowoviesky, 1924) and a Vineta Festival (since 1994). Furthermore, East German bands have been addressing

the theme more frequently than Rungholt. Already in 1979, the band Transit wrote the song “Sturmflut” (1979) that was related to the Baltic Sea, while the Puhdys, another highly popular East German band, released a similar title in 1994. We can only speculate about the reasons, but it seems that Vineta, perhaps due to its abstraction, is much easier to approach than Rungholt, which seems to convey a stronger, and thus more threatening reality, especially at present.

Outlook

While it is still necessary to undertake further research on this topic, it is apparent that the combined analysis of natural disaster, the environmental context, the soundscape, and the adaptation in the arts provides a deep insight into human subconscious responses to extreme environmental events. How far any avoidance of this topic in music is pragmatism in the face of collective trauma, or ignorance of the environmental context, warrants further investigation. This is also apparent in that the danger of environmental changes was, on the one hand, already comprehensively discussed in the 1980s, with the discourses clearly and strikingly resembling current debates, but, as in the case of storm-tides, not implemented in the collective long-term memory (cf. Heßler and Kehrt 2014:12). This becomes clearly evident through a deeper analysis of related musical repertoires.

Given the ongoing environmental challenges and the rising of sea levels, storm-tides remain a serious threat in the 21st century, indeed moreso than ever before, and now increasingly interrelated with discussions on climate change. Just as Achim Reichel clearly challenged an unspoken tradition by bringing the topic into popular music, storm tides are likewise challenging local tradition. As an NDR documentary (Hansen 2014) on the situation on Hallig Hooge indicated in 2014, in order to survive the changing environment caused by the increasingly stronger and higher storm tides, the pragmatic Hallig inhabitants are also considering tearing down their century-old houses in order to raise the hight of the Warften. It is a rebuilding with unclear outcomes. There is just one certainty – the next storm tide will definitely come.

Endnotes

[i] I could already observe a similar phenomen in the Alpine glacial world. The extreme environment had not been addressed in music until the 19th century when glaciers started to get depicted romantically in local repertoires. Previously, the high Alpine world was considered a threatening environment. Many mountains remained unnamed, and glaciers, associated with life-destructing forces, were often addressed by musical and performative silence (cf Sweers 2019).

[ii] One interesting example is Aplin and Williams (2011) who provide a comprehensive overview of classical musical works depicting meteorological phenomena.

[iii] Many interviews were undertaken in informal settings, unstructured formats, partly during phone-calls. Recollections were strongly dependent on the atmosphere, as the topic was partly considered as being something not to be talked about or met with surprise, which also required additional time and talks to allow recollections to surface. Partly, I was also called days after the talks that had apparently stimulated further mostly forgotten recollections.

[iv] For a more detailed background see Deutscher Wetterdienst (2018) and Jensen et al. (2006).

[v] Despite the emphasis on the tidal impact, several historical tides might have also been either further intensified by Atlantic flood waves or might have even been been the result of the breaking Atlantic shelf (as has been speculated with the 1858 storm tide that came without further weather-related pre-warnings).

[vi] See also Freie und Hansestadt Hamburg. *Sturmflutschutz: Hinweise für die Bevölkerung*. http://www.hamburg.de/contentblob/3425452/45daab7ca53950c90e21de9c8bc49400/data/sturmflut-download-sturmflutschutz.pdf. Accessed: 1 October 2018.

[vii] NordNordWest, Wikimedia Commons: https://commons.wikimedia.org/wiki/File:Schleswig-Holstein_relief_location_map.jpg?uselang=de

[viii] A spring tide is an intensified high tide caused by a specific constellation with sun, moon, and earth forming one line. The earth is either between (full moon) or in opposition to (new moon) the sun and the moon. The nipp tide with less distinct high and low water levels is caused by moon, earth, and sun being at a 90-degree position (during half moon). With regard to storm tides, the weaker low water level can have a serious impact.
[ix] The Second January Flood 1976 occurred a few weeks later between January 20–21, 1976. Being only slighly weaker than the first one, it likewise counts as one of the strongest storm tides of the 20th century. This storm was not named.
[x] In contrast to future (alphabetical) naming practices, this storm was named after a ship that sank in Rostock during the storm.
[xi] The name relates to the name day of the saint bishop Burkhard of Würzburg.
[xii] Von Runga - Eigenes Werk, CC0. https://commons.wikimedia.org/w/index.php?curid=25587512
[xiii] Mostly in the areas around Hamburg and Glückstadt between 2016-2018.
[xiv] See, for instance, Christian Deick and Julia Brangs, *ZDF History, Sturmflut in Hamburg – Die wahre Geschichte* (2006).
[xv] Two extreme snowfall and snowstorm events (Dec. 30, 1978–Jan. 3, 1979 and Febr. 13–18, 1979) in Northern Germany. See also NDR/ Studio Hamburg, *Das weiße Chaos: Die Schneekatastrophe in Norddeutschland 1978/79* (2014).
[xvi] Gerhard Z. "Die Nacht als die Deiche brachen." In Bütow (1962: 25–27).
[xvii] A gripping example are the recollections on the warning attempts during the flooding of the river island Hamburg-Waltershof: NDR: *Sturmflut in Waltershof* https://www.ndr.de/kultur/geschichte/chronologie/sturmflutwaltershof133.html (one of several accounts in the NDR series Sturmflut: Zeitzeugen erinnern sich https://www.ndr.de/kultur/geschichte/chronologie/Zeitzeugen-erinnern-sich-an-die-Sturmflut,sturmflutzeitzeugen107.html). (2012). Accessed: 1 October 2018.
[xviii] "Bei der Sturmflut 1962 ist der Pastor in Finkenwerder in die Kirche geeilt, um vor dem Hochwasser zu warnen. Daran erinnern sich Finkenwerder noch heute dankbar." More precisely, Pastor Sannemann started to ring the bells of the St.-Nikolaikirche already at 0:20 for half an hour (Leimbach and Wagner 2012:22).
[xix] Stadtteilschule Stellingen/Ida Ehre Schule (Cläre Bordes, ed.) (2016).
[xx] "Diese Signale werden mehrfach wiederholt! Außerdem sollen anhaltend die Kirchenglocken läuten. Bei Stromausfall werden die Signale über Sirenenanhänger gegeben, die durch die gefährdeten Gebiete fahren!" (Stadt Cuxhaven 2017).
[xxi] "Die fünfte und sechste Glocke klingen auf as und c. Ihre Besonderheit: Sie erinnern an die Sturmflut 1976. Ihre Inschrift auf Deutsch: 'Zur Erinnerung an die Sturmflut am 3. Januar 1976.' (...). Als Bildzier enthalten sie je zwei Friese mit Wasserwellen." Evangelisch-lutherische Kirchengemeinde Haselau (2018).
[xxii] Though a protest song about the racist and wrongful imprisonment of the midweight boxer Rubin 'The Hurricane' Carter, the metaphor of violence is still relevant.
[xxiii] Presumably written by Harry Evans in 1894.
[xxiv] The reason is not the often misquoted Tacitus (56–117) sentence "Frisia non cantat" – ["Frisia does not sing"]. While ascribed to his Germania, the quotation, most likely related to the inhabitants of the Dutch coast, and only later transferred to the northern regions, does not appear there, but it has been frequently used to describe the musicality of the region in an ironic manner, despite the rich local musical variety (see, for example, Keller 2010).
[xxv] This clearly resembles superstitious practices already documented in medieval times. According to this perception negative forces (e.g. the devil, ghosts, demons) would be invited by naming them. This is also reflected in proverbs such as "Den Teufel nicht an die Wand malen" ["Don't draw (i.e. conjure up) the devil on the wall"] that has been attributed to Martin Luther or "Wenn man vom Teufel spricht" ["Speaking of the devil"].
[xxvi] This fact was also emphasised by Theodor Storm, who, together with Detlev von Liliencron, was central for popularizing the tale in the 19th century.
[xxvii] The region had previously been under Danish administration.
[xxviii] "Sein Haupt ruht dicht vor Englands Strand/ die Schwanzflosse spielt bei Brasiliens Sand."
[xxix] "Wo gestern noch Lärm und lustiger Tisch, schwamm andern Tags der stumme Fisch."
[xxx] But not sea or ocean in general; the meaning is restricted to the North Sea.
[xxxi] Nordsee ist Mordsee (dir. Hark Bohm, Germany 1976)
[xxxii] Storm was also highly active on a local musical level. In 1843, at a time, when the male choir movement was at ist peak, he founded and directed the first mixed male/female in Husum. See also Jochen Missfeldt, *Du graue Stadt am Meer: Der Dichter Theodor Storm in seinem Jahrhundert*. Stuttgart: Reclam, 2014. 87.

[xxxiii] Several of Storm's novels and poems are located in Husum, which, until present day, is also called "The Grey City by the Sea", named after his poem "Die Stadt" ["The City"].
[xxxiv] The collection also includes an account of the origin of the storm tides (tale 189, "Woher die großen Fluten kommen") – here as a revenge of an angry English queen after being refused by a Danish king around 600.
[xxxv] The German North Sea areas, as well as the strongly North Sea influenced estuary regions, such as of the river Elbe, share many similarities with other North Sea regions. This applies to linguistic parallels (English shares various similarities with the Frisian and Low German languages), but also to trade networks or cultural relations (the Hamburg patrician's lifestyle is strongly modeled in England, while all regions share some similarities in traditional sea shany repertoires). Reichel indirectly refers to this interrelation in his choise of musical references.
[xxxvi] As Reichel remarked in the liner notes (Reichel 2008), he likewise received strong and positive feedback from school students.
[xxxvii] "*Aber Du sitzt im Sessel / da gibt's ne Sondersendung, da bist Du live dabei, wenn der Deich bricht*."
[xxxviii] The band would also later adapt and rewrite "To France" as "Lieder der Freiheit."
[xxxix] 1st half of verse two, parts of 3, the full verse 5 that describes the market scenes in Rungholt, and the most dramatic parts of verses 7 and 8.
[xl] "Rungholt ruft laut Deinen Namen/ Rungholt ruft laut übers Meer/ Rungholt ruft seit tausend Jahren/ Blanker Hans, wir trutzen Dir."
[xli] "Und dann drei i mik um und ik mean...man vertellt..."
[xlii] "bedrückende Gefühl, wenn der Sturm aufzieht" (Rahn 2009a).
[xliii] For further details see Klaus Goldmann and Günter Wermusch. *Vineta: Die Wiederentdeckung einer versunkenen Stadt*. Bergisch Gladbach: Lübbe, 1999. Also Heimreich (1666:181) points to this parallel between Rungholt and the destruction of a location at the Baltic Sea, here called Julia.
[xliv] The Beaufort Scale or Beaufort Wind Scale measures wind speed by relating wind speed to observable conditions on land or at sea. An empirical value of 11 indicates a violent storm, while 12 indicates a hurricane.
[xlv] Usually also the effect of a specific wind condition with wind from northwest blowing water from the North Sea into the Baltic Sea – and then wind change to northeast that then blows water at the shores; often occurs after North Sea storm tides that are the often interrelated with Northwest storms and related subsequent weather changes.
[xlvi] For more details see Marcus Petersen and Hans Rohde: *Sturmflut. Die großen Fluten an den Küsten Schleswig-Holsteins und in der Elbe*. Neumünster: Wachholtz, 1981 (3rd edition).

Appendix

Detlev von Liliencron, "Truth Blanke Hans"
Published in *Adjudantenritte und andere Gedichte*. Leipzig: Wilhelm Friedrich, 1883.

Heute bin ich über Rungholt gefahren,
die Stadt ging unter vor sechshundert Jahren.
Noch schlagen die Wellen da wild und empört
wie damals, als sie die Marschen zerstört.
Die Maschine des Dampfers schütterte, stöhnte,
aus den Wassern rief es unheimlich und höhnte:
Trutz, Blanke Hans!

Von der Nordsee, der Mordsee, vom Festland geschieden,
liegen die friesischen Inseln im Frieden,
und Zeugen weltenvernichtender Wut,
taucht Hallig auf Hallig aus fliehender Flut.
Die Möwe zankt schon auf wachsenden Watten,
der Seehund sonnt sich auf sandigen Platten.
Trutz, Blanke Hans!

Mitten im Ozean schläft bis zur Stunde

ein Ungeheuer, tief auf dem Grunde.
Sein Haupt ruht dicht vor Englands Strand,
die Schwanzflosse spielt bei Brasiliens Sand.
Es zieht, sechs Stunden, den Atem nach innen
und treibt ihn, sechs Stunden, wieder von hinnen.
Trutz, Blanke Hans!

Doch einmal in jedem Jahrhundert entlassen
die Kiemen gewaltige Wassermassen.
Dann holt das Untier tiefer Atem ein
und peitscht die Wellen und schläft wieder ein.
Viel tausend Menschen im Nordland ertrinken,
viel reiche Länder und Städte versinken.
Trutz, Blanke Hans!

Rungholt ist reich und wird immer reicher,
kein Korn mehr faßt selbst der größeste Speicher.
Wie zur Blütezeit im alten Rom
staut hier alltäglich der Menschenstrom.
Die Sänften tragen Syrer und Mohren,
mit Goldblech und Flitter in Nasen und Ohren.
Trutz, Blanke Hans!

Auf allen Märkten, auf allen Gassen
lärmende Leute, betrunkene Massen.
Sie ziehn am Abend hinaus auf den Deich:
"Wir trutzen dir, Blanker Hans, Nordseeteich!"
Und wie sie drohend die Fäuste ballen,
zieht leis aus dem Schlamm der Krake die Krallen.
Trutz, Blanke Hans!

Die Wasser ebben, die Vögel ruhen,
der liebe Gott geht auf leisesten Schuhen,
der Mond zieht am Himmel gelassen die Bahn,
belächelt den protzigen Rungholter Wahn.
Von Brasilien glänzt bis zu Norwegs Riffen
das schlafende Meer wie Stahl, der geschliffen
das Meer wie schlafender Stahl, der geschliffen".
Trutz, Blanke Hans!

Und überall Friede, im Meer, in den Landen.
Plötzlich, wie Ruf eines Raubtiers in Banden:
das Scheusal wälzte sich, atmete tief
und schloß die Augen wieder und schlief.
Und rauschende, schwarze, langmähnige Wogen
kommen wie rasende Rosse geflogen.
Trutz, Blanke Hans!

Ein einziger Schrei- die Stadt ist versunken,
und Hunderttausende sind ertrunken.
Wo gestern noch Lärm und lustiger Tisch,
schwamm andern Tags der stumme Fisch.--
Heut bin ich über Rungholt gefahren,
die Stadt ging unter vor sechshundert Jahren.
Trutz, Blanke Hans!

References

Primary Sources

Heimreich, Anton (1666) *Nord-Fresische Chronick, darin von denen dem Schleßwigischen Hertzogthum incorporirten Fresischen Landschafften wird berichtet. Mit Fleiß zusammen geschrieben durch M. Antonium Heimreich.* Schleßwich: Johann Holwein.

Larson, Eric (1999) *Isaac's Storm: A Man, A Time, and the Deadliest Hurricane in History*. New York: Random House.

Müllenhoff, Karl Victor (1845) *Sagen, Märchen und Lieder der Herzogthümer Schleswig, Holstein und Lauenburg*. Kiel: Schwersche Buchhandlung.

Reichel, Achim (2008) *CD liner notes, Regenballade*. Indigo Records.

Storm, Theodor (1888) *Der Schimmelreiter*. Berlin: Paetel.

Von Liliencron, Detlev (1883) *Adjudantenritte und andere Gedichte*. Leipzig: Wilhelm Friedrich.

Secondary Sources

Ahmed, Sara (2004) Affective Economies. *Social Text* 22: 117–139.

Aplin, Karin L. and Paul D. Williams (2011) Meteorological Phenomena in Western Classical Orchestral Music. *Journal of the Royal Meteorological Society* 66(11): 300–306. https://rmets.onlinelibrary.wiley.com/doi/full/10.1002/wea.765 Accessed: 1 October, 2018.

Bantelmann, A. et al., Eds. (1995) *Geschichte Nordfrieslands*. Heide: Verlag Boysens & Co.

Behre, Karl-Ernst (2003) *Nacheiszeitliche Küstenentwicklung an der Nordsee. Nationalatlas Bundesrepublik Deutschland*. Heidelberg: Spektrum Akad. Verlag.

Bütow, Hans (1962) *Die große Flut in Hamburg. Eine Chronik der Katastrophe vom Februar 1962*. Hamburg: Freie und Hansestadt Hamburg, Schulbehörde.

Buisman, Jan (1995–2015) *Duizend jaar weer, wind en water in de Lage Landen*. Vol.1–6. Franeker: Uitgeverij van Wijnen.

Cohen, Norm (2008) American Folk Songs: A Regional Encyclopedia 2 vols.; vol 1. Westport (Conn.) and London: Greenwood Press.

Deutscher Wetterdienst (2018) Wetterlexikon: Sturmflut. https://www.dwd.de/DE/service/lexikon/Functions/glossar.html;jsessionid=E4D4B243001F3AF7973F244966B981D8.live11044?nn=103346&lv2=102248&lv3=102640 Accessed: 1 October, 2018.

Duerr, Hans-Peter (2000) *Rungholt. Die Suche nach einer versunkenen Stadt.* Frankfurt: M. Insel.

Endfield, Georgina H. and Lucy Veale Ed. (2018) *Cultural Histories, Memories and Extreme Weather: A Historical Geography*. Milton Park (Oxon) and New York: Routledge.

Essing, Karel (2009). Stormfloed 1509. Publication of Symposium, Stichting Verdronkon Geschiedenis. http://www.verdronkengeschiedenis.nl/nl/stormvloed/stormvloed.html#symposium. Accessed: 1 October, 2018.

Eversberg, Gerd (2005). Die Rungholtsage. *Nordelbingen. Beiträge zur Kunst- und Kulturgeschichte Schleswig-Holsteins* 74: 113–143.

Groh, D. et al., Eds. (2003) *Naturkatastrophen: Beiträge zu ihrer Deutung, Wahrnehmung und Darstellung in Text und Bild von der Antike bis ins 20. Jahrhundert*. Tübingen: Gunter Narr Verlag.

Haskell, Erica (2015) The Role of Applied Ethnomusicology in Post-Conflict and Post-

Catastrophic Communities. In Svanibor Pettan and Jeff Todd Titon, eds., *The Oxford Handbook of Applied Ethnomusicology*. Oxford and New York: Oxford University Press: 453–480.

Heßler, Martina and Christian Kehrt (2014) Einleitung: Die Hamburger Sturmflut. Betrachtungen aus zeit-, technik- und umwelthistorischer Perspektive. In Martina Heßler and Christian Kehrt, Eds., *Die Hamburger Sturmflut: Risikobewusstsein aus zeit-, techink- und umwelthistorischer Perspektive*. Göttingen: Vandenhock & Ruprecht.

Ingold, Tim (2007) Against Soundscape. In Angus Carlyle Ed. *Autumn Leaves: Sound and the Environment in Artistic Practice.* Paris: Double Entendre: 10–13.

Jakubowski-Tiessen, Manfred (1992) *Sturmflut 1717: Die Bewältigung einer Naturkatastrophe in der frühen Neuzeit*. München: Oldenbourg-Verlag.

Jensen, Jürgen (2012). Kleine Dokumentation historischer Sturmfluten. Universität Siegen. Universität Siegen. https://www.bau.unisiegen.de/fwu/wb/publikationen/sturmflutarchiv/?lang=en%2522. Accessed: 1 October, 2018.

Jensen, J. et al. (2006) Modellgestützte Untersuchungen zu Sturmfluten mit sehr geringen Eintrittswahrscheinlichkeiten an der deutschen Nordseeküste. *Die Küste* 71: 123–167.

Keller, Tom (2010) Frisia non cantat: Ein musikalischer Streifzug durch Norddeutschland. *FolkWorld* 41 (March), http://www.folkworld.de/41/d/fries.html. Accessed: 1 October, 2018.

Leimbach Claus and Kurt Wagner (2012) *Als die Deiche brachen: die Finkenwerder Sturmflut von 1962*. Erfurt: Sutton Verlag.

Matsinos, Y. et al. (2006) The Interdisciplinary Development of the Term "Soundscape"; Tracing its Ecological Roots. *AEgean Journal of Environmental Sciences* (AEJES). 2: 11–23. http://www.env.aegean.gr/wp-content/uploads/2017/03/Matsinos-et-al_AEJES_2016.pdf

Nübling, D. et al. (2015 [2012]) *Namen: Eine Einführung in die Onomastik* (2nd edition). Tübingen: Narr Francke Attempo.

Pfister, C. et al. (2010) The meteorological framework and the cultural memory of three severe winter-storms in early eighteenth-century Europe. *Climatic Change; Special Issue: European Climate of the Past 500 Years Based on Documentary and Instrumental Data.* 101: 281–310.

Sakakeeny, Matthew (2013) *Roll With It: Brass Bands in the Streets of New Orleans*. Durham (NC): Duke University Press.

Schafer, Raymond Murray (1977) *The Tuning of the World*. New York: Random House.

Schulte-Fortkamp, Brigitte and Peter Lercher (2003) The Relevance of Soundscape Research for the Assessment of Noise Annoyance at the Level of the Community.*Proceedings of the 8th International Congress on Noise as a Public Health Problem.* N.P.: Academic Press: 225–231. See also http://www.sea-acustica.es/fileadmin/publicaciones/Bilbao03_aam008.pdf. Accessed: 1 October, 2018.

Stadtteilschule Stellingen/Ida Ehre Schule (Cläre Bordes Ed.) (2016) *Wir haben viel Glück gehabt: Lebensgeschichten zur Sturmflut 1962*. Backnang: WIRmachenDruck. https://stadtteilschulestellingen.schulhomepages.hamburg.de/wp-content/uploads/sites/65/2016/07/Wir-haben-viel-Glück-gehabt-Layout-Final-Ansicht.pdf Accessed: 1 October, 2018.

Sündermann, J. et al. (2000) *Die Nordsee: Gefährdungen und Forschungsbedarf*. Hamburg: Zentrum für Klima- und Meeresforschung.

Sweers, Britta (2019) Environmental Perception and Activism through Performance: Alpine Songs and Sound Impressions. In: Britta Sweers, ed., *Music, Climate*

Change, and the North. *European Journal in Musicology* 18(1): 138–159. https://doi.org/10.5450/EJM.18.1.2019.138

Voegelin, Salome (2006) Sonic Memory Material as 'Pathetic Trigger'. *Organised Sound 11*: 13–18.

Newspaper Articles and Information Leaflets

Adolphsen, Helge (2014) Der Klang der Glocken fasziniert seit Jahrhunderten. *Hamburger Abendblatt*, 3 May.https://www.abendblatt.de/hamburg/harburg/article127566674/Der-Klang-der-Glocken-fasziniert-seit-Jahrhunderten.html Accessed: 1 October, 2018.

BSH (n.d.) *Alarmierung bei erhöhten oder erniedrigten Wasserständen an Nord- und Ostsee.* https://www.bsh.de/DE/THEMEN/Wasserstand_und_Gezeiten/Telefonwarnverteiler/telefonwarnverteiler_node.html Accessed: 1 October, 2018.

Evangelisch-lutherische Kirchengemeinde Haselau (2018) *Das Haselauer Glockenwerk*. https://www.kirche-haselau.de/kirche/das-glockenwerk.html. Accessed: 1 October, 2018.

Freie und Hansestadt Hamburg (2012) *Sturmflutschutz: Hinweise für die Bevölkerung*. Hamburg: Behörde für Inneres und Sport. http://www.hamburg.de/contentblob/3425452/45daab7ca53950c90e21de9c8bc49400/data/sturmflut-download-sturmflutschutz.pdf Accessed: 1 October, 2018.

Jacobs, Maurus (2017) Hamburger Sturmflut 1962: ' Ein totes Kind hing in den Ästen des Apfelbaums.'. *Die Welt*, 19 February. https://www.welt.de/regionales/hamburg/article162203803/Ein-totes-Kind-hing-in-den-Aesten-eines-Apfelbaums.html Accessed: 1 October, 2018.

Inixmedia GmbH (2018) *Finkenwerder: Wissenswertes 2018/2019*. https://docplayer.org/76359335-Finkenwerder-wissenswertes-2018-dat-alns-givt-dat-up-finkwarder-8-auflage.html Accessed: 1 October, 2018.

Pawelko, Elke (2012) 1962 – das Jahr, in dem die große Flut kam. *Hamburger Abendblatt,* 21 January. https://www.abendblatt.de/region/pinneberg/article107721280/1962-das-Jahr-in-dem-die-grosse-Flut-kam.html Accessed: 1 October, 2018.

Rahn, Udo

(2009a) Gedenken für 'Mandränke 1634': Godewind-Songs über Sturm und Flut.*SHZ* (28 August). https://www.shz.de/lokales/nordfriesland-tageblatt/godewind-songs-ueber-sturm-und-flut-id660656.html Accessed: 1 October, 2018.

(2009b) 'Manndränke' als Warnung verstehen. *SHZ*, 28 October. https://www.shz.de/regionales/schleswig-holstein/mandraenke-als-mahnung-verstehen-id764386.html Accessed: 1 October, 2018.

Reichardt, Julia (2012) Wattenmeer: Friesisch Gomorrha. *Die Zeit* 41, 4 October. https://www.zeit.de/2012/41/Wattenmeer-Rungholt Accessed: 1 October, 2018.

Stadt Cuxhaven (2017). *Merkblatt des Referates Sicherheit, Ordnung und Katastrophenschutz der Stadt Cuxhaven*. Stadt Cuxhaven, n.p.

Trotier, Kilian (2018) Sturmflut 1962: Chronologie der Katastrophe. *Die Zeit* 30, 19 July. https://www.zeit.de/2018/30/sturmflut-1962-hamburg-katastrophe-chronologie Accessed: 1 October, 2018.

Zacharias, Anna (2012) Sturmflut: Elsfleter flüchtete im Boot vom Hof. *Nordwest Zeitung Online*, 15 Febuary. https://www.nwzonline.de/hintergrund/elsflether-fluechtete-im-boot-vom-hof_a_1,0,530717351.html Accessed: 1 October, 2018.

Discography

Godewind (1989) *Keen beten mööd*. Brook B000025J6E.

Reichel, Achim (2008 [1977]) *Regenballade*. Tangram/Indigo 911632.

Santiano (2015) *Von Liebe, Tod und Freiheit*. We Love Music. Electrola/ Universal 06025 475003.

Werding, Juliane (2008) *Ruhe vor dem Sturm*. DA Records – CD 871969-2.

Videography

Deick, Christian and Julia Brangs (2006) *ZDF History, Sturmflut in Hamburg – Die wahre Geschichte.* ZDF. https://www.youtube.com/watch?v=tymA51g7hoQ. Accessed: 1 October, 2018.

Hansen, Jess (2014) *NDR – Die Nordstory: Land unter auf Hallig Hooge*. NDR. See also https://www.youtube.com/watch?v=L-zKZ3iFf68. Accessed: 1 October, 2018.

NDR/ Studio Hamburg (2014) *Das weiße Chaos: Die Schneekatastrophe in Norddeutschland 1978/79.* NDR.

NDR (2012) *Sturmflut: Zeitzeugen erinnern sich.* NDR. https://www.ndr.de/kultur/geschichte/chronologie/Zeitzeugen-erinnern-sich-an-die-Sturmflut,sturmflutzeitzeugen107.html. Accessed: 1 October, 2018.

Pöhlmann, Barbara (2002) *Die Nacht, als die Deiche brachen: Die Sturmflutkatastrophe 1962 in Hamburg*. Hamburger Studio, Hamburger Fernseh Allianz (FA). NDR.