



Heritage, social values and the threat of ruination

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Abstract – *Valuation of heritage buildings is usually performed by architectural-historical experts, who use a typology of heritage values based on conservation philosophy. Increasingly, social and spiritual values are included in heritage assessment frameworks. In the Netherlands earthquakes caused by gas mining seriously threaten hundreds of heritage buildings, both by necessary repairs and by the proposed strengthening operation. Inhabitants strongly argued for incorporating energy neutrality in repair, strengthening and restoration plans. Recently, a heritage evaluation framework was published for the assessment of strengthening plans. In this paper, we compare experts' and laypersons' values. We find that the public fears for loss of character of historic towns. Moreover, ambitions to pair opportunities of heritage and energy are not realized. We conclude that the evaluation framework is successfully incorporating social values. Furthermore, we recommend combining the framework with energy assessment. This could increase the chances for pairing opportunities of restoration and energy neutrality.*

Keywords – *valuation systems; social values; gas-induced earthquakes; liveability; ruination*

1. INTRODUCTION

“Earthquakes are just a fact of life,” said Dutch Minister Kamp in 2014 after gas induced earthquakes again hit in Groningen, the province in the Netherlands that is situated above the ‘Groningen field’. Although he later regretted the cynical tone of his remark, it is true that earthquakes will probably continue to cause damage and unrest for years, if not decades to come. Groningen is a culturally rich endowed region which boasts medieval churches, castles, historic farms and characteristic townscapes. Sadly, more than 50 percent of the historical buildings in the earthquake-region are damaged due to the gas-quakes, while in some municipalities this is up to 90 percent. The threats of ruination and loss of character due to the gas-induced earthquakes generated a storm of protests by citizens and heritage organizations in Groningen.

“Ruins and moments of breakdown make infrastructure visible to every-one involved; it is momentarily acute”[1]. In Groningen, the gas infrastructure that was built up since the beginning of the 1960s used to be a rather unobtrusive part of the landscape. Indeed, infrastructure often is “by definition invisible, part of the background for other kinds of work” (Star 1999, 380). However, it is after the earthquake in Huizinge in 2012 that the underground gas fields became explicitly visible to both politicians and the public.

Infrastructures represent not only utilitarian arrangements, but they also embody structures of power. The present situation in Groningen draws our attention to the power structure, which lurks behind the unremarkable gas stations dotted in the Groningen countryside. “These sorts of seepages and disruptions draw attention to how permeable infrastructure is: appearing strictly utilitarian but always also embodying larger structures of

power and direction” [1]. The Dutch gas-regime, in Dutch called ‘gasebouw’, was set up in the 1960s. The Dutch state and two oil companies shared the profits of the sale of gas and the companies are jointly responsible for compensation of damages caused by gas mining. Until recently, the gas mining company (NAM) had a very dominant position regarding the damage caused by gas-quakes, presently reaching a total of 87,739 claims¹. Furthermore, NAM takes the economic value of buildings as their only reference point, not accounting for cultural-historical values. This attitude unfortunately extends to listed buildings.

Not surprisingly, people in Groningen increasingly feel like “the local population who live in the “background” of infrastructures that are constructed solely to channel resources to other more distant populations” [1]. The situation leads to psychological effects, such as depressions [2], negative effects on the housing market, and increased migration from the area [3]. Consequences for local heritage are severe. Many characteristic buildings have already vanished, as is recorded by the Monitor ‘Het Verdwenen Groningen’. Heritage buildings are threatened by earthquakes in two important ways. The first is obviously the direct damage to the fabric, artwork and construction of heritage caused by the repeated incidence of (minor) earthquakes. The second major threat is the so-called strengthening operation that is meant to protect the inhabitants of heritage structures in case of a more severe earthquake. Consolidation of the structure is expected to lead to considerable damage to the cultural-historical qualities. Furthermore, this operation can render the building unfit for use. Citizens’ groups have argued that repair, restoration and strengthening should go hand in hand with energy measures, aiming for energy neutral and gas-free buildings.

To provide municipalities with tools to assess the repair and strengthening plans for heritage buildings, a new evaluation framework, called the ‘Heritage and Earthquake Framework’ (HEF) has been prepared under the auspices of the Dutch National Heritage Agency (RCE) [4]. One of the recommendations was to declare unsafe heritage buildings ‘ruins’, which led to public outcry. The RCE quickly issued a statement that it regretted the impression this made on the public and restated their ambition to protect historical buildings.

The purpose of our research is to investigate the strategies that are used to balance conflicting demands and values regarding historical buildings and townscapes. In this paper, we investigate how the HEF helps decision-making on proposals for ‘earthquake-proofing’ historical buildings. Furthermore, we will bring in public discourse on heritage and earthquakes, with the aim to examine how competing discourses are settled. Following the structure of the HEF, we focus on three aspects: cultural historical values, safety, and livability, and in particular, how these aspects are balanced. We also investigate what difficulties hinder the integration of energy measures in strengthening and restoration plans in the studied region. Based on our examination, we reflect on the possible use of the evaluation framework as a boundary object [5]. We contribute to the literature on evaluation frameworks [6], in particular, we include lay values and liveability in our assessment of heritage evaluation [7], [8]. Lastly, we propose to expand the HEF to include assessment of energy measures.

2. LITERATURE REVIEW

2.1 INTRODUCTION

In this section, we outline a practice approach to valuation, based on ethical and Science & Technology (STS) literature. We discuss the Authorized Heritage Discourse compared to lay values. We also reflect on the incommensurability of values, which leads to the need to balance these values and make decisions and trade-offs. In Groningen, trade-offs have to be made between cultural history, safety and livability. Therefore, we briefly reflect on liveability in connection to heritage buildings and review the social scientific literature on the Groningen earthquakes, focusing on communication, risk perception and psychological effects.

2.2 VALUATION OF HERITAGE

Valuation of historical buildings basically involves three steps: identifying the features that are valuable, why they are valuable and how valuable they are [9]. However, valuation as a creative process entails a second important aspect, valorization, which refers to improvement, of making something (more) valuable [10]. Heuts and Mol identify ‘registers’ of valuing: bundles of criteria used by valuers, related to their interests and backgrounds. This concept helps to explain differences in value assessments between actors [11]. Furthermore, registers are related to the position of the actor with regard to the historical building; local historians, residents, and the mining company have very different registers for the valuation of buildings.

Values often conflict, they can also be incommensurable, thus accordance with one value can lead to damage to the other [6], [12]. Strengthening buildings for earthquake safety can seriously damage historical qualities. Even more strikingly, strengthening can inhibit the use of the building, which threatens livability and local identity. Energy measures can also threaten historical values of buildings in various ways [13]. Valuation is thus a balancing act which requires negotiations between involved stakeholders.

The heritage sector has developed a general language and specific criteria for value assessments, which is often referred to as the Authorised Heritage Discourse (AHD) [9], [14]. Valuation of historical buildings is usually performed by cultural-historical experts, who have completed a special training in value assessment. Valuation by lay people and communities is studied by Parkinson et al., Mydland et al. and Van der Schoor et al. [7], [8], [15].

2.3 GAS-INDUCED EARTHQUAKES AND RISK PERCEPTION

Psychological investigations indicate that large groups of Groningen inhabitants experience psychological problems, such as depression, as a consequence of earthquake related problems [2]. In a study on public risk perception, Perlaviciute et al. reported an increase in perceived risks and negative emotions in the years following the first major earthquake in Groningen [16]. In particular, people reported a high risk to property and to the image of the region. Negative emotions increased, in particular feelings of powerlessness. Importantly, people did not find that mitigation measures to address these risks were well implemented [16]. Research findings suggest that the extent to which residents are able to cope with earthquake experiences determines their intention to leave the region [3].

There has been little research so far into gas-induced earthquake communication, however Opperhuizen et al. recently performed a media analysis. Most apparent in their sample

of 2,265 relevant media reports were personalization, dramatization and negativity bias. They also conclude that the media did not perform its ‘watchdog’ function until 2013 [17].

2.4 LIVEABILITY AND SENSE OF PLACE

How does heritage connect to the concept of liveability? In this paper, we restrict ourselves to the contribution of heritage buildings to the perception of liveability. Already in 1981 ‘sense of identity’ was identified as a key motivational force behind the desire for preservation [18]. English Heritage has taken up the concept of ‘sense of place’ in several publications and position papers, seeking to involve the needs and preferences of local communities in their work [19]. The framework for indicators of historic sustainability, as proposed by Stubbs, includes multiple social issues, such as civic pride and sense of place, social inclusion, referring to the ability of the historic environment to engender skills and improve self-esteem and community [20]. Stubbs also mentioned ‘*public understanding and awareness of the heritage sector and links to sustainability*’ and ‘*appraisal of relevance of heritage sector to everyday lives*’ as criteria in his framework [20].

Strange & Whitney indicate that community strategies, drawn up by local strategic partnerships, can be powerful tools for community engagement and regeneration. The principles suggested by Pickard also stress the connection of heritage with local life and community involvement [21].

3. METHODOLOGY

The empirical material on which this paper draws is assembled in the course of a case study of expert and public discourse regarding heritage and earthquakes. The case study is situated in the earthquake region of the province of Groningen. This part of our research in particular investigates the ‘Heritage and Earthquake Framework’. The HEF’s most important task is to help local authorities with the assessment of proposals for the strengthening of heritage buildings for safety reasons. For the analysis of public discourse, we assembled websites from involved NGOs, media reports and activists’ blogs, including material describing the reception of the HEF. Other relevant documents, such as policy papers and reports of stakeholder discussions served as control and backup. Furthermore, we visited meetings with experts and public in the region. Documents were imported in Atlas.ti and analyzed according to guidelines for qualitative research [22], [23].

Juxtaposing the discourses of experts on the one hand, and the lay public on the other, we aim to highlight differences in evaluation discourses. We rely on ‘discourse analysis’, which is concerned with the analysis of ‘world-building’ with texts [24]. We focus our analysis on three themes: cultural values, safety and livability.

4. CASE STUDY: HERITAGE, SAFETY AND LIVABILITY

4.1 GOVERNMENTAL APPROACH: HERITAGE AND EARTHQUAKES FRAMEWORK

Local authorities have an important task in evaluating plans for re-use, repair and strengthening of historical buildings. This is a formidable task, because of the staggering amount of heritage buildings damaged or threatened by earthquakes. In the ten municipalities

there are over 1,800 listed buildings (national importance), more than 800 municipally listed buildings and 28 protected views.

The ‘Heritage and Earthquakes Framework’ (HEF) has been developed to assist local authorities with the assessment of repair and strengthening plans. It was commissioned by the RCE and is drawn up by a group of advisors on historical buildings and spatial planning. The HEF is focused on practical solutions for repairing earthquake damage and safety proofing and gives recommendations for a due process. This is especially important given the low level of trust in the institutions that were responsible for damage assessment and repair [16]. For example, until recently the mining company was heavily involved in both the assessment and repair plans of damaged buildings.

The HEF takes three lines of approach: cultural history, safety, and livability. The framework is summarized in a traffic-light table, which can assist with finding solutions that do justice to the three themes. A range of possible solutions is depicted in the first row, so the impact on the three dimensions can be quickly scanned.

TABEL - WAARDEN VS. VERSTERKEN & MAATREGELEN													
Invloed van versterken op de Waarden: heeft invloed op: Waarden:		VERSTERKEN					GEWIK			SLOOP LOPENLIJN		SLOOP BELEVENIS	
		01. Lagen knuffel herstellen: versterk muren, venster, portaal, etc. (niet)	02. Betonnen binnenzijde met concrete muren, portaal, etc.	03. Betonnen buitenzijde met opgelegde gevels, venster, portaal, etc.	04. Dak isolatie	05. Nieuwe binnenwanden	06. Nieuwe buitenwanden	07. Gevel veranderen	08. Nieuw gebruik of gebruik door 4-5 jaar (20 jaar)	09. Nieuw gebruik door 4-5 jaar (20 jaar)	10. Slopen en opnieuw bouwen	11. Slopen en opnieuw bouwen	
CULTUUR HERTOEGE	Landschap												
	Stedenbouw												
	Archaeologie												
	Gebouw												
	Interieur												
LEEFBAAR- HEID	Gedruik												
	Relevantie Plaanmatige structuur												
	Symbolische waarde												
VEILIGHEID	Veiligheid												
	Bouwsubstantie schadevrij												

Figure 1. Traffic-light table of Heritage and Earthquakes Framework.

4.2 CITIZEN’S RESPONSES

There is a range of citizens’ organizations in the region, such as Groninger Gasberaad, Schokkend Groningen, Groninger Bodembeweging, and the VGME (Society of Owners of Listed buildings), which all work on policies, citizen support, information and events concerning earthquakes in the region. We examined a selection of blogs, op-ed articles and media-interviews, featuring representatives of the NGOs or concerned citizens. Furthermore, a special website to monitor disappeared buildings invites the public to contribute information and photographs and storiesⁱⁱ. The aim is to provide a rich overview of how natural gas mining changes the landscape of Groningen. This database combines the findings of journalists with (verified) public contributions. To date, 92 buildings were reported demolished and 373 are threatened.

After the publication of the framework – which had been leaked to the press – many public voices concluded that heritage in Groningen was up for ruination. Discussions in social media about meetings on the strengthening operation also show the worries of citizens in the

region regarding the character of the towns and villages, for example fearing that ‘Towns in Groningen will turn into characterless suburbs’.

5. BALANCING CULTURAL VALUES, SAFETY AND LIVABILITY

5.1 THEME CULTURAL VALUES

The Heritage and Earthquake Framework has supplied examples, which show how values could be balanced in actual situations. Furthermore, the advisory report ‘Levende monumenten in een leefbare regio’ [25] (Living monuments in a livable region) includes four case studies of severely damaged historic buildings.

Citizens’ organizations primarily refer to the ‘character’ of buildings in Groningen, which should in their view be protected. Furthermore, citizens use cynicism in discussing ‘new Groninger’ types. Citizens and their organizations not only argue, but increasingly act to force institutions to take identity and architectural character into account. Multiple strategies are used to reach this goal. Individuals act by drawing attention to demolition or other threats on social media. Citizens’ organisations use various methods to inform and support members and communities. For example, in Overschild a local ‘whitebook’ was prepared to support residents with the strengthening procedure, and in Krewerd every home-owner in the village will be assisted by a specialized architect to ensure the outcome of the strengthening operation will carry support of the residents. It turns out to be very difficult to keep energy measures on the agenda in the often long and maze-like processes of assessment, strengthening and restoration planning. Furthermore, the financial structure apparently inhibits energy measures, because the mining company refuses to pay for such ‘unnecessary’ interventions.

5.2 THEME SAFETY

In general, the societal discourse on safety has a very high profile, anything can be forbidden ‘in the interest of health and safety’. However, the scientific base of safety measures is contested in the HEF itself, for example when the authors mention that many variables are not yet sufficiently examined. This leads to the risk of ‘overprotection’, potentially causing severe damage to cultural-historical values. The report *Levende Monumenten* [25] prepared the way in this respect and advises that historic buildings should keep the exemptions they presently have with regard to building regulations. Especially since the knowledge base of historic buildings and earthquakes is incomplete.

The public is of course very much concerned with safety issues. This expresses itself often in pleas for the reduction of gas mining, to prevent earthquakes as far as possible. The Groninger Gasberaad strongly advises to stick to one version of the national safety protocol, which is regularly updated. Otherwise, decisions for comparable buildings in the same village, or even the same street, can turn out very differently. They also warn for an over-cautious safety policy and argue that care for history and character should be balanced with safety concerns.

5.3 THEME LIVABILITY

Livability is in this paper only regarded where it relates to heritage in the built environment, following the Heritage and Earthquake Framework (HEF). The authors of the HEF have to be commended for the sincere and extensive way they have included livability and

use issues in the framework. They identify three issues: symbolic values, use and spatial ‘readability’. The report *Levende Monumenten* [25] provides concrete suggestions for the inclusion of livability in the management of villages with threatened heritage buildings, such as the appointment of a town-manager to support local processes.

The public has sometimes very outspoken views on liveability. Protection of characteristic buildings sometimes leads to bodily protest methods, for example a couple decided to squat the farm they wanted to buy in Middelstum, after the mining company repeatedly refused to take on their offer to buy it. A massive rush of solidarity with the couple emerged in regional news and social media, and ultimately the mining company relented.

6. DISCUSSION

The gas induced earthquakes in Groningen have a severe impact on heritage values in the earthquake region. Damage caused by these earthquakes is not incidental, it is expected to continue to occur in the coming decades. Furthermore, the proposed strengthening operation threatens even more historical buildings.

In this paper, we investigated how the Heritage and Earthquake Framework can assist with the assessment of proposals for ‘earthquake-proofing’ historical buildings. We focused on three aspects: cultural historical values, safety and livability, and in particular, how these aspects are balanced. Furthermore, we examined lay (public) responses on these three themes. We conclude that the HEF aims to balance cultural values with demands of safety and priorities regarding liveability. An extensive process is suggested to guide both owner and local authorities through the different steps of the assessment process. The question remains, however, if the HEF is successful as a ‘boundary object’ [5]. For example, it is unclear if the officials in charge of safety actually use this balanced approach in their decisions for the strengthening operation. At least, citizens’ organisations repeatedly express doubts concerning aspects such as liveability and local character in strengthening plans. Furthermore, the regular update of the safety regulations creates fear for unequal handling of similar buildings. More in-depth research is needed to bring to light how cultural values, safety and liveability are balanced in the preparation of the strengthening plans.

Citizens’ organisations strongly support the protection of local character of towns. They strongly argue that towns in Groningen should retain their historic identity and increasingly act to force institutions to take identity and architectural quality into account. Multiple strategies are used to reach this goal, on several levels. Individuals act by drawing attention to demolition or other threats on social media, or by taking personal action such as squatting.

Values concerning energy efficiency are especially important in this region, because many people see the damaging effects of mining fossil fuels in their direct environment. Hence the pleas to ‘pair opportunities’ of strengthening, restoration and energy neutrality. However, these opportunities are lost due to financial and procedural difficulties. Unfortunately, the framework fails to address energy interventions. Nonetheless, the HEF may form a strong methodological basis for integrating energy with cultural-historical and social values.

This paper gives only a preliminary account of the dynamic phenomenon of heritage protection in the earthquake region. Local authorities have so far been rather silent on the

procedures regarding heritage under their governance. Gathering information about their views and experiences in this major operation is one of the tasks for the next phase of our research project. More in-depth investigations are necessary to follow the struggles and strategies to conserve historical identity and heritage buildings in the towns and villages of Groningen.

Lastly, the methodology of the Heritage and Earthquakes Framework could be applied to assess measures for gas-free and energy neutral restoration, which would also improve chances of integrating energy measures in repair, strengthening and restoration plans.

7. REFERENCES

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