

Digital media innovations through participatory action research

Interventions for digital place-based experiences

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Abstract

This article presents an action-research study investigating a spatially sensitive innovation process of place-based experiences in a rural area of Sweden. Lately, there have been a growing number of initiatives focused on developing location-aware mobile media – geomeedia technologies – to offer place-based digital experiences within tourism. Drawing on contemporary critical studies on geomeedia technologies, we stress the importance of reflecting upon the implications of place-based technologies to minimise both the negative impacts on a place and the neglect of local perspectives. We conducted action-research interventions to unpack the complexity of developing place-based mediated experiences. The study makes an illustrative case of how interventions lead to more nuanced development processes of geomeedia technologies while simultaneously fostering creativity. We argue that as action research allows researchers to intervene in media innovations, it identifies models for more nuanced place-based development processes, including local spatial and sociocultural perspectives.

Keywords: action research, media innovation, geomeedia technologies, destination development, digital experiences

Introduction

This article reports the process and findings from an action-research study in rural Sweden, which conducted a media innovation process utilising local engagement in developing digital place-based experiences. The study was part of a destination development initiative for the nature reserve Glaskogen (Arvika), the waterfront area of Kristinehamn (Lake Vänern), and the cultural scene situated around Sunne.

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Lately, the tourism sector has seen a growing number of initiatives in the shape of digitally enhanced experiences, where visitors on-site use location-aware mobile media, or so-called geomeia technologies. Examples include audiovisual routes, historical representations, or position games, and they constitute a digital layer of experiences overlapping the physical topology through digital devices (mobile phones, tablets, watches, or similar). Turning to contemporary critical studies on the impact of geomeia technologies, we argue that the implications of place-based technologies are not reflected upon enough within the development process. Geomeia technologies risk having a negative impact on a place (see, e.g., Adams & Jansson, 2012; Fast et al., 2018; McQuire, 2016), neglecting local perspectives as well as social and cultural impact, and do so, as it is often argued, in favour of visitors and economic growth (Dwyer, 2017; Jansson, 2020; Mosedale, 2016). Also, destination actors and stakeholders lack the knowledge and understanding of the implications that media may have on a place (see also Ek Styvén & Wallström, 2017). We therefore take our standpoint from Lefebvre's (1991) theory on the production of space, acknowledging that a place is not a fixed entity but is produced in negotiation between politics, everyday practices, and its representations in minds and media, as well as being highly entangled with its past, present, and future. Taking these aspects into consideration through action research elevates critical perspectives and promotes a more nuanced development process for geomeia technologies while simultaneously fostering creativity. We therefore propose the following research question: How do we conduct a nuanced and spatially sensitive development of digitally based experiences (geomeia technologies)?

Through participatory action research, we investigated how to facilitate and utilise local prerequisites and critical geomeia theory into the development of geomeia technologies on-site. Our entry point was interventionist (Reimer, 2018), informed by the action-research based methods design for social change (Ehn et al., 2014) and collaborative media (Löwgren & Reimer, 2013). These methods allowed us to unpack the complexity and reshape the development of place-specific mediated experiences (see also Eikeland, 2012; Nyre, 2014; Tufte, 2017).

The study illustrates how to conduct interdisciplinary action research in a way that turns media innovation development into a means for reflective development, dissemination of knowledge, and knowledge production. We also answer the call for a more nuanced development process, including environmental, social, cultural, and political consequences of media innovations (see also Bhroin & Milan, 2020; Gössling & Hall, 2019; Gretzel et al., 2020).

In the first section of the article, we present the theoretical underpinnings, addressing geomeia technologies specifically. Thereafter, we introduce participatory action research and its application within media and communication research. We then account for the destination development initiative that constitutes the core of this study and address how interventions were performed at the intersection of theoretical perspectives, research results, and participants' knowledge. In the final section, we discuss the study's results and how action research contribution to the field of geomeia studies and to media communication and media innovation in general.

Geomedia theory and geomedia technologies

Media technologies have and continue to move into our everyday lives and routines. We use technologies to handle simple tasks, such as paying for public transit, viewing a film or television series, or keeping up with our social relations. As more and more digital functions depend on our physical position, tracking and integrating our whereabouts, technologies are gradually becoming interwoven with places and actions as well as how we understand and interact with a place (Ash et al., 2018; Couldry & McCarthy, 2004; de Souza e Silva et al., 2017; Kitchin & Dodge, 2011; Sutko & de Souza e Silva, 2011), especially due to the locative media services and tracking provided by smartphones (Fast et al., 2019; Goggin, 2011; Nyre, 2014). This kind of location-sensitive media have come to be addressed as geomedia technologies. These media bring new perspectives on the materialisation of media in space and shift how we engage with and perceive media and a place (Fast et al., 2019). Geomedia is understood here as being one part of a technological regime in media studies that is replacing the previous regime of mass media (Adams & Jansson, 2012; Jansson, 2019). McQuire (2016) argues that geomedia rises at the intersection of convergence (the fusion of different media technologies and its impact on institutions and regulations), ubiquity (the omnipresence of media in everyday life), location-awareness (media tracking and adapting to users' whereabouts), and real-time feedback (immediate responses between users or technology and users). Thereby, a specific location may frame both content and functionality (McQuire, 2016, 2018). Fast and colleagues (2018) conclude that the emerging use of geomedia technologies calls for research that engages with the role that place holds in organising and giving meaning to mediated processes and activities, as well as the other way around – media's role in organising and giving meaning to processes and activities *in space*, which has been termed the field of geomedia (see also Adams & Jansson, 2012). Kitchin and Dodge (2011) argue that software creates new spatialities in our everyday lives through, for example, functions such as supermarket checkouts or public transport planning. Nyre and colleagues (2012) make use of geomedia technologies, or what they refer to as locative media, to reconnect journalistic work with a specific geographical place. As such, the field of geomedia emerges at the intersection between media and geography (Adams, 2009; Falkheimer & Jansson, 2006). The task at hand is, therefore, to understand the impact of geomedia technologies in a wider social and spatial context, both in the study of such technologies as well as the development of the same.

A growing body of work investigates how media technologies impact different places. A prominent example is studies of the house-rental platform Airbnb and how the use of the platform has led to gentrification, over-tourism, and conflicts between visitors and locals (Gurran et al., 2018; Ioannides et al., 2019; Krotz, 2017; Mermert, 2017). This example goes hand in hand with the critique of how media developments within tourism focus on the visitor rather than the place, and thereby risk disconnecting the visitor from a place's history, values, and practices (Briassoulis & van der Straaten, 2013). However, whereas geomedia technologies may have a negative impact on a place, they simultaneously offer opportunities. Drawing on Lefebvre's (1991) production of social space, we understand a place as being under constant construction, with media as a part of it. A place is comprised of the relationship between politics, everyday practices, and its representation in minds and media (Lefebvre, 1991). Inevitably, these relationships are also entangled with a place's past, present, and future visions.

A place is thereby interwoven in complex power structures with spatial and sociocultural impact (Lefebvre, 1991; see also Massey, 2005) where media plays a part and has an impact. However, when media are place-sensitive, they offer an opportunity to create “a new sense of place” (Lemos, 2010: 1) – a way to enhance social awareness and form political mobilisation. A sense of place, as Massey (2013) would put it, incorporates all established and unestablished interactions, simultaneously aimed inwards towards the local and outwards towards the global. Tarkka (2010) also addresses this potential and emphasises that location-aware media provide possibilities for new regimes of power when cultural producers intervene in the technological landscape, asking, “what kind of potentialities, of thinking and acting, are performed into being?” (2010: 132). McQuire (2016) draws on the work of the artist Rafael Lozano-Hemmer to illustrate how interactive art in public spaces allows users and viewers to explore and understand spaces in new ways, and he discusses how geomeedia technologies may rearticulate the local and relations to a place through creative interactions (see also de Souza e Silva & Frith, 2014). There are also studies of how place-based digital services and games change individuals’ perceptions and use of, as well as activities in, a specific place (see, e.g., de Souza e Silva et al., 2017; Licoppe & Inada, 2006; Wilken, 2014).

Approaching geomeedia technologies as possibilities for changing perceptions brings attention to the potential of shifting perspectives through careful design. Recently, several scholars have expressed a need for more nuanced and critically initiated media innovation processes (Ek Styvén & Walltröm, 2017; Frith, 2014; Hjalager, 2010; Sigala, 2018). Murray (2012: 2) argues:

[Digital innovations] pervade our lives, and *the design decisions that shape them affect the way we think, act, understand the world, and communicate with one another*. But the pace of change has been so rapid that technical innovation is outstripping design [emphasis original].

This is rearticulated in Bhroin and Milan’s (2020) call for a new research agenda at the intersection of media innovation and social implications. In their overview of contemporary media innovation literature, they identify that media innovation tends to focus on business and economic growth, and they therefore call for critical perspectives and analyses within media innovation research, both concerning the development process and the social, cultural, environmental, and political consequences of media innovations (Bhroin & Milan, 2020; see also Gössling & Hall, 2019; Mura & Wijesinghe, 2021). Gössling (2021) brings attention to the potential of media innovations to make a substantial contribution towards more sustainable tourism and a sustainable future, but there are significant barriers to overcome regarding critical conceptualisations and awareness of complexities in relation to digital implementations. Jovicic (2019) argues the need to critically conceptualise digital tourism by reimagining tourism destinations themselves. These notions have long been requested by tourism scholars advocating community-based approaches to tourism development as a means for increasing environmental and social sustainability (e.g., Lenao, 2017; Nunkoo & Gursoy, 2017). Researchers’ call for new approaches to tourism development highlights the substantive needs and well-being of people as well as the procedural aspects of, for example, empowerment, resilience, and governance required to facilitate it (Helgadóttir et al., 2019).

We therefore suggest that perceiving media innovation processes through a critical lens of geomeia – investigating media’s role in organising and giving meaning to processes and activities in space and vice versa (Fast et al., 2018) – will bring critical conceptualisations and awareness of complexities to media development and contribute to more nuanced development practices.

Participatory action research

Participatory action research is defined as research that is conducted “together with” and not “on”, where the intention is to promote change (Brydon-Miller et al., 2003; Ingold, 2018). This approach emphasises that research should be participatory and in democratic processes, integrating theory and practice, and traces back to work by Dewey, Lewin, and Schön (Brydon-Miller et al., 2003). As such, participatory action research is not only a method, but a perspective on the role of research in society that we will understand the world by interacting with it (Lakoff & Johnson, 1980). Action research hence stems from the idea that research is not neutral, that knowledge is socially constructed, and that research is conducted to challenge and ultimately transform undemocratic systems and practices (Anderson & McLachlan, 2016). The intention is to form joint knowledge production at the intersection of action, reflection, theory, practice, and, centrally, to do so in collaboration with actors outside academia (Reason & Bradbury, 2008). The researcher has an active part within the setting, case, situation, or phenomenon, in opposition to keeping distance from the object of study. Participatory-oriented action calls for engagement across different sectors or knowledge areas and may include practitioners, citizens, organisations, and communities. Thus, while the research is forming new theory, it is also generating knowledge that is useful and valid for those partaking in the study – both on an individual level and within communities or organisations – and making change that is motivated by participation and empowerment (Brydon-Miller et al., 2003; Styhre & Sundgren, 2005).

Action researchers can apply a variety of methods for data collection, both qualitative and quantitative (Bradbury-Huang, 2010); however, the emphasis is on authenticity rather than statistically significant or generalisable conclusions (Coghlan & Brydon-Miller, 2014). Significant for participatory action research is a research design of performing multiple cycles of three recurring stages: inquiry, action, and reflection (Coghlan & Brydon-Miller, 2014). Each cycle informs the next and enables new questions to emerge; the cyclic process ensures that theory and practice intersect and inform each other. However, participatory-oriented work is also challenging and open to critique. There is a risk of manipulating data and selecting participants to fulfil the research agenda, funders’ agenda, or stakeholders’ agenda rather than a community’s needs (Coghlan & Brydon-Miller, 2014; David, 2002). There may also be limitations in how researchers clarify their interpretations or risk projecting their own assumptions in the analysis rather than allowing different perspectives to emerge through the data (Forsythe, 1999). Therefore, researchers are asked to continuously reflect individually throughout the process (Coghlan & Brydon-Miller, 2014; Forsythe, 1999). In our study, the research group continuously discussed and reflected on our own and the group’s preconceptions, interpretations, and goals (following Forsythe, 1999). Working in collaboration with different stakeholders (such as companies, municipalities, regions, and

civic organisations), the actors involved may not share the same interest, potentially causing frictions (David, 2002). Also, as Anderson and McLachlan (2016) address, participants have individual expectations that may or may not be fulfilled, which can complicate further collaboration or result in mistrust. A major concern in the presented study has been to gain the engagement of diverse actors and allow for friction without discouraging participation, which resulted in carefully outlined workshops, which we describe below.

Participatory action research in media and communication studies

The above description outlines participatory action research and constitutes the common ground of all participatory action research initiatives. However, participatory action research can be developed and adjusted to meet the conditions of a specific research subject and aim. Within media and communication studies, for example, participatory action research is considered to contribute a useful approach to the study of media, allowing researchers to capture nonlinear processes, work in an interdisciplinary manner, as well as research ongoing phenomena (Wagemans & Witschge, 2019). Action research has been used to conduct research within the development of media, media practices, and design and communication processes: in and with media organisations (e.g., Buschow, 2020; Deuze & Witschge, 2020; Morlandstø, 2019; Nyre et al., 2018) and in community and social development for empowerment to provoke social change (see, e.g., Löwgren & Reimer, 2013; Shea, 2012). Action research therefore coincides with an underlying aspect of media and communication studies: media is central to a democratic society and a key tool for civic action and debate (Tufte, 2017).

Some form of media development or media innovation are recurring phenomena in these action-research studies (see, e.g., Condell et al., 2021; Engberg & Bolter, 2014; Nyre et al., 2017). Although the aim of a study may not be to develop a media innovation as such, conducting action research through media innovations in collaboration with users or media organisations enables researchers to have “direct experimental contact with reality” (Nyre et al., 2012: 304). Often, collaboration is referred to as intervention, in the sense of delivering change and intrusion as part of the action (Eikeland, 2012). Reimer (2018) argues that, in the context of media and communication studies, researchers have a role in working with interventions as part of changing the media landscape. This allows researchers to explore the qualities of different media and identify constraints and possibilities within the complex media-saturated everyday life (Reimer, 2018), while simultaneously helping people identify, and possibly solve, their problems (Bradbury et al., 2019). Reimer (2018) reformulates, or rather extends, the media researcher’s role as taking active part in media development and innovation (see also Tufte, 2017).

Participatory design for social change and collaborative media

For guidance on how to conduct participatory action research with media innovations, we turn to participatory design for social change (Ehn et al., 2014; Smith & Iversen, 2018) and collaborative media (Löwgren & Reimer, 2013). They are workshop-based

collaborative methods rooted in the action-research tradition and developed and used specifically to engage with different forms of media and technology developments. Participatory design for social change (Björgvinsson et al., 2012; Ehn et al., 2014) is a reformulation of the action-research-based method of participatory design, originally conceived for the democratisation of technological or system development at workplaces (Sandberg, 1976), but adjusted and applied to media innovations for social change (Björgvinsson et al., 2010; DiSalvo et al., 2012). Rooted in action research, the social aspects in media innovations are addressed by acknowledging that democracy is a power struggle where peripheral groups may be unheard. Therefore, the media innovation process needs to be conducted at the local level, among heterogenous communities and with marginalised publics (Ehn et al., 2014). Central aspects include creating collaborative design processes with diverse stakeholders who have complementary knowledge and input, building long-term relationships and trust, and exploring their own context and drawing attention to potential dilemmas (Björgvinsson et al., 2012; Emilson, 2014). The intention is to use the innovation process not only to develop new tools but to empower and build collective knowledge during the process. In this setting, the development of media innovations provides the setting for engaging in experimentation and the creation of new imaginaries that aid in conceptualising a sustainable future (Ehn et al., 2014; see also Gössling, 2021; Smith & Iversen, 2018).

Collaborative media theoretically departs from critical theories of media convergence and participatory culture (e.g., Jenkins, 2006) to initiate creative development processes for media innovations. This method specifically addresses making media by combining analysis and criticism with design-oriented interventions (Löwgren & Reimer, 2013). Collaborative media brings attention to five perspectives or interventions within a study: being collective to sustain co-production for collaborative knowledge; being interventionist by allowing theory and concepts to develop in parallel with development and thereby inform each other; being public by working in public spaces (physical, as well as mediated); being agnostic by bringing issues of power and different agendas among participants to the table; and being accountable by taking responsibility for one's own standpoints and actions (Löwgren & Reimer, 2013:42). By drawing on these participatory action-research-oriented methods for media innovations, we seek "to conduct real-life experiments 'in the wild'", as Reimer (2018: 204) suggested. Participatory design for social change draws attention to the local and place-specific aspects, which was central to the study. Collaborative media, on the other hand, allows us to address the critical geomedial theory along with development. The motivation to conduct action research was, therefore, to promote an inclusive and locally anchored development process of gathering and making use of local (and unique) assets, and in parallel, to build awareness of and explore the limitations and possibilities of media technologies. Below, we describe how we worked collaboratively through interventions, mobilising knowledge in a destination development project to include a place's history, values, and practices.

Data collection

The data collection was conducted over two years at three places in the county of Värmland, Sweden: Glaskogen nature reserve (Arvika), the waterfront of Kristinehamn (Lake Vänern), and the cultural scene around Sunne. These places are all well-known

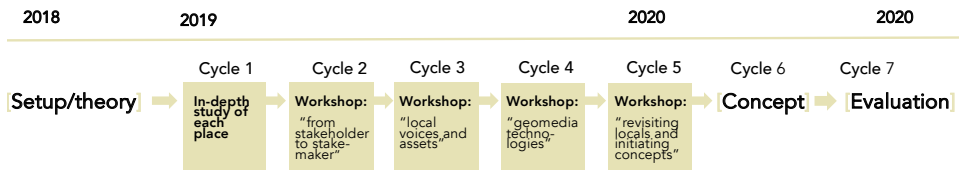
destinations and attract national as well as international (mainly central European) visitors. Throughout the project, we collaborated with different local actors (entrepreneurs, local organisations within culture and heritage, volunteers, and individuals involved in local engagement) and stakeholders (the municipality, the region of Värmland, and the Värmland County Administrative Board) from each place. The research team consisted of researchers from media and communication studies, human geography, tourism studies, and sociology. Part of the team was also a locally based digital innovation bureau which contributed knowledge of media technologies, technological development, digital storytelling, and prototyping throughout the process.

Research design: Inquiry, action, and reflection

While setting up our research plan, we defined a set of key aspects: First, the place should be at the core of each step in the process to ensure local anchoring (Ehn et al., 2014), and the participants of the action-research process should be based at the selected place. Second, the development process should include multiple perspectives (see, e.g., Murray et al., 2010), which was ensured by in-depth studies of each place, interviews with visitors, and inviting a variety of participants with diverse perspectives into the process (then also including researchers and our theoretical underpinnings as well as the innovation bureau). Third, we mobilised knowledge by allowing theoretical perspectives, research results, and participants' knowledge to build on each other throughout the process (see, e.g., Anderson & McLachlan, 2016). One of the most challenging aspects of action research, especially when the processes are to initiate or provoke development, is to trigger collaboration. On the one hand, the process needs to be open, and on the other, there is a need for direction and progress. These needs must be set up to facilitate collaborations among a variety of participants bringing their different competencies, agendas, and mandates into the transformation process and mobilising knowledge (Anderson & McLachlan, 2016; Löwgren & Reimer, 2013; Ren et al., 2017). It was also crucial to build an inclusive development process promoting long-term relationships between different actors in order to collaboratively explore possibilities as well as dilemmas (e.g., Emilson, 2014).

We developed a series of workshops with the intention of capturing and involving diverse knowledge from different actors in creative, collaborative making. The first set of workshops was to build knowledge and identify possibilities and limitations through simple prototyping, whereas the intention of the last part of the workshop series was to specify an open-ended concept for each destination.¹ We also evaluated the process throughout, via questionnaires given to the participants after each workshop and focus-group discussions with partakers from each place (entrepreneurs and stakeholders) towards the end of the project. Before starting the process, participants also filled out a form expressing their expectations of the process, allowing us to trace a before-and-after. Figure 1 illustrates the process, from in-depth studies, via workshops, to the specification of concepts.

Figure 1 Timeline and research process



Comments: The theoretical foundation was setup beginning in September 2018. Cycles 1–5 ran from January 2019–January 2020. Cycle 7, the evaluation stage, ended in December 2020.

The research design allowed us to conduct multiple cycles of inquiry, action, and reflection (Coghlan & Brydon-Miller, 2014). The in-depth study of the place and interviews with visitors formed the first cycle, then we conducted one cycle for each individual workshop, and the evaluation formed the final cycle. Table 1 presents the rich and diverse data collection and use of data sources throughout the process.

Table 1 Data sources and collected data

Method	Data collected	Sampling and material
Document study	Local history, culture, the conditioning landscape, and natural resources.	Written local material, such as books and reports. Archives at local heritage organisations. Visual material, such as old photographs. Websites describing the local history.
Qualitative study of media presence	Digital representation of the place.	Social media, such as Facebook, Instagram, YouTube, Google Maps, and Twitter. Hashtag search related to each place.
Qualitative interviews	On-site, face-to-face interviews with visitors at each place.	38 interviews, 17 of which were with Swedish citizens and 21 with visitors from other European countries. The interviews were 20–50 minutes.
Workshops	Creative collaborative work with different groups.	Observations, written notes, photographs, and video documentation. Each workshop lasted around 4 hours and was conducted locally on site. 8 workshops were conducted and 96 people participated. Participants were recruited using a snowball method among entrepreneurs and the research team.
Evaluation questionnaires	Qualitative evaluation questionnaires for participants in workshops.	Evaluation questionnaires distributed after each workshop; 42 answers.
Focus-group discussion	Qualitative evaluation with entrepreneurs and stakeholders.	Three focus-group discussions (4, 3, 4 participants) after the process.

Results: Interventions, collaborations, and geomeia technologies

The following section describes the study and accounts for each part of the participatory action-research process. Each section focuses on an analysis cycle and how each cycle brings knowledge into the next.

Cycle 1: Grounding interventions in the local through in-depth studies

The initial stage was to conduct in-depth studies at each place. These studies aimed to bring diversified perspectives of the place, awareness to the role of media in the construction of a place, and attention to inequalities in the development process. Data were collected using in-depth interviews with visitors, visual studies of social media (Facebook and Instagram) and digital maps (Google and local map apps), as well as document studies (see Table 1). The data were analysed to address digital representation, marginalised perspectives, invisible boundaries, and political issues. On the one hand, these studies individually contributed with valuable research results. In our action research perspective, the results constituted the basis for new perspectives and interventions. In some instances, the results brought difficult or uncomfortable issues to the table. As such, the results from these studies constitute an example of how to understand a place through a critical geomeia lens that was revisited throughout the study. The study provided a rich material of the representation of each place; however, some key findings later provoked discussions in the workshop and came to be important in further development:

- Visitors to the Kristinehamn waterfront felt disconnected and excluded from local information and marginalised by the locals. Historical representations focus on the boat industry and men within the industry but lack representation of women and children. Little attention is given to the marine environment.
- Contemporary representations (social media and marketing) of Glaskogen focus on nature and lack historical connections to Finn culture or the previous iron industry. There are invisible boundaries between areas for visitors and areas for locals. Visitors want to disconnect and experience authenticity and immersion in nature.
- Sunne officially describes itself as “part of the saga” (referring to their long tradition of famous authors living in the area) and creative, but visitors perceive Sunne as a museum where places are to be visited, not experienced, and thus excluded from “the saga”. There is an extensive focus on history in favour of the present, especially with regard to local author Selma Lagerlöf (1858–1940).

Cycle 2–5: Workshop series

The findings from the first cycle described above provided the point of departure for cycle 2–5: a variety of workshops with different participants exploring ways of bringing diverse knowledge into the process.

Workshop series 1, “from stakeholder to stakeholder”, occurred with local stakeholders in order to identify local knowledge and assets. We conducted three separate workshops, one at each place. Each workshop began with a general description of the place, the results from the in-depth studies, and the innovation bureau presenting a

variety of media technologies and how they may be used. The participants were asked to identify key aspects that were valuable for understanding the place they represented. For example, the participants from Sunne formulated a statement specifying their core values – “We fight for the saga so the saga continues” – bringing specific attention to their long tradition of storytelling and authorship and the importance of nurturing this in the future. These workshops were conducted by mixing representatives from different places and allowing for interaction between places to identify differences and similarities. Additional intentions were to gain insight into stakeholders’ understandings of and relations to the place and their understandings and knowledge of media technologies, and to identify their role in local development. Yet another motive was inspired by Ren and Jóhannesson’s (2017) description of shifting a “stakeholder” into a “stakemaker”. Drawing from previous research within destination development, Ren and Jóhannesson (2017) point out that involving stakeholders (organisations with political power) in the process is central to enabling change and evoking common responsibility and ownership of the result. Therefore, an aim of these workshops was also to gain stakeholders’ trust and foster an experience of inclusion in the development process (see also Emilson, 2014).

Workshop series 2, “local voices and assets”, focused on local voices, history, and cultural expressions from each place. We invited different local actors from the community to participate, ranging from entrepreneurs in the tourism sector, cultural institutions, and local organisations within culture and heritage, to citizens with specific local interest. The participants contributed local knowledge and history as well as insights into ongoing activities and their visions for the future. These workshops began with our studies of each place and the knowledge gathered from the previous “from stakeholder to stakemaker” workshops. In several of these workshops, we identified tension between stakeholders’ perspectives and some of the local entrepreneurs. Whereas they all, to a large extent, agreed on each place’s key values, local actors questioned why stakeholders had not pursued them earlier or made decisions in line with the values that they stated in the first workshop. Participants were asked to explore different ways of representing their key interests by prototyping different media experiences. We thereby generated a wide range of ideas with local connections, building on local assets such as local history, cultural expressions, and nature experiences. We could identify that several local entrepreneurs within the tourism sector lacked knowledge of local values, such as local history and traditions. Here, the knowledge that emerged from the workshop functioned as a source of inspiration and creativity and sparked future collaborations.

Workshop series 3, “geomedia technologies”, involved participants who were potential visitors and with little or no connection to the place. We also invited participants who were considered established users of media technologies, such as gamers, tech developers, filmmakers, media students, or individuals with a specific interest in media technologies. After having presented findings from the previous workshops, participants were asked to prototype a digital experience, focusing on content and function. The purpose of these workshops was to explore different media formats to identify possibilities and limitations based on the specific place. These workshops provided a wide range of concepts using different types of media (or combinations thereof) and complexity.

In the last round of workshops, workshop series 4, “revisiting locals and initiating concepts”, we revisited the gathered knowledge and pushed the workshops toward a

more defined concept of place-based digital experiences. We invited participants from the local community who had taken part in the second round of workshops, “local voices and assets”. These participants were central to defining the form, function, and content of the media innovations. Before the final workshop series, the research team clustered the different ideas and prototypes from previous workshops into various themes and identified key aspects that emerged through the process. Participants were asked to explore these ideas further and identify benefits and limitations. Exploring what the local community thought represented their voice was also central here. Participants were asked to identify their ability to develop these ideas further. In doing so, we provoked a discussion concerning the complexity of different types of technologies. This discussion was intended to identify different technological solutions for the same concept and illustrate that technological solutions do not always need to be complex. The workshops ended with valuation and specification of different concepts to identify a set of functions and contents the participants wanted to develop further.

Cycle 6–7: Final conceptualisation, prototyping, and evaluation

In the final stage of the development process, the researchers and the innovation bureau worked through the concepts specified in a final workshop. The aim was to refine the concepts into a prototype of a media innovation for each studied place. Throughout our workshops, we identified a concern about the use of complex technology, partly due to costs, but mostly due to the risk of exclusion and limited access. From the start, we wanted to establish low-tech solutions (e.g., QR codes) to ensure a manageable starting point for the entrepreneurs interested in pursuing further development. In addition, as Löwgren and Reimer (2013) suggest, we wanted to offer a framework of functions and media formats that could be cross-media and combined and used in different ways. We thereby wanted to shift focus from technological functions to content and experience. An example of a prototype was a digital application allowing users to capture digital so-called story cards with a character or an event, by visiting different sites. These cards represent keys to different narratives inviting visitors to create and share their own stories. In a final session, all participants were invited to a presentation of the prototypes with a discussion to follow.

Analysis: Shifting perspectives and pursuing new territories

The study establishes that the process of intersecting knowledge, critical thinking, and development allowed participants to develop new perspectives, broadened the potential narratives surrounding each destination, and encouraged local entrepreneurs and municipalities to try new things. Several actors expressed feeling empowered after the process, due to knowledge development and because of the network of local resources they identified through the workshops. As one of the participants concluded, “being creative together makes innovation” (local entrepreneur, 8 March 2019). The evaluation shows that the process gave entrepreneurs the opportunity to update their digital knowledge and explore media innovations, and hence increased their ability to control their business development. Entrepreneurs expressed less dependency on existing platforms and tools to pursue mediated experiences after the process. Participants also

gained new ways to pursue business development and support digital development and a greater awareness of contradictions between the interests of locals and those of the tourism sector (Ren & Jóhannesson, 2017). Other local actors expressed satisfaction from contributing with their specific local knowledge and the ability to bring awareness to their perspectives. As several locals noted, this was a rare opportunity to be included in a local development process.

During the project, some entrepreneurs and stakeholders established new initiatives and initiated their own development projects. For example, the municipality of Kristinehamn developed a digital story trail exploring local history and narratives aimed at both locals and visitors, and Glaskogen initiated a new network among local entrepreneurs. Partaking in the process allowed for a dialogue within a wider – but local and spatially anchored – context, as called for by Jansson (2020).

Disagreements are a risk when gathering different perspectives in a collaborative process, and sometimes we had to push the process carefully. For example, the representatives from a stakeholder organisation in Glaskogen stated that they fight for those typically ignored, but local participants pointed out that this is in opposition to stakeholders' previous decisions allowing logging in parts of the forest. There were also notable discussions concerning some of the results from our in-depth studies, especially as we, in some instances, came to question how these places perceived themselves. For example, pointing out that some perspectives or experiences were lacking representation of children and women or engagement in the present made some participants uncomfortable and provoked a discussion. At one stage, we had to conduct a separate discussion with some stakeholders and entrepreneurs to avoid collapse of the process. However, comparing the initial workshops with the final workshop (several participants attended both), we identified how research results that were initially uncomfortable were later addressed as a prerequisite for valuable development. Hence, though these research results were provocative or uncomfortable at first, they became important interventions and creative insights during the process. These are examples of how dissonances in practices, understandings, and representations among different actors allow for engagement with the uncomfortable and question-established standpoints. Actors then shifted perspective and moved beyond preconceptions concerning both the given place and digital technologies (see also Löwgren & Reimer, 2013).

Several participants highlighted how the setup of the workshops fostered creativity and new perspectives. Entrepreneurs, especially, identified how creative collaborative and spatially anchored processes are useful tools for developing the future. In the analysis of the evaluation form and focus groups, we detected an awareness of the necessity of listening to and capturing diverse narratives and representations of a place. As a participant expressed, “the insights we can gain if we allow others to tell their own story about us” (local entrepreneur, 3 May 2019). We thereby identified sensitivity to local perspectives and inclusion of local history and culture, but also how local and critical perspectives enable the identification of unique assets. To be spatially sensitive hence allows one destination to distinguish itself from others.

Several participants expressed a more nuanced understanding of media's role in the production of space – in particular, media as a carrier of how a place is represented and that such a media representation may be in dissonance with local perspectives and understandings. One of the municipality representatives reflected upon how “we need to think about what types of feelings we mediate” (stakeholder representative, 8

March 2019). Whereas several scholars have concluded that individuals may change their understanding and experience of place through geomeia technologies (de Souza e Silva et al., 2017; McQuire, 2016; Wilken, 2014), we conclude that partaking in a development process for geomeia technologies facilitates an even deeper and much needed understanding of the interconnection between media and place. Considering the growing scholarly critique of geomeia technologies, this study acknowledges the importance of discussing these issues early in a development process.

Action research for spatially sensitive media innovation

We have presented a nuanced and spatially sensitive innovation process for geomeia technologies. Through action research, we have performed an inclusive and locally anchored process that explores the limitation and possibilities of media and builds awareness of the relationship between media and place among participants.

First, let us revisit what has been stated above as the foundation of the geomeia field – the study of how place organises and gives meaning to mediated processes and activities – as well as media’s role in organising and giving meaning to processes and activities in space (Fast et al., 2018): The study pinpoints the complexity of our contemporary (geo)media landscape, and how these are joint, complex, and messy processes with no definite start or endpoint (as suggested by Massey, 2005, 2013). In this setting, conducting action research allowed us to engage with the messiness and layers of data that a place holds, from contemporary social media platforms to historical archives, previous social and cultural everyday practices, and the entanglement with diverse media practices and representations. Action research allows for insights into these phenomena in a real-life setting (Reimer, 2018; Styhre & Sundgren, 2005), experimenting at the site of development (Wagemans & Witschge, 2019). We identified dissonances in practices, understandings, and representations, which gave insight into complex asymmetries of visible and invisible power structures, different aspects of privileges, and roles in a community. Simultaneously, we brought attention to how addressing asymmetries lowers the risk of them being reproduced in diverse forms of media representations. When comparing the results from the three places, different perspectives surface. Even though these places are geographically close – within the same county – they differ in their digital representation; the relationship between local inhabitants, tourism entrepreneurs, and stakeholders; their local history; and their local community. These differences finally materialised in the concept developed for each place.

Second, placing this research and the role of action research in a wider context of social inequality and our contemporary neoliberal society (Anderson & McLachlan, 2016), a critical and reflexive analysis of media’s role in reproducing and (sometimes) strengthening inequality is important to address within media innovation literature. Action research here offers a way for researchers to bring existing theory and perspectives into development processes to at least slightly shift the joint forces of economic growth and techno-determinist perspectives that dominate digital innovation today (Tufté, 2017; Wagemans & Witschge, 2019). It draws attention to the fact that media innovations are not solely an issue for media industries or media practitioners. Through the lens of geomeia, it has implications across society, where critical perspectives on media can bring much needed insight to provoke more nuanced media innovation processes in different areas (see also Bhroin & Milan, 2020; Murray, 2012) concerning digital

transformation. By understanding space as a production (Lefebvre, 1991), we offer an approach of exploring and identifying alternative nuanced and more spatially sensitive ways to innovate the addressing of sociocultural issues. In this setting, the development of media innovations provides engagement in experimentation and the creation of new imaginaries that aid in conceptualising a sustainable future (Ehn et al., 2014; Gössling, 2021; Smith & Iversen, 2018).

Third, whereas the result and process were used to develop geomeia technologies for place-based experiences, they were also the means for reflective development, dissemination of knowledge, and knowledge production. Staging an innovation process offered the opportunity to collect rich data on a phenomenon as well as a creative setting for learning and knowledge exchange among a variety of participants. We want to highlight that including research-based knowledge provides validity to alternative perspectives and brings creativity to the process, and thus important interventions, even though uncomfortable at first. As Löwgren and Reimer (2013: 169) note, it is not necessarily the design that makes the difference, but the process of “engaging with other actors in collaborative work integrating inventions, analysis, and criticism”.

Note

¹Examples of the prototypes and concepts, as well as photos and supporting documentation of the workshops, are available upon request. Please contact the corresponding author at linda.ryan-bengtsson@kau.se.

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