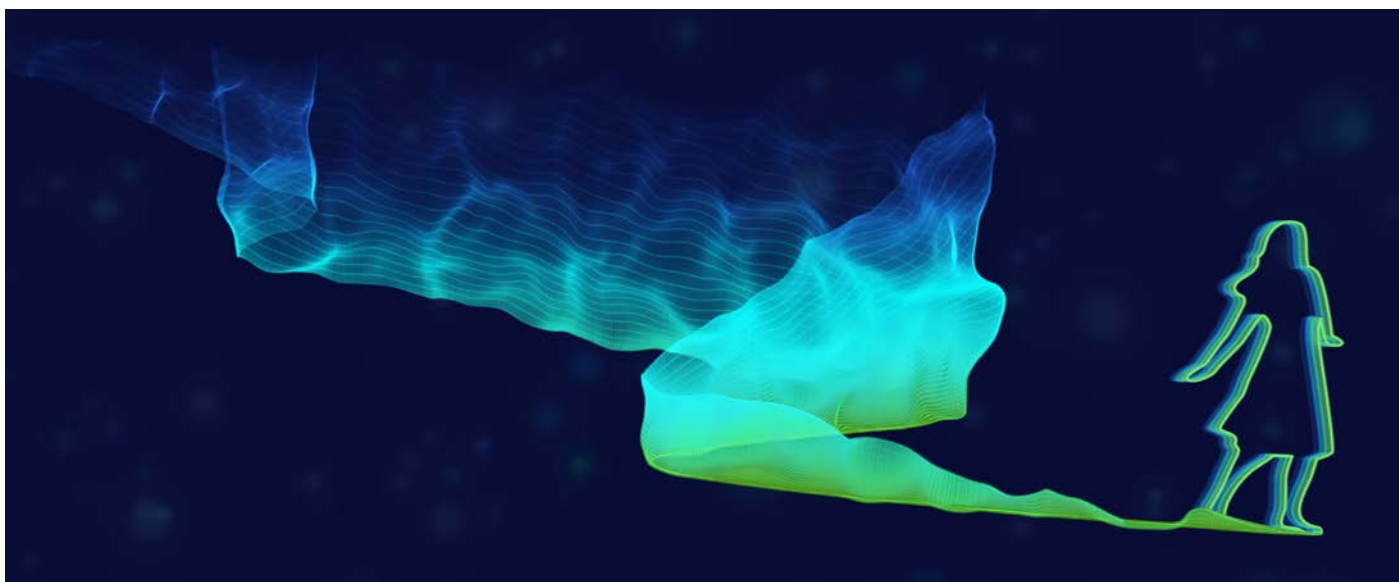# Northern Lights Ceilidh
Playful Digital Interventions in a Scottish Tradition

Lynn Parker and Clare Brennan (2014)

Above: The promotional image for NLC which was used to advertise the event.

1.0 Executive Summary

Northern Lights Ceilidh (NLC) was a one-off event which added a modern twist to traditional Scottish dancing, music and performance and added a digital infusion of technology mediated interactions to proceedings. The event marked the end of an international games competition hosted in Dundee each year, Dare to be Digital (DtbD) inviting the participants in the games competition and the general public to attend. In total 208 people attended NLC, 75 of whom were participants in DtbD.

It is not possible to determine how many of the participants were external to Abertay University. However, 50% of respondents to a survey relating to NLC[1] (the survey was completed by 12% of the total attendees) cited they found out about the event through sources external to Dare to be Digital which could suggest that there were attendees who had no link to Dare to be Digital and Abertay University.

The Ceilidh was part funded by the year of Homecoming Scotland, and thus sought to weave historical Scottish traditions with new traditions in Scotland (i.e. weaving ceilidh, poetry and dance with new forms of design including 3D printed jewellery and interactive technology). NLC was held in a high-tech marquee in Dundee City Square on the 8th of August 2014. The marquee had been used for four days as the site of the DtbD games showcase and was transformed into a dance hall for the event.

NLC aimed to, through digital mediation, provide participants with agency commonly associated with digital media. Participants were able to contribute to the creation of a digital aesthetic which was layered upon the physical ceilidh experience through projection and real-time manipulation of live video feeds. The participants could alter and manipulate their movement to change what happened on screen, co-creating not only the dance

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1. An audience feedback survey was carried out by the NLC hosts, DtbD. This was an online survey, sent out after the ceilidh designed to assess the event's success at supporting the year of Homecoming. It was not gathered for academic research purposes and thus cannot be ethically used within this research.

elements of the ceilidh but also the digital spectacle.

The ceilidh was designed Lynn Parker, and Clare Brennan. Ryan Locke provided imagery which was used as the setting for digital animation production by Lynn Parker. A jeweller, Elizabeth Armour, was commissioned to create custom jewellery for the event, a 3D printed brooch and two digital artists, Stuart MacBean and Yana Hristova were commissioned to create an animated 'peep' board with which attendees were encouraged to take photographs. During the event itself, the band Whiskey Kiss called the dances and provided the music whilst a performer recited poetry to open the event. Quartic Llama, an interactive media company were commissioned to create a digital app to promote the event, titled Lightstream (Quartic Llama, 2014).

Lynn Parker led the design of interactive media interventions into the event, the creation of animation sequences and live visuals during the event, developed branding for the event, carried out client facing work with Quartic Llama and collaborated with her colleagues in the facilitation and organisation of the event.

Northern Lights Ceilidh as practice-led-research work offers insight into design approaches to support and facilitate social interaction. The social nature of the ceilidh event provides a template for community creation and the layering of digital intervention provides a basis from which the mediation of interaction through both human and technology mediated play can be evaluated.

The addition of a digital layer to the ceilidh setting provides an extra level of participation in the event, where the participants can not only make the event come to life through participating in the dances but also in their manipulation of their movement to shape the digital visualisations on screen. The experience of the participants of both the ceilidh setting and of digital mediation provides valuable underpinning for the evaluation of these factors through practice-led-research.

Above: Participants taking part in a large group dance in the early stages of NLC.

1.1 Relation to Research Practice

A ceilidh is a traditional ritual event, it is a 'known' quantity to many participants, much like theatre or exhibition and its conventions tend to be known by the attendees prior to the event itself. Thus, many participants attend a ceilidh with preconceived notions of the type of event, type of activities and thus expected behaviour. Participation is central to the ceilidh event, and promoting an event such as a ceilidh prepares individuals to participate. Such participation in the arts is recognised to "contribute to community cohesion, reduce social exclusion and isolation, and/or make communities feel safer and stronger." (Arts Council, 2014).

For those familiar with the tradition of a ceilidh, the role of audience and of participant is clear. For those who have no previous experience, spectatorship, or taking on the role of audience, can help to interpret the practices of the ceilidh because an audience:

... is both a socially constructed practice

and a notional position in relation to external and internal phenomena: we become audiences and we understand what we do as audience members because of the traditions that we inherit and adapt, but we also go through our lives taking the position of spectator to the world around us, our own actions in it as well as those of other people. (White, 2013, p.5).

Ceilidhs, therefore, are inherently participative: without the audience taking an active role in dancing a ceilidh cannot exist. In bringing the event to life, the attendees already co-create the experience as, without them, the ceilidh is not enacted.

""I think a lot of the time Scottish culture is kind of thought of as really old and kind of traditional but not in the best sense so its nice to see it kind of being brought to a more modern stage"

Above: Participants taking part in a large group dance with the live visuals being displayed on the large screen on the dancefloor

Within NLC, however, the designers aimed to add a new level of participation by extending co-creation, providing participants with digital tools which could create abstracted digital embodiments of their movements on a large-scale projection in the dance space. The aim of this digital intervention into the ceilidh was to enable further co-creation of the event, in the physical and digital realms. NLC invited the audience to co-create the event aesthetic through:

> *Using their bodies in dance to create digital patterns on the screen*
> *Use their voices, feet stomping and the rhythm of the music to influence visualisations on screen*
> *Use their brooches to 'draw' on the screen actively by purposefully changing their movements or passively through interacting with choreographed dance*

In these ways, the participants themselves become the medium of the performance (White 2013) and thus the digital reactions on screen were designed to highlight, augment and advance the movements that were taking place in real-time. These effects played with time, delaying, repeating and extending temporal qualities to highlight different facets of movement and create a visual spectacle for those dancing and for those who were taking a rest and watching the ceilidh.

The ceilidh provides insight into the facilitation of social interaction within an event, using dance. It looks at co-creation of spectacle through inviting active participation in dance and digital visual aesthetic creation through dance. It also examines the role of digital mediation in forming "arena for exchange' where participants may discuss their digital interactions, experiences and what they see (Bourriaud, 2002).
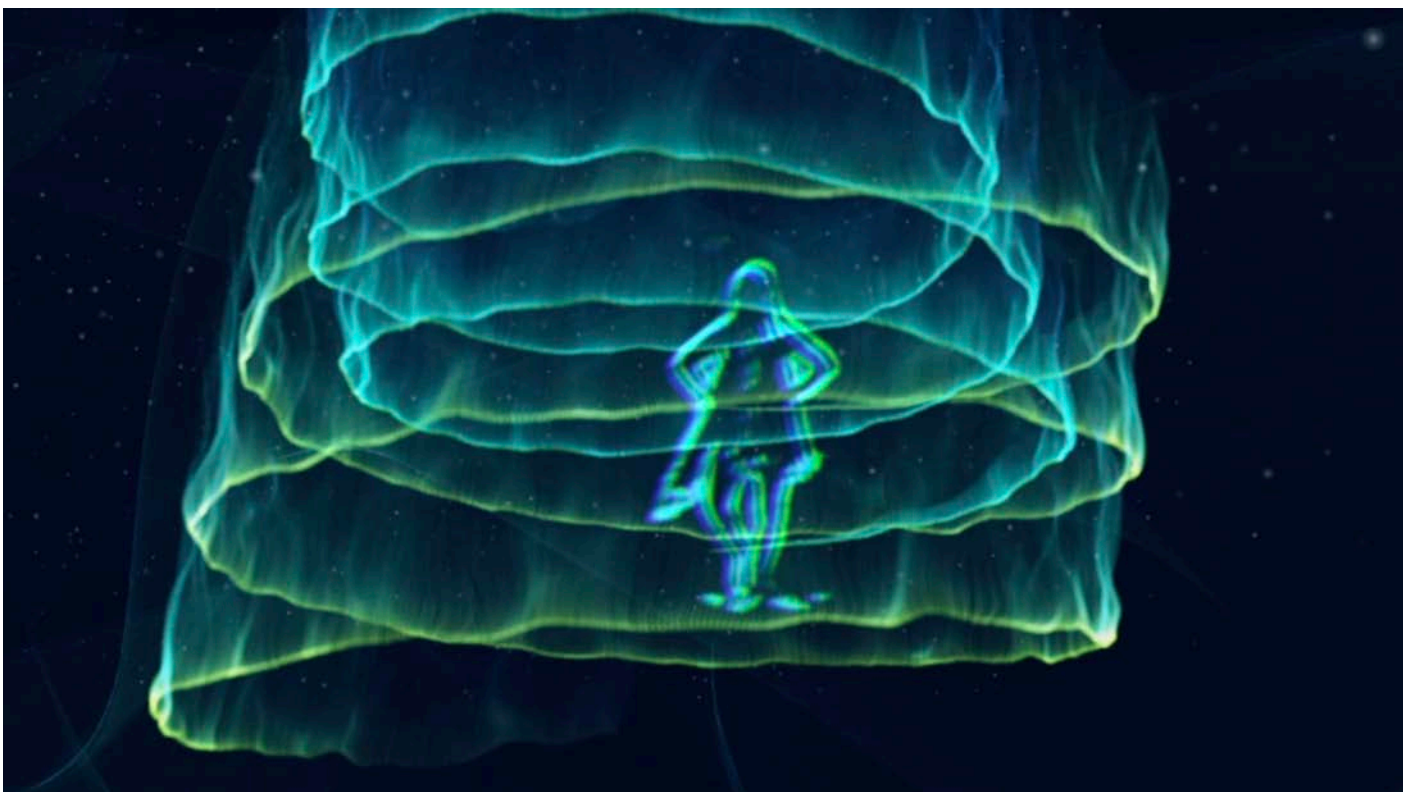
Above: A still from the first interstitial animation showing the 'Mirrie Dancers' Playing in the Northern Lights

Above: Images of the ceilidh band, Whiskey Kiss, performing during NLC

2.0 Research Questions

How can digital media be used to enhance audience participation and the creation of a shared aesthetic for a ceilidh event?

Within a ceilidh setting, how can digital media be used to facilitate or enhance social interaction?

What is the impact of digital interventions on the creation of a sense of community within a ceilidh event?

3.0 Methodology

The project was practice-led, with an iterative design process informing creative and organisational decisions. Early ideas were pitched to the client, Elaine Russell from DtbD, and from there, the look and feel of the project was developed through mood boards, documentation and video tests of potential digital interventions. The client was regularly updated on the design development, planned structure of the event and event scheduling. The band was identified by the client and were also in regular communication with the designers to ensure that the event structure suited their approach to ceilidh events (an outline of the event structure can be found in appendix A of this document). The designers felt the need to respect the ceilidh tradition and looked for modes of digital mediation which complemented the ceilidh rather than changed or modified its behaviour. In staying true to this vision, the core interactive element became by-product of core ceilidh activity; the visuals created by the brooches came into existence through movement and participation in the ceilidh itself and did not require any additional effort from the participants, unless they wished to enact it. In the development process, five forms of digital intervention were designed:

Interstitial animations
LED brooch led interactive visuals where dancers could become the northern lights
Live visual manipulation to augment, highlight and enhance patterns in ceilidh dancing
An animated 'peep board' photo opportunity
An interactive sphere where participants could draw the northern lights with their hands

The interactive visuals and live visual manipulation were core interventions focussed upon empowering the audience to co-create the aesthetic of the event. The

interstitial animations provided moments for interpretation and contemplation. The other two interventions supported the digital feel of the event and provided entertainment whilst participants chose to take a rest from dancing. The animated peep board was created by two arts students and the interactive sphere was designed by the events company Northern Lights, therefore the design of these elements are out with the focus of this document.

Semi-structured interviews were carried out with 5% of the event (the interview guide can be found in appendix B of this document). These interviews aimed to gather focussed qualitative data regarding the audience's role in the ceilidh event, looking particularly at their participation within and awareness (if any) of contributing to the aesthetic of the event and the extent to which they felt like the made connections or formed part of a community through their participation in NLC.

The participants were aged 20-32, and worked in games development, were studying creative arts production or were digital arts academics. All but one had participated in DtbD and therefore, the resulting data was influenced by a range of contextual factors, including their links with other attendees (due to having participated in the competition), their experience of the location for the competition context, and the transitional landmark nature of this event (i.e. the culmination of eight weeks hard work). The interviews were carried out in person or via video call and participants were shown a short documentary about the ceilidh to refresh their memories of the event.

Above: visual manipulation of live video shown behind the dancers as they enjoy a group dance

The interviews were semi-structured, making use of an interview guide to help to shape the discussion of the event. The interviews were carried out almost one year after the event had occurred. The collection of data one year after the event presents issues of selective recall, telescoping and the likelihood of participants to recall the past in light of their present circumstances (Jupp, 2006).

The interviews were transcribed for analysis and were organised, in a matrix by question, to allow direct comparison of participant experiences and identify gaps in the research data (Gray and Malins, 2004). Commonalities across the data set were identified and compared to the intentions of the designer. Further analysis of the data was then undertaken to identify the potential reasoning for these commonalities and the extent to which the digital mediation shaped participants experiences. In analysing the data, it became clear that contextual factors around the ceilidh setting itself influenced participant responses, thus these were further interrogated allowing conclusions to be drawn around the effect of the ritualistic qualities of the event on participation.

3.1 LED Brooch and Live Visuals: Design Approach

A jeweller, Elizabeth Armour was commissioned to design and create 'digital' brooches for the event. These built upon the developing themes of the northern lights and the myths which exist around them. The brooch brief stated that an LED should be embedded within the design to lead the audiences' contribution to digital augmentations within the ceilidh event. The brooch "aimed to capture a movement ...inspired by the beautiful organic shapes of the aurora." (Armour, 2014). Regular meetings were held with the jeweller to review the design, explore the technical development and test out the jewellery with the digital systems which were designed to use the light from the LEDs to create real-time animations.

The animations driven by the brooches were inspired by the Orcadian proverb which believes the Northern lights are spirits dancing in the sky and that "When the Mirrie Dancers play, they are like to slay" which links to the red lichen often found on the rocks by the coast on Orkney. The digital intervention aimed to capture the light emitted from each dancer's brooch and extend this to create a stream of light, dancing across the screen, simulating the northern lights. This effect was achieved by isolating the light from the brooches from a live video feed and extending the time that each frame of light was on screen to create a light stream.

This direct representation of each dance, live and extended on screen allowed for embodiment in the digital realm and opened up opportunities for participant agency for digital representation through physical movement. Participants could choose to alter their movements to identify themselves in the digital realm and alter the representations on screen. Extensive testing was undertaken to ensure the length of each light on screen was such that it aesthetically represented the northern lights whilst not taking up too much

Above: The LED brooches, designed by Elizabeth Armour, awaiting the arrival of NLC participants.

Above: A still image from the first interstitial animation which aimed to introduce the 'Mirrie Dancers.' A performer accompanied this animation, reading a poem inspired by the Northern Lights.

of the screen so that many lights could be represented on screen at once. Two cameras in different locations were planned to be used in the event, to capture different angles and allow further experimentation by participants, but unfortunately, due to technical limitations, only one live camera could be used during the event itself.

The event was structured around four phases: one which aimed to capture the anticipation leading up to the ceilidh, one which celebrated the mythical nature of the event, one which built to a crescendo as the event reached its pinnacle and a final phase which represented resolution and the end of the event. These phases were represented by the passing of an evening, from dusk through to dawn and four interstitial pre-rendered animations were created to mark the transition from one phase to the next. The setting of these animations, night scenes of hill tops, forests, lochs and cottages provided a landscape upon which the participants were able to become the 'mirrie dancers.'

Important lessons were learned during the event as all testing had taken place in the space prior to the setup of the lighting for the event. An individual had been brought in by the events company to facilitate live lighting effects for the evening of the event only, and thus it had not been possible to discuss and test effects fully with these lights in situ. Thus, changes occurred in the visual effect on screen, with aspects of the floor and participant bleeding into the digital light streams. On-the-fly modifications were made to the live feed settings to try to mitigate this issue.

3.2 Live Visual Manipulation: Design Approach
A series of 'live' animations and effects were also designed for use during the ceilidh itself. These visuals made use of a live digital feed and aimed to take the movement of the ceilidh dancers to create visuals which could be projected back into the space. Many of the live animations made use of time distortion in order to

showcase delayed images of the dancers alongside the real-time versions. This created multiple versions of each participant on the screen, highlighting the repeating patterns that exist in the choreography of the dances themselves. It also included visual representation of the dancers, making the potential for digital embodiment more evident to dancers and the audience. Other effects included the manipulation of colour of the on-screen feed driven by the sound input of the whoops, claps and feet stamping of the participants and the noise of the band. These effects added further visual rhythm to the digital embodiment on screen and provided participants with the opportunity to add to the spectacle, if not through their movement, then through their appreciation of ceilidh traditions through voice and applause.

A series of pre-rendered effects (kaleidoscopes created from the northern light graphics, animated creatures and effects from the interstitial animations) were also created to be composited over live footage of the event, in order to link into the narrative structure, set off at the beginning of the event by the poetry reading and developed by the interstitial anima-

Above: A professional dancer performs in front of the live visual manipulations

tions throughout. These were integrated into the live video feed to add flavour and diversity to on-screen visuals and further enrich the narrative element. The animated loops were chosen to support the liveliness of the ceilidh setting and to complement the visual aesthetic defined within the animated interludes. These animations were motivated by sound input, changing in colour, and tempo driven by the music of the ceilidh band, the stamping of feet, clapping and whooping of the ceilidh participants.

"Well, I had quite a specific experience with someone who had just come along by themselves and that really like lifted my heart a bit because she was just there as was so kind of open and willing to make new friend and to meet new people and I guess in that respect it really felt like a coming together of individuals who were sort of united through this experience. I think a ceilidh kind of does that anyway"
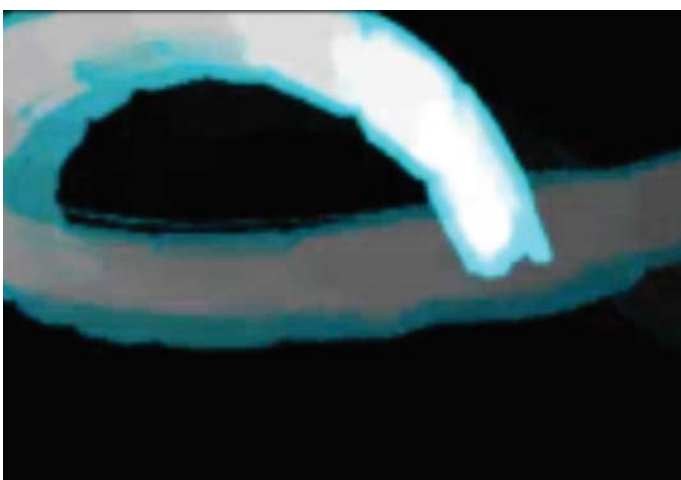
Above: A test image of the manipulation of the light from the LED brooches to make a light stream

Above: A still image from the second interstitial animation, which aimed to add mysticism to the event.

4.0 Participant Feedback

5% of the audience to NLC took part in semi-structured interviews to inform analysis of the event design. Below is a sample of their thoughts and opinions of NLC.

"I think the NL ceilidh made making connections easier than traditional ceilidhs"

""It is a magical thing of bringing everyone together to celebrate"

"it definitely felt younger if that makes sense, it felt more modern, it felt having the lighting and the interactivity and having projections and things yeah, it felt like a very modern techie kind of area"

"it was quite satisfying when you did have that realisation that the movement you were making was being tracked and interpreted but I think that really the sort of generative visuals that happen whilst everyone is dancing is not really for the dancers, it is for the people that aren't dancing. Because you are so involved in the movement you are making that, you are concentrating on that and so there is a kind of and audience for the audience"

"I think everyone had creative input, they might not have been aware of how they were having an effect, but knew they were having an effect, I knew by being there and taking part and enjoying myself it was contributing to the effect"

"I guess with a couple of the Chinese teams actually cause we really struggled to communicate ...but being able to overcome language barriers and stuff, that kinda stuck out "

"Being there and wearing the pin...taking part in what that was producing, like the lights, that was a big part of the participation that everyone took part in...participating in growing the bonds of international games development as well"

5.0 Results and Discussion

In evaluating the experiences of the NLC participants, the event was seen to foster co-creation and social interaction using the following three strategies:

> *Leveraging existing participative social contexts and utilising novelty to expand appeal*
>
> *Novelty as a tool to promote exchange*
>
> *Accessibility and levels of co-creation through ecologies of participation*

5.1 Leveraging existing participative social contexts and utilising novelty to expand appeal

As previously established, in attending a ceilidh event, people have already prepared themselves to participate. Therefore, when tapping into a ritualistic event like a ceilidh, the invitation to participate is naturally embedded. The event naturally filters it attendees, with only those who are willing and/or interested in participating, signing up to attend.

The ceilidh event in itself provides some valuable insight into the formation of temporary communities around a playful intervention, in this case dance. Ceilidh dancing is partner dancing and thus, in order to participate, social interaction must occur. Ceilidhs also, as acknowledged by participants, bring out a sense of responsibility in those who know the dances to share their knowledge with others at the event (33%). NLC was particularly unusual as many of the attendees were international (due to being participants in DtbD) and thus did not know the tradition or the dances.

One participant notes:

I didn't think I held a responsibility to do it [participate]... possibly on the side of the fact that I was one of the people who knew how to ceilidh dance and the fact of getting other people involved who didn't know how to do it, there was maybe a slight responsibility to get everyone who wanted to do it, to do it

Whilst others felt the atmosphere and environment gave them courage to invite others to participate: "If I didn't feel like I was part of a community I wouldn't have dragged other people up to dance." Ceilidhs clearly encourage community development through their playful nature; they are informal convivial affairs and many participants acknowledge either "dragging" others up to dance, or dancing even though they did not know the moves (67%). The atmosphere and festivity of a ceilidh, paired with the ritualistic qualities naturally evokes participation.

The digital mediation of the event, paired with the community contextual factors (the fact that many of the respondents were members of a large existing micro-community at the event) promoted

Above: Behind the screen both designers manipulated the visual distortions and sound input throughout the event

Above: Participants taking part in a large group dance at NLC.

participation. 44% of participants said they were more active and participatory at NLC than they would be typically in a ceilidh event and 56% acknowledged that the digital mediation helped the ceilidh tradition to feel more relevant to them.

5.2 Novelty as a tool to promote exchange

Social interaction is inherent in ceilidh events. Digital mediation within NLC added novelty and a level of spectacle which triggered further conversations as forms of social objects (Engeström 2007). For example, as each participant received their brooch, 44% of participants felt these helped to start conversations. The interstitial animations and the live visuals also evoked social exchange (22%). The abstract nature of the live visuals and interstitial animations, partnered with the brooch as an aesthetic object invited social interaction and "collective elaboration of meaning" (Bourriaud, 2002) as acknowledged by 55% of the participants.

Digital mediation through artefacts within NLC existed on three levels: there were aspects which could be accessed all evening at the participants leisure (i.e. the peep board and interactive sphere), there were semi-permanent interventions (i.e. the live visuals driven by dance and sound and the augmentation of the screen by the brooches) and there were aspects which were shared only once and thus were temporary (i.e. the interstitial animations). The different levels of access imbued some of the artefacts with a more ephemeral quality: the interventions which were not permanently available left the biggest imprint on the minds of the participants, with everyone recalling the brooches, 67% recalling the live visuals and 56% recalling the interstitial animations positively. Very few references were made to the peep board or interactive sphere. The scarcity of access to this material and its novelty went some way to enhancing the imprint NLC left upon participants.

5.3 Accessibility and levels of co-creation through ecologies of participation

The level of digital know-how required to

participate in NLC was very low, and thus, there was no barrier to entry for participants. This ensured accessibility for all ages, and perhaps was a key to broadening the audience for the ceilidh whilst not alienating those who may be less comfortable with technological interventions. Lowering barriers to entry when it comes to interacting with technology in social environments is a key strategy to promoting participation and social exchange (Dyce and Fairweather, 2017). The ceilidh did this very well, with every participant being able to engage with the lights and in turn, consciously or otherwise contributing to the digital aesthetic.

The brooch was provided upon entry to the event, with an information card about the jeweller. It did not, however, provide any further guidance as to how it could invite co-creation of the event, and thus, for many, was an appealing item in and of itself. 33% of interview participants were not aware of the effect of the brooch on the live visuals. It was assumed by the designers, that in participating in dances, it would become fairly clear to participants the nature of their influence on the digital screen. For some, this was the case, especially prior or in-between dance sessions. One participant notes:

I do remember we were trying to work out what the little lights were and then somebody walked across in front of us and we followed the trail across the board and we went "oh, that's what it does", and then we were running backwards and forwards a couple of times like small children that we are and spinning that was the point.

Whilst others report their observations of unusual behaviours by some participants drew curiosity:

I remember watching people with the brooches and they interacted with the

Above: One of the participants playing with the light created by their brooch by moving around in front of the screen and watching the trail of light (in green) made by there movements. This occured just as the ceilidh was about to begin.

screen, so I just remember watching people do that and their amazement, it's so cool and then I did it and thought, people are watching me, thinking the same!

In this way, the artefacts, particularly the brooches and their live potential provided a sense of novelty which not only supported conversation and collective meaning making for some, but also encouraged experimentation in participation for others. The novelty of interacting with on-screen visuals using the brooch, however, soon wore off, and 44% of participants acknowledge once they had tried it out, they returned their attention the social and physical elements of the experience. The effect that the brooches made on screen remained consistent for the entirety of the time this intervention was available to the audience and this may have limited the ongoing appeal and engagement. Once it was understood, the design offered no further reason for participants to continue engaging; there was no development of complexity or challenge to keep their attention.

In terms of co-creation and sense of authorship, some participants (56%) were aware that their movements contributed to the on-screen visuals, however, they all acknowledge the complexity of participating (carrying out steps, being attentive to their partner, staying balanced etc.) took their full attention and thus they were unable to interact in the real world and to interact actively with the digital realm simultaneously. The influence on the digital world was most recognised by respondents when they were watching the performances and screen rather than participating in the dances themselves. The

spectacle this created was appreciated by the audience, with 56% claiming that it extended and improved spectatorship of the dances:

It [the live visuals] meant people who couldn't dance still had something to look at and appreciate, it was a nice touch and wasn't a factor that was... a gimmick, it joined in with the dancing really well and felt part of one thing rather than something added on to just be flashy.

Therefore, the complexity of a task effects the extent to which a participant can be aware of what is happening around them. Play and the creation of a magic circle echoes this phenomena, to an extent, where the magic circle envelopes players separating them from the rest of the world. This magic circle is most often connected to the creation of another reality (Sicart, 2014), but can also reflect a distancing of players activities outside of play (Salen and Zimmerman, 2004; Huizinga, 1949). The ceilidh therefore presents further evidence of differing levels of participation present within a playful experience – there is full immersion in the experience itself (as shown by the dancers), semi-engagement (as shown by those experimenting with their brooches) and spectatorship (as shown by the audience). With NLC, it is clear that the spectators are in the best position to fully experience the aesthetic which is being co-created between the designers and the participants. It is by being 'passive', they are able to appreciate yet not contribute to the spectacle.

Making the co-creation of aesthetic a

by-product of the dance experience promoted accessibility but also lowered audience agency. The complexity and dependencies of ceilidh dancing enhance social interaction between partners, and promote inter-partner sociability, however, it leaves little attention or agency for participants to actively shape their movements away from those integral to the dances. Therefore, in participating in the ceilidh, it is not possible to actively augment the digital representation of movement on screen.

5.4 The Ceilidh in General

The ceilidh demonstrates potential for learning about the creation of temporary participative and playful communities. Analysis NLC suggests a ceilidh enhances participation and social exchange in the following ways:

the need for varying levels of partnership to take part in dances (Dancing as social object)
A sense of responsibility by those who "know" the dances to pass on the tradition (insiders induct outsiders)
Embedded celebratory tone and ritualistic meaning
A need for different levels of participation to maintain energy
Facilitation of participation by an active host - the Ceilidh Band (scaffolding for participation)

6.0 Dissemination & Impact

Preliminary findings from user feedback were presented looking specifically at the role of the audience as co-creators of an experience, at the Society of Animation Studies annual conference in Canterbury in 2015. The paper was titled Tradition meets Technology: Audience Participation in the creation of a Digital Mediated Ceilidh and was attended by approximately 48 people. Feedback from the conference presentation suggested that the audience

Above: One of the professional dancers performing in front of the live visuals inspired by interstitial animation two.

Above: Two of the professional dancers performing in front of one of the pre-rendered/live visual mixes

could see potential social benefits in designing digitally mediated interaction in a range of settings, especially in the realms of games for change or community arts working with participants who may have social disorders.

A promotional trailer for the event is available online and has received 288 views (Abertay TV 2014b), and a short event 'documentary' has had 383 views (Abertay TV 2014a).

7.0 Conclusion

NLC provides useful insight into the use of digital mediation to enhance the appeal of traditional events, such as a ceilidh, to new audiences. All respondents recognised the digital mediation of the event to some extent and for those to which a ceilidh did not usually appeal, claimed that the digital mediation helped to enhance the appeal of the event to them. Some also acknowledge that the brooches and

their interactive quality encouraged them to participate more or that, in fact, they were more active at NLC than at previous ceilidh events due to the range of participative options provided.

The digital mediation of the ceilidh used novelty to promote social exchange, and this was fairly effective within the small sample interviewed. The novelty, however, of the interactive elements did not keep participant attention for long, potentially due to this being an augmentation to the 'main business' of ceilidh dancing. Participants appreciated the digital elements, but they seem to have been a small part of the larger whole that made the experience fun and memorable.

Looking back at the social interaction elements, it may have been beneficial to have used the brooches for more than just visual manipulation of the aesthetic. The could have promoted further socia-

Above: Participants receiving their LED brooches as they arrive at the start of NLC.

bility through 'organising' social interaction. For example, using the colours of the LEDs as a way to encourage meeting a new dance partner. The speed and attention needed for ceilidh dancing also leaves little space for attention to digital manipulation, therefore, it may have been beneficial to empower those who were spectating to contribute to the spectacle in some way. For example, perhaps placing cameras on each table to capture live feeds from the audience or placing 'visual mixers' in the audience space which could shape the visuals on screen would have provided further agency and clearer co-creation of the event aesthetic.

These limitations of digital playful interventions design have provided valuable practitioner insight into the use of digital mediation to encourage social interaction and community. The mediation of social interaction within NLC was very subtle, and moving forward, as a practitioner, more direct forms of social in-

teraction through digital mediation have been explored. For example, within the practice-as-research work Ola de La Vida, digital mediation requires players to physical contact for the duration of the game. This physical contact mediates their ability to play the game and draws attention to their co-players through touch. It has also been recognised by participants in enhancing the team aspects and conviviality of the play experience.

In terms of the creation of a community, all NLC respondents made it clear that they felt they were part of something larger, however, there are a range of reasons reported for this, including the nature of ceilidhs themselves, the existing community around DtbD, the feeling of a shared experience and the digital mediation. New playful behaviours emerged from participants within the event which suggest the development of a temporary community. Such behaviours include the addition of high fives in large group danc-

es and an impromptu dance off as the culmination of the event.   A mix of the nature of the ceilidh event in and of itself, the contextual and social factors of DtbD and the shared experience of participating in an event over the course of an evening seem to have been key to bringing the participants together and creating comfort and confidence for such new behaviours to emerge.

The ceilidh as a form also provides valuable insight into community creation, and study of this event and the interrelations reported by participants both in relation to their existing relationships and the formation of new temporary ones, helps to showcase techniques for enhancing social potential and temporary communities around a playful artefact or event. Further study of these elements within other ritualistic beyond NLC may provide transferrable techniques for community

development in temporary events (For example, see Benedetto, no date). The findings of this research are problematic for several reasons: the data sample for this study was rather small in relation to total attendees; the time between the event and the data collection was quite large and thus makes its reliability questionable; and the focus upon participants who were emotionally invested in the event due to it marking the end of DtbD and thus being a time of transition in their lives.   However, the data was collected with issues of recall considered in data design (Jupp, 2006), has been analysed and presented with complete transparency, acknowledging these limitations. It is believed, however, that the results of this study provide insight into understanding the success (or otherwise) of the design techniques of playful artefacts and the development of communities around ceilidh events and around NLC in particular.

Above: A photograph of the dance-off which emerged between the professional dancers and the participants of NLC.

7.0 References

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Northern Lights Ceilidh Running Order

Sunday 10th August, 8pm – Midnight

PLAN - Panoramic Screen / Live music / Recorded Music / VJset / Performance

8pm – 8.45pm　　　　　　　Music: Pre-recorded Scottish ambient music
Audience/guests: People arriving at ceilidh
Visuals on panoramic screen: Sunset and Outdoor party being set up (motion loop).
Animation number 1

8.45pm-9pm　　　　　　　Music: Pre-recorded Scottish ambient music, changes to up
　　　　　　　　　　　　　　　beat music when animations starts
Audience/guests: Watching, buying drinks, settling in (not yet dancing)
Visuals on panoramic screen: Merry dancers/northern lights. Animation number 2
Additional performance: Poetry reading (starts at 8.45pm) then moves in to animation

9pm – 9.45pm　　　　　　　Music: Live Ceilidh music
Audience/guests: Dancing!
Visuals on panoramic screen: Atmospheric VJing (using LED accessories)

9.45pm-10.10pm Music: Pre-recorded Scottish upbeat/quirky music
Audience/guests: Watching, buying drinks, resting
Visuals on panoramic screen: Ambient motion loop (approx. 20mins) Move to forest
scene, abstract/surreal visuals(approx. 3mins 30secs) Animation number 3

10.10pm – 11pm　　　　　　Music: Live Ceilidh music
Audience/guests: Dancing/watching professional dancers?
Visuals on panoramic screen: Atmospheric VJing (using LED accessories)
Additional performance: Professional dancers

11pm-11.20pm　　　　　　　Music: Pre-recorded Scottish upbeat/quirky music
Audience/guests: Watching, buying drinks, resting
Visuals on panoramic screen: Ambient motion loop (approx. 15mins) Move to abstract
fast paced visuals, movement/fighting (approx. 3mins 30secs) Animation number 4

11.20pm – Midnight　　　　Music: Live Ceilidh music
Audience/guests: Dancing!
Visuals on panoramic screen: VJing then move to Sunrise. Animation number 5

Appendix B

Northern Lights Ceilidh: Semi-Structured Interview Guide

NLC Participant Interview Guide

1. Before the Northern Lights Ceilidh could you describe your experience of the traditional ceilidh setting and your feelings attached to it?
2. So how would you describe the atmosphere of a traditional ceilidh?
3. And what would you say are the key features of a ceilidh?
4. Where are you from?
5. As a non-scot did you have any preconceptions of the ceilidh?
    OR
    So, as a Scot, do you have any kind of attachments to the whole tradition of the ceilidh?
6. Do you feel like the ceilidh is part of your cultural heritage?

7. Could you just describe what you think the Northern Lights ceilidh was?
8. The ceilidh could be called a ritual coming together with conventions and preconceptions?
9. How, if at all, was your experience of the Northern lights ceilidh different to a traditional ceilidh?
10. What do you remember best about your experience?
11. What do you remember about the atmosphere of the ceilidh?

12. How important were the band to the overall experience?
13. How aware were you of the myths about the northern lights that the ceilidh drew from?
14. Did the event have a sense of narrative to you?
15. As a participant, do you feel like you made connections with people at the ceilidh?
16. Can you tell me a specific instance of an interaction with someone at the ceilidh which you remember? Why do you remember it?
17. Did NLC make you feel part of a community?
18. What stood out to you most, in your feelings of the event or in your interactions with people?
19. What were your experiences of the digital mediation of the event?

20. Can you describe the different modes of activity you remember being part of?
21. What are your feelings about these activities?
22. What do you remember about participating?
23. What do you remember about watching?
24. What do you remember about the space?

25. Previous experience shape your understanding of the space?
26. Did it live up to your expectation? Why?
28. What do you remember about your sensory experience?
29. Did the ceilidh feel interactive to you? If so, in what way?

30. Did you feel like you had any responsibility in order to create the spectacle of the event or to bring the event to fruition?
31. Would you want responsibility as a participant?
32. Did you feel like you had any creative input into the spectacle? Do you feel that you played an active role in contributing to the event?
33. is it possible for you to be participant and witness in an event?