

THEME: DEMOCRATISING TECHNOLOGY

Match Making: Broadening cultural exchange opportunities through digital access to crafts

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An Overview of the reSlide Residency

The reSlide residency was a Creative Scotland funded exchange programme for makers between Scotland and India during August 2012 to May 2013. It had the objective of facilitating high quality production and knowledge exchange around making by bringing together practitioners with educational, professional and wider community-based making networks particular to each country. The programme allowed two textile based designer makers from Scotland, and two practitioners from India to pursue two separate four-week periods of practice in the respective host country, with considerable emphasis placed on providing opportunities for audience engagement and broadening of cultural experience at all levels of making. During the second residency phase, practitioners engaged with hobbyists and industry leaders, high school pupils and university researchers in the Scottish Borders, while interacting with traditional artisans in Kutch, Gujarat, collaborating with experimental design in Calcutta and engaging with Indian models of students-grassroots interface. The enduring success of the programme was considered to be dependent on developing a collaborative atmosphere to allow immersion into another culture and develop from it, as part of a socially situated learning process, further consideration of dissemination of their learning with an audience that went beyond the immediate participants involved (For a detailed analysis of the outcomes achieved in school workshops and adult community workshops in Scotland, see Greru and Kalkreuter 2013). One challenge recognised from the outset was to keep this momentum going when the physical residencies would be over.

In this paper we catalogue key thoughts and practices that emerged in the analogue engagements during the residency, while also scrutinising the digital engagement that started during the project. Its effectiveness as a means of furthering collaborative practice was considered, namely how social media platforms as extensions of analogue experiences were used to arouse lasting engagements with practitioners and the public when such media have been largely overlooked with regard to e-learning (Lewis et al., 2010). Key questions to scrutinise the online engagement by are:

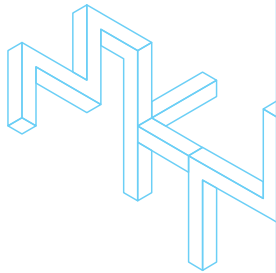
1. Is the information provided on an online platform sufficient to create a meaningful understanding of

Abstract

The paper describes research conducted into the engagement potential of social networks in the field of cultural exchange about making. It was conducted alongside a Creative Scotland funded residency programme between designers in India and Scotland that had public engagement as one of its aims. During the residencies, which might be described as the analogue phase of the reSlide project, the occurrence of appresentation of cultures was identified as a key factor in successful engagement of the public in a culturally informed making process. The potential of social media and other digital tools to prolong and enhance this environment is the object of this paper. A qualitative approach of participant observations and content analysis of interview data from the digital media used by the residency team was applied, and social network and hyperlink analysis was conducted through open source software NodeXL with visualisation through Gephi. Textual data analysis of individual and collective dialogue amongst large groups was also employed.

Analysis revealed that what was shared online in this project did not fully replicate all the descriptive and layered information afforded to participants who were witnessing and sensing the events live and in person, with far distant geographic locations and dramatically diverse practices being suspected to be factors. However, a certain degree of the implicit knowledge often considered as a key achievement of the analogue experience of residency was clearly identified as present in online users as they engaged with previously unknown or assumed characteristics of culture through live debate of various viewpoints and through multiple stimuli. The paper concludes by indicating the need for further study of the motivations and techniques employed by emerging collaborative cultures such as the one considered here.

Keywords: Residency, cross-cultures, digital- engagements, appresentation, social media.



another culture, and does it equate to a cultural experience?

2. In order to inform making, is the information and knowledge provided through images and texts or colloquial conversations an adequate representation of culture?

The Methodology

A qualitative approach of participant observations and content analysis of interview data was employed in addition to monitoring online engagements of the reSide residency through personal web blogs and the interactive Facebook page of the project that became a regular discussion forum during and after the residency. As part of this, web forum, social network and hyperlink analysis (Hine, 2000; Hine, 2008), open source software NodeXL with visualisation through Gephi was employed in addition to textual data analysis of individual and collective dialogue amongst large groups. Conducting the research from the standpoint of a Facebook fan page, in what might be termed virtual ethnography (ibid.), allowed us to monitor the involvement of practitioners, hobbyists and other interest groups from local and global contexts from within the platform.

Cross Cultural Residencies

Residencies are often praised for their benefits as well as criticised for being resource intensive (Horn, 2006). Cross-cultural exchanges between practitioners to support *cultural trade* and sharing of mutual knowledge and practices were widely seen as building awareness across boundaries, and producing wider benefits from knowledge exchange to movement of ideas and creative productions between countries (Hare Duke & Theophilus, 2013). Hare Duke and Theophilus favour residency experiences as *meaningful legacies* over *one-way curatorial tourism*. Our paper explores how these legacies might be carried through digital engagement, which complements and follows on from a resource intensive, longitudinal, knowledge exchange experience in analogue format.

What Practitioners Learnt from the Analogue Engagements:

Understanding Craft from within Communities

The Scottish practitioners realized the importance of communities of practice that still prevails in Indian society that occurs while sitting, eating and living with the artisanal communities. Tradition was experienced as a generational and socially immersive activity rather than its perception as curatorial practice in museums or archives in Scotland.

The time spent in Kutch was a huge contrast to the impersonal city. I had instant and continuing contact with people in their daily routines and with artists in their workspaces. It was here that I began to understand how artisan communities operate. (Scottish designer maker) (Image 1)¹



Image 1



Image 2

The sensitivity the practitioners developed with another culture was more important where they found reasoning behind each activity, this increased cautiousness in their approach when perceiving a culture, both material and conceptual.

I had believed I would be block printing and dyeing under the artisan's tutelage. Reflecting on this, I realised that the Western idea of 'workshops' for (paying) amateur participants cannot easily transfer to a country where each community is a distillation of generations of experience and skills as well as having a specific position in society. Why would somebody pay to be allowed to do badly what the artisan does supremely well? (Scottish designer-maker)

Making as Conversation

Rather than the result of a personal struggle between technology, materials, aesthetics, creativity and the self, making was experienced as a means of conversation in and with the community, with interesting outcomes for individual risk but also credit.

The women artisans in particular interested me a lot, the way they use textile as a way to meet, as a way to create and a way to communicate was incredibly inspiring. (Scottish Designer)

I don't think we ever share in the Western community. Especially in the textile courses, it's really competitive. If I want to be the best and then I don't want them to use my techniques... But People can enjoy things in a more rounded way like in those communities. (Scottish Designer) (Image 2)

1. ReSide team

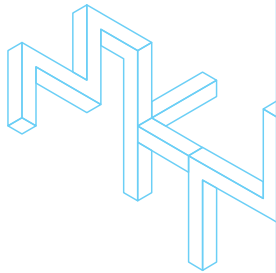
includes: Dr. Britta Kalkreuter, Louise Butler, Shona Sinclair, Lindsay Roberts, Jeni Alison, Swati Unakar and Murji Hameed Vankar.

Image 1.

Collective community making activities in Kutch. Photo: © ReSide team

Image 2.

Local women practicing their craft in Kutch. Photo: © ReSide team



This understanding developed as a key enrichment during the residency for the Scottish practitioners as they sought to share their making with the wider public through local and personal networks. Organised workshops took the spirit of community sharing. Co-created meanings were found through collective making and sharing of skills as well as ideas.

Appreciation of Culture and Craft: Contrasting own and others' practices

In this context, it became important to all practitioners to evaluate how one could contribute their own thoughts and practices to collaborative encounters, and how *freedom of choice* and *original design* relate to *good design* when seen in the context of David Pye's conversation with Frayling on how making good design is like making 'something new, something old, something else, where it is not about copying the tradition but developing on it instead – on what is been done.' (Frayling, 2012, p.95-96)

On my return to Bangalore (after finishing the first phase of the residency in Scotland) it was time to reflect and rephrase the project proposal. It was also an opportunity to revisit some old forgotten practices such as journaling, sketching & painting. Experimenting with the local silk in combination with wool was a new exciting direction to take. (Indian designer maker)

I enjoyed the natural beauty of the land. I saw prosperity and meticulous infrastructure and small things made me aware of my own 'Indianness.' In the silence, I saw an absence of people while life back home was grounded in people... people and children buzzing all around! I realised I needed that context to create. I appreciated that in India despite all the societal pressures, the struggle for livelihood, the dirt, the noise, the absence of infrastructure, despite all of this, one could still create, one could still make the most of things and still be happy. (Indian artisan) (Image 3)

Analogue immersion here led to a realisation process of one's own making through material and conceptual appreciation of another culture, realised through some degree of *appresentation*, in addition to what is *presented directly*. Tim Dant (2012, p.438) describes



Image 3

Image 3.
ReSlide artisan
Murji in his local
context in Kutch.
Photo: © ReSlide
team

means of creating awareness and the idea of sharedness when he explains:

if the other person was from a very different culture, for example one in which there were few cars, or few new and well maintained cars, then her apperceptions would be different and her perceptions would be less appresent for me. Appresentation depends on sharing a very similar stock of knowledge and, the further away the other's experience, the less likely the person will see things in the same way.

Marton and Booth (1997, p.99) liken appresentation to how we perceive a table when looking at it from above, because 'the experience is not of a two-dimensional surface of a table, but of a table'. In other words, the external experience of seeing the surface of a table from above trigger a much richer internal experience that is more effective in allowing us to understand the phenomena present, because it takes into account contextual and prior experiences in addition to what is *presented* to us (ibid., p.99). From our perspective, it is important to consider what experiences can build a shared stock of knowledge. Within any learning process our internal and external experiences do come to matter in the way we perceive a culture or a cultural object. Allowing practitioners to experience the critical aspects of cultures by a process of total immersion actually work towards informing this multidimensional understanding, more so than in much debated craft and design interventions where contact remains brief and superficial.

To what extent could these analogue experiences be extended into the virtual environment of reSlide?

Digital Engagements of the reSlide

In 21st-century maker cultures, digital engagements are sometimes viewed as detrimental to the analogue culture (Luckman, 2013, pp.251-252). On the other hand, online platforms like websites are seen by some as rather 'underutilised' modes of engagements because creating public digital engagements are considered a daunting task to achieve within residency experiences (Hare Duke & Theophilus, 2013, p.210). Little doubt exists that the use of digital media and technology in creating cultural experiences is an emerging practice, however, and Rachel Charlotte Smith suggests the true challenge does not lie in applying technology to existing practise to enhance the user experience, but to understand the 'emergence, creation and conceptualisation of cultural heritage' within digital engagements (Smith, 2013, p.117).

Within the reSlide residency, the participants maintained their personal web blogs as part of the project, but were supported by a central Facebook page. As Hare and Theophilus (2013) have suggested, we had doubts about how much trust can be given to interactions between the larger public and self-publication.

In recreating a virtual community, the public's

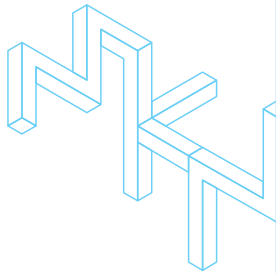


Image 4

increased use of internet communications and social media, in the context of production and consumption (Lewis et al., 2010), has been described in the concept of 'prosumption' in a 'prosumer- society' (Zajc, 2013), or through what Gregory Cameron (2011, p.336) calls a 'democratic public sphere'. This is a central consideration in our study as immersion in community has been shown to be a central gain of the analogue residencies.

How the Digital Engagement Worked

The ReSlide Facebook fan page was utilized as the main method of online engagement from the inception of the residency, with all four practitioners given access rights for contribution to content. The makers published their own work and found inspiration found during their cultural explorations in each society, with plentiful conversations starting on their initial comparisons between Eastern and Western practices. With the initial content validated as authentic by the residents' immersive experiences, fans and followers of the page actively contributed through deeper enquiry as well as reporting related experiences. This reflects Lessig's (2004) observation on how social media are inviting users to, by means of reading, also write (cited by Zajc, 2013). Active participation is preceded in this model by consumption (Zajc, 2013). The latter possible only in digital, not analogue format for anybody but the participants of the residency itself.

The use of social media during the residency brought great insight into how the online and offline engagements could be viewed in a complementary manner as global discussions and communicating with a personal intimacy existed side-by-side and kept prompting participation at different levels. In this context, one (adult) group's off-line engagement with the residents were shaped by on-line engagements during and after the residency project as they continued to share what had been observed in the analogue meetings as communities of practice. The digital engagements populated the idea of sharing rather than copying, where collective contribution of making was enjoyed by all going beyond the individual making practices (Image 4).

Digital Engagements and Appresentating a Culture

The appresentation, as seen in the analogue cultures, was also found to be useful in understanding the digital engagements. The *on-screen* presence of reSlide

through textual and visual branding on the social media became available to anyone who followed it. By ways of liking, sharing, commenting, tagging or simply reposting hyperlinks and web links, screens were 'walked' (Cetina & Bruegger, 2002a, p.396), and users were enabled to distinguish themselves as bona fide participants of the project without necessarily having actively participated. In other words, what benefits a project (or product) in terms of gaining publicity through social media sharing also has benefits for those choosing to share as they choose a level of involvement that goes beyond mere passive consumption and moves into the realm of prosuming.

By bringing different engagements, conversations and presentation onto a public social media platform some immersive experiences could be connected; allowing a large community to be *present identically in all places* whether they were in Scotland, India or any other country in the world. This was dependent on whether they had direct links to the project, or whether they had actively contributed or not (Cetina & Bruegger, 2002a, p.395).

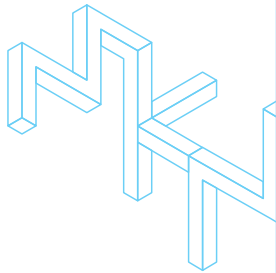
Appresentation also works through online platforms, according to Knorr Cetina and Bruegger (2001, p.183), because:

screens are not, in their core elements representing a reality out there, but are constructive of it... we take the screen to be an appresentational device that enhances and routinizes such relationships... where the screen brings a geographically dispersed and invisible market close to participants, rendering it interactionally or response present (Cetina & Bruegger, 2002b, p.163).

Therefore, in the residency, digital engagement and the maker culture is constructed by assembling experiences from people of different disciplines whether taking part directly or passively. It includes makers, craft lovers, craft enthusiasts, institutions, researchers and businesses, and the public at large. It contributes by creating a 'site' of consumption and (elective) production of craft work and culture rather than acting merely as a 'medium' of transmission of images and textual data (Cetina & Bruegger, 2001, p.183).

The digital experience empowers each user by freely offering a position on the online community without the scrutiny and potential exposure of inadequacy often associated with analogue sharing of cultural activity. By 'becoming a player in its overlapping networks', brings benefits beyond the selected group of people in the analogue engagements (Cetina & Bruegger, 2002b, p.164). The digital experience allows observers, gently and without pressure, to become participants by incrementally growing their thoughts on other participants into finally daring to propose their own contents if ever they choose to do so, but without the embarrassment of remaining silent forever.

Image 4.
Collective
embroidery banner
shared online.
Photo: © Louisa
May Douglas



Images to Facilitate Remote Immersion

The digital platform also allowed abandoned use of images and videos, for example of time spent in India by the Scottish practitioners who shared footage and images of local festivals, like the Navaratri festival² and the garba dancing³, or the traditional Rabari⁴ wedding festivals. This documented details of different maker techniques as well as the rural Indian community they were associated with in a way that provided an immersive experience virtually, and allowed at least parts of the analogue residency experience to be transferred on to a digital platform. Interestingly, some practitioners provided evidence on their personal maker practices in reaction to these documented local cultures by posting detailed descriptions of mood boards, videos on experimental design approach, and material and conceptual explorations alongside moving images of what they had experienced. (Image 5)

Another Scottish practitioner provided a detailed description of the natural indigo dyeing techniques she learnt in Kutch to bring insight into how she used it during her own design process. (Image 6)



Image 5

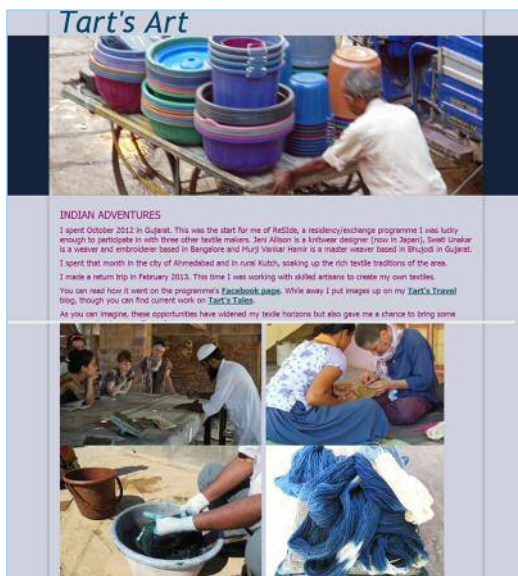


Image 6

This information was commented on as important by other users in India and in Scotland as a way to witness how traditional practices might be contemporised, informing interesting debates on craft and design interventions at times when innovation is claimed to be largely associated with Western modernists values deploying first world design agendas for local cultures (Tunstall, 2013). Once again, the social media platform allowed these discussions to be shared democratically.

Importantly, during the time spent in Scotland, the Indian practitioners wanted to explicate the various types of design meetings they had by posting these events online. Posts varied from capturing the natural beauty of Scotland as contrasting to the arid desert experiences in Kutch, to design experiences in museums, archives and private design studios in Scotland. Online posts by the Indian residents tended to concentrate on communicating aspects of their changed practices rather than materialising their broader cultural experiences through actual product. A participating Indian designer, for example, posted her new open studio concept that was started after the residency (Image 7), and an Indian artisan supplied images of sharing his Scottish experience with his community (Image 8).

Did the Digital Platform Create Digi-cultures?

It would be overly optimistic to conclude that reSlide digital engagements created a full online representation of analogue cultural experiences when compared to the highly personal and multisensory immersion experienced by the residents during their two months (Cetina & Bruegger, 2002a). Even though great efforts were made to make the materiality of the screen come alive with textual and visual data, the *transparency or the see through quality* of the information one shares on the screen must be considered rather one dimensional in comparison to living and working in a culture 24/7 (ibid).

What can be shared online never quite offers equal opportunities. All the descriptive and layered information equivalent to witnessing and sensing the events, especially when taking place across such different geographic locations, is often lost (Cetina & Bruegger 2002a & 2001). Therefore, the research poses two questions to be considered on how much one can experience of another culture within a digital engagement.

1. Is the information provided on an online platform sufficient to create a meaningful understanding of another culture, and does it equate to a cultural experience?
2. Is the information and knowledge provided through images and texts or colloquial conversations an adequate representation of culture to inform making?

2. A festival in India that celebrates the Hindu goddess Durga.

3. A form of a dance that is said to originate in Gujarat.

4. A type of embroidery practiced by nomadic communities in Gujarat.

Image 5.

Content from ReSlide Facebook fan page.

Image 6.

Content from Lindsay Robert's personal blog shared on Facebook.

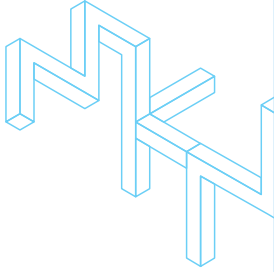


Image 7



Image 8

Analysing the reSlide Facebook Fan Page

We attempted to bring insight into the above two questions by analysing the Facebook page using open source software NodeXL, before visualising it using Gephi. This allowed observation, analysis and visual interpretation of the connectivity between the 283 members of the fan page on this social platform. The most engaged group were between the ages of 25–34. Identifying key influential people in terms of co-commenting and co-liking, we requested their feedback on how the reSlide residency's online platform helped them to understand another culture and to what extent it influenced their practices.

The answers demonstrate that reSlide on Facebook has added cultural knowledge as well as arousing further interest in the culture perceived as *other*. According to one comment, the images and other contents formed rather an exotic experience and generally opened minds, allowing a glance at cultural exploration without ever moving:

It gave me a look into a place I had only heard of, but have never been. It made me more open to exploring culture in other places.

Other participants reported a direct influence on their own practice as well as a broadening of the mind:

More open and broadened my thoughts pattern and creative output

A third indicated the digital immersion as a possible first step before actual travel:

My practice now is not as a textile designer but as an artist and the visual images inspired my use of colour. I would love to go to India and see the colours in reality.

Some of the online residency's social media practices created larger conversations between members as one user said 'I read and share to make others aware.' Describing collective dialogue, which is important for collaborative creations, and particularly in problem solving conditions (Lewis et al., 2010). Images were at times used to stimulate and facilitate a collective problem solving atmosphere in virtual territory (Image 9). According to Lewis et al. (2010) it is these collaborative problem solving cultures which ignite innovations and change.

Further, we saw the platforms used for encouragement, advertising to participate in related analogue events, to seek more information and virtually participate in the events at distance. The sense of appreciation lavished on many such events either through participating in conversations, or simply liking each other's submissions provided a cornerstone for the sustainment of the online platform.

The online exp of ReSlide helped me understand the long term output of the entire programme, how it has benefitted all involved over a period of time. I am particularly inspired to see how much effort ... [The Scottish designer maker] has put in the project even post her visit to India...!

The importance of sharing the visual content on social media, or any digital platform was key where many participants saw the benefits of visual culture:

The interactions and postings made me appreciate and understand another culture more with the visual content than words.' Or 'The images update on FB is a quick way of following the story. After all a picture says a million words.

The photo albums that were posted by the reSlide residency practitioners were analogous to the physical journal entry experience, which seeks to elicit, document or develop a personal approach to understanding creative inspiration, here located in the understanding of another culture.

As the practitioners shared what they keenly captured as the critical data through images, representing the most interesting aspects of life styles and the making culture, such collated albums created multi-layered scenes that online users could build and comment on. Different meanings and experiences that were exchanged, brokered and negotiated created a digital learning environment (Lewis et al., 2010).

Discussion

Uploading intensely and intimately captured events on social media and inviting a community of users to

Image 7.

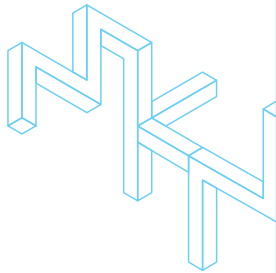
Open Studio in Bangalore concept realised.

Photo: © Swati Unakar

Image 8.

Sharing residency experience in Kutch.

Photo: © ReSlide team



share, comment, contribute or even just consume, has been shown to add inclusive and lasting dimensions to the reSlide residency project. The community succeeded in evoking a maker culture that was 'represented, created and consumed' through the images and texts which were generated, shared and understood on an online platform (Woermann, 2012, p.621). The 'micro-communications' like nature of social media served as a relatively barrier free insight into individual practices and perceptions, which big events might struggle to achieve as building a social eco system would first be required.

A picture was generated through a collection of 'lots of small bits of information about people and communities' that can help inform choices made at whatever level or degree appropriate and possible for each participant (Lewis et al., 2010, p.355). Here, another culture becomes represented on the screen as a *whole* (Marton and Booth, 1997), to whatever degree, and from whatever angle a participant chooses to engage with the collection of diverse interactions and contributions. What is presented on the screen of the social media platform is not just a collection of images from the individual residency experience, but instead becomes a collective immersion in analogue experiences and the digital reactions they trigger (Image 10).

As Knorr Cetina and Bruegger (2002a, p.397) explain, the on- screen representation becomes a 'wired, programmed and content- filled, textually elaborated, *surface* that fascinates through its ability to frame and present a world'. This contributes to the creation of a developing culture experienced by all who participate, and necessarily different to what this culture actually is like, or how it is experienced by just some. For a total immersion into the cultural experience, the on-screen presentations should serve to create an experience of integration and accumulation of knowledge that individuals achieve through embodied processing when they develop 'implicit knowledge' (Cetina & Bruegger, 2001, p.193).

Creation of such 'implicit knowledge' is considered a key achievement of the analogue experience of residency, but was also clearly present in online users as they engaged with previously unknown or assumed characteristics of culture through live debate of various viewpoints and through multiple stimuli (Dant, 2012). What was achieved through digital engagement of participants might be seen as an initiation, or 'common ground' in creating a 'shared perspective that helps make sense of novel experiences and cultural categories' as explained by Lewis et al. (2010, p.364).

The running of the digital platform during and after the residency programme had been initiated as a relatively sustainable and accessible mode of knowledge economy that is democratic and truly global where the residencies were necessarily elitist and local. It served as collating 'dispersed and fragmented local knowledge' into a distributed knowledge' system (Cetina & Bruegger, 2001, p.193) irrespective of the physical, temporal and spatial. While post residency, the online engagements are an example of lasting debate as participants are still updating their different creative trajectories on the Facebook fan page. We must note that the online engagements were much livelier during the residency, particularly on those events when it was linked up with off-line community engagement projects.



Image 9

Image 9.
Contents from
reSlide Facebook
page.

Image 10.
Collection of images
posted on social
media as cultural
experiences.
Photos: © Swati
Unakar



Image 10

Limitations of Digital Engagements

To support successful digital engagements other aspects of developing successful collaborative digital narratives must be considered. A question raised by Knorr Cetina and Bruegger (2002b, p.164) centre on how the human relationships of analogue encounters might be infringed on screen by *non-human others* within the digital engagements. The workshop sessions that ran alongside the residencies and the online platforms connected both on-line and off-line making might have served to bridge this gap in certain ways. Future research might investigate how users produce and consume the digital making cultures in analogue ways beyond the project.

Another constraint rests with the linear format of Facebook communications where content gets archived as more posts get added.

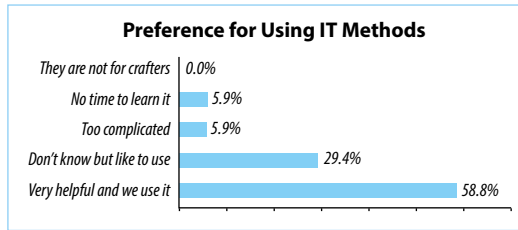
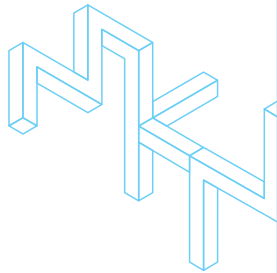


Image 11

Facebook deals pretty exclusively with 'now' so to see the development of the project you would need to scroll backwards from the bottom'. (Scottish designer maker).

Finally, and since we are speaking of cross cultural knowledge engagements, accessibility to technology and preferences do matter for effective engagement. Communications might be hindered by infrastructural facilities and literacy rate of the people who get involved across the boundaries. A few years ago Lewis et al. (2010) reminded us that even though digital smart phone accessibility was high in Europe, it remained largely limited in other parts of the world. We can add to this viewpoint the results from a mini survey⁵ of some artisans in Kutch in 2012 (Greru, 2012) to emphasise the emergence of information and communication technologies in terms of sharing and communicating craft skills to help with their creative craft productions. The results showed the increased preference and attention the rural artisans had developed over ICT methods and it was beyond what we initially anticipated (Image 11).

With such growing interest and enthusiasm to learn and use technology, we are hopeful that rising technological accessibility and mediation may not only create democratic maker practices, but will also generate democratic maker cultures through increased communications and knowledge sharing where analogue meetings are out of the question. Future research might look into ways of refining such collaborative cultures.

References

- Camero, G.,** 2011. 'Politics and the Internet: A phenomenological critique', *Meta: Research in Hermeneutics, Phenomenology, and Practical Philosophy*, 3(2), pp. 335-361.
- Cetina, K. K., & Bruegger, U.,** 2001. 'Transparency Regimes and Management by Content in Global Organizations. The case of institutional currency trading', *Journal of Knowledge Management*, 5(2), pp. 180-194.
- Cetina, K. K., and Bruegger, U.,** 2002a. 'Inhabiting Technology: The global lifeform of financial markets', *Current Sociology*, 50(3), pp. 389-405.
- Cetina, K. K., and Bruegger, U.,** 2002b. 'Traders' Engagement with Markets: A postsocial relationship', *Theory, Culture & Society*, 19(5-6), pp. 161-185.
- Dant, T.** 2012. 'Seeing Things: Apprehending material culture' in Heywood, I., and Sandywell, B., (eds.), *The Handbook of Visual Culture*, London: Berg, pp. 426-444.

- Frayling, C.** 2012. *On Craftsmanship: Towards a new Bauhaus*, London: Oberon Books.
- Greru, C.,** 2012. *Communicating and Managing Craft Knowledge in Cultural Based Product Design Developments*, unpublished thesis, Heriot watt University.
- Greru, C., & Kalkreuter, B.,** 2013. 'Makers in the Class Room: Knowledge exchange through practice', in *Making Futures 3*, Plymouth, UK, Plymouth College of Arts.
- Hare Duke, B., & Theophilus, J.,** 2013. 'Crafts and the Contemporary in South Asia: A collaborative journey' in Ravetz, A., Kettle, A., and Felcey, H., (eds.), *Collaborations Through Craft*, London, UK: Bloomsbury Publishing Plc, pp. 193-205.
- Hine, C.,** 2000. *Virtual Ethnography*, London: Sage.
- Hine, C.,** 2008. 'Virtual Ethnography: Modes, varieties, affordances', *The SAGE handbook of online research methods*, pp. 257-270.
- Horn, S.,** 2006. 'Inspiration into Installation: An exploration of contemporary experience through art', *International Journal of Art & Design Education*, 25(2), pp. 134-146.
- Lewis, S., Pea, R. & Rosen, J.,** 2010. 'Beyond Participation to Co-creation of Meaning: Mobile social media in generative learning communities', *Social Science Information*, 49(3), pp. 351-369.
- Luckman, S.,** 2013 'The Aura of the Analogue in a Digital Age: Women's crafts, creative markets and home-based labour after etsy', *Cultural Studies Review*, 19(1), pp. 249-270.
- Marton, F., & Booth, S.,** 1997. *Learning and Awareness*, Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Smith, R. C.,** 2013. 'Designing Hertzgae for a Digital Culture' in Gunn, W., Otto, T., and Smith, R. C., (eds.), *Design Anthropology: Theory and practice*, London, UK: Bloomsbury Publishing Plc, pp. 117-135.
- Tunstall, E. D.,** 2013. 'Decolonizing Design Innovation: Design anthropology, critical anthropology and indigenous knowledge' in Gunn, W., Otto, T., and Smith, R. C., (eds.), *Design Anthropology: Theory and practice*, London, UK: Bloomsbury Publishing Plc, pp. 232-250.
- Woermann, N.,** 2012. 'On the Slope Is on the Screen Prosumption: Social media practices, and scopic systems in the freeskiing subculture', *American Behavioral Scientist*, 56(4), pp. 618-640.
- Zajc, M.,** 2013. 'Social Media, Prosumption, and Dispositives: New mechanisms of the construction of subjectivity', *Journal of Consumer Culture*.

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5. The survey was distributed among 30 artisans in Kutch. Twenty usable surveys were returned with a response rate of 66.6%. Out of this, 10% were female with a majority of male artisans.

Image 11. Preference of using ICT methods in artisanal making.