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A Meditation on the Faces of Circular Textile Research

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Abstract: *To achieve a circular textile industry – one that has closed complex resource loops at all stages of the lifecycle – collaboration is required between diverse stakeholders. Working with people from different backgrounds, cultures, training, professions and with different languages can be extremely challenging, and progress when working together for the first time can be slow. This paper presents one approach taken by the authors who used textile design methods to help build a sense of trust and shared understanding amongst a group of EU project collaborators – scientists, designers and industry participants – during six of the mandatory project workshops which took place over a 14-month period towards the beginning of the project. Three experiments were conducted using the faces of the participants to create new insights around the roles, knowledge and expertise of the group; as well as being used to form the basis of the first co-created garment for the project.*

Keywords: Circular textile research; collaboration; cross-disciplinary and inter-disciplinary approaches; faces

Introduction

The authors created a series of interventions in the unscheduled times of the workshops focusing on the social connections within the group. Each intervention drew attention to participants' faces, using visual mapping and textile design methods to develop relationships in unconventional ways. The authors' 'hunch' was that building relationships using visual textile methods within a conventional EU project setting could strengthen the shared ambitions of the group, which would be particularly important for supporting collaboration between workshops when people were working independently, in disparate locations and with fewer opportunities for face-to-face interaction.

The two main interventions are presented in this paper as Experiment 1 and 2, while a preceding (supporting) intervention is described as a 'pre-experiment' providing background to the approach. The authors draw on results from post-workshop feedback surveys, field notes and observations to reflect on the usefulness of this approach for achieving 'trust and shared understanding' and generating lasting personal connections between the disparate research team members.

Research Context

The authors were positioned within two work packages of an EU project concerned with communication; one with external communication and the other with communication between the consortium which included a variety of disciplines (designers, textile design researchers, scientists, social scientists, and manufacturers). The authors' decision to focus on 'faces' was very much linked to the understanding that the current project would succeed or fail based on new collaborative relationships between *people*, many of whom had never worked together before, in an environment that was geographically dispersed. Face-to-face contact was only possible during two-day workshops held every two to three months, where representatives from the partner organisations would work together in tightly scheduled exchanges (typically 35 people). Therefore, the need to enhance and support the collaboration as well as communicate to an outside audience was framed from the outset and opened up a research direction which was defined by the people involved in the work. It should be noted that although this seemed a logical approach to the authors due largely to their personal/professional stance and previous research (see Earley 2017 and Hornbuckle 2010, for example), this is not a conventional path for EU projects, which are usually characterised by a technology- and process-focused approach. Indeed, it is unusual for EU projects to include face-to-face workshops so frequently in the workflow.

In contrast to the intense face-to-face moments in the workshops there are also the 'in between' periods where communication is necessarily restricted to teleconferencing and emails. The numerous

benefits of face-to-face encounters versus technologically-enabled communication is now well established, Arvey (2009) explains:

Face-to-face meetings allow members to engage in and observe verbal and non-verbal behavioral styles not captured in most computer mediated communication devices. There are nuances associated with hand gestures, voice quality and volume, facial expressions, and so forth that are simply not captured in email discussion, chat rooms, and the like. Even videoconferencing does not capture all of the dynamics of group members (e.g. the expression of others while one member is talking, etc.). (Arvey 2009:6)

Subtler advantages cited by Arvey include “sideline conversations” (2009:7) which occur when people are at ease with one another and have the opportunity to break away from the main group during coffee breaks or other social times, and “humour” which occurs much more readily during face-to-face exchanges and enhances social connections and relationships.

The significance of the ‘face’ in the sciences

The ‘face’ has long been the focus of considerable attention from psychologists and philosophers. With the emergence of neuroscience and the ability to gather neurological data to study facial recognition and perception, knowledge and understanding about the significance of faces has grown enormously.

To the two design researchers who instinctively recognise the importance of faces to making social connections, reviewing scientific concepts relating to ‘faces’ provides some guidance (as well as reassurance) about the design interventions used within the action research setting. For this reason a brief discussion of the relevant concepts is included here.

Psychologists studying ‘face recognition’ and ‘face perception’ have sought to understand how people process the complex information presented in a person’s face, as Jeffrey & Rhodes explain:

Faces convey a wealth of information that we use to guide our social interactions. As adults, we swiftly extract information about identity, gender, ethnicity, age, and emotional state from faces. (2011:799)

The skill involved in interpreting and understanding this information is important from a very young age, enabling children to begin to read social cues, communicate and build relationships. The philosopher Jonathan Cole, who has sought to understand how physical abnormalities to peoples’ faces have affected their social and emotional well-being in his seminal work *About Face*, explains:

Babies and children first reach out to the world not via abstract thoughts but through a relatedness to others based on an affective emotional need, and much of this relatedness is communicated through facial expression. If this is the case then the face has a role in the child’s development of socialization and in the realization of others. (1998:6)

So face recognition is powerfully associated with how we respond to people and our emotions (Curby *et al*). Indeed, when combined with other physical cues such as vocalization, gestures and ‘gaze’ the resulting impression - termed *person perception* – provides a great deal of information for interpretation about a person and becomes the basis for social interaction and relationship building. When considered in the context of building collaborations, where complex social groups need to form relationships in the short timeframe and intense environment of the project workshop, the importance of faces becomes

even more apparent. Indeed, Cole (1998) argues that the link between facial recognition, the organization of complex social groups and meaningful relationship-forming is central to what differentiates humans from other species:

One reason for the success of primates has been their development of complex social groups. These require regulation, based on mutual regard and hierarchy, and I suggest that facial display has a role in this. In humans further advances have occurred which enable, through mutual regard, ways into others' minds. (Cole 1998:6)

The link between faces and social interaction is also considered through the concept of 'saving face' by Goffman (1967), who maintained that "the proper study of social interaction is not the individual and his psychology, but rather the syntactical relations among the acts of different persons mutually present to one another" (1967:2). In this respect 'the face' relates to maintaining actions which will not compromise the outward expression of the self, and so rather than simply a physical appearance, the face becomes an important symbolic outward expression of the person and how they relate to others.

Considering the power of face-to-face interaction, philosopher Levinas proposed that the gaze of another amounts to a 'command' and leads to an inherent sense of responsibility in the ethical sense, as Bergo explains:

This command and supplication occurs because human faces impact us as affective moments or, what Levinas calls 'interruptions'. The face of the other is firstly expressiveness. It could be compared to a force. (Bergo 2015)

In summary, there is a clear, but complex, link between the importance of facial perception and social interaction. As a basis for further investigation, from a design research perspective, focusing on the face could offer great potential for helping to build meaningful relationships in a pressurized environment such as the project workshop. What is more, the literature indicates the connection of facial recognition to other means of expressions such as vocalization which could be useful when trying to enhance the technology-enabled interactions in between face-to-face encounters. There is also the suggestion in Levinas theoretical stance, that meaningful face-to-face encounters are powerfully affective, making connections which could be invaluable to building trust which, of course, is essential to collaboration.

Methodology

The methodology fuses textile design and communication design research. The background of the authors are in textile design research (Earley, author 1) and the communication of recycled materials (Hornbuckle, author 2), so the methods developed for the experiments were a sequential process that moved between the experience of both authors:

- i. creating photographic imagery (textile design research method)
- ii. using this imagery to co-create a map and analysing this information (communication research method)
- iii. co-creating visual imagery for print design (textile design method)
- iv. collecting feedback from participants and analysing replies (communication research method)
- v. responding to the insights by making a textile artefact (textile design method)

The project set-up, as well as the different expertise and responsibilities, led to the formation of the first phase of the action research, the '**pre-experiment**' which involved taking 'headshots' of each person at

Workshop 01 (September 2015). Further interventions which followed on from this first response to the project situation, and which are presented in this paper are identified as:

- **Experiment 1:** ‘Face-map’ – participants were asked to place themselves within a ‘map’ of the project using ‘face stickers’ (Workshop 04, May 2016), to create an expertise log.
- **Experiment 2:** ‘Silence Shirt’ – participants were invited to meditate and then draw each other’s faces in silence (Workshop 06, November 2016), to create imagery for a printed textile artefact.

The Pre Experiment

The pre-experiment involved author 1 (a printed textile designer) using photography – the technique most commonly found in the early stages of her creative textile practice projects – as a means to record participants’ faces during project workshop 1 (Stockholm, September 2015, figure 1). Author 1 describes the importance of this first step in framing roles, developing trust and building relationships and its significance as the prelude to Experiments 1 & 2. As part of the leadership role of Work Package 8 (Communication, Dissemination and Exploitation) the portrait shoot by author 1 acted as a way to bridge the deep textile design expertise with the new communications role. It also served as a warm-up to the main events of the two-day meeting and provided essential material for the first deliverable – the project website. This pre-experiment quite literally put names to faces, through creating a shared file for the project participants to access in order to remember who is who in the large consortium group. The logo-patterned backdrop poster gave the portraits a unified aesthetic, resulting in a set of visual images that contributed to the sense of a unified project team with shared objectives from the very first meeting.



Figure 1. Author 1 setting up the portrait shoot and reviewing the results with WP01 leader
Source: C Kohtala



Figure 2. Project Portraits - outcomes from the pre-experiment
Source: R Earley

Experiment 1: Capability Face Map

In between workshop #03 and workshop #04 (February to May 2016) author 2 was focusing on how to enable people within the collaboration to understand one another’s expertise. This was seen as important in the project context as observations from workshop #03 suggested that peoples’ roles and abilities within the workshop setting were still unclear. Author 2 proposed to the methodology team (a team of ‘facilitators’ that plan the workshop activities and exchanges) that they undertake a survey of workshop participants’ expertise, creating a resource for the people in the project which could aid relationship-building and collaboration. This survey elicited a good response from participants with 40 responses.

Once the data had been generated the question remained about how to make it accessible to participants. This has been a central question throughout the project as some types of information

presentation are more accessible to designers and others to scientists and engineers (Hornbuckle 2010; Ashby & Johnson 2002). Therefore, the multi-disciplinary nature of the workshop participants pointed to a two-pronged approach:

Stage 1: A simple tabular presentation of the capability data using colour coding to make the information easier to comprehend. A hard copy was given to each workshop participant and the digital version made available on the internal project website (see figure 3).

Stage 2: Face mapping sought to engage visual thinkers and make the information memorable to all through interaction (see figure 5). This intervention will now be discussed in more detail.

The 'face-mapping' activity

Visualising information is seen as a powerful method of supporting understanding, Tufte comments: "we envision information in order to reason about, communicate, document and preserve that knowledge" (Tufte 1990:33). The recent emergence of the 'info-graphic' – as researchers and designers seek to make 'big data' available to a larger population and decouple accessibility from privilege (Boehnert 2016) – signifies an acceptance of the power of information visualisation.

The approach of author 2 therefore was to aim for data visualization to improve the accessibility to the diverse audience of project partners. Meanwhile, the nature of the data – being about the people in the project – proceeded logically from the 'pre-experiment' described above; using these 'faces' as powerful and affective symbols in the data presentation. Alternative symbols such as the person's name or organization logo could have been used, but considering the psychological and philosophical significance of the face, discussed earlier, using faces could lead to a more engaging and emotive representation and could potentially enhance social connections and interaction in a way that other symbols may not.

Rather than simply interpret the data into an info-graphic and present it to workshop participants, author 2 proposed an interactive task to maximize engagement. A large poster of the project lifecycle was pinned within the workshop space and participants were given their own 'face stickers' to place within the project (see figure 4). This created a sense of 'fun' for people by handling and placing their own faces amongst other peoples' and gaining a sense of location within the project and in relation to other people. It is perhaps worth mentioning the current zeitgeist of 'selfies' and Facebook as a contributing factor in understanding the potential power of making social connections in this way. Furthermore, it is not a big leap to suggest that people are now more accepting of 'using' their own self-image in an explicit and public way than they may have been prior to the rise of social media. This exercise perhaps borrowed some familiarity from this current trend.

The success of the activity can be gauged partially through participation levels and responses to the post-workshop survey. Every workshop participant took part and some even added other colleagues (who are involved in the project but not attending workshops) using post-it notes. The feedback from the post-workshop survey was positive, with partners asking for it to be made available online and stating that it will become "increasingly useful". In the post-workshop analysis, the author was able to code people by their broad disciplinary category (design, science, manufacturing) which also gives an overview of where different types of knowledge reside within the project (faces have been removed for anonymity).

Figure 3. Collaboration participants' capability data presented in a tabular format
Source: R Hornbuckle



Figure 4. Face stickers given to each collaboration participant to map their own expertise
Source: R Hornbuckle

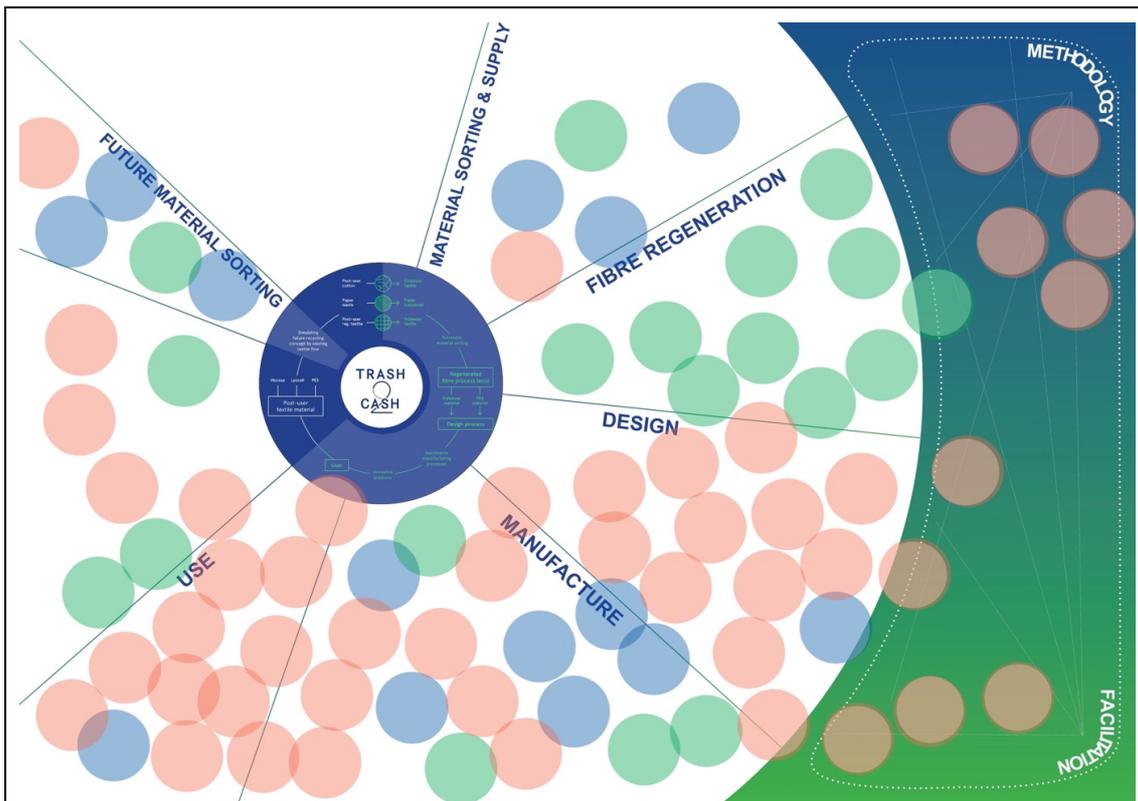


Figure 5. Capability map created by collaboration participants using their face stickers (faces removed for anonymity and coded by discipline: green=science blue=manufacturing red=design)
Source: R Hornbuckle

Experiment 2: The Silence Shirt

Faces are the most interesting things we see; other people fascinate me, and the most interesting aspect of other people – the point where we go inside them – is the face. It tells all.
(David Hockney)

Author 1 uses the remanufacturing of the polyester shirt to explore ideas about sustainable textile design strategy, education and fashion innovation. The work currently focuses on building bridges between science, industry and academic researchers towards new models for the circular fashion textile industry. As this body of work has progressed, the value of co-creating the garments has become increasingly clear. In exploring new research questions the shirts previously created through workshop scenarios have provided very different kinds of insights when compared to shirts created by the author in a solo or partner context. Building on this body of practice research work, author 1 wished to use unscheduled time in a workshop to co-create a shirt print design – for a recycled polyester item – to understand whether spending time making something together could help bridge the divide between design and science partners and contribute to the formation of lasting working relationships.

Philosophical and Psychological Research Context

This section will present the premise for experiment 2 drawing on neuro-science and social psychology principals which emphasise the importance of 'faces' to social interaction and building relationships (Bargiela-Chiappini & Haugh 2009; Goffman 2005; Cozolino 2004). Researchers Kellerman, Lewis, and Laird (1989) set out to explore the effects of consistent eye contact on feelings of romantic love. In two experiments, people were randomly paired into opposite sex couples and given the instructions to look at their partner's hands or eyes, or count eye blinks. After that participants filled out questionnaires to assess their emotional responses to their assigned partner. The questionnaires showed that couples who participated in mutual eye contact in particular reported stronger responses than the others. Couples who looked into each other's eyes reported significantly higher feelings of affection, passionate love, dispositional love, and liking for their partner. Thus, as the researchers note, "*subjects induced to exchange mutual unbroken eye gaze for two minutes with a stranger of the opposite sex reported increased feelings of passionate love for each other.*" (p. 145). In Aron *et al* (1997), researchers put pairs of strangers together and asked them to talk about intimate topics for 45 minutes. Afterwards, the participants rated how close they felt to other person.

Author 1 happened across these examples after a colleague had fallen in love with a stranger in a silent meditation practice in a yoga centre. After looking at the stranger for 30 minutes the colleague reported feeling intensely connected to the stranger. They now have a child together. Author1 was interested to know whether through a creative design research experiment some 'love' could be created between project partners. The experiment aimed to also:

- a) Give the participants a break from the formal tasks and activities, specifically giving them a chance to feel the benefits found in silent meditation
- b) Give the participants a chance to create something (a painted portrait) as well as be part of co-creating the print for a garment (The Silence Shirt)
- c) Give the participant the opportunity of having their portrait painted – 'how do others see me'?
- d) Find out if this type of activity enhances the sense of connection between partners and changes the view of the project work in any way.

Stage 1: Practicing collaboration through making, project partners were invited to co-create an upcycled shirt during workshop 6, 21-22nd November 2016. *Silence Shirt* was co-created by EU project researchers who gathered together at work after lunch, silently meditated (figure 6), stared at each other in pairs for some minutes, and then quietly drew each other's portraits using transfer inks (figure 7).

Stage 2: The drawings were then scanned - (other textile patterns and constructions will later be created from the resized scanned images) - and later collaged, hand painted and printed on to a second hand shirt by Author 1. (Figures 8, 9 and 10).



Figure 6. Meditating – a quiet moment in the middle of WS06 – enabling participants to prepare for a creative activity with a person they do not know

Source: R Earley



Figure 7. Painting portraits of partners using transfer inks, WS06

Source: R Earley



Figure 8. The blank shirt with the disperse dye painted portraits around it

Source: R Earley

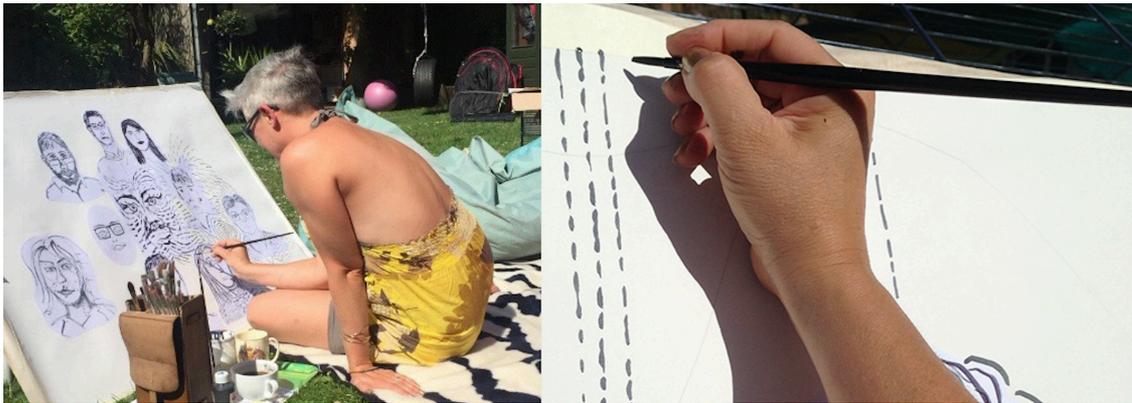


Figure 9. Author 1 collaging the portraits together for the front and back shirt print panels – using hand painted textile patterns to literally make connections between the very different portrait styles

Source: R Earley



Figure 10. The finished co-created print and upcycled garment, 'The Silence Shirt' (Earley 2017)

Source: R Earley

The Results of Experiment 2

Giving the participants time to distance themselves from the immediate sensations experienced, exactly six months after the workshop author 1 asked the participants to reflect on the session, using emailed questions derived from the aims of the session and photos as memory prompts. This survey elicited 11 responses (65%). Although a few were worried about not being able to recall much detail after six months, many respondents gave clear and detailed descriptions about the process and how it made them feel. Below the summarised responses express the range of feelings experienced during the meditation and the portraiture session.

Question 1

Can you remember the experience of sitting there in silence with your own thoughts for a few minutes? What happened to you? After the silence how did you feel? In what way was it different to the experience of the rest of the day? (Aim a: To give participants a break & to feel the benefits found in silent meditation.)

To stop and quietly meditate in the middle of a project workshop created mixed feelings for several of the respondents. At first the task unsettled them – but then they experienced a relaxing effect: *The meditative part at the beginning where we were “forced” to sit in silence first felt a little awkward. But then it was nice to calm down and detach a little from the “buzz” of the workshops and the conversations over lunch that we just had before...*

Many of the other respondents also wrote of this relaxing effect, noting that there was ‘tension’ during the day and that it can be very demanding to be working with so many different people. They noted the meditation making them feel less tense: *Very nice to sit in silence for a moment as a contrast to all the intense presentations and exercises. Nice to get some stress relief when meeting a lot of new people...*

Question 2

What can you remember about painting the portrait of the person sitting next to you?

(Aim b): Give the participants a chance to create something (a painted portrait) as well as be part of co-creating the print for a garment (The Silence Shirt.)

In this part of the session the responses showed that some were happy to attempt a portrait of the person sitting next to them, whilst others found that they felt out of practice, or worried about their inexperience and creating a poor portrait, or felt unhappy/dissatisfied with the tools available for the task: *I liked the idea of free drawing, it felt freeing, but it was also not freeing because I am so rusty at drawing.*

Two of the participants each saw much more than a face to draw. Both wrote independently, six months later, about a much deeper experience facing each other during the portrait session they shared:

1 - When I started to draw the person in front of me at the beginning I was concentrate onto the drawing it self in order to make a similar-looking portrait, but after few minutes I had eye contact (for a quite long moment) with X, something like a different proximity, a kind of human intimacy (at the beginning in has been a little bit embarrassing, then I just felt "authorized" to that kind of "intimacy" due to the exercise requests and the silence in the room).

2 - The portrait of X just came out of a combination of wanting to do brushstrokes with the brush and ink and - maybe - X's hair. I decided, or the drawing decided, very early on that it would be expressive and not try to be a realistic portrait. Some strokes went a little awry and I was worried that X looked angry in the drawing, when I see him rather as strong-minded and

not prone to anger. I did not think long about this, but in a small way the portrait exercise did indeed make me think more about X and his leadership and teamwork style.

Question 3

What did you think about the portrait they made of you? (Aim c: Give the participant the opportunity of having their portrait painted – ‘how do others see me?’)

A few worried about if the other person would like the portrait: *When I was painting X's portrait I remember that I was a bit worried that he wouldn't like the portrait I made, but I enjoyed quite a lot doing it, it was fun.*

To most the final portrait didn't matter; they stated that the process was what was important to them: *I must say I cannot really recall the outcome. Seeing the result right now, it clearly wasn't finished. But I don't think it is/was about the result but the process. It's the road that matters for me in this case...*

Question 4

After it was over, do you recall feeling or thinking anything different - about the people in the project or the workshop, or the project itself? (Aim d: Find out if this type of activity enhances the sense of connection between partners and changes the view of the project work in any way.)

For three respondents, there was a clear sense of a change in the way in which the partners felt connected: *In general, we all did come a bit closer, more personal, in my view... I think all in all it connected people a bit more... I did feel it created a certain connection.*

For the two that drew each other - highlighted in the answers to question 2 above – the insights that came through the exercise were useful for understanding more about how to design-in to the project.

1 - At the end of the exercise I have not a different perspective on the project itself, or about the workshop, but for sure I realized the enormous gulf in terms of personal knowledge of the people with which I work into the project, the human factor, their state of mind; how much is simple create a connection.

2 - Afterwards, when I saw the other drawings, I was surprised that everyone kept to the traditional portrait style and there were no abstract ones, aside from my expressive one. I felt proud of people willing to draw who had not had as many (or no) drawing classes as those of us who had studied design in art and design schools.

Experiment 2 Summary

The answers demonstrated that the experiment made many of the participants often feel uncomfortable at first – due to the strangeness of this kind of activity – being still, silent, and then staring at the face of their “front person”. Yet the comments also revealed that at this stage of the project people were comfortable enough with each other and the process to relax into it – even though staring at each others’ faces is an intimate act.

Drawing faces showed the skills of the designers – perhaps unrealized or demonstrated by this stage of the project. This worked in helping some scientists ‘see’ the skills of another discipline, but for one respondent it also might have created an unfair advantage and they noted a “neutral task might have been fairer.” *It was amazing to see how many good artists we have in the consortium. I think this kind of exercise was absolutely great and should be practiced on many more meetings, outside of the consortium!*

Studying the face can also work against the ambition of the experiment – maybe we see something in the face of another that send us a negative message. But for the majority of the respondents the process revealed closeness or affection between some (“adorable people”), and built more closeness between others, enabling some shyness to be overcome: *At the beginning, it was terribly difficult for me to relax my self, I was nervous and definitely out of my comfort zone for a shy person like me. After less than one minute all became soft and smooth and I just enjoy that silence... This experience was really needed to refresh my mind. During painting I just try to keep in touch with X sitting in front of me. Before that session I never had the chance to know her. After this session I think I had finally a more in-depth relationship even without talk each other. She is such a good person and I think to have a better understanding about her personality.*

Conclusion

“We regulate our emotion by seeing how we are doing with other people... Faces are not just things that move; they are things that invite you to move in a similar way.” (Cole 2017)

In this paper, we have presented three ways in which we have used the faces of participants of an interdisciplinary project workshop combined with textile design methods, in order to try to bring about new insights about how to collaborate and build partnerships across design and science research.

The Pre-Experiment was a way to help bridge methodological approaches and to put names to faces, working as an ice-breaker at the beginning of a three-year project. It helped familiarise us with each other and it gave us a resource to use to help communicate as we moved ahead. It was an important first step which provided a visual tool to use in various ways within the workshop and set the tone for how we would proceed (using a people- as well as material-focussed approach) throughout the project and particularly in Experiment 1 and 2.

During Experiment 1 it became clear that using faces as a symbol to represent a participant, rather than logos or written names for example, enabled people to place themselves within the project and alongside others. Using playful interaction and humanising the data resulted in a high level of engagement in what otherwise could have been a rather dry and uninspiring spreadsheet, particularly for the ‘visual thinkers’ within the consortium. The hope was that this would help people to build relationships and understanding that would support the collaborative work.

In Experiment 2 we noticed that the task of making a textile artefact in the lunch break interested the group, and that drawing faces is very different to photographs and stickers of faces. An artistic subjectivity and intimacy was introduced which some found very helpful, others not so. Future work could include some analysis of the drawings of faces – perhaps it would be interesting to see what a portraiture expert would say. The responses and analysis to the finished shirt printed with the faces is still to come in September 2017 when the consortium meets in Helsinki for WS09.

These experiments, although very different in style, nevertheless all draw on a common appreciation that building and supporting connections between people is fundamental to interdisciplinary collaboration. Textile design approaches along with the work of psychologists, sociologists and philosophers presented here has shown that focusing on ‘faces’ offers a powerful tool for achieving this goal. The successes of these initial experiments have lead the authors to continue to pursue and develop this approach. An EU project of this type, and the challenges presented by moving towards a circular textile industry, demand that we all try to get on well. Collaboration is essential to building bridges to link sectors and improve flows and innovation. Textile design approaches can nurture connections between people in ways that other disciplines cannot – through the silent co-creation of images and textile artefacts we can understand each other using our eyes, hands and facial expressions.

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