FACING AFFECT/ SYNTHETIC INTERFACE & MEANING

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Abstract

This paper describes a practice-led research project that addresses issues of emotional creativity and affect. A series of three-dimensional works were developed to discuss and demonstrate an exciting moment of new tangentiality; and an understanding of the emotional face as interface evolved. With this research a crossover zone was explored, where computer technology affects the material realm and where digitally driven processes interact with traditional ones, describing a hybrid practice. The practice aims to reflect on an interdisciplinary research process, including the study of creativity and synthetic emotions. This research is carried out in collaboration with the Digital Media Research Innovation Institute at OCAD University in Toronto, and the Rapidform Print Research department at the Royal College of Art in London.

Keywords: Creative emotions, emotional creativity, feeling, affect, sensation and meaning, facial interfaces.

InterFaced and Thick Friendship are two distinct series of art works that speak to evolutionary biology, emotions and hybridity. The artworks derive from a database of human and animal faces and some discrete emotional faces that were scanned with a 3D scanner and combined to allow gestural and facial expressions of animals and humans to interact. The work suggests a discussion about feeling and consciousness that includes animal and human emotions, and posthuman and transhuman digital emotions.

The work series InterFaced speaks to a body of research considering emotional consciousness and, in particular, facial expressions of emotions. It is suggested that emotional consciousness expressed through the face can serve as a good model for understanding human consciousness. Gesture, touch and feeling were explored through a creative studio project that included a digital database, sensory computing and 3D print technology in addition to creative research and traditional studio production. The body of work is reflecting on new materiality, digital touch and new surfaces that derive from digital visualization techniques. This paper proposes the face to be the seat of emotional creativity. While the work InterFaced speaks about a trajectory of emotions from man to animal and their particular relationship, Thick Friendship aims for a historical reference. Both bodies of work remain in a realm of playfulness and masquerade,

and while InterFaced combines the features of a young fox with a grinning man, Thick Friendship merges data from a buck head with sculpted busts of Schiller and Goethe, and here again 3D scanning was employed. Goethe and Schiller had an unusual emotional friendship that included all facets of emotions, from deep love to outraged hate.

Gabriele Buzzi (2007), in 'Expression and Dévisage: the face's signification from art to reality' [1], describes the face as the most analogical part of the body. She explains how difficult it is to recreate it digitally. This is probably the same challenge that artists have felt for centuries when trying to depict expressions in the human face. And yet we can read a face's expression from a very simplified drawing with just a couple of dots and lines. For the reading of an animal we usually need to also consider posture and context to be able to identify their emotional state. The fur and hair does not allow for an easy reading of an expression, and a speculative thought is offered here: that the human face is deliberately more exposed to allow for direct communication through facial expressions. This is obviously an anthropomorphic reading of the situation. A human being can certainly read the face of a dog exposing his teeth. Charles Darwin's focus in 'The Expression of the Emotions in Man and Animals' [2] was on emotions in other primates. His study included close observation of animals and humans. That emotions are observable in other primates is a defining characteristic of human emotions, and yet it is possible that there are some emotions that are

unique to humans, even though there is no convincing evidence that that is the case. Naturally, our language capacity to express and describe emotions in words changes many aspects of emotional experience. Darwin's work unfortunately was not continued so we seem to rely on these early statements of the expressions of animal faces. I considered myself to be continuing along those lines of research when I introduced the animal face in this study of facial expressions.

For both bodies of works depicted here, the faces were not created from scratch but built up from a combination of digital scans of people and taxidermy animals. The manipulation of the faces happened on a data level and not on a surface level. The data was further manipulated with a haptic sculpting tool to emphasize some features and emotional expression for clarity. It was this hands-on manipulation of the hybrid expression that became a focus point for the research of synthetic facial expressions.

Mark Hansen [3] elaborates on the shift from the visual to the affective and the haptic. By exploring de Kerckhove's argument of the disembodiment of visual experience in Virtual Reality, Hansen engages the facialization of the entire body as an imagization of affection. In Hansen's term Virtual Reality is not simply the product of advances in technology and developments in computer graphics, but rather he insists that the experience of Virtual Reality is grounded in the biological potential of human beings; it is to be understood as a body-brain achievement. In that sense Virtual

Figure 1 *InterFaced* 2013, © Barbara Rauch. Photo © photo Georg Muehleck.

Figure 2 *Thick Friendship* 2013, © Barbara Rauch. Photo © photo Nick Grace.

Reality is not technologically but biologically grounded. This new digital Virtual Reality is therefore an adaptation to newly acquired technological extensions provided by New Media. It is important to understand that virtual reality experience is not a new human experience, but that it is built in; our capacity to experience dreams demonstrates this. This is further elaborated in my PhD thesis, where I argue for the dreaming brain to be understood as a natural virtual reality model [4]. Of interest here is Antti Revonsuo's 'threat simulation theory' [5], compared with Sherry Turkle's approach to online game environments where one can rehearse different aspects of self and other [6].

My work series InterFaced, under the umbrella of synthetic emotions, attempts to visualize an evolution of emotions on a scale that ranges from the abstract via animal emotion to the hybrid human body. This was possible as we developed an application that allowed us to morph the human face into an animal face and from here into an abstract shape. It equally allowed manipulation from the human face into an abstract shape. Looking closer at the visual representations on screen, the virtual digital face seems to suggest an image that does not refer to the Real, but rather describes an image that speaks to process and information that is made perceivable through embodied experience.

I here introduce Mark Hansen's use of a technical dimension of embodiment as human agency that has been expanded with contemporary digital technologies. While I agree with Hansen's use of the digital image as processual and interactive and in that sense highlighting its potential sensory and haptic qualities, I would assess the reading of a digital image as remote and distant. But it is through the digitization of a facial emotional image, to use Hansen's exemplary reading, that humans interface more directly with the digital as they perceive and feel with the body. Hansen uses the digital face to explain affect as interface. His use of the "digital image" is in fact a digitized image that represents emotional reality as fluid and accessible.

My recent studio works demonstrate this point. The sculptures are manipulations of data from digital scans and database. With the use of a haptic interface, digital data was modified on screen yet it was felt on my fingertips as if it was happening in the material world. The facial emotion expressed on screen was no longer detached but perceived by the processing body.

To elaborate further, affect functions outside of awareness, but manipulates and interfaces from within the body. This is in contrast to emotions and feelings which depend on specific cultural construction. Antonio Damasio [7], Paul Ekman [8] and others have spoken about emotions as evolving features as they are influenced by culture, context and behaviour. Emotions and the readings of emotions are therefore an interesting study for artists and cultural theorists as they reflect the Zeitgeist of the present culture. Furthermore, it is undoubtedly the case that Western and Eastern societies have changed with the use of recent technologies, and we might wonder whether our ability to read facial expressions will also slowly change with the new mobile communication systems that doesn't rely on the reading of a human face, or the reading of the voice, but use mere letters on a screen. I would propose that reading the meaning of a facial expression or body gesture needs a creative mind which can imagine beyond the surface of the skin. I conclude with a speculative idea and provocation: by reducing the exposure to these visual references, the brain will rewire and unlearn the complex signs of more subtle facial expressions. The overall contribution of the body of work discussed in this paper presents an exploration of emotional creativity and meaningful synthetic aesthetics by offering a translation of the digital hybrid image into an object with material and physical qualities.

References and Notes

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