

An In Your Face Interface: Revisiting Cyranoids As A Revealing Medium For Interpersonal Interaction

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Abstract

This paper reports upon an ongoing investigation exploring a provoking concept in interpersonal interaction. The origins of the concept of human conduits or cyranoids as a tool of deception is outlined. Informal exploration of the technique in social settings is described. It was discovered that a participatory unveiling of the illusion might accelerate the formation of positive new interpersonal relationships. A follow up trial in a workplace setting probed if the technique had potential as a medium of business communication. Reflections upon the difficulties of accurately relaying emotions through a human conduit conclude the paper.

Introduction

Cyranoids are people whose speech is being controlled by another person (Milgram 1984). People that converse with a cyranoid may thus experience an illusion that they are interacting with the person in front of them whilst in a sense they are only interacting through that person.

It is hoped that an exploration of cyranoids can contribute to and provoke discussions in a range of theoretical and practical fields relating to interaction design, including the development of embodied agents, voice activated systems, humanoid robotics, augmented cognition, remote collaboration, social media, cyber-ethics and telepresence.

Researchers concerned with the methods of prototyping other complex devices and systems may also care to reflect on how a cyranoid is a kind of subversion of the “Wizard of Oz” technique (Kelly 1983). “Wizard of Oz-ing” uses a concealed experimenter as an inexpensive and rapid method to simulate the behaviour of an interactive application or device. In contrast, a cyranoid can be seen as using a non-concealed person (who may or may not be experimenters) in a simulation of product behaviour for which we have widely available technology.

Cyranoid the first cyranoid

The term comes from the character Cyrano de Bergerac in Edmond Rostand’s 19th Century play (Rodstand 1898). Cyrano, who is ugly but articulate, helps his handsome but inarticulate friend win the heart of Roxane by providing eloquent and witty prompts from the sidelines. The outcome is that Roxane falls in love with Cyrano’s mind through interacting with the body of his friend. Although this intriguing plot has been explored in numerous plays and films since the 19th Century, there has previously only been one attempt to explore this idea outside of fiction.

Stanley Milgram and 20th Century Cyranoids

Social psychologist Stanley Milgram coined the term cyranoid to describe a person whose utterances were being controlled by a second person, the source, via radio transmission (Milgram 1984). The cyranoid wears a headset which receives input from a microphone in a different location. The source then speaks into the microphone, and the cyranoid just has to repeat to their interactants what they hear in their ear. So that the source knows what is going on, the cyranoid also wears a microphone which transmits everything it hears back to the source. In this way one person can control the utterances of another unbeknownst to other people.

Cyranoids in the age of ubiquitous computing

Since Milgram’s work, little has been done in this area¹, and yet, today with advances in technology the time is right to explore a more advanced version of the cyranoid. While the headsets used by Milgram were conspicuous and limited to transmitting verbal data, now, it is possible to use incredibly inconspicuous equipment to transmit both verbal instruction and for the source to also receive a video stream of what the cyranoid is seeing. Furthermore, the internet means that the cyranoid and the source can be separated by huge distances, with sources simply ‘logging in’ via the web to a given cyranoid, being able to see and hear what the cyranoid hears and sees, and then being able to transmit thoughts to, and through the living, breathing avatar that is a cyranoid.

Experiments in Social Settings

To explore and verify Milgram’s claims, two trials of cyranoids were undertaken in the social setting of exhibition launch events at two different art galleries. In both cases there were three unannounced cyranoids mingling with the unknowing guests. The trials took place in different towns, thus the guests attending the events were largely unfamiliar to all three cyranoids.

An obvious and two discrete cyranoids

One of the cyranoids wore their camera, microphone, transmitters, receivers and power sources and all connecting wires on the exterior of incongruous headwear.

¹*The focus of this ongoing inquiry is on the interpersonal effects of a single source in turn conversing through a cyranoid that is colocated in time and space. Related explorations include democratically controlled tele-actors (Goldberg 2002) whereby many sources vote online to control the actions of a tele-actor and artworks in which living avatars are remotely directed to interact with other living avatars (Butler 2007).*



Figure 1. The obvious cyranoids from the two social settings trials

In the first trial this “obvious” cyranoid wore a straw hat and in the second trial, a skateboarding helmet (Fig. 1). The other cyranoids wore hidden video cameras and very discrete earpieces similar to those used by secret service personnel.

Procedure

In both experiments the cyranoids were controlled by an evolving cast of sources sitting in a hidden control room (Fig. 2). The initial sources that controlled the cyranoids were drawn from the staff of the venue. After interacting with one or more cyranoids, dozens of guests were discretely invited to the control room and given the opportunity to have their words relayed by a cyranoid themselves (some video and audio available). The duration of the trials were 2.5 hours and 4 hours respectively.



Figure 2. Control rooms where the sources sat in order to transmit words to the cyranoids

What happened

In brief, the illusion in interaction reported by Milgram was very much found to be feasible. These trials however went beyond Milgram’s use of deception. The revealing and rotating of interactional roles allowed guests to participate in the creation of the illusion which enabled a much fuller range of observations as follows.

It was startling, that despite the visible clues offered, almost no guests figured out that the cyranoids were repeating the words of hidden sources in the control room. Particularly surprising was that the hat wearing cyranoid, although considered eccentric and/or socially clumsy was perceived as speaking their own thoughts just as much as the subtle cyranoids were. It appeared that interactants cannot independently conceive of a cyranoid as being anything other than a single speaking person.

The guests that experienced being a source, in general had a very enjoyable experience, isolated as they were from the confusion and occasional anger of interactants and embarrassment experienced by cyranoids. It was anticipated that cyranoids might be utilised by sources as a means to say things to strangers that they might normally feel restrained from doing. However, in both trials, sources overwhelmingly chose to interact with their friends through the cyranoid, rather than strangers. Indeed, sources were often tongue tied when talking to strangers that they were unfamiliar with.

When the interactants knew that they are talking to a source through the cyranoid, rather than just experiencing an odd interaction, the interactants became much more relaxed and conversation was both more reflective and playful.



Figure 3. When interactants were aware that they were talking through, rather than to the cyranoid, they become much more relaxed.

Groups of interactants conversing with a friend through a consensual cyranoid appeared to much more successful and happier experience for interactants than “one-on-one interaction”. For example, such interactants frequently enjoyed a shared joke concerning differences in physical appearance, gender, accent between the cyranoid and their friend in the control room. Groups of interactants engaged in consensual cyranoid interaction with a friend as source also brought unforeseen benefits of social inclusion for the cyranoids. Even though it was often the first time that they had encountered any given source and group of interactants, the cyranoid felt very rapidly to be part of their social group.

If, a cyranoid could very rapidly have a sense of belonging to a social group, then this raises the possibility that the technique could also be used professionally to accelerate integrating workplace team members in, and between remote locations. In order to explore if a cyranoid meeting can be a productive meeting, an opportunity for a workplace study was pursued.

Workplace Experiment

An opportunity arose in connection with three academics who were due to meet to discuss the formulation of their unit’s research strategy. However, the senior academic became unable to travel to the university for the scheduled meeting. At short notice the cyranoid technique was deployed in the form of a masters student attending the meeting as his conduit.

Audio & video set up

The source’s speech was transmitted to cyranoid by landline telephone. For this purpose the cyranoid wore a standard office worker hands-free wired headset. The audio of cyranoid and interactants was picked up by a quality table mounted microphone and monitored by the source via a popular free VOIP service.

The built in camera on a netbook PC held in the lap of the cyranoid provided the source with a video feed of the two interactants. The source could not see the cyranoid and neither the cyranoid nor the interactants could see the source. The meeting was documented by a separate single video camera positioned to the side of the cyranoid and interactants (video available).

What happened

The meeting contained many moments of laughter from all parties, particularly in the early stages. The relaying of the source’s laughter by the cyranoid appeared to create a ripple effect whereby it would infect the interactants with laughter.

As the meeting progressed, the source adapted their speech to suit the capabilities of the medium and the cyranoid acquired much greater fluency relaying the source's words. One of the interactants made little eye contact with the cyranoid, instead they looked at the microphone a great deal.



Fig. 4 There was much laughter at the beginning of the meeting, before interactants (seated centre and right) became oriented to the medium of the cyranoid (seated left).

Feedback from workplace setting

Following the meeting all four participants were semi-formally and separately interviewed about their experiences and observations during the encounter.

Interactants and sources ascribed their laughter during the trial to many different causes. These included "embarrassment", "unusual experience" and "humorous delays" - for instance the cyranoid "looked like they were taking a long time to think for very simple and understated responses". The cyranoid relaying the laughter of the source was reported to be a "very eerie" effect which also in itself provoked further laughter.

As the source and one of the interactants reported, they "got used to" the unusual format of the meeting. The source felt that the business of the meeting was accomplished as quickly as it may have been if via a standard webcam link: "We got enough done".

The delay between the source transmitting words and the cyranoid relaying them was a source of great amusement initially but it was a phenomenon that over time, the interactants orientated themselves to. As one said:

"it was a bit like when you start teaching and you wait for students to respond to a question that is not addressed to any of them in particular. You get used to waiting longer than you think you should at first".

Several participants commented that for certain parts of the meeting the delay may have helped promote more reflective and thoughtful viewpoints. In any case, all parties commented upon how the interactants took a more active role and talked to each more than they may have if the source was present.

One of the interactants felt that conversational turntaking followed more natural patterns in comparison to a non-cyranoid webcam conference. That the remote participants words were being relayed "as clear and as present as someone else's voice in the room" rather than "tiny laptop speakers" was also reported to be a positive feature by one of the interactants.

The cyranoid felt very involved with the unfamiliar topic of discussion and had a sense of belonging that went far beyond what they would have expected if they were merely an observer at a meeting.

Discussion

The difficulties experienced by the interactants in relation to the relaying of the source's laugh during the workplace trial points to a somewhat counterintuitive hypothesis: namely, that on the basis of these limited explorations, a human relay may cause more disruption to human interaction than a machine relay.

A "basic building block" (Hatfield & Rapson 1998) of human interaction is emotional contagion - the means by which people subconsciously mimic and synchronise each others' non verbal communication and aspects of their vocalization. Studies have suggested that such cues may also be transmitted through telephone and computer mediated communication (Hancock 2008). However a human relay in the form of a cyranoid appears likely to block emotional convergence between source and interactant as the signals will be modified by the cyranoid's own emotions, language and body.

A cyranoid may attempt to faithfully relay the emotional qualities that they hear in the source's voice but it appears highly unfeasible that they may achieve this. To wholly and reliably relay the emotions of the source would require the cyranoid either to completely remove their own emotions from the interaction and/or completely synchronise their own emotions with that of the source. Outside of hypnosis, neither options appears remotely plausible. Although other mediums may diminish emotional contagion, the difficulty with a human relay is that the filtering, or indeed, amplification of emotion, whether deliberate or unintentional, is much harder to identify.

Marshall McLuhan wrote that "every extension is an amputation" (McLuhan 1962). The explorations described above illustrate this vividly: the cyranoid and source may have their mutual senses of empathy increased and the source may feel a degree of capability to act and interact at a distance, but these "extensions" are at the expense of disrupting the emotional contagion experienced between most parties.

As an exercise in group formation, the medium also involves trade-offs between advantages and disadvantages. The cyranoid and source combination may create for those participants, a sense of "us", but only by delineating a contrasting "them" in the form of interactants. The cyranoid and interactants may similarly experience a sense of "us" by virtue of their having a co-located dialogue in contrast to the less present source.

McLuhan's warning can also in a sense be applied to researching technological attempts to improve interpersonal interaction. Each time a technology system is extended to involve an additional person, the complexities of evaluating the impact of the system are multiplied. A cyranoid interaction involves novel and multi-locational forms of relating which can cause confusion even amongst participants that are very familiar with each other.

However, such confusion also points to the value of cyranoid investigations as a means to explore interpersonal communication since unlike a telephone or an instant messaging service, a cyranoid may themselves deliberately influence, reflect upon, question and discuss the interaction that they facilitate.

Future Work

The possibility of a cyranoid enabled “speed dating” event is being explored with potential partners from the hospitality industry. Opportunities to deploy cyranoids within a conference environments may prove revealing. In addition to acting as a possible social catalyst between previously unacquainted conference attendees, cyranoids also have the potential to allow those unable to travel to a conference a sense of remote, but active participation.

Conclusion

The positive interpersonal interactions and sensations generated by these limited trials are encouraging, but it is as yet unclear how much these positives are due to contextual factors such as the specific personnel and situations in which they have been deployed. Further work with richer documentation, rigorously analysed may yield further understanding of what cyranoids can tell us about people and interpersonal interactions, and of how such understanding can be applied.

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