conscious = camera

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1 Project description

Jean-Paul Sartre, in *l'Imaginaire*, says that *"the image is not a state, a solid and opaque residue, it is a consciousness"*.

The reality we are perceiving is indeed not a flow of flat images as a digital camera or video camera would output, but a consciousness "of things" — which is made of a completely different material. This project attempts at "representing" this consciousness, by detecting in a video stream the face and the hands of a person using statistical body-tracking, and analyzing his/her movement.

If the movement is slow, only the face and hands are shown: this is the consciousness of a static person. If the movement becomes more important, the face and hands disappear and the body begins to appear: this is the consciousness of a less distinguishable body in motion. A trailing effect makes each image integrate the "before" and "after" moments, parts of the consciousness of movement. Each consciousness shown leaves a mark on the background, which will very slowly vanish. This represents the memory.

2 Interacting with the camera

Initial reactions to the conscious=camera are playful: users want to understand what it sees and get an idea of how it works. First, users will see their hands filtered, and the effect of moving. Those two states are inherently opposed: static moments show details and motion produces blurriness. Users will discover the effect of oscillating between these two: only some poses of faces and bodies appear on the screen. It could be a profile, or a face looking toward a particular direction. Maybe these are those "privileged instants" (Bergson) we would remember from an interaction with somebody, or those "decisive moments" (Cartier-Bresson) that a photographer would like to capture. While probably not representing the actual biological state of consciousness, they are a poetic and meaningful way of looking at how we act and how we appear — of how we are seen.

Later, users will discover the memory effect: the mark of their actions on the conscious=camera's background. They will understand how the other marks made by the previous users have appeared. Previous users' actions will thus be present in the mind of the current users. Current users will see the previous users as themselves have just been seen by the conscious=camera: as it gave them an image of a consciousness of themselves, they have now a consciousness of the others.

The conscious=camera then creates a presence, and this presence is the presence of others. It is an ephemeral mirror which reveals parts of what we are and how we act, and by this makes us see with new eyes the others who surround us — like a door toward the interactions in the social world.

3 Technical statement

The work, written from scratch, relies on the implementation of body-tracking techniques inspired from the MIT Pfinder, but adapted to extract with a skin-tone detection algorithm hands and face blobs even in extreme conditions (for instance if users get very close to the camera or just show hands).

We also inserted it in a complex structure of filters and functions tuned to make the program produce the aesthetically desired result. This is were the creative center of our work is located: at the low-level manipulation of all the program's elements, the "inside" of the algorithm. It is with the understanding of how the lowest levels of the program's elements affects and transform the aesthetic aspect that we have been able to construct an engaging result. Tuning them was for us like looking for brushes and colors in a "painting" not in a two dimensional world, but in the world of interaction.

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static body

moving hands

moving body

a memory