

## Conclusion and summary:

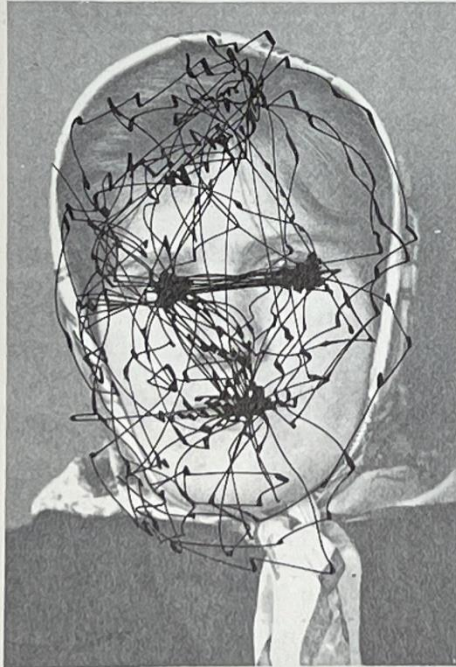
Discoveries and opinions about Leonardo da Vinci's methods based on exploring his last painting "Salvator Mundi" creating five levels of illusional dimensions (he was sort of leap-frogging over the fourth dimension (e.g. time although I think, in his own way, Leonardo managed to address time as well after all: He is still talked about 500 years later.)

- The 5th dimension is defined here (and should be elsewhere) categorically as **perception**.

Leonardo clearly recognized that placing a 3-D illusion into 2-D space like a canvas, allowed for extensive manipulations with the dimension that is simulated. Much like what M. C. Escher had discovered through his graphic work derived from Morish tessellations. Leonardo da Vinci took his experiments with such visual manipulations much further, beyond the 3<sup>rd</sup> dimension. His aim was to reach beyond and reflect the emotional state of his subjects. Trying various approaches he achieved pseudo-emotional renditions that use a state of confusion to induce hypnotic responses in his viewers. He largely used the ambiguities created by conflicting light sources, blurring objects to make them appear more distant and assorted other tricks such as chroma adjustments to simulate perspective dimensionality, in and out of focus posing and multiple lighting sources for other effects, etc. Towards the end of his life he used his light sources to give multiple, irreconcilable impressions within his painting. He purposely minced directions of incoming rays to enhance confusion and underscore the impression of gender ambiguity. His good looks most likely allowed him to portray his own self, time and again in different portraits using his own facial features as model. Perhaps not only out of economic necessity, but he did so out of vanity as well. All these contributing vectors make for an enigmatic mix of experimentation, art and science. His obsessive attention to details, his correcting work over unimaginable lengths of time leave observers wondering 500 years later.

When attempting to stage some of the poses it becomes very clear that some of the props, the staging and the positions of hands and assorted reflections are synthetic. He relies on the needs on part of the observers, who cannot comprehend an image all at once, to scan sequentially across the images. By the time they have done so, the gathered impressions contradict one another and more possibilities for "mischief" open up to be exploited. All these are methods in the service of a conceptual presentation, they are skillfully blended into Leonardo's imagery to communicate the concepts he is trying to impart. They are, more often than not, difficult, if not impossible, to reenact. Using deliberate ambiguity to manipulate perceptions. Leonardo thereby leapfrogged over Albert Einstein's fourth dimension because he managed to operate in the five dimension.

Peripheral:



When we stare closely at a human face, we do not remain fixated on exactly the same spot for any length of time. Our eyes scan the features of the face, but concentrate most on the eyes and mouth, as revealed by this experimental record of eye-movements made by a subject staring for three minutes at a photograph of a young girl's face. (After Yarbus.)

The process of comprehending a face is largely a serial affair, significant points are scanned by the eyes one by one, and are subsequently assembled into an image of a more parallel nature, into a concept of sorts, by the brain.

If processing by the brain is somehow confounded, manipulations aiming to alter perceptions by the viewer can be accomplished. Such maneuvers can then be used to conjure a pseudo-realm of perceived emotional expressions.

