ANAMORPHOSEN

Mag. David Stuhlpfarrer

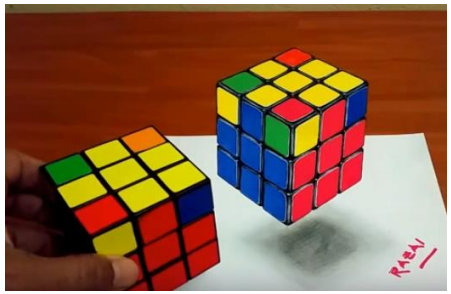
Definition

Als eine **Anamorphose** (altgriechisch ἀναμόρφωσις anamorphosis, griechisch αναμόρφωση ‚die Umformung', von altgriech. μορφή morphe, deutsch ‚Gestalt, Form') bezeichnet man seit 1657 Bilder, die nur unter einem bestimmten Blickwinkel bzw. mittels eines speziellen Spiegels oder Prismensystems zu erkennen sind.

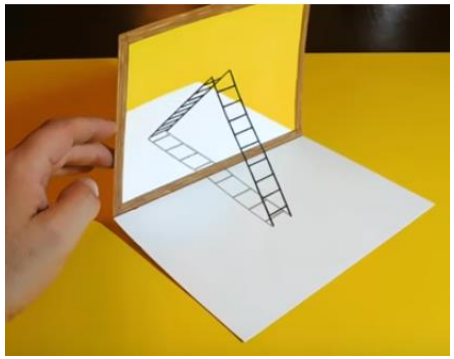
[https://de.wikipedia.org/wiki/Anamorphose, 28.2.2019]

Beispiele

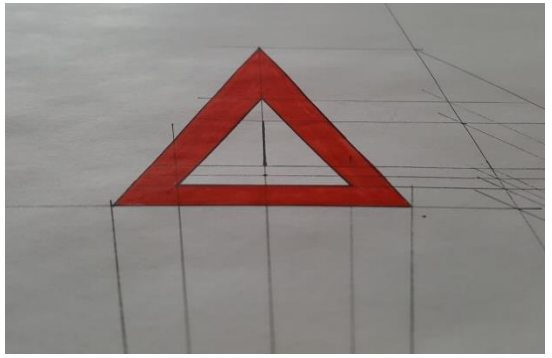
https://www.youtube.com/watch?v=TwypkIZJrCQ



https://www.youtube.com/watch/?v=L38JgAUUnrM



Im Alltag



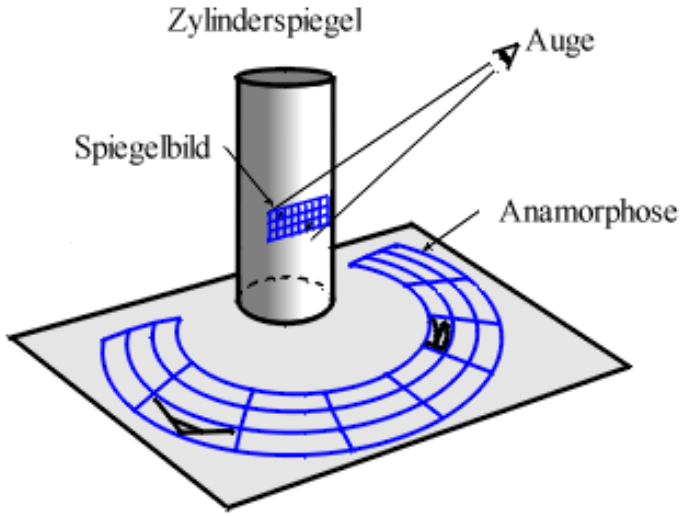
In der Kunst

“Die Gesandten” (1533, aus *Wikimedia Commons*) von Hans Holbein dem Jüngeren.

https://michaelbach.de/ot/sze-anamorph/index-de.html

Weitere Beispiele

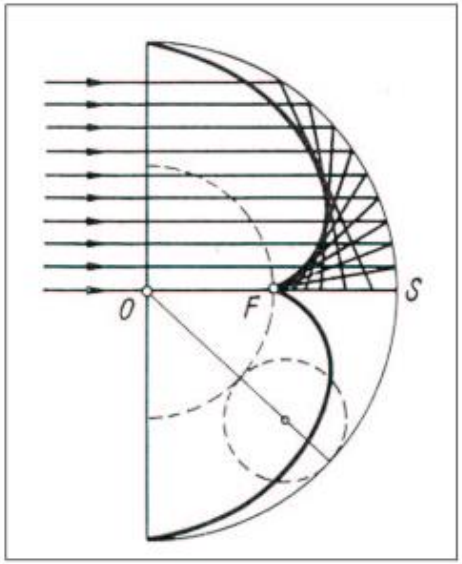
http://www.schroediwi.de/arcorspiegel/klaus/morphen/anas/ana1.html

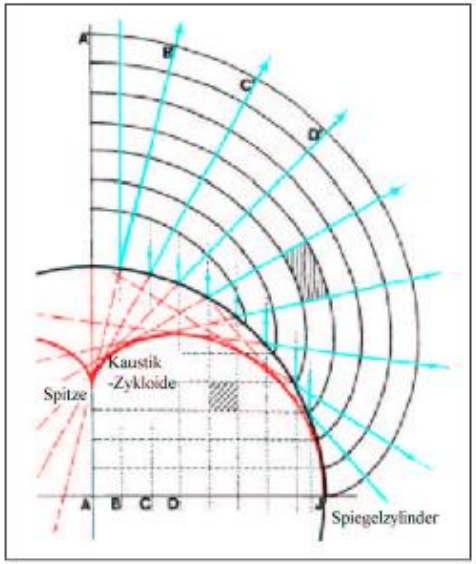


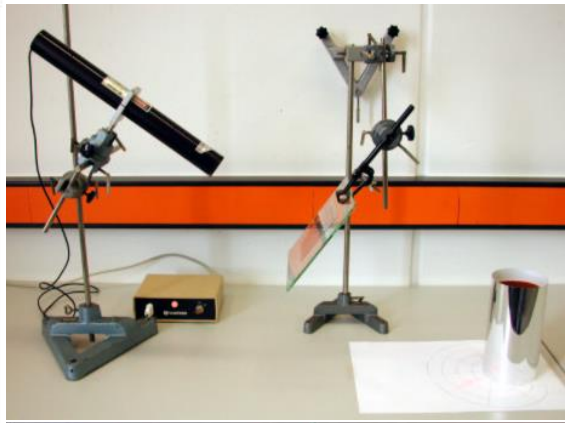
Anamorphose für einen Zylinderspiegel

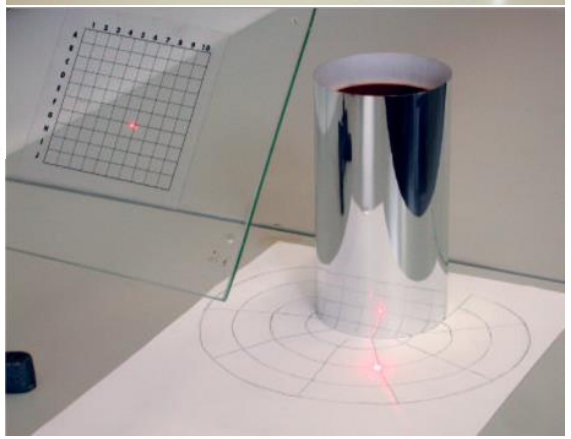
Die Mathematik (Physik) dahinter…

- http://didaktik.physik.fu-berlin.de/~nordmei/PhysikKunstMusik/Software/Anamorphosen.pdf



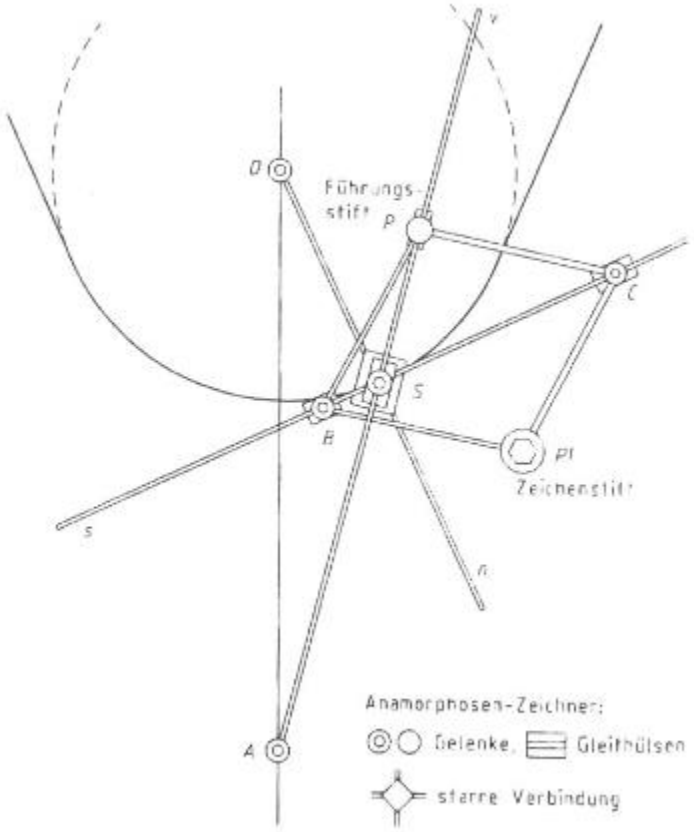


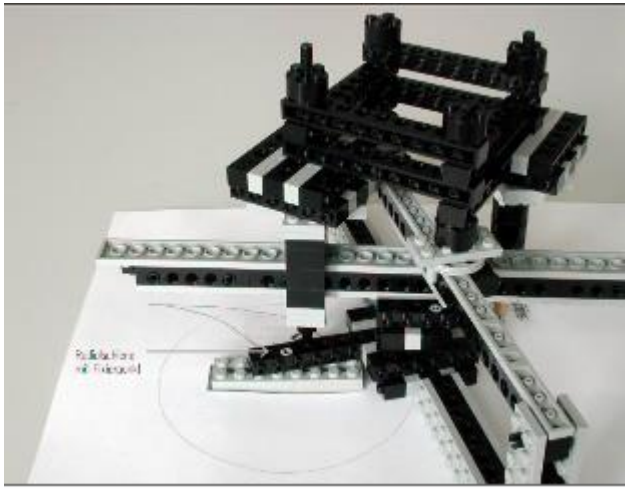


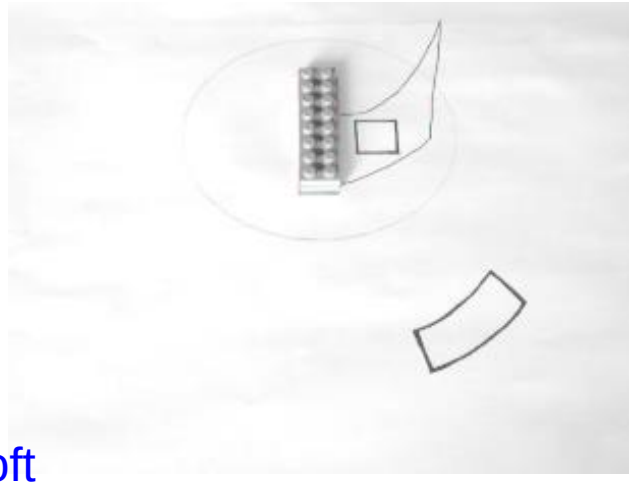


Markus Heeke, Münster, 2003

Anamorphosen-Zeichner





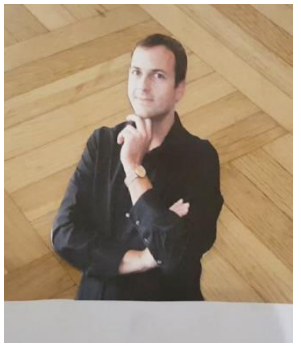


http://didaktik.physik.fu-berlin.de/~nordmei/PhysikKunstMusik/Software/Anamorphosen.pdf

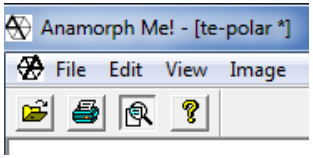
Software

https://www.anamorphosis.com/software.html

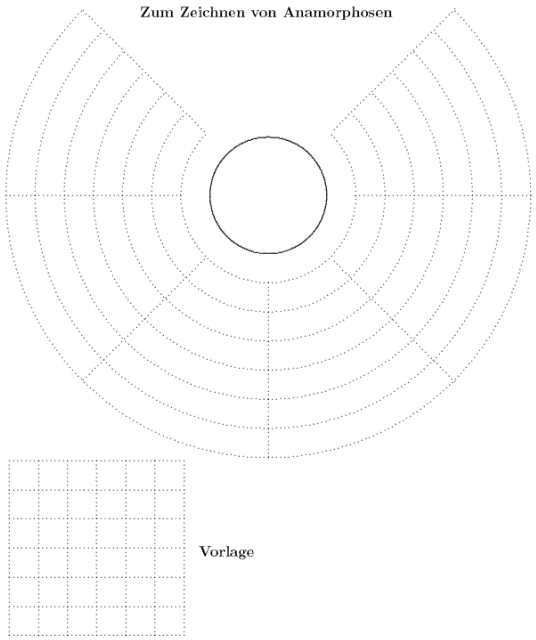
Video



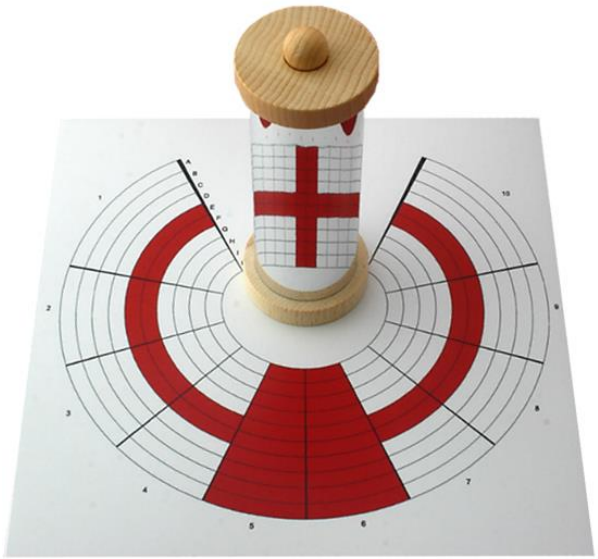
Zylinderanamorphose



Anamorphosen selber zeichnen

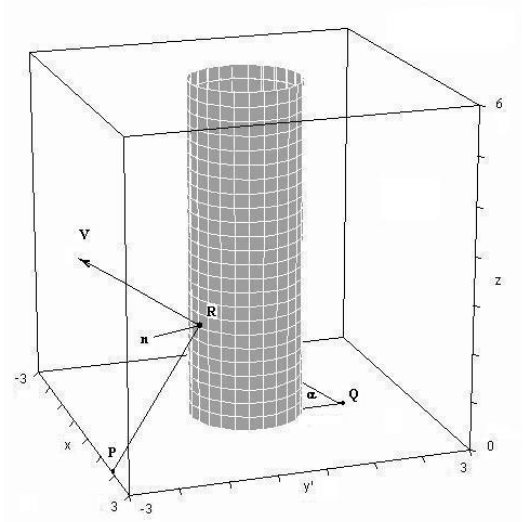


https://www.math.uni-bielefeld.de/~ringel/lectures/spiegel/spiegel/krumm.htm

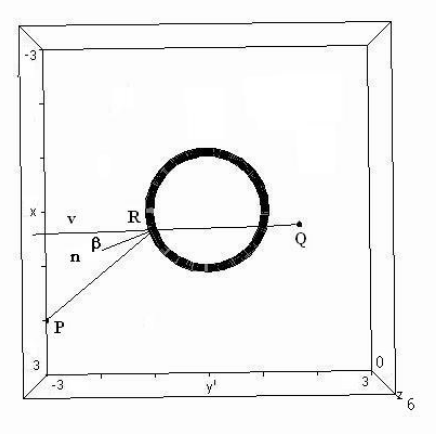


https://experimentis-shop.de/physikspielzeug-a-z/anamorphosen-spiegelanamorphosen-katoptrische-anamorphosen

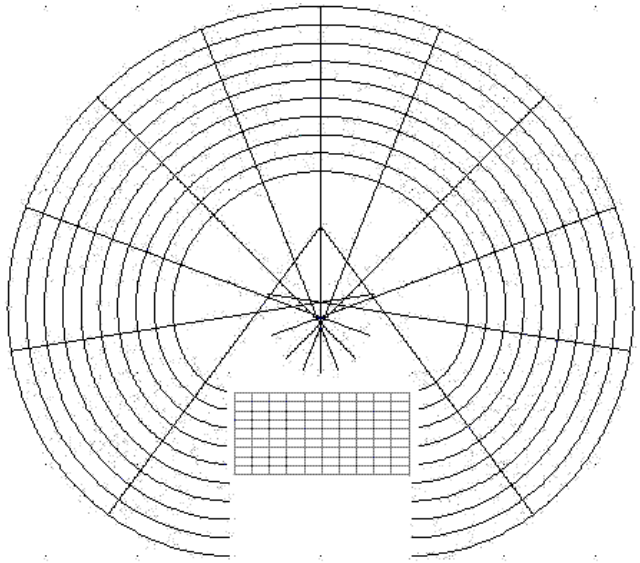
Nach genauer Berechnung…



Spiegelung am Zylinderspiegel



Aufsicht auf die links dargestellt Situation



http://www.myquilt.de/al/anam/anamorphosen.htm

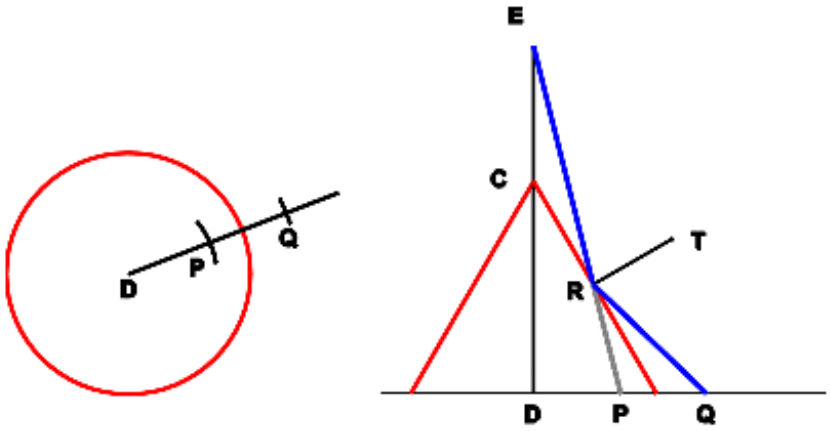
Kegelanamorphosen

https://www.lifehack.org/articles/lifestyle/30-anamorphic-artworks-boost-your-creativity.html

Anleitung

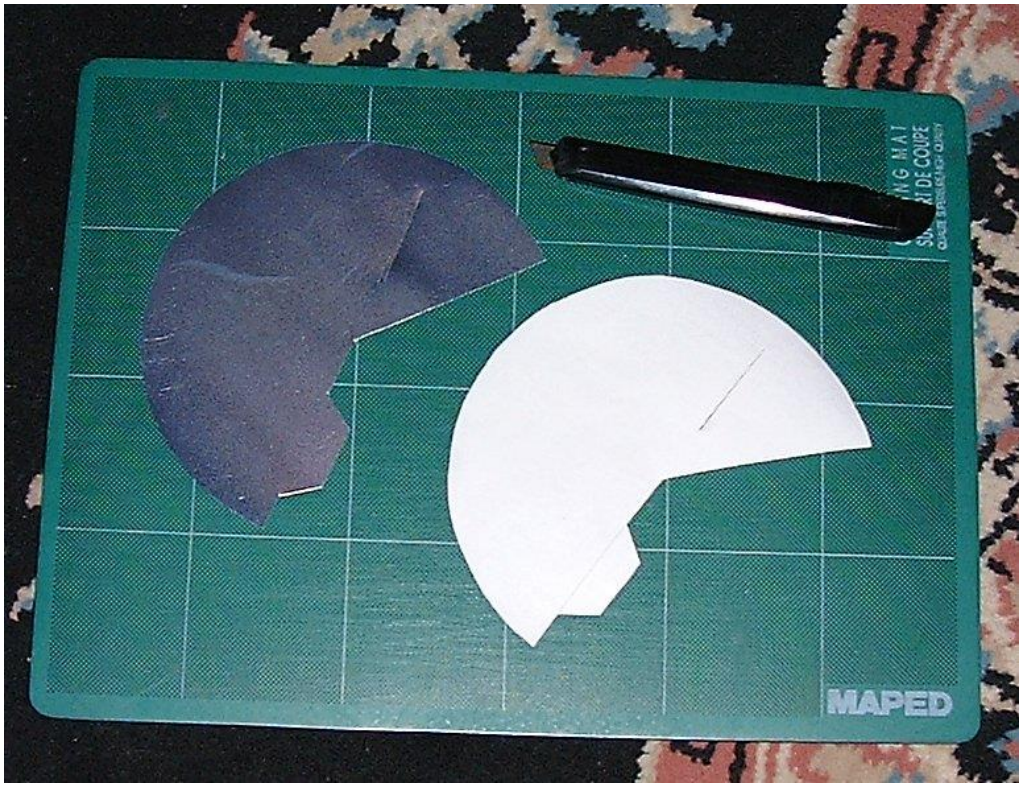
https://anamorphicart.wordpress.com/2010/04/21/conical-mirror-anamorphoses/

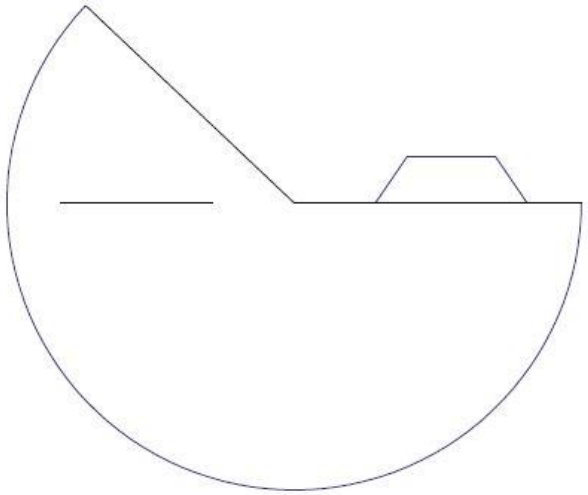
- ***Step 1*:** The picture will not normally be small enough to fit in the base of the cone. Even if it were, then accuracy would suffer since the cone is quite small. When you have finished the drawing, you can reduce the picture on a photocopier. So decide on the enlargement ratio and draw a circle around the picture to correspond to the base of the cone. This (with only one point of the picture, point P) is the drawing at the left above.
- ***Step 2:*** Using the enlarged radius of the cone base and the angle of the cone, construct a triangular cross section of the cone as shown in red in the diagram at the right above. Also draw the axis of the cone CD.
- ***Step 3:*** Decide on where the eye will be positioned along the axis of the cone at point E.
- ***Step 4****:* Choose a point P on the drawing. This point will become point Q on the anamorphic image.
- ***Step 5:*** Draw a line joining P to the centre of the circle D and extend it outside the circle. Using a pair of compasses, transfer the length DP to the base of the cone.
- ***Step 6****:* Working in the right diagram, join P to E to intersect the side of the cone cross section at point R.
- ***Step 7:*** Erect a perpendicular RT at R and then draw line RQ so that angles ERT and TRQ, since the cone is the mirror. ER is the incident ray and RQ is the reflected ray and the angle of incidence is equal to the angle of reflection.
- ***Step 8:*** Using a pair of compasses, transfer the length DQ to the picture as in the diagram at the left.
- ***Step 9:*** Repeat for all points in the image.



Spiegelkegel

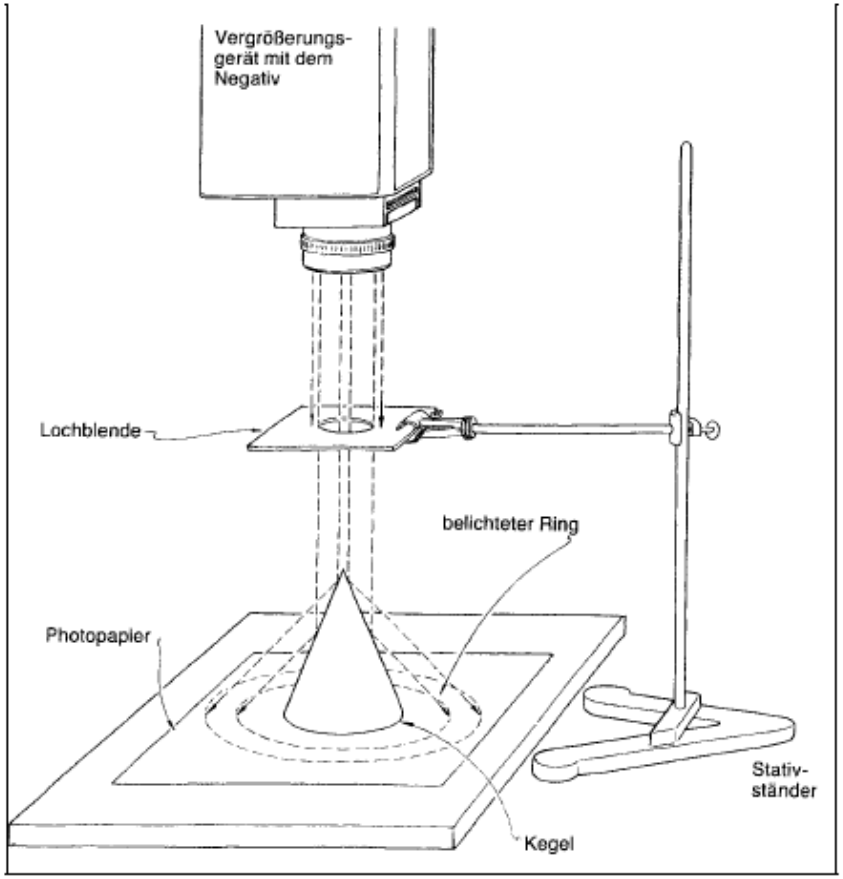
https://anamorphicart.files.wordpress.com/2010/04/cone_cutout.jpg





Photographie

http://didaktik.physik.fu-berlin.de/~nordmei/PhysikKunstMusik/Software/Anamorphosen.pdf

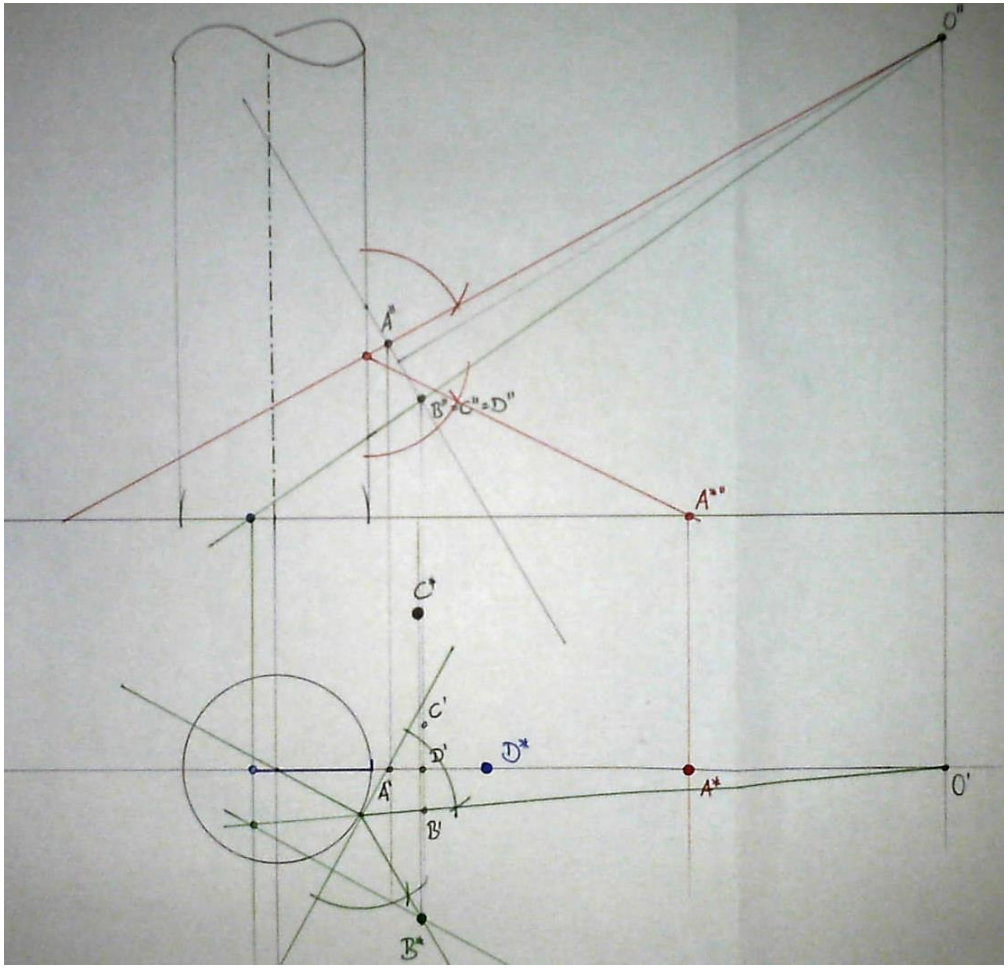


Versuchsaufbau zur Herstellung anamorphotischer Bilder.

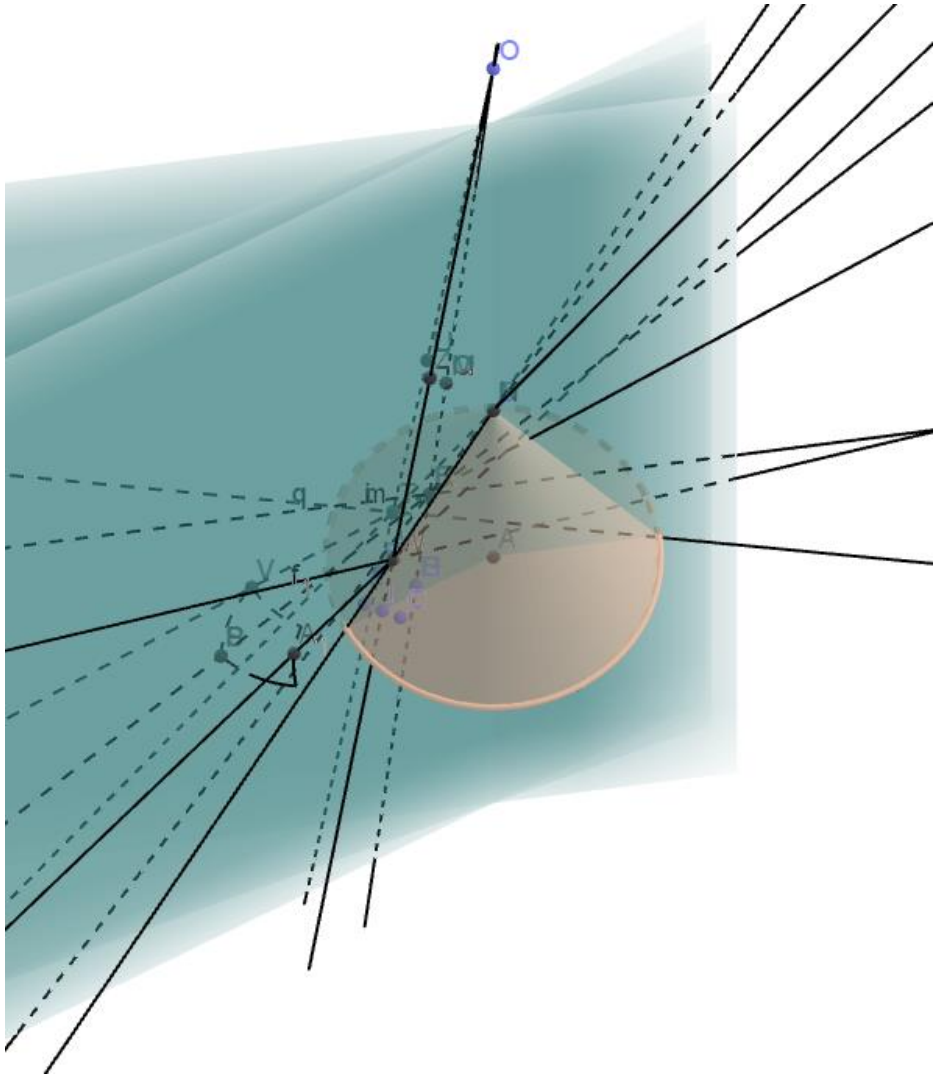
Quelle: [Walker 1981], S. 135

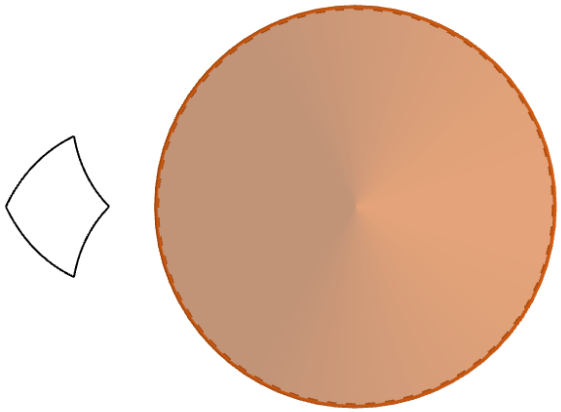
UNI GRAZ

Zeichnen



…oder mit Geogebra 1





…oder mit Geogebra 2