

# Anamorfosis

**Valentina Muñoz Porras**

**[valentina.munoz@cimat.mx](mailto:valentina.munoz@cimat.mx)**

**TCJ julio 2024**

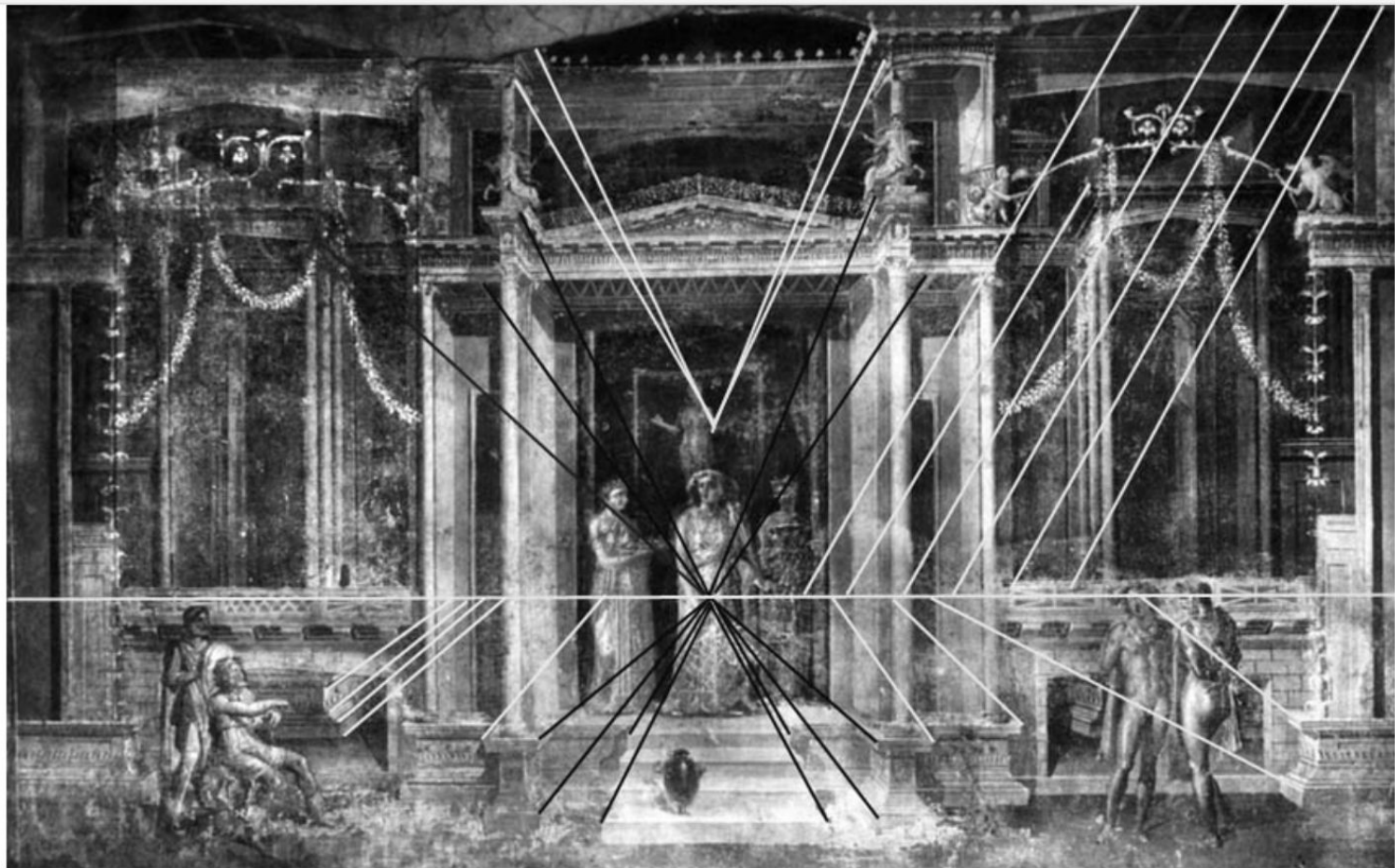
¿Cómo plasmar en un lienzo que es plano, que es de dos dimensiones (ancho y largo) este efecto de que hay cosas más cercanas y más lejanas?

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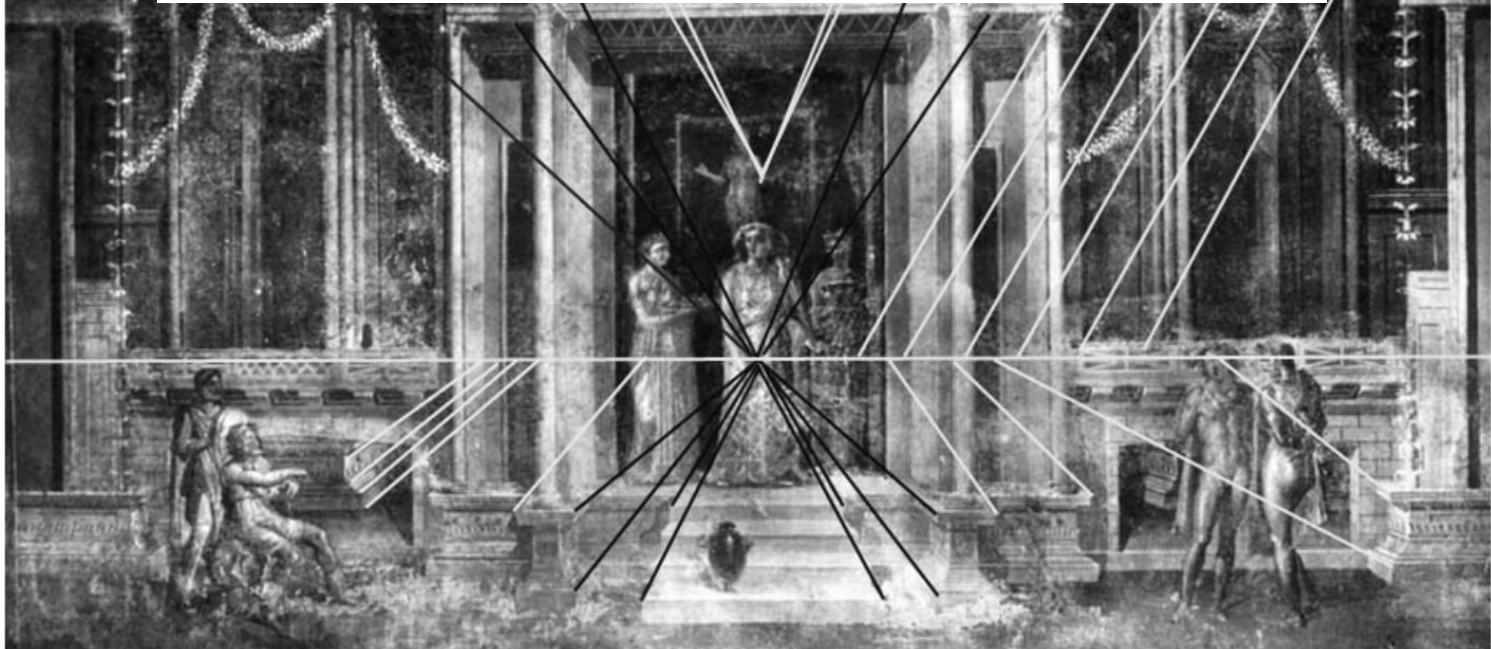
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**Perspectiva**



Pompeiiian mural of the pageant of Orestes, 2nd century AD, containing both central convergence (black lines) and 'fishbone' parallel convergence for the peripheral features such as the roof rafters (white lines).

Tyler, C. W. (2000, June). Perspective as a geometric tool that launched the Renaissance. In *Human Vision and Electronic Imaging V* (Vol. 3959, pp. 492-497). International Society for Optics and Photonics.



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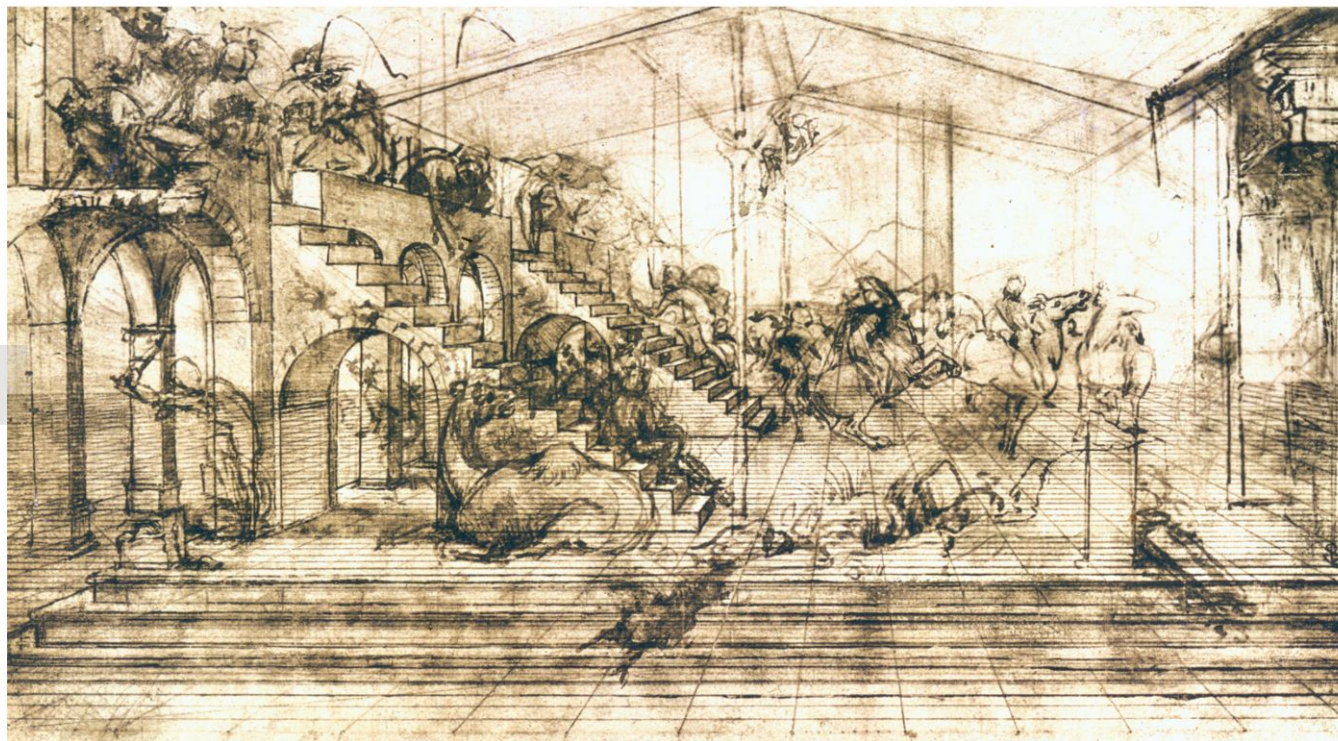
2 / 4

VIEW FULL-SIZE

PRINT

CAPTION

CITE

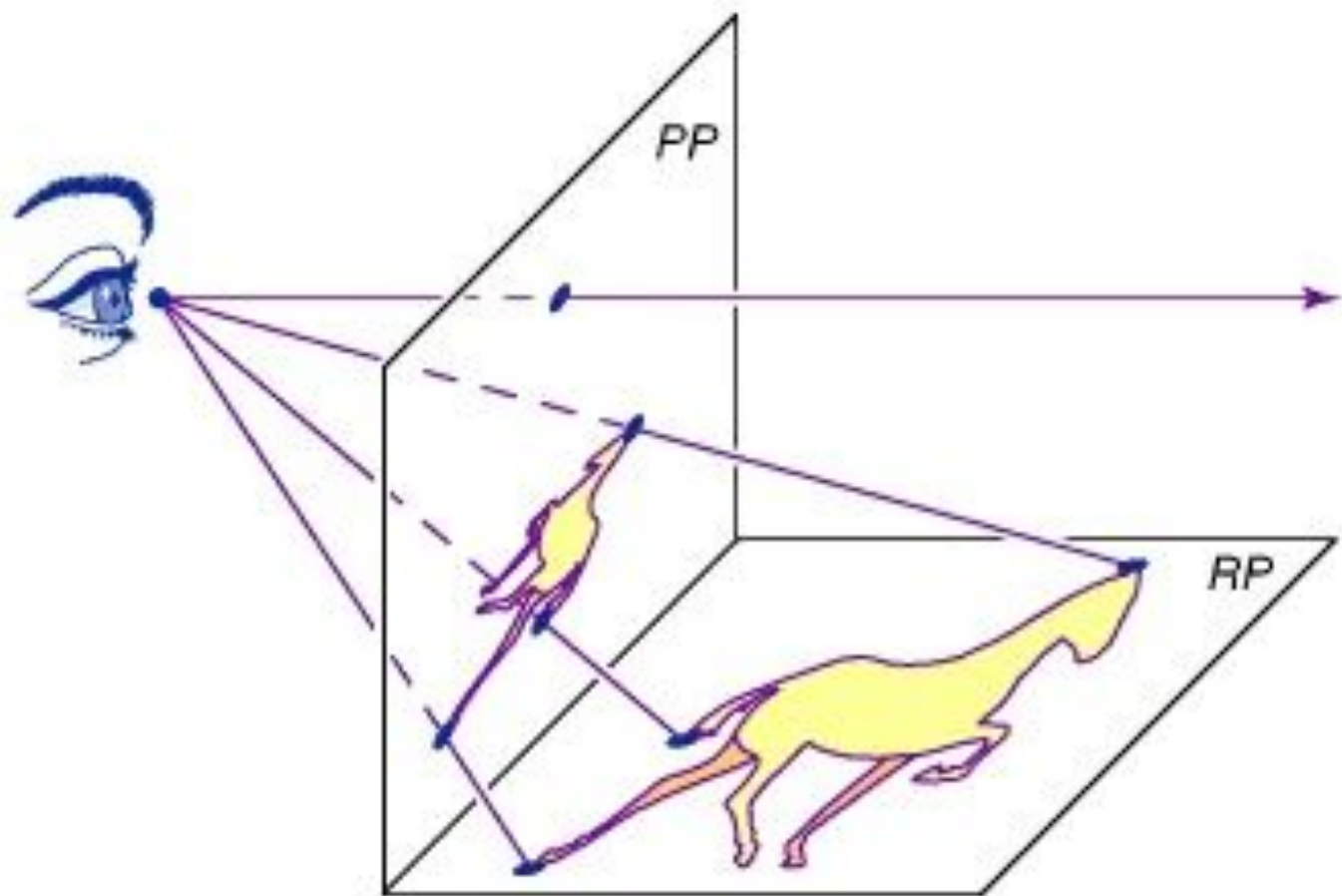


## Leonardo da Vinci: *Adoration of the Magi*

Linear perspective study for the *Adoration of the Magi*, silverpoint, pen, and bistre heightened with white on prepared ground by Leonardo da Vinci, c. 1481; in the Uffizi, Florence.

*Alinari/Art Resource, New York*

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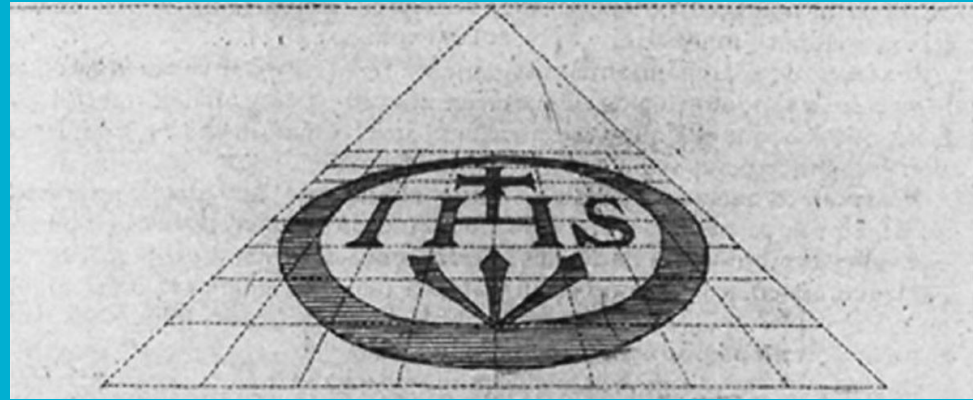
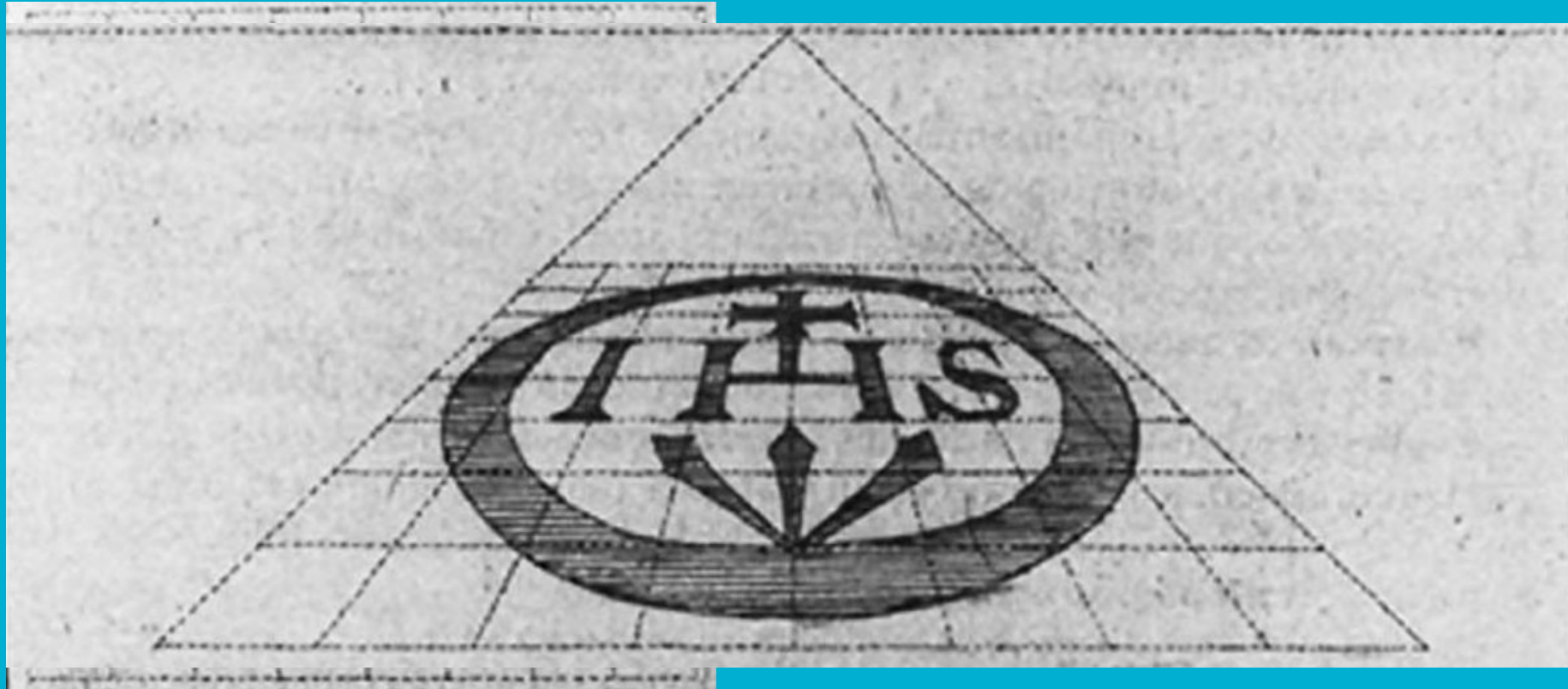


Figure 32. Table 44 of J. Dubreuil's treatise 'La Perspective pratique...', published in Paris in 1647



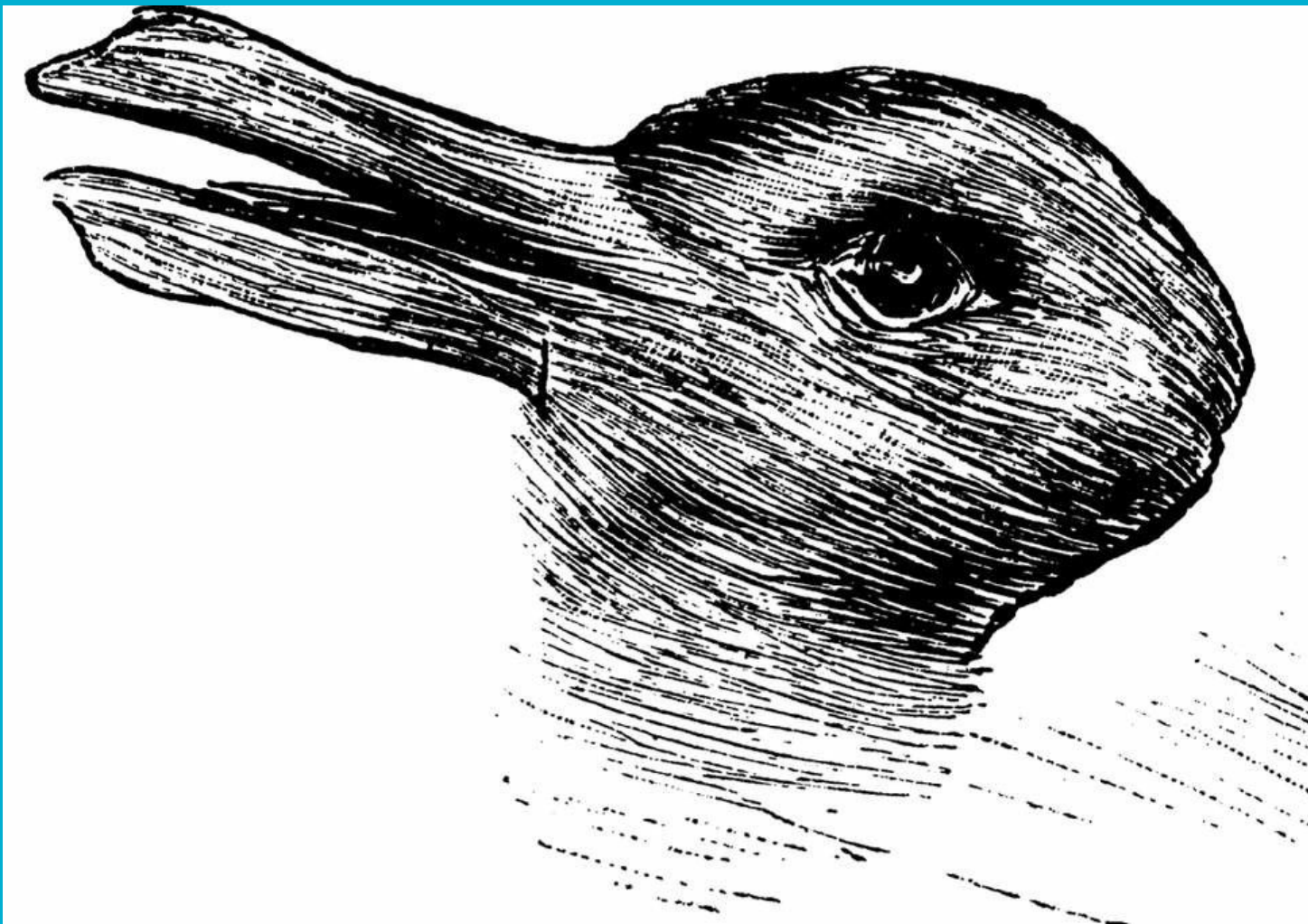
Amoruso, G. (Ed.). (2016). *Handbook of research on visual computing and emerging geometrical design tools*. IGI Global.

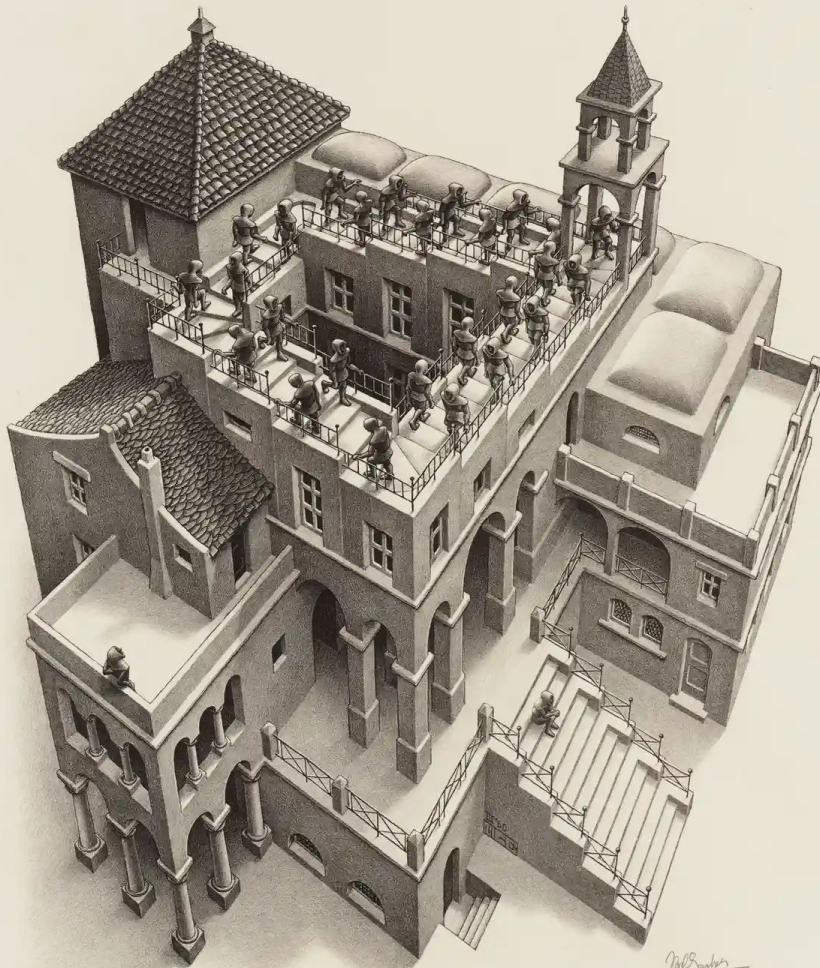


**¿Cómo se puede crear una obra de arte que capture la atención del espectador?**

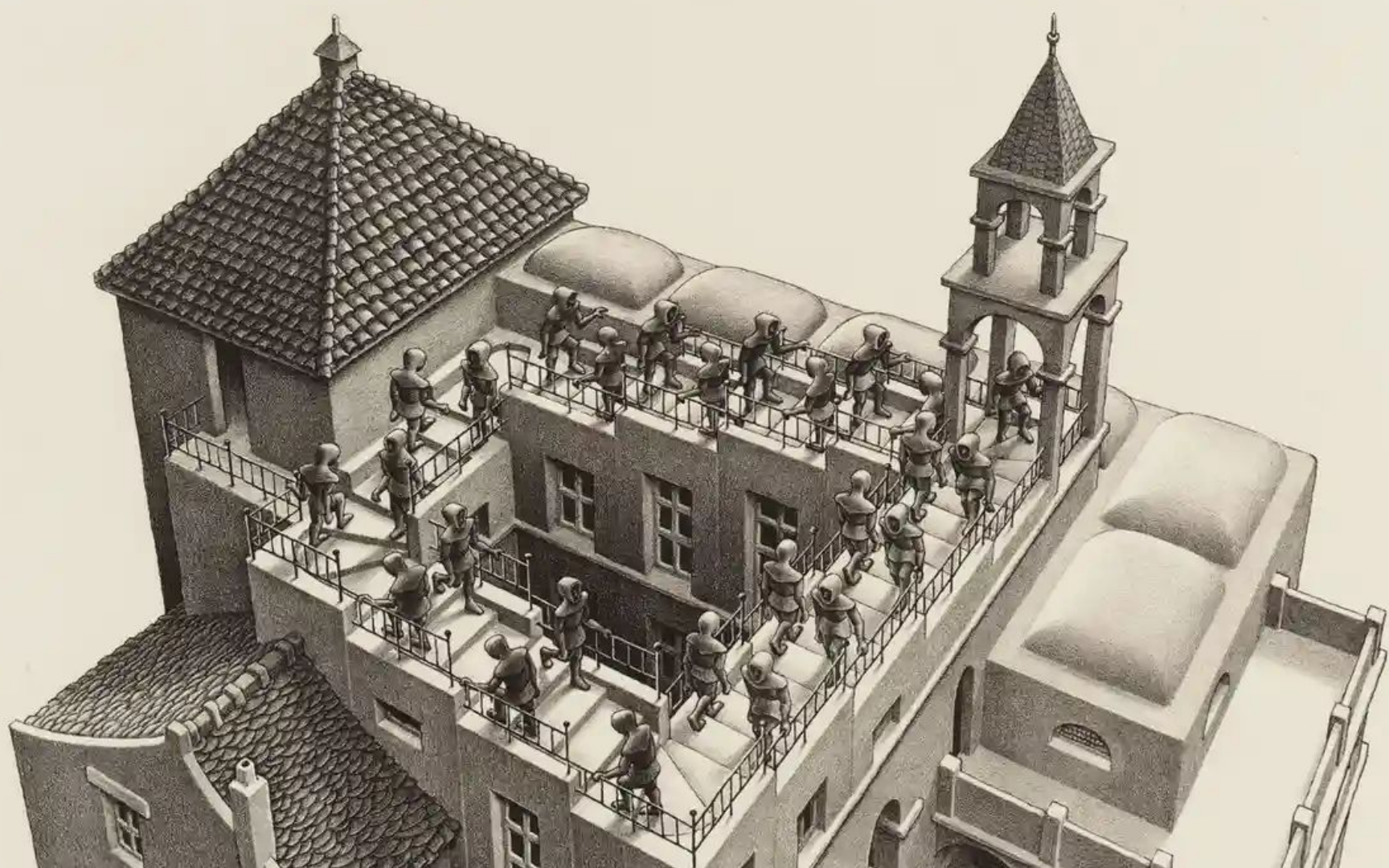
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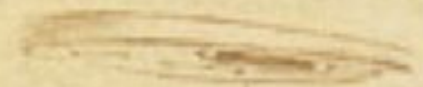
**Ilusión óptica**





Ascending and Descending,  
1960, by MC Escher

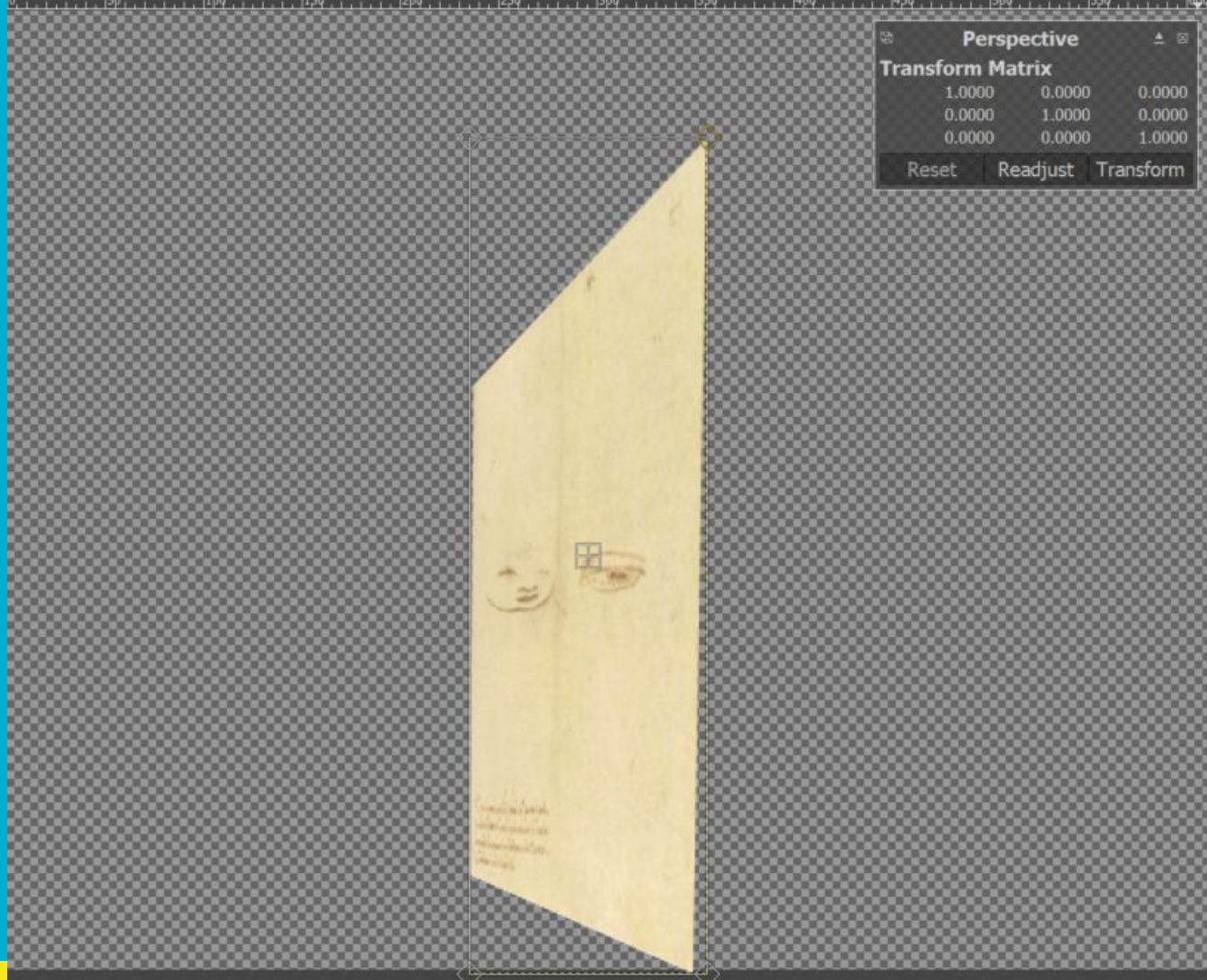




Le due di questi come felle / se parli a un' persona di quella  
fronte se felle con un' conca di quella medesima / se se vola  
che parli alla commo / che se della parte / se due et se se se  
a un' donna / che se alla parte della

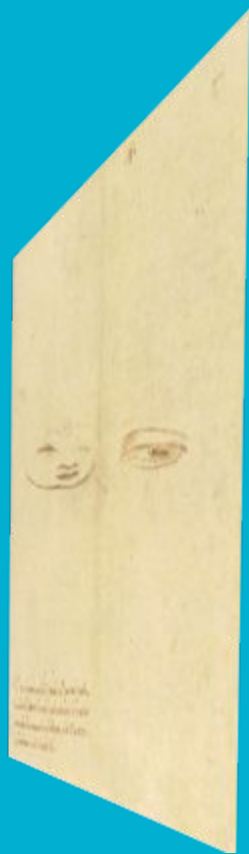


# Herramienta de perspectiva en GIMP



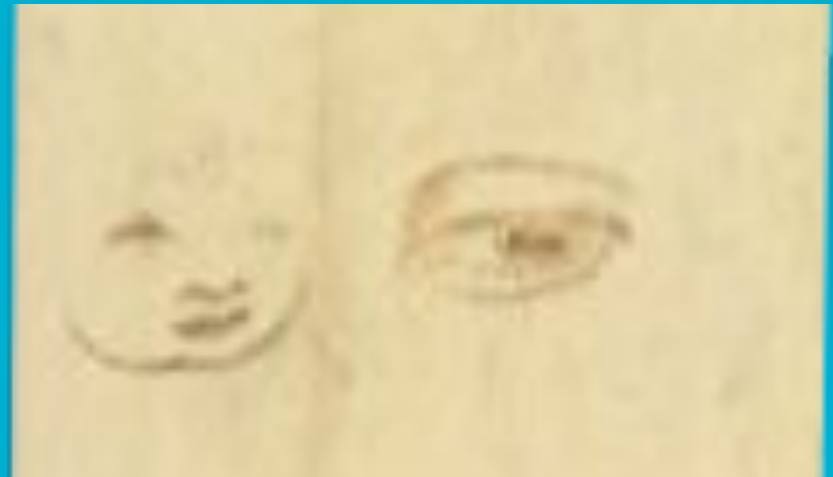


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*Leonardo da Vinci; Anamorphosis: Study of the Eye; on the left, Juvenile Face, in Codex Atlanticus; ca. 1478–1518; Milan, Biblioteca Ambrosiana; fol. 98r. ; (artwork in the public domain; photo © Biblioteca Ambrosiana, Milan, Italy/De Agostini Picture Library/Bridgeman Images)*  
**[side-by-side viewer]**



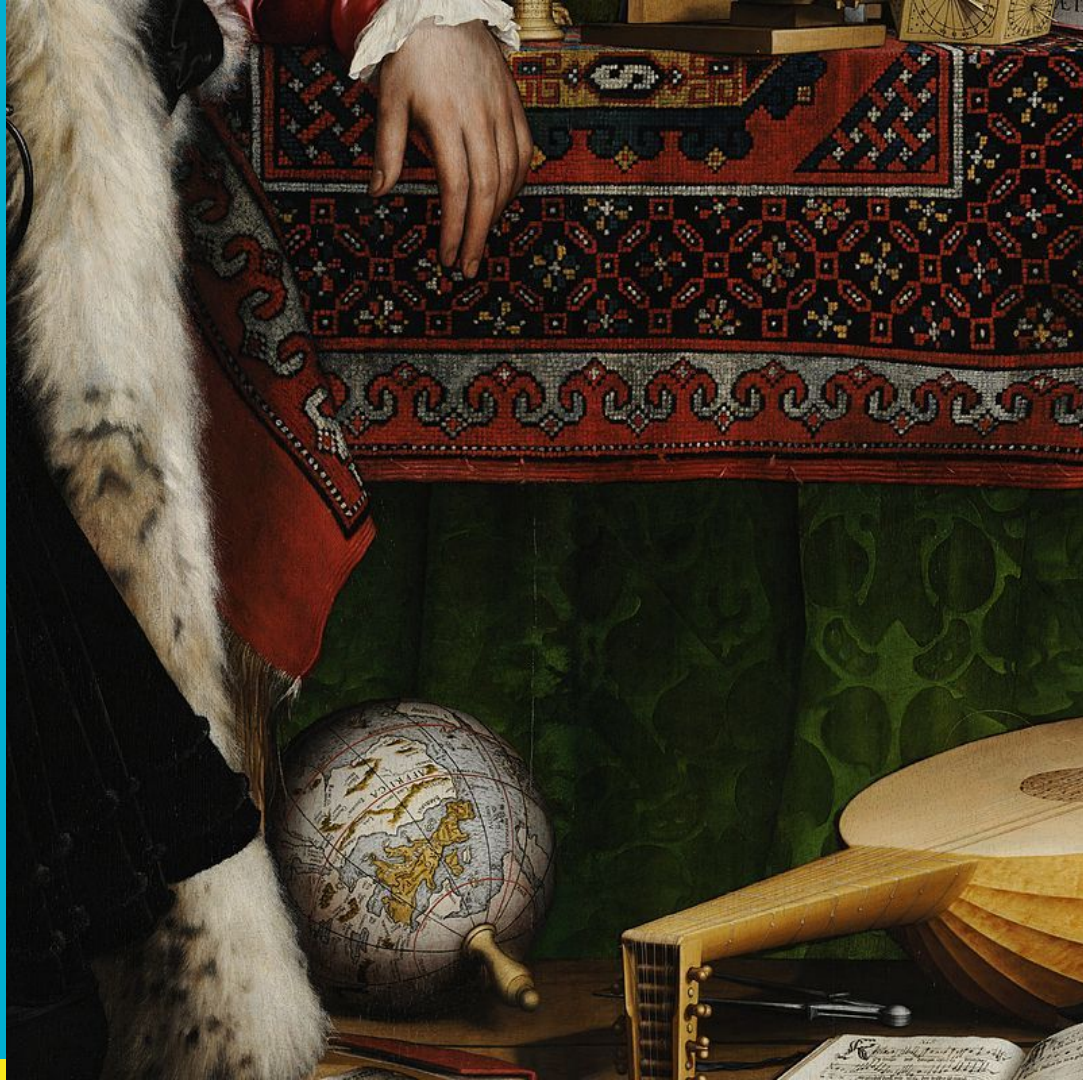


*"The Ambassadors" by Hans Holbein the Younger, 1533.*

"The Ambassadors" by Hans Holbein the Younger, 1533 (Credit: National Gallery / Public domain/ Wikipedia)

An

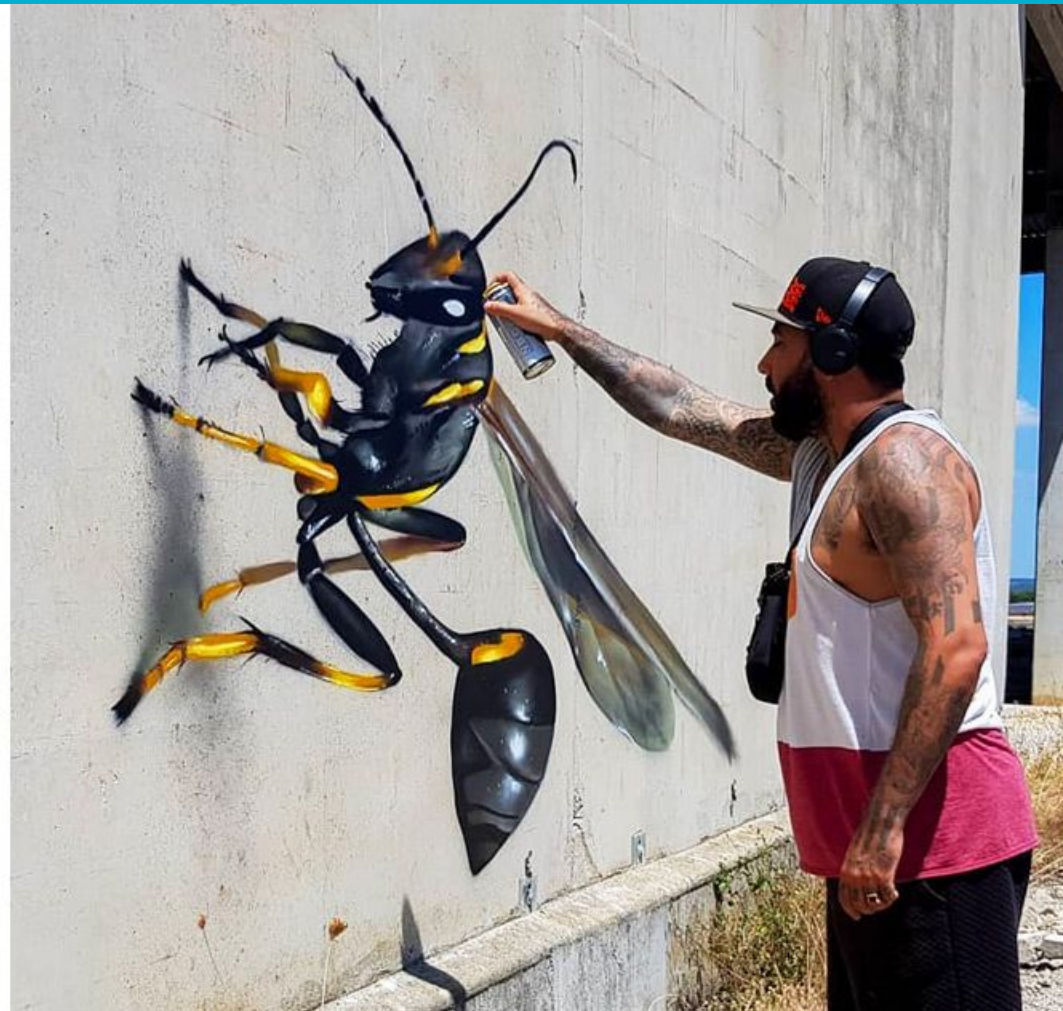








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La **anamorfosis** es una **proyección distorsionada** de una **figura**. En ocasiones, como es el caso de la obra de arte de Holbein, *Los embajadores*, no se requiere de un espejo u otro artefacto para apreciar la figura anamórfica, basta con posicionarse estratégicamente a un lado de la obra.

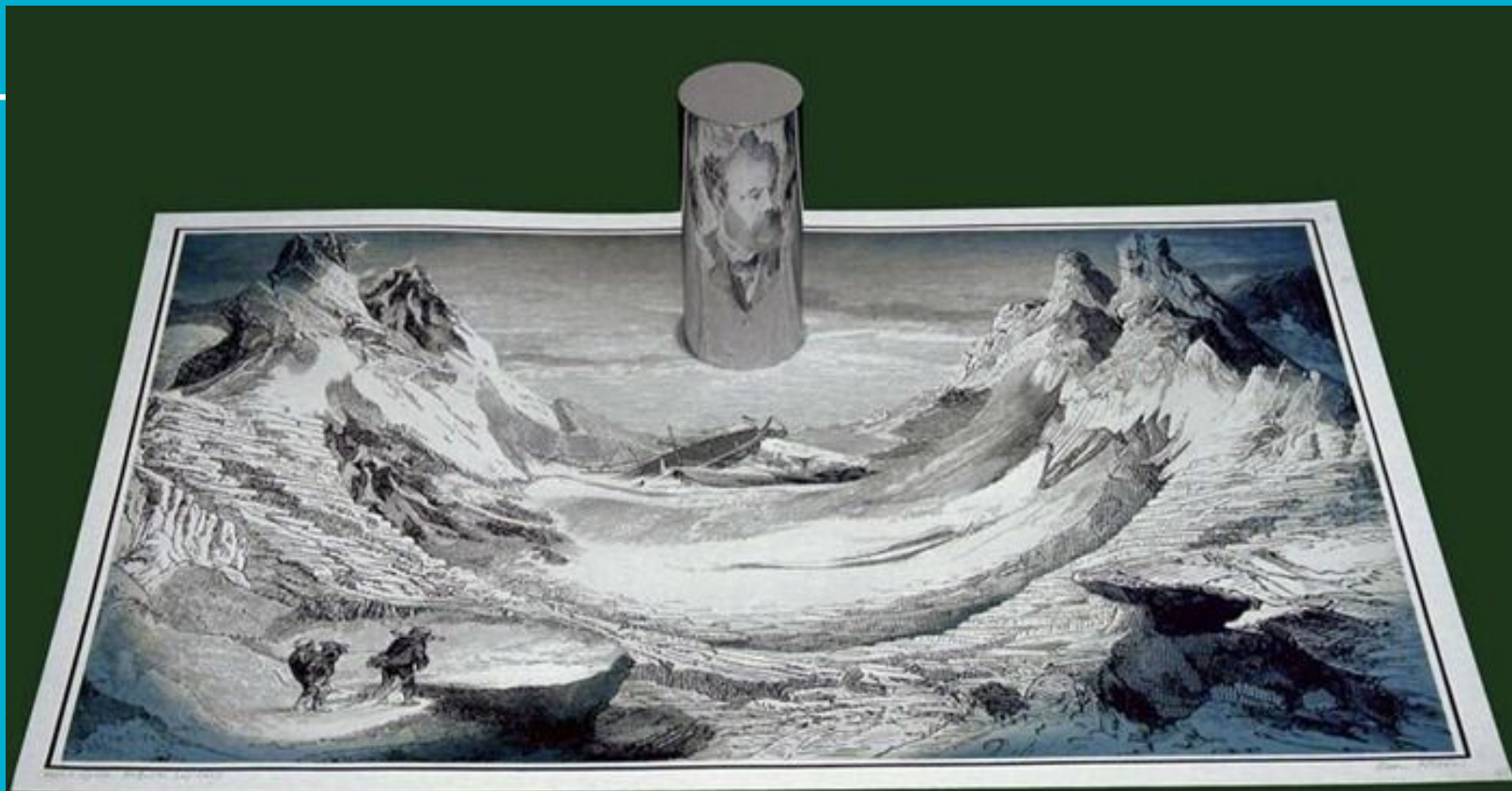
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Pero en otras ocasiones, se pueden conseguir figuras anamórficas con la ayuda de un espejo, por ejemplo un espejo cilíndrico, y aquí estaría involucrándose el efecto de reflexión de la luz. Cuando se refleja una figura en un espejo no plano, se producen distorsiones

# István Orosz

Sergide Ortaçağ zamanlarından bir Alman  
şair Sebastian Brant'ın

# István Orosz



# István

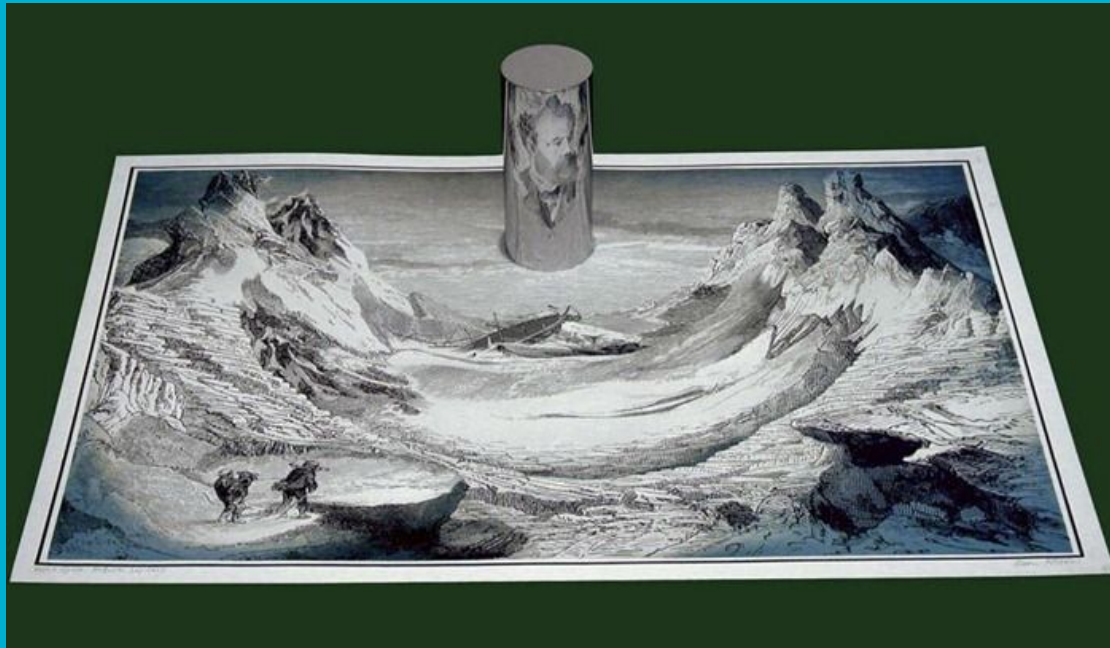
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Istvan Orosz, *Ile mysterieuse*

[*Mysterious Island*], 1983.

Anamorphic etching.





## Julio Verne



Retrato de Julio Verne por Félix Nadar (c. 1878)

### Información personal

<b>Nombre de nacimiento</b>	Jules Gabriel Verne
<b>Nacimiento</b>	8 de febrero de 1828 Nantes, Reino de Francia

# Anamorfosis

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Las **matemáticas** pueden usarse para entender mejor estos efectos y para crearlos. Por ejemplo, una forma de las formas más básicas de crear estos efectos visuales es haciendo uso de la proyección básica. Otro es la transformación de dilatación (o escala).

Las proyecciones más usadas en el arte anamórfico son las **polares** y las **cilíndricas**.



**Manos a la obra**

CHAP. XX.

*To extend or contract a Picture keeping the proportion.*

**I.** ENcompass your picture with one great square, which divide into as many little ones as you please: this done, according as you would have your picture either greater or less, make another square greater or less, which divide into as many equal squares, which be drawn with a black-lead plummet.

**II.** Take your black lead pen, and draw the picture by little and little, passing from square unto square (by the example of the pattern) until you have gone all over with it: observing that in what part of the square the picture lies, you draw the like part in the square answerable thereto, till you have finished the whole.

**III.** Then draw it over with a pen, in which second drawing of it you may easily mend any fault, and shadow it at pleasure.

**IV.** Lastly, When it is thoroughly dry, rub it over with the crum of white-bread, and it will take off all the black lead stroaks, so will your draught remain fair upon the paper,



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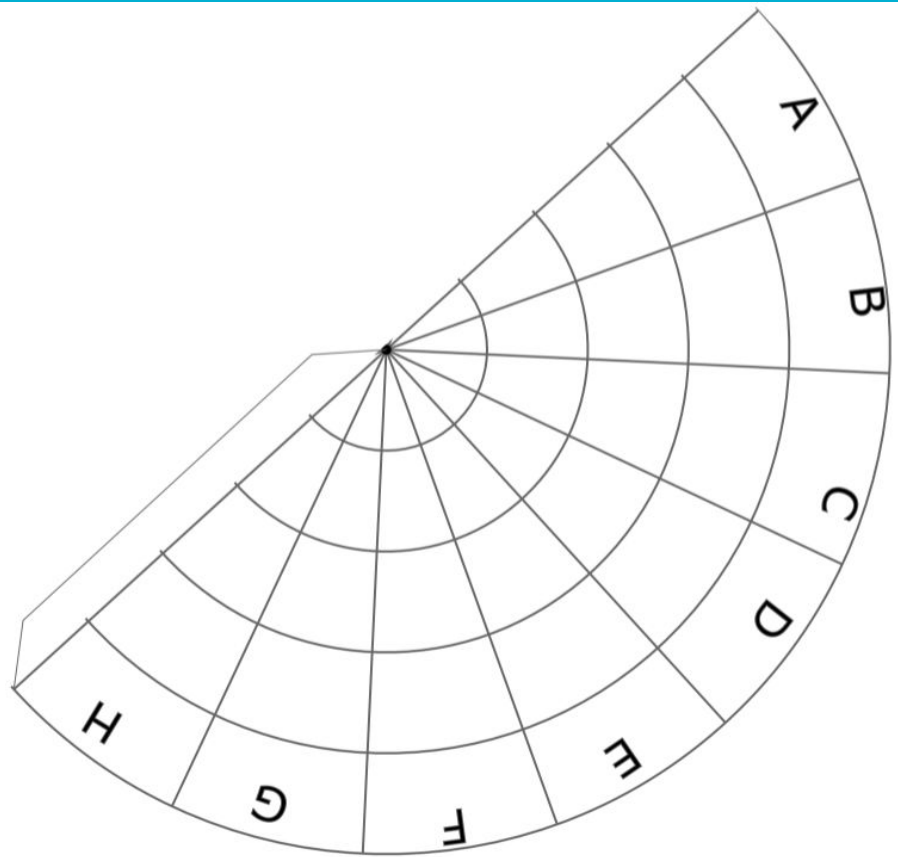
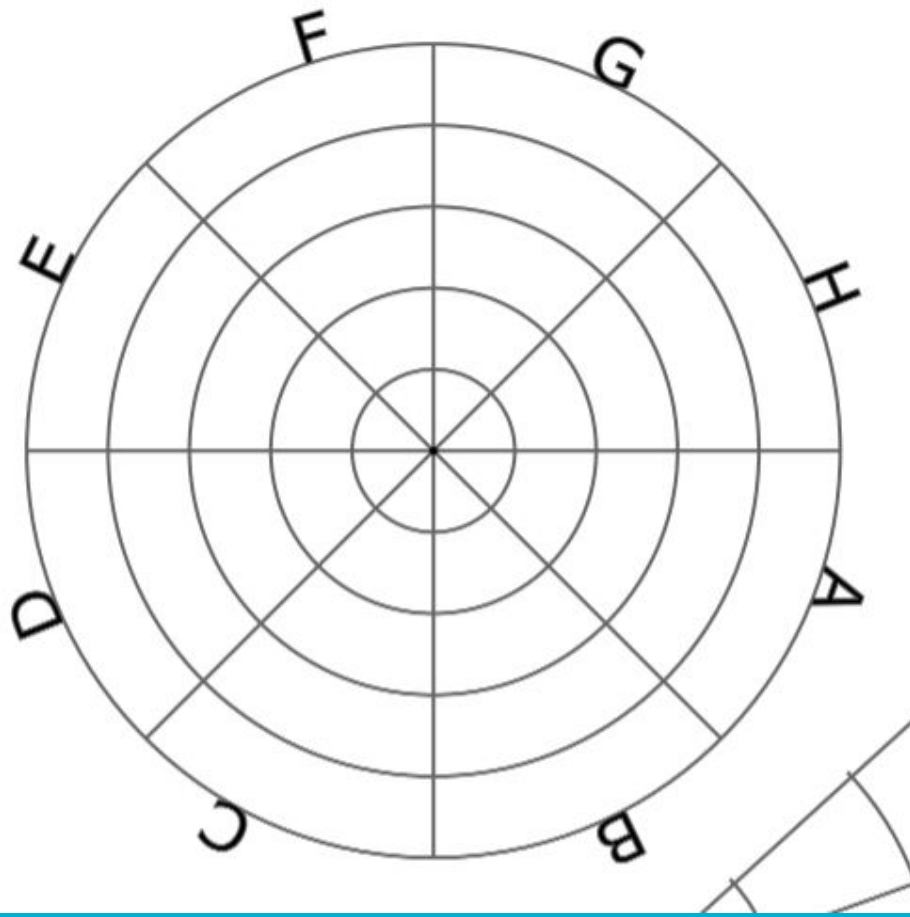
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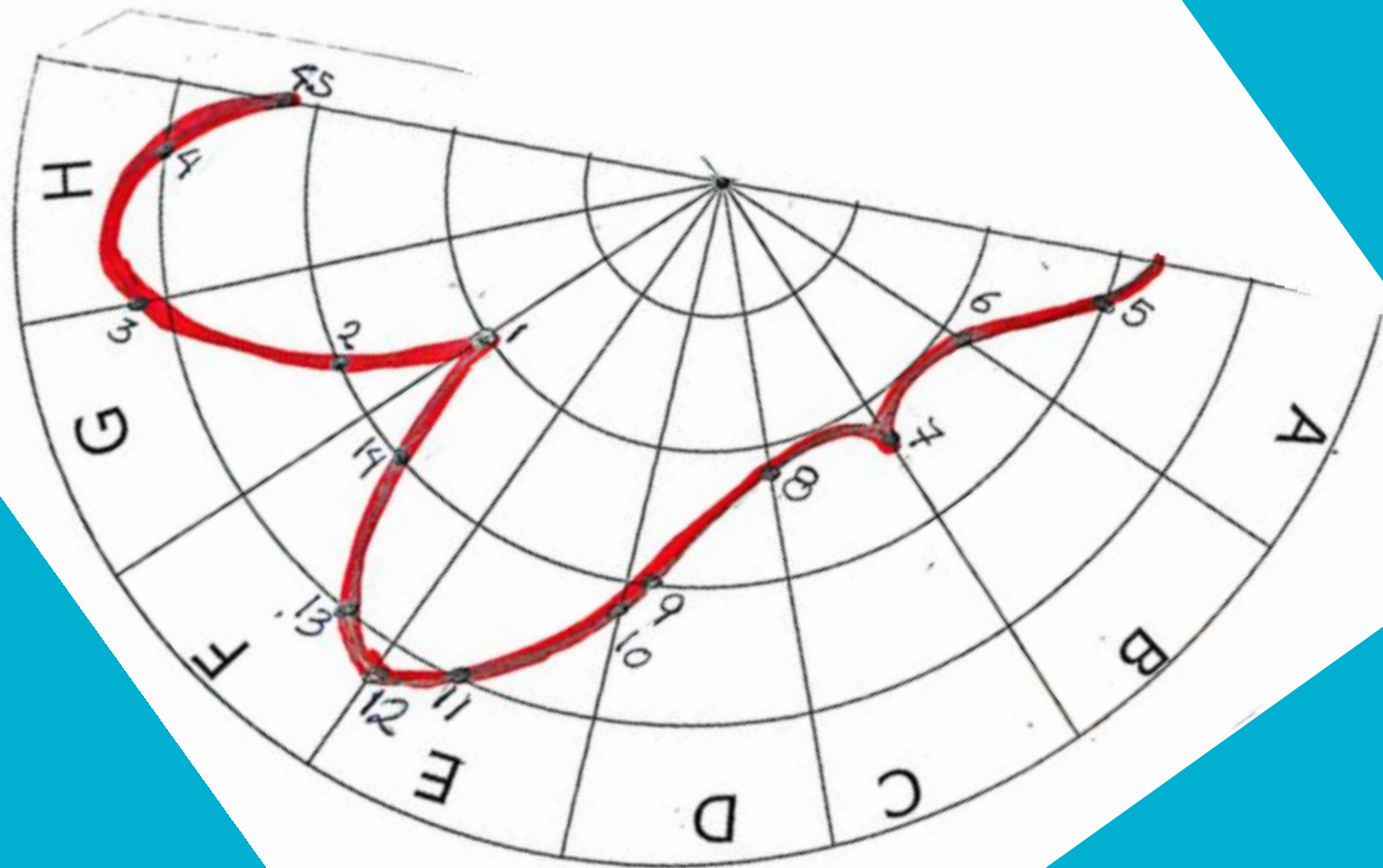
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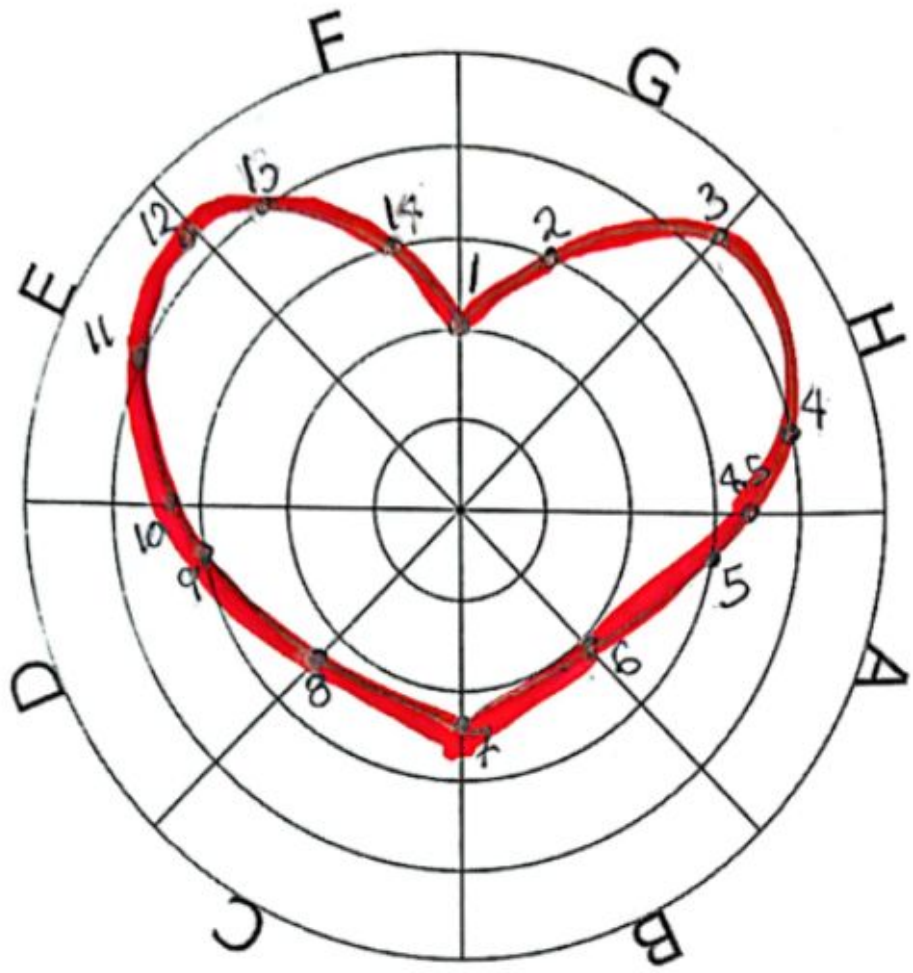
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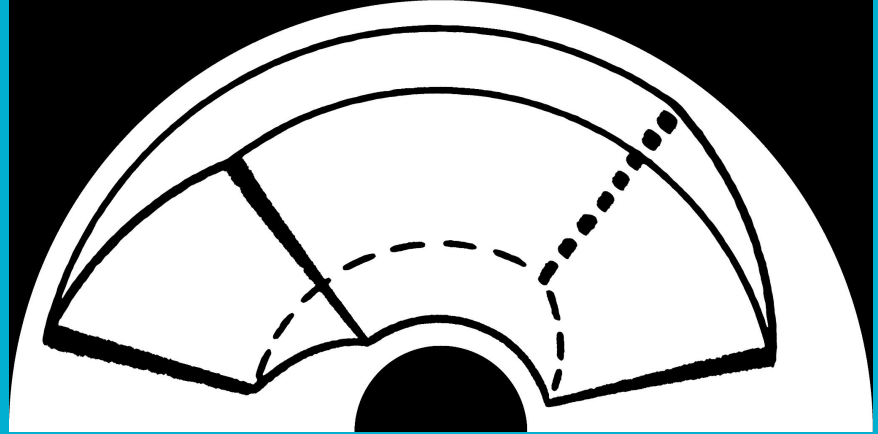
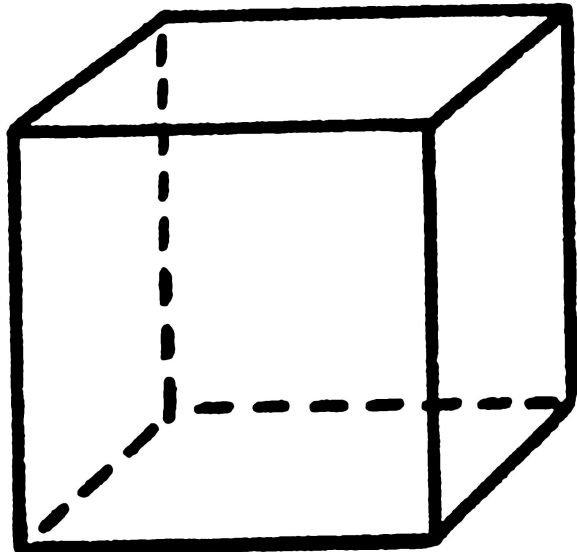


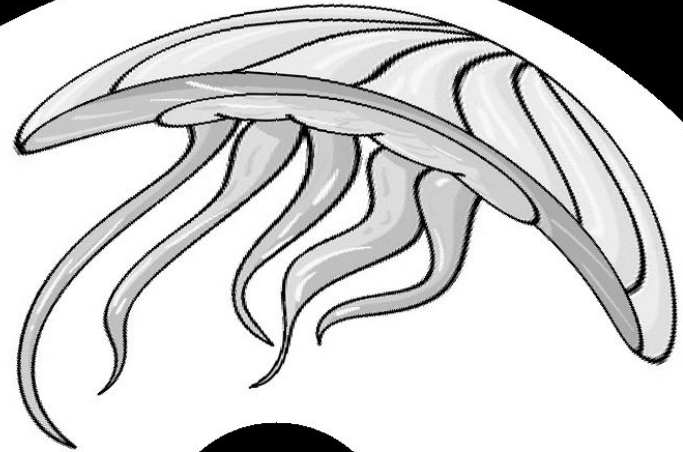
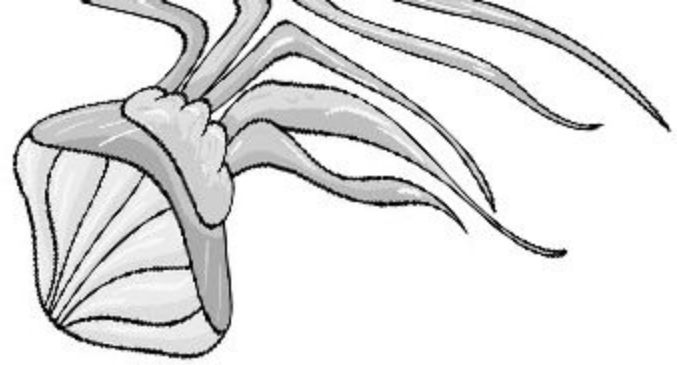
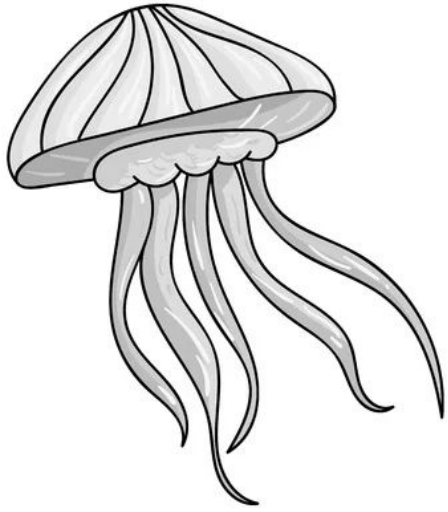
# Actividad. Anamorfismo cónico. Mat







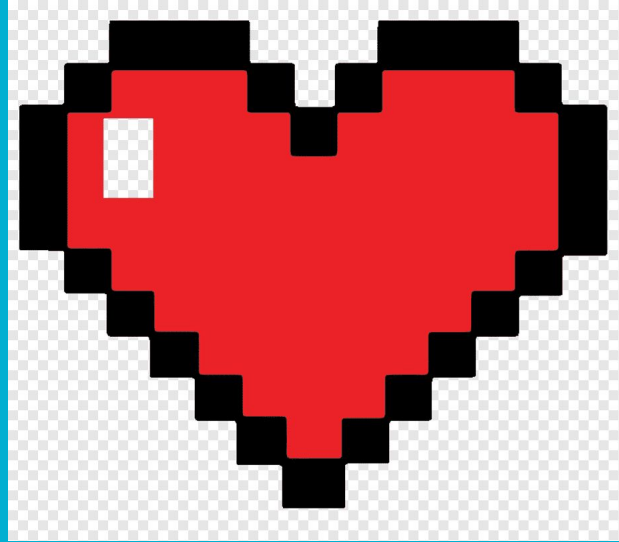


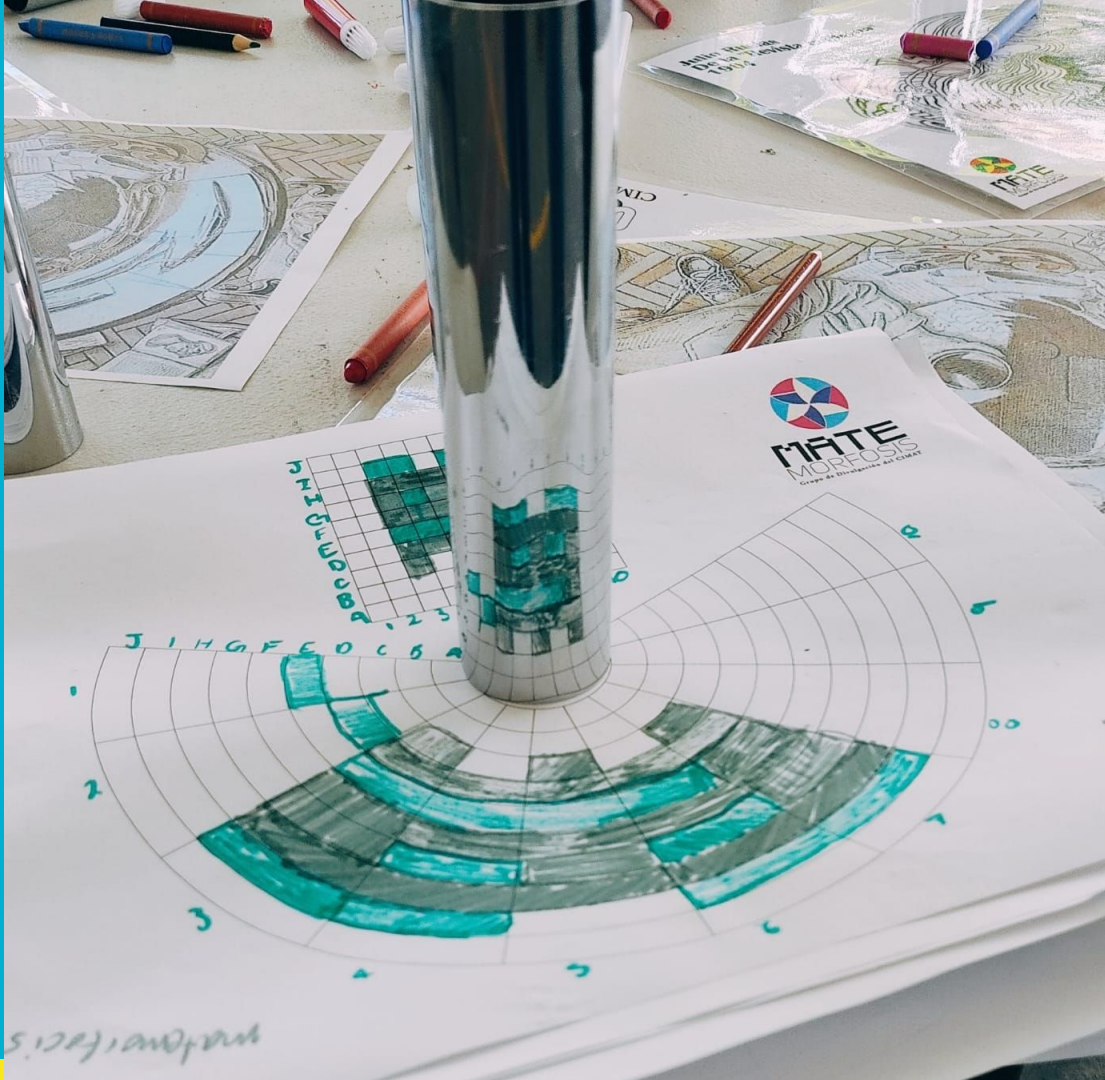


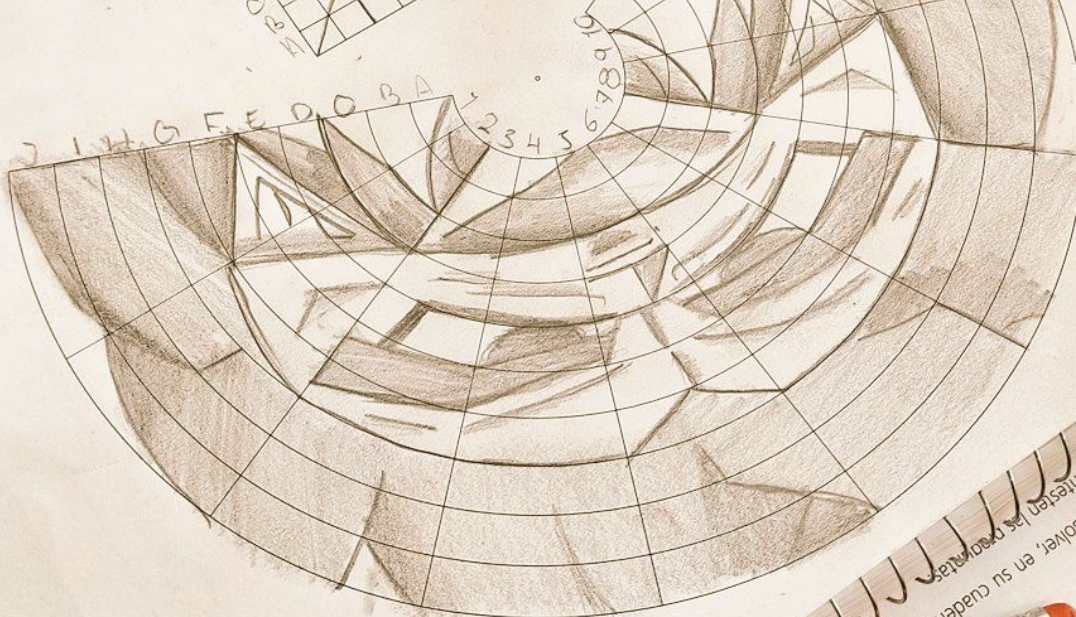
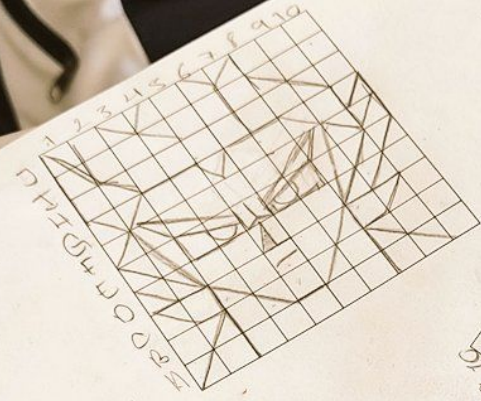


# Inspiración

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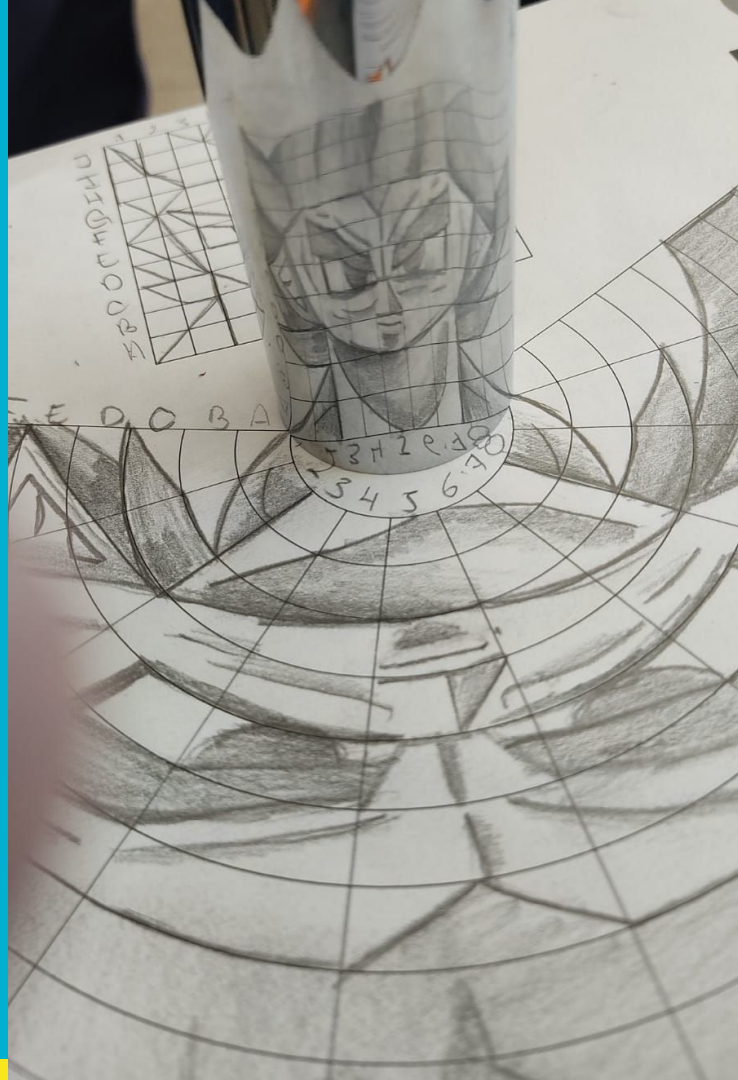






...en su cuadro  
...las pautas

—





+ Código + Texto

```
center = (rows//2, cols//2)
R = math.trunc(math.sqrt(rows*rows+cols*cols)/2)
warp2=np.zeros([R,2*R,3],dtype=np.uint8)
alphadata=np.zeros([R,2*R,2],dtype=np.uint8)

alphadata.fill(255)
warp2.fill(255)

for i in range(2*R):
    for j in range(R):
        (r, ang) = polar((i-R, j))
        if(r <= R):
            alphadata = 255
            (x,y)=rect((r,2*ang))
            y = math.trunc(y+center[0])
            x = math.trunc(x+center[1])
            if 0<=y < rows and 0<= x < cols:
                warp2[j,i] = f[y, x]
            else:
                warp2[j,i]=(255,255,255)

rgba = cv2.cvtColor(warp2, cv2.COLOR_RGB2RGBA)
rgba[:, :, 3] =alphadata

cv2_imshow(warp2)
```

Marta Faust, "“Eyed Awry”: Blind Spots and *Memoria* in the *Zimmer*  
*Anamorphosis*," *Journal of Historians of Netherlandish Art* 10:2 (Summer  
2018) DOI: 10.5092/jhna.2018.10.2.2

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<https://github.com/aydal/Cylindrical-Anamorphosis/blob/master/anamorph.py>

[https://es.123rf.com/photo\\_73733778\\_icono-de-los-pescados-de-jalea-en-estilo-del-esquema-aislado-en-el-fondo-blanco-ilustraci%C3%B3n-de-vecto.html](https://es.123rf.com/photo_73733778_icono-de-los-pescados-de-jalea-en-estilo-del-esquema-aislado-en-el-fondo-blanco-ilustraci%C3%B3n-de-vecto.html)

[https://colab.research.google.com/drive/10p9ci7LOXI30lmPw6a8WxFEb3pQC\\_UxDN?usp=sharing](https://colab.research.google.com/drive/10p9ci7LOXI30lmPw6a8WxFEb3pQC_UxDN?usp=sharing)

# Herramientas para crear estos efectos

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