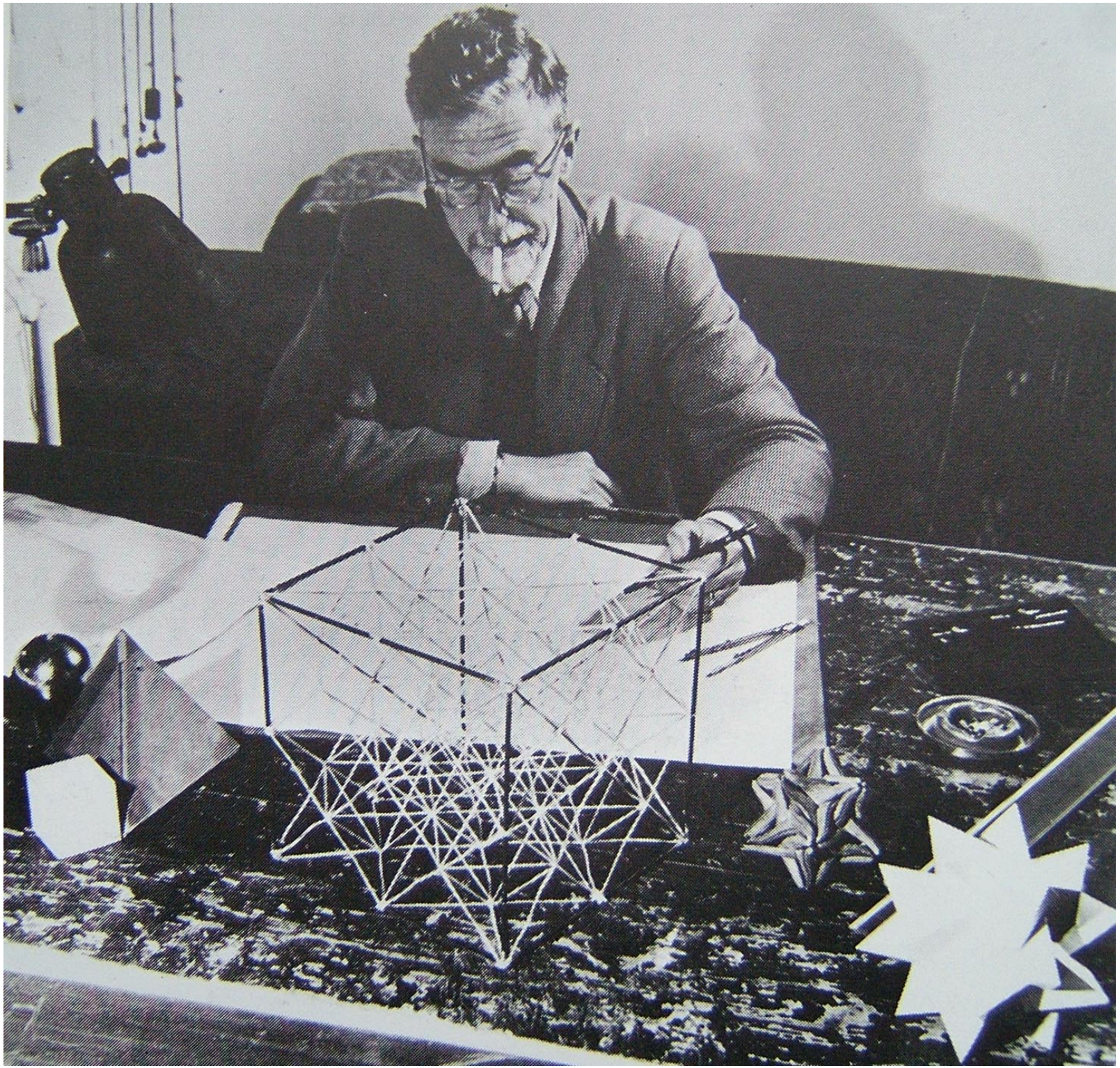
Maurits Cornelis Escher

Le strutture della superficie



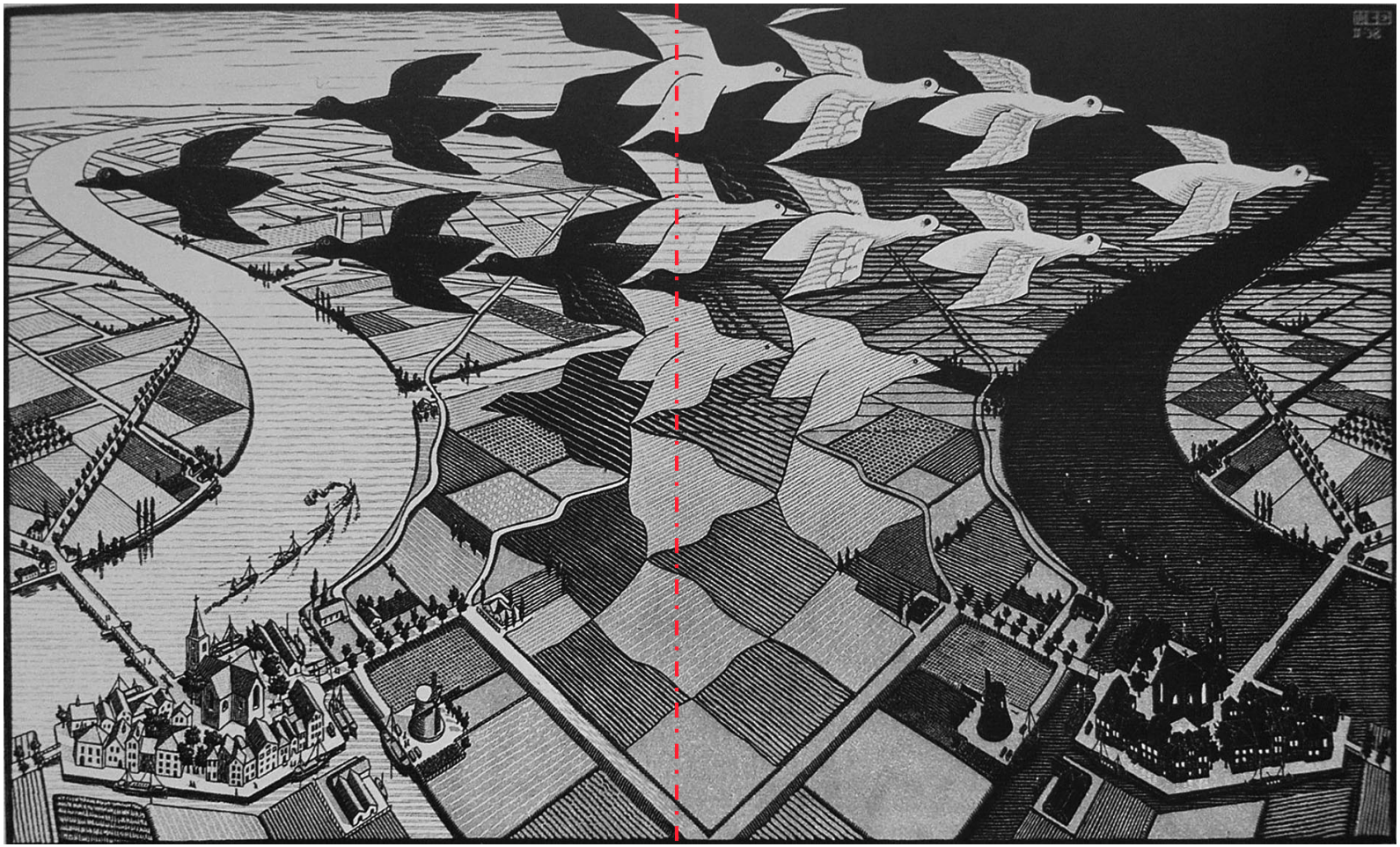
Maurits Corneliis Escher (1898-1972)

La sua opera nel campo della grafica documenta una ricerca molto personale, della quale sono documentate più le relazioni con matematici e cristallografi che non con il dibattito artistico contemporaneo, dal quale egli sembra tenersi in disparte nonostante siano riconoscibili alcuni riferimenti ai dibattiti formali che hanno agitato la prima metà del XX secolo. Questa indaga le “strutture” geometriche dello spazio con costruzioni complesse, che mettono in evidenza le ambiguità della rappresentazione grafica e dello spazio proiettivo.

Come nessun altro grafico è riuscito a dare forma a quella relazione tra la matematica e l’architettura che attraverso la geometria trova nel disegno la sua forma espressiva privilegiata, dando vita ad architetture “cerebrali”, immaginarie e concettuali, che portano a porsi domande di difficile risposta sulla struttura della realtà fisica che ci circonda e sulla sua percezione sensoriale.

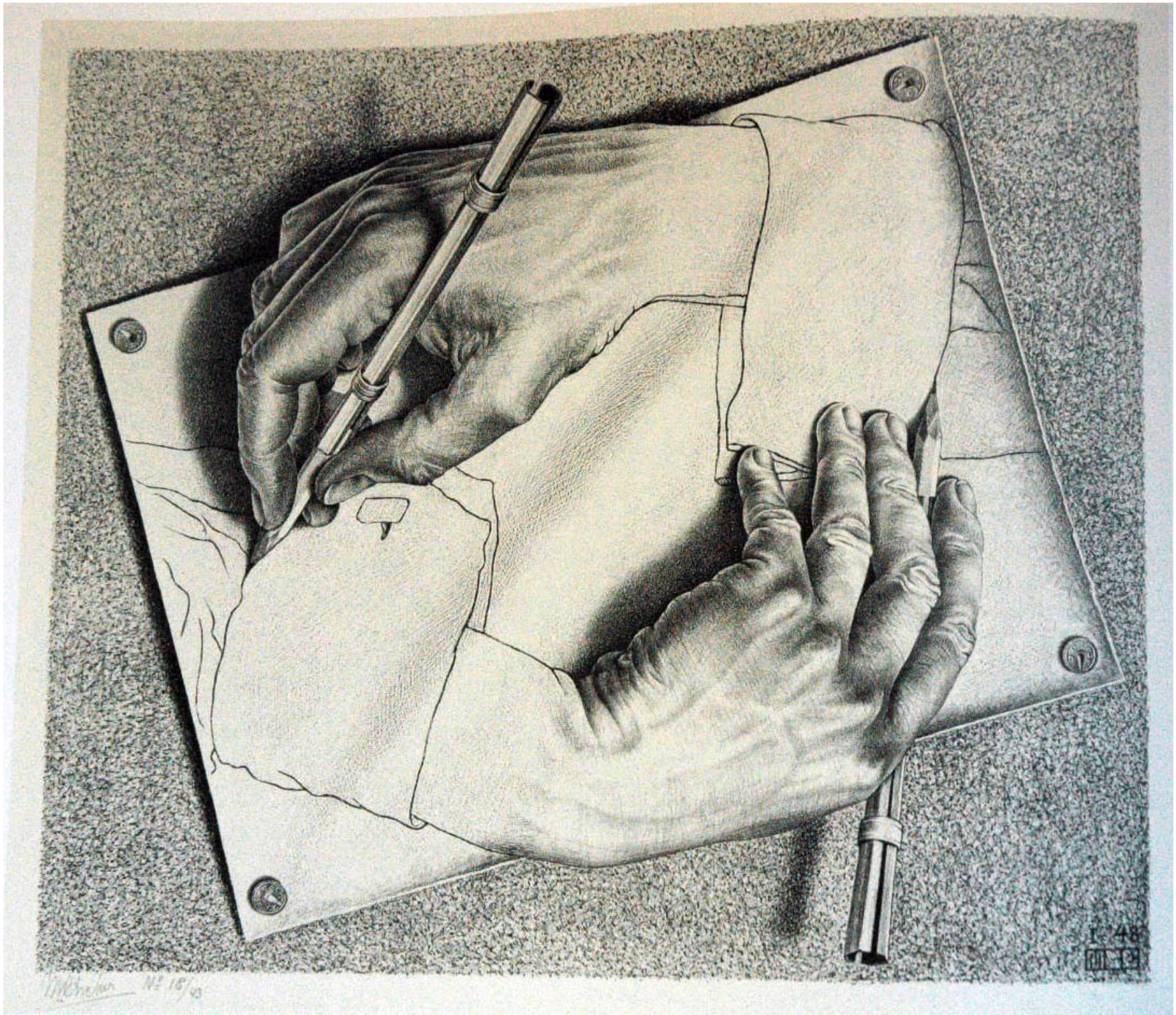
Con grande rigore e logica coerenza Escher si è avventurato lungo strade diverse da quelle tracciate dai binari della geometria euclidea e del disegno codificato, sottolineando nell’ambiguità della proiezione i paradossi della percezione e della rappresentazione.

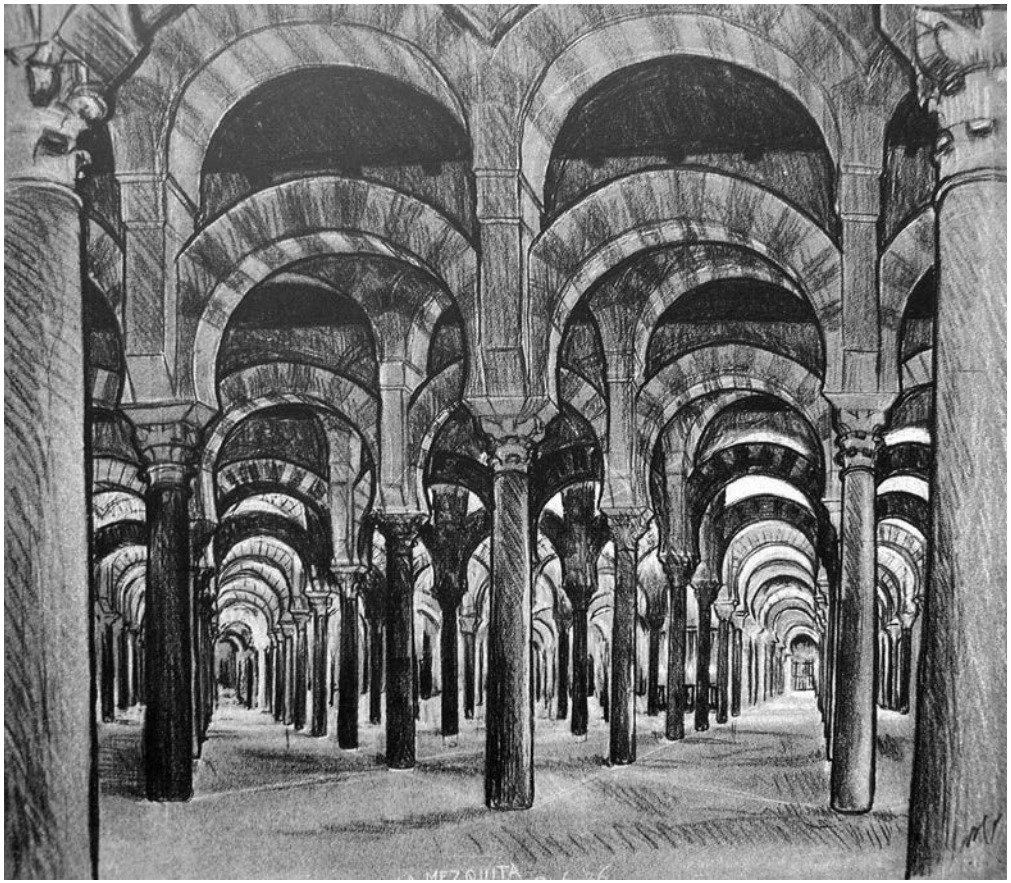
Simmetrie e contrasti



Giorno e notte

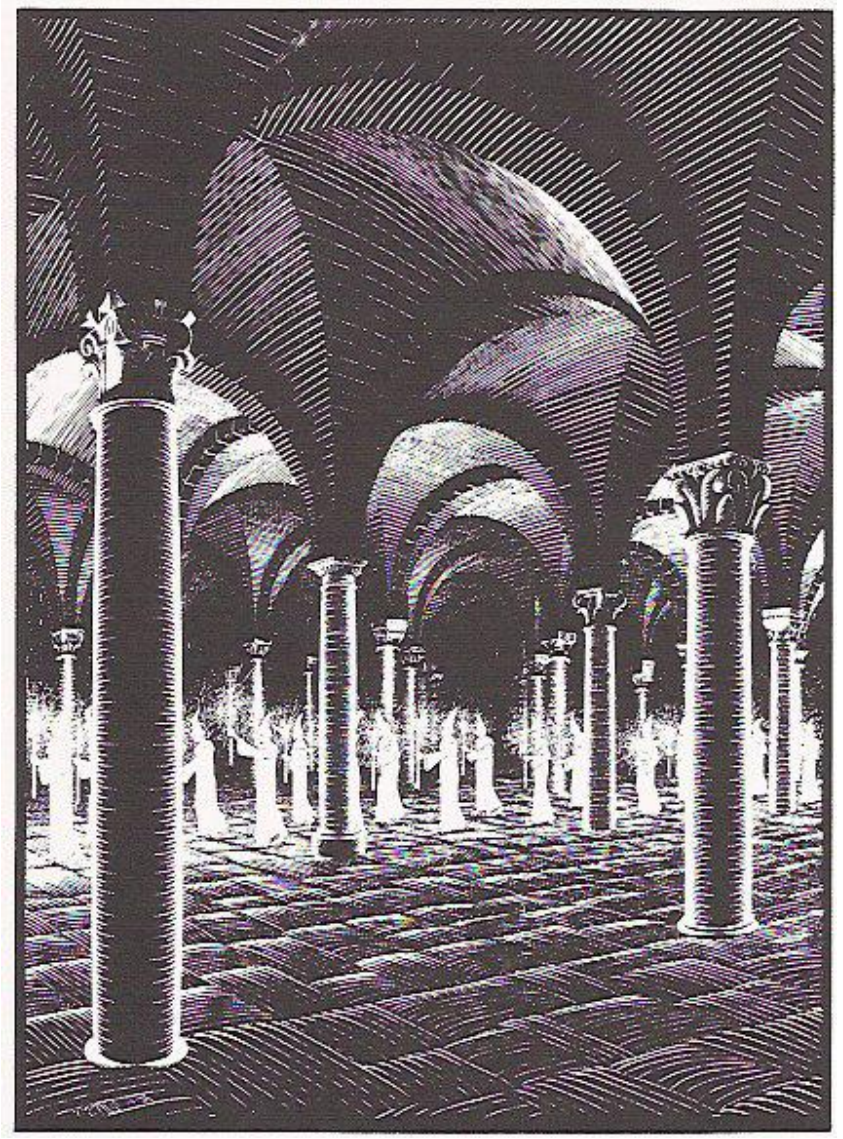
“bianco e nero, giorno e notte - il grafico vive di queste contrapposizioni.”


I 48



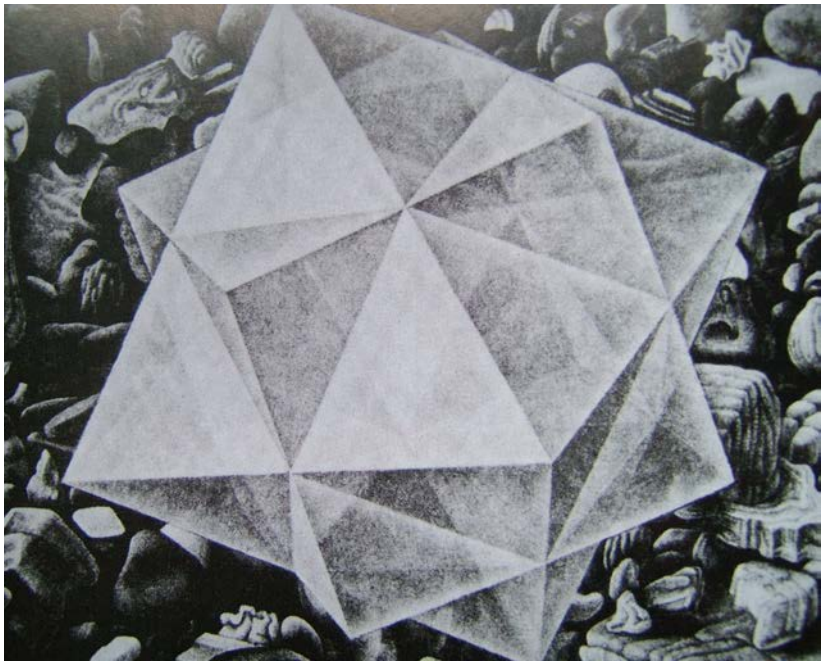
La moschea di Cordoba

Processione nella cripta



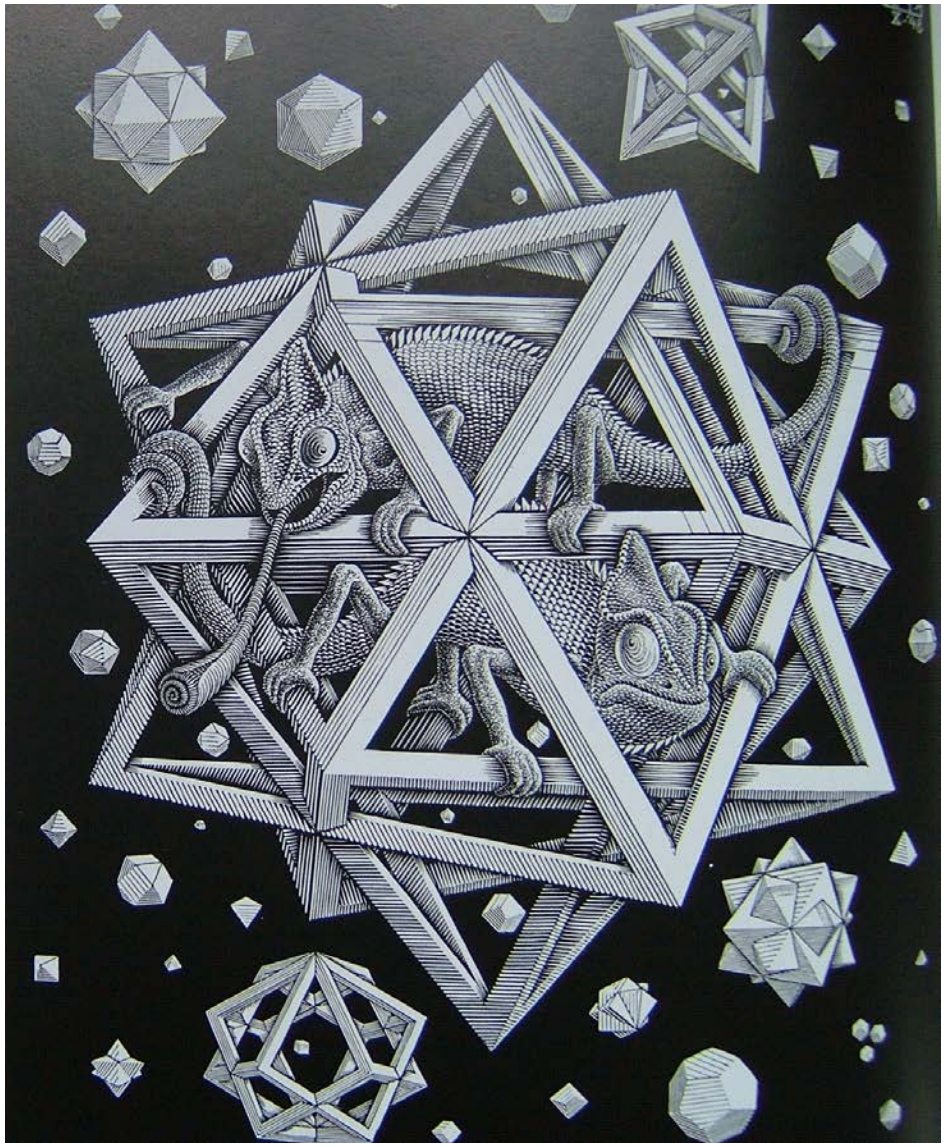
“la mia opera è molto brutta e molto bella al tempo stesso…Bella perché il disegno stupisce nelle sue singole manifestazuioni e nella coerenza della ricerca - brutta perché la ricerca resta irrisolta nel margine ambigo tra realtà spaziale e percezione sensoriale, nel gioco tra le due dimensioni del disegno e quelle dello spazio euclideo”

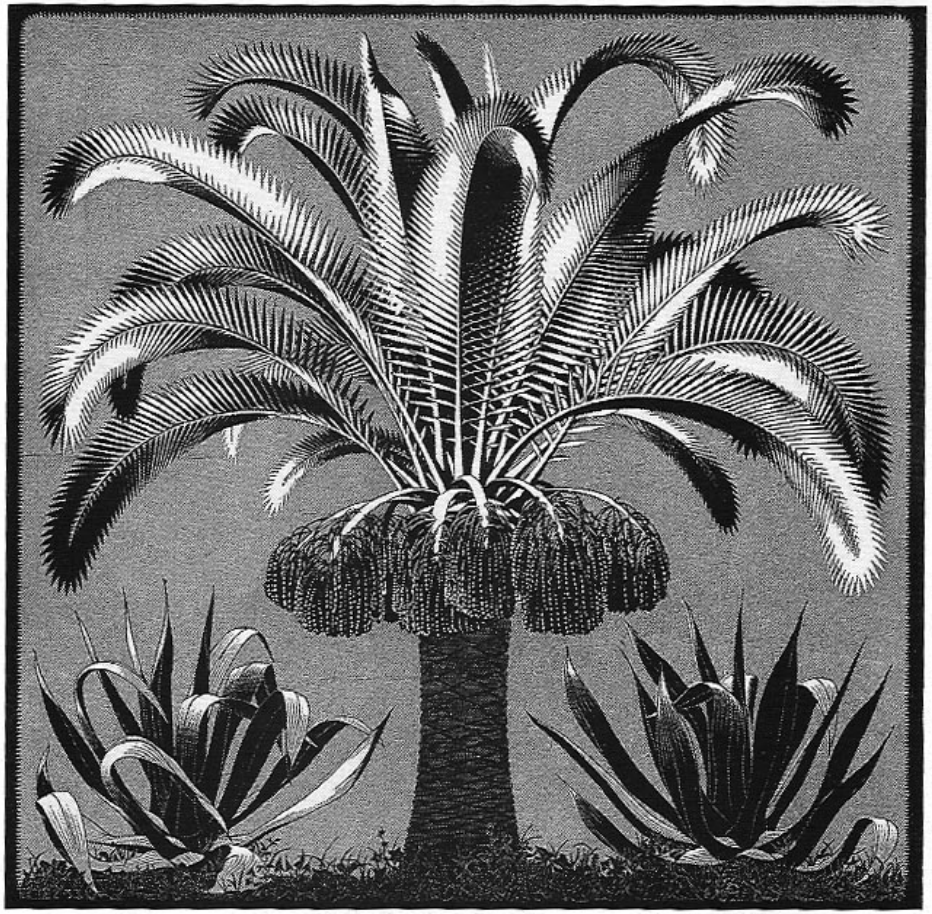
“Le leggi matematiche non sono invenzioni umane o creazioni, esse *sono*, esistono indipendentemente dallo spirito umano.”



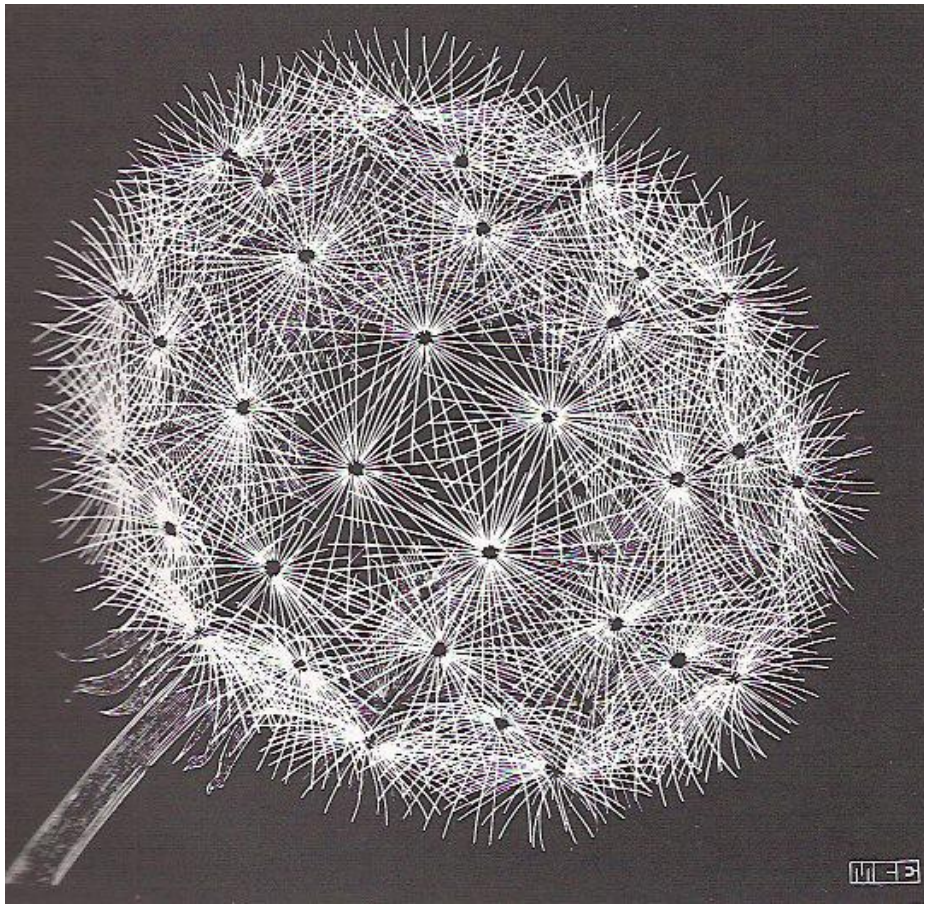
“I cristalli non sono creazioni della mente umana.

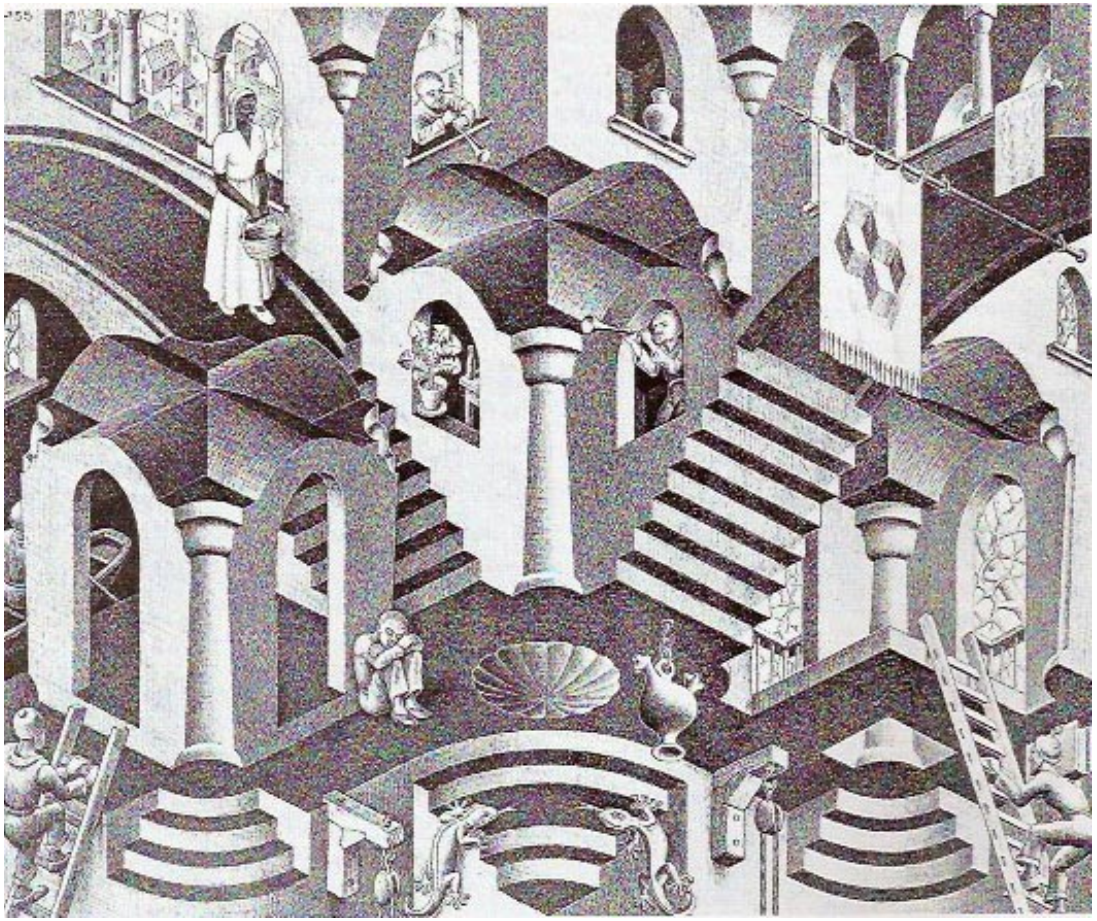
Esistono, concretizzando leggi geometriche e matematiche.”





“La bellezza e l’ordine dei corpi regolari sono irresistibili”

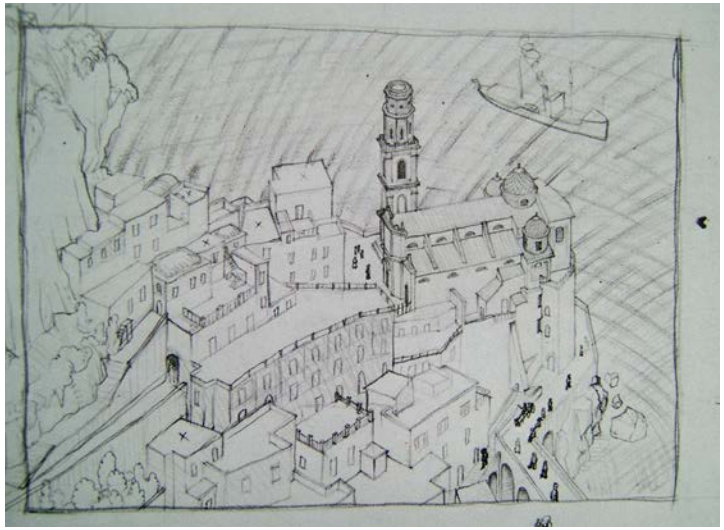




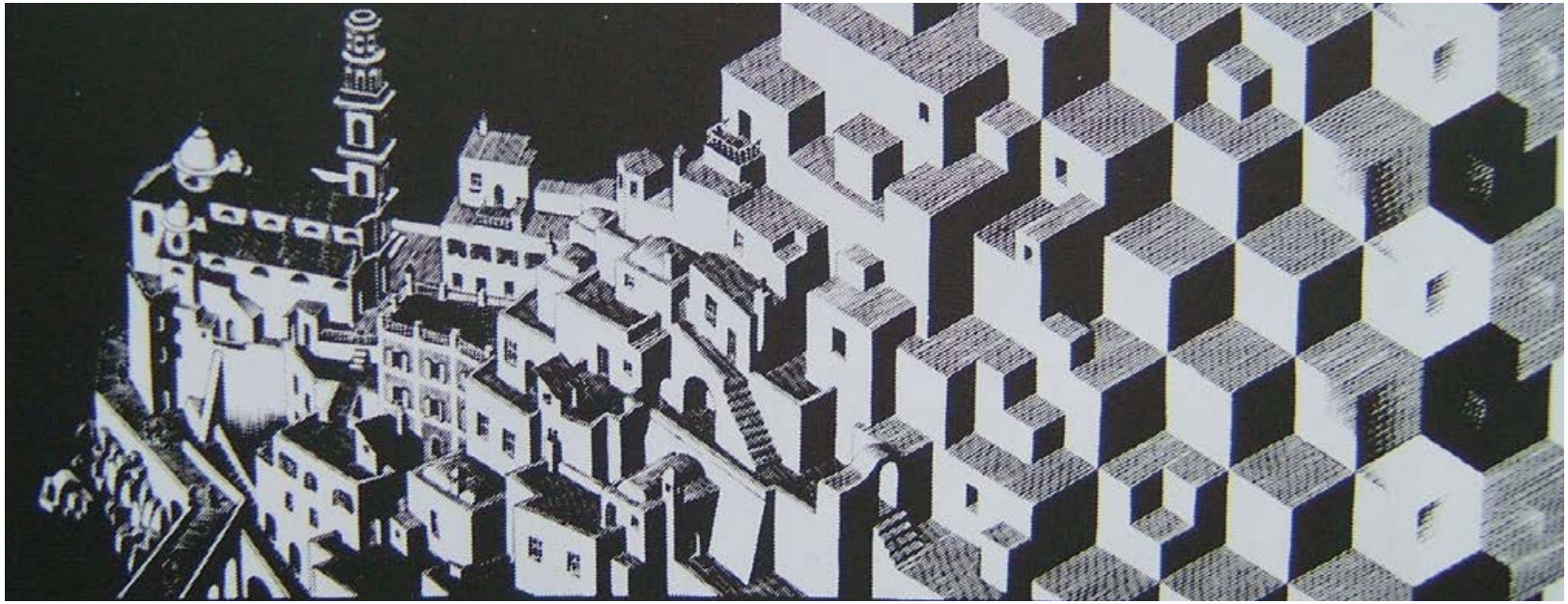
Concavo e convesso

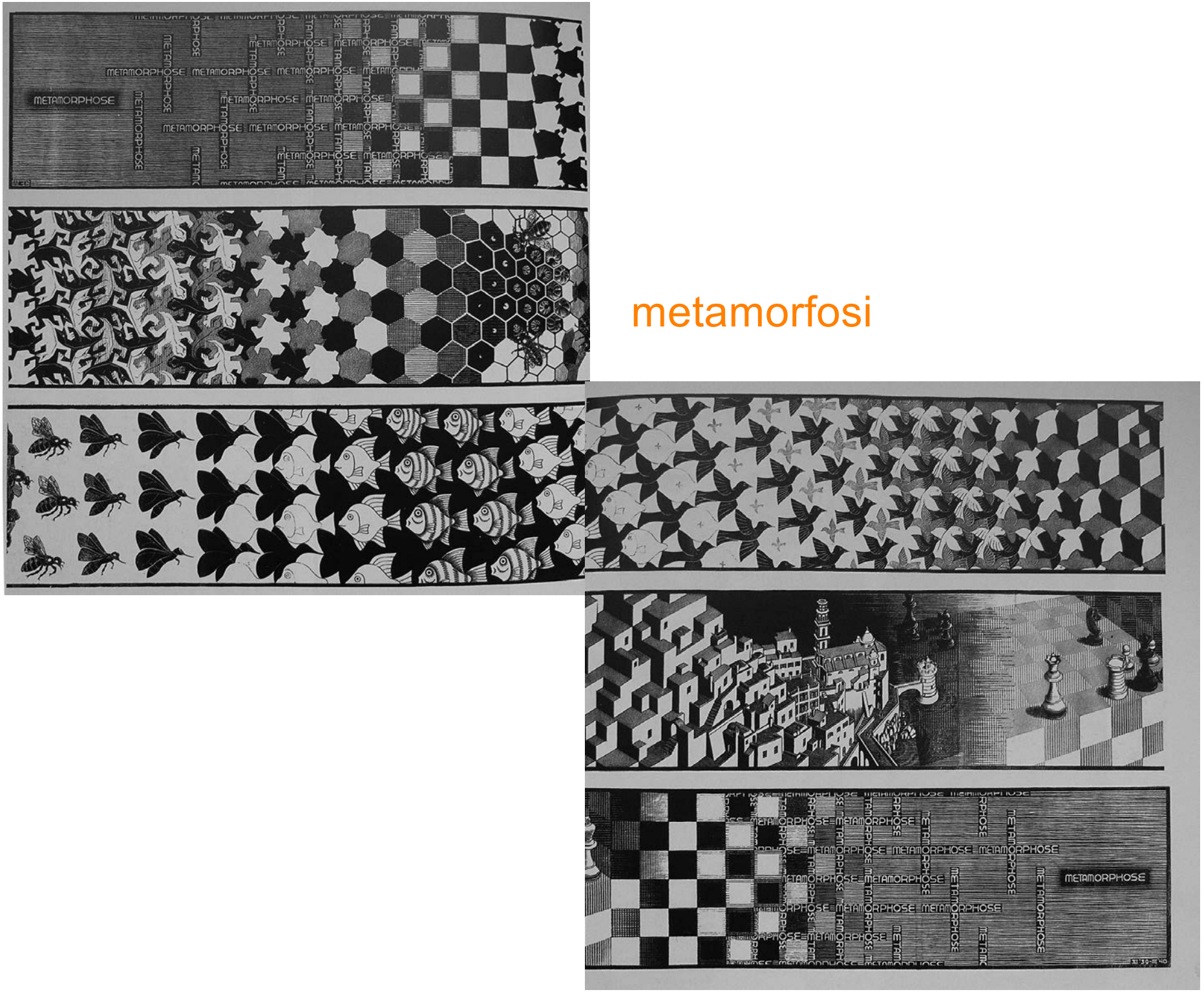
“Non ho mai voluto rappresentare qualche cosa di mistico. Quello che alcune persone giudicano misterioso non è altro che un consapevole o inconsapevole inganno”

Forma e trasformazione

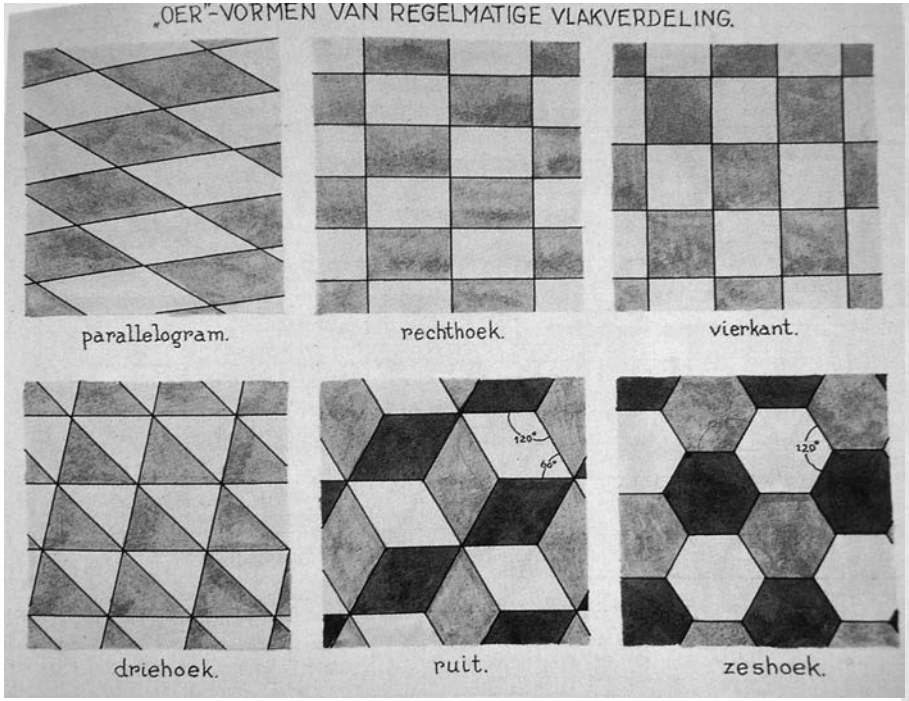


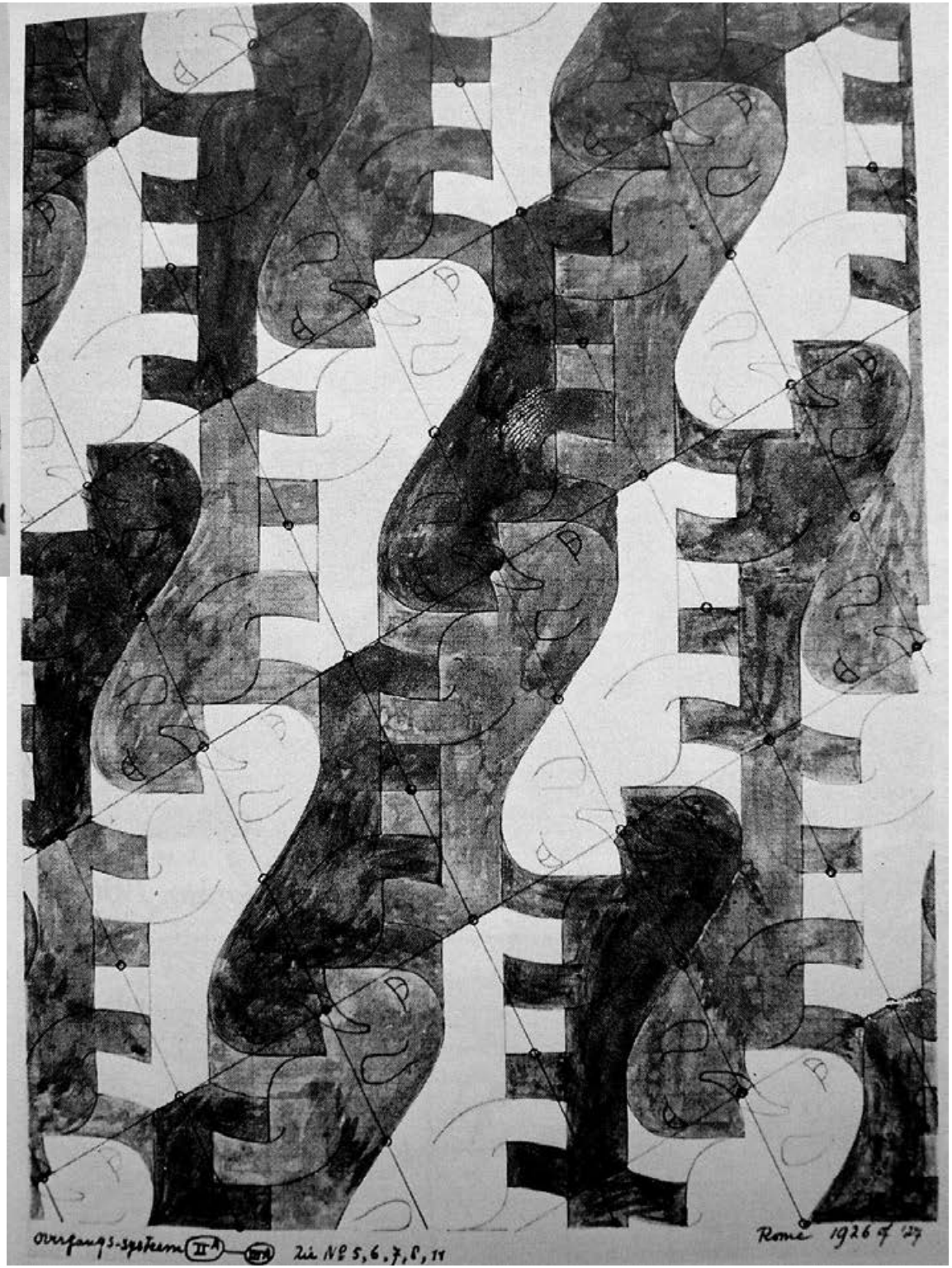
Metamorfosi





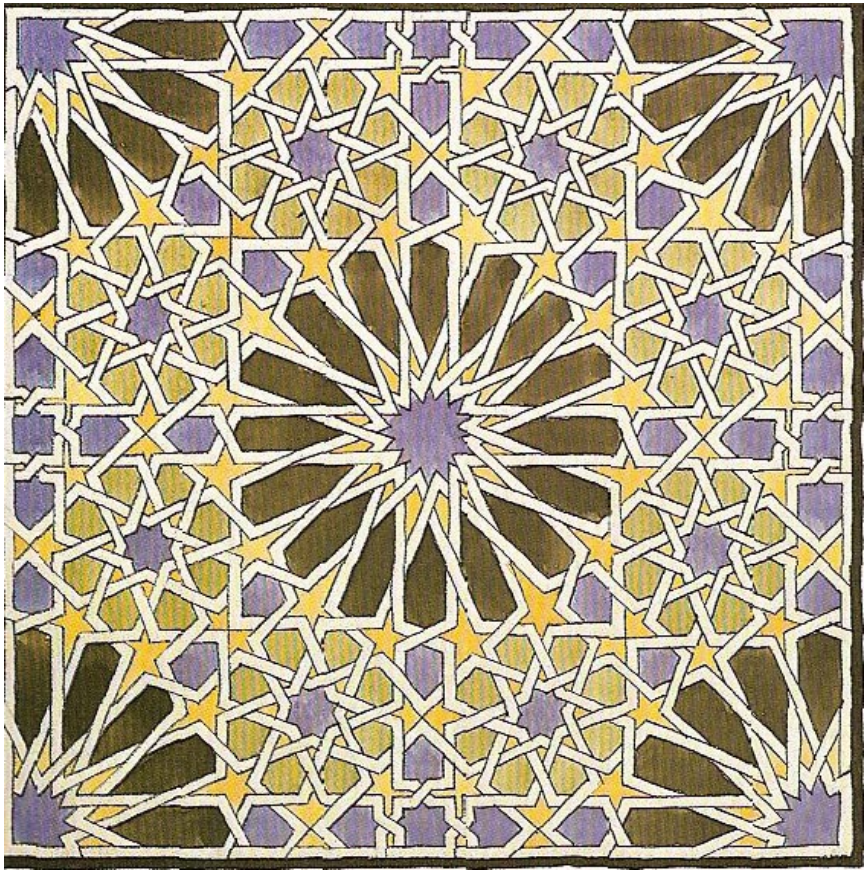
metamorfosi

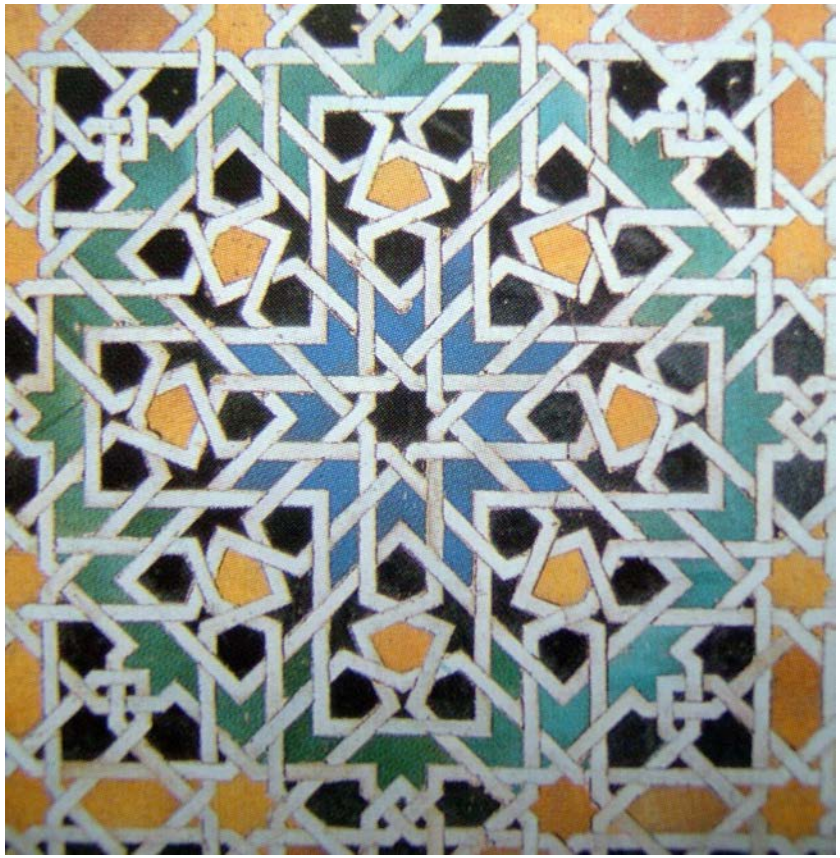




"Tutto ciò che presento nelle mie opere sono notizie circa le mie scoperte."

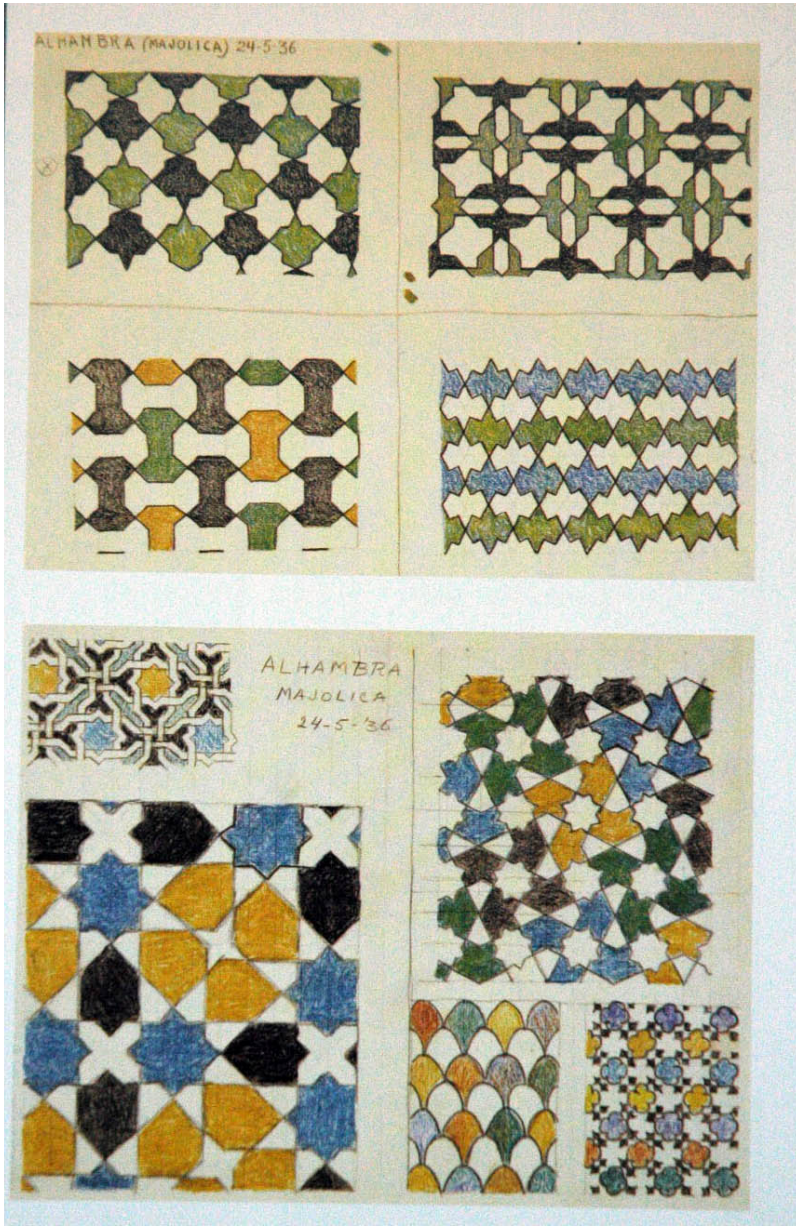
continuità

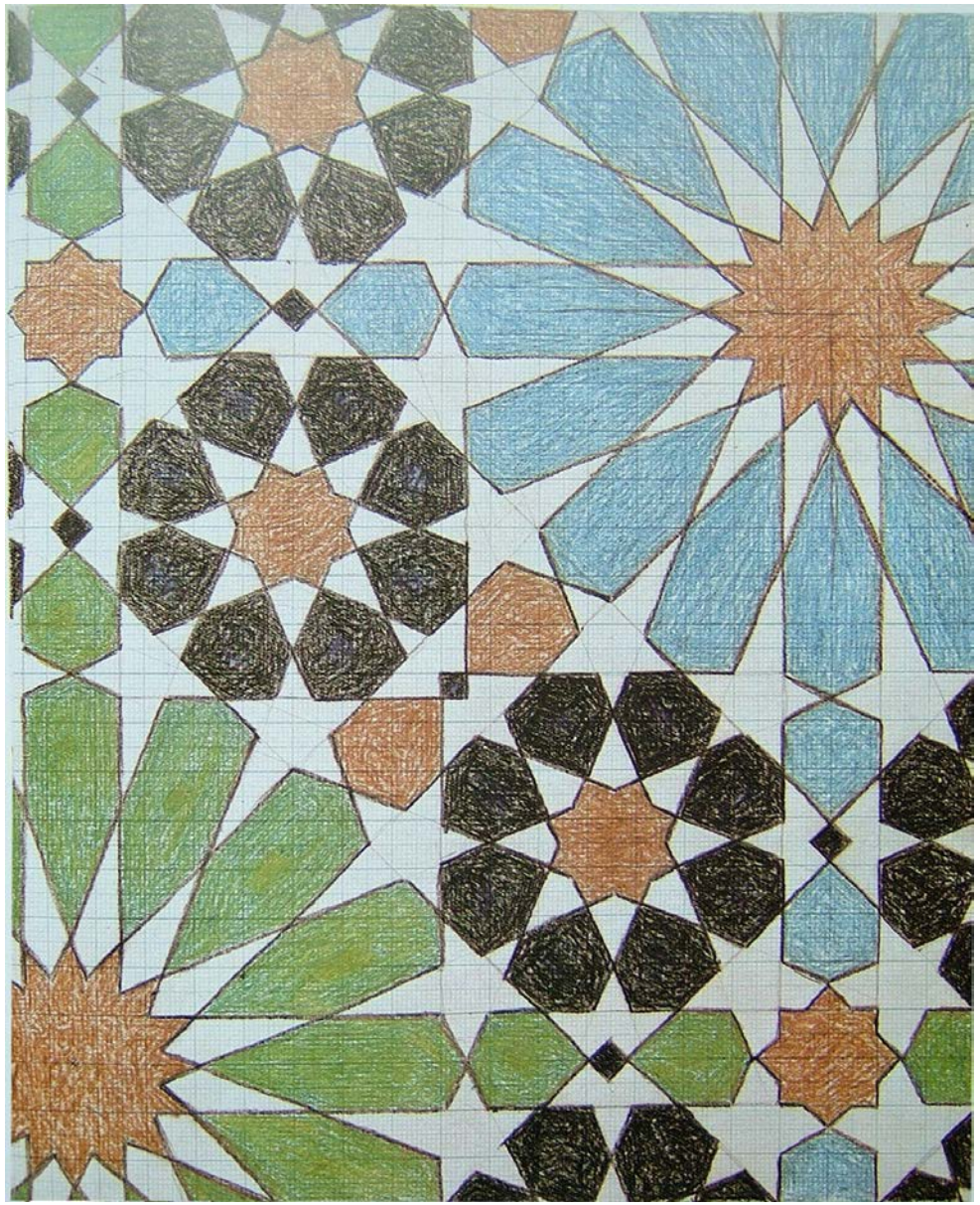




“I mori erano maestri nel riempire superficicon un motivo sempre uguale, accostando pezzi di maiolica colorata senza lasciare interstizi.”

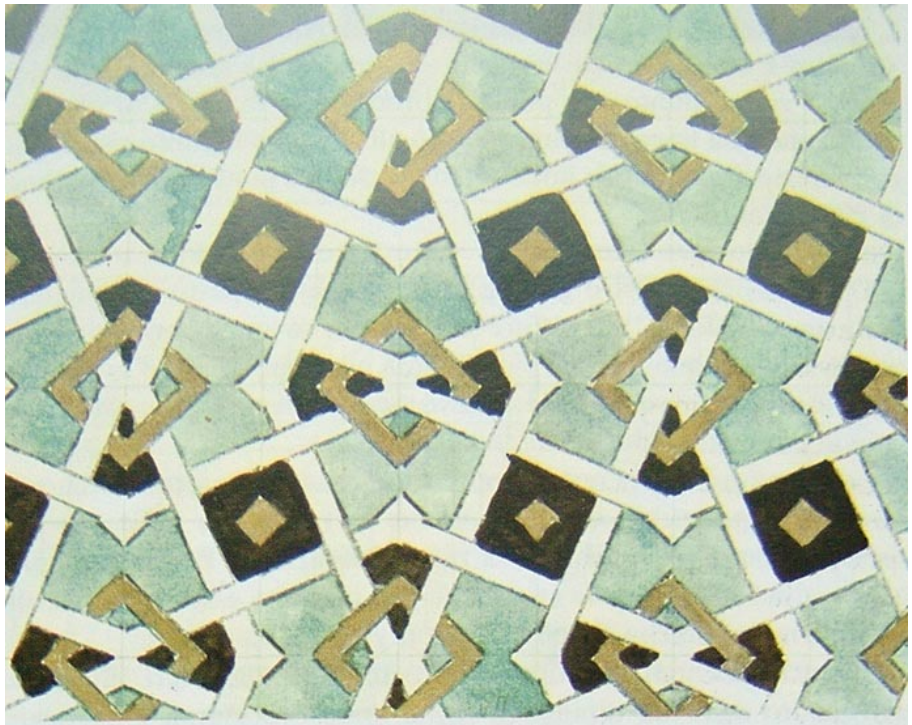
Simmetrie, reticoli e motivi ciclici: Lo studio delle leggi della tassellazione del piano


ALHAMBRA (MAJOLICA) 24-5-36
ALHAMBRA
MAJOLICA
24-5-36



79. a. *Stampo per le decorazioni delle illustrazioni 80 e 81.*

79. b. *Possibili posizioni dello stampo e loro immagini speculari*

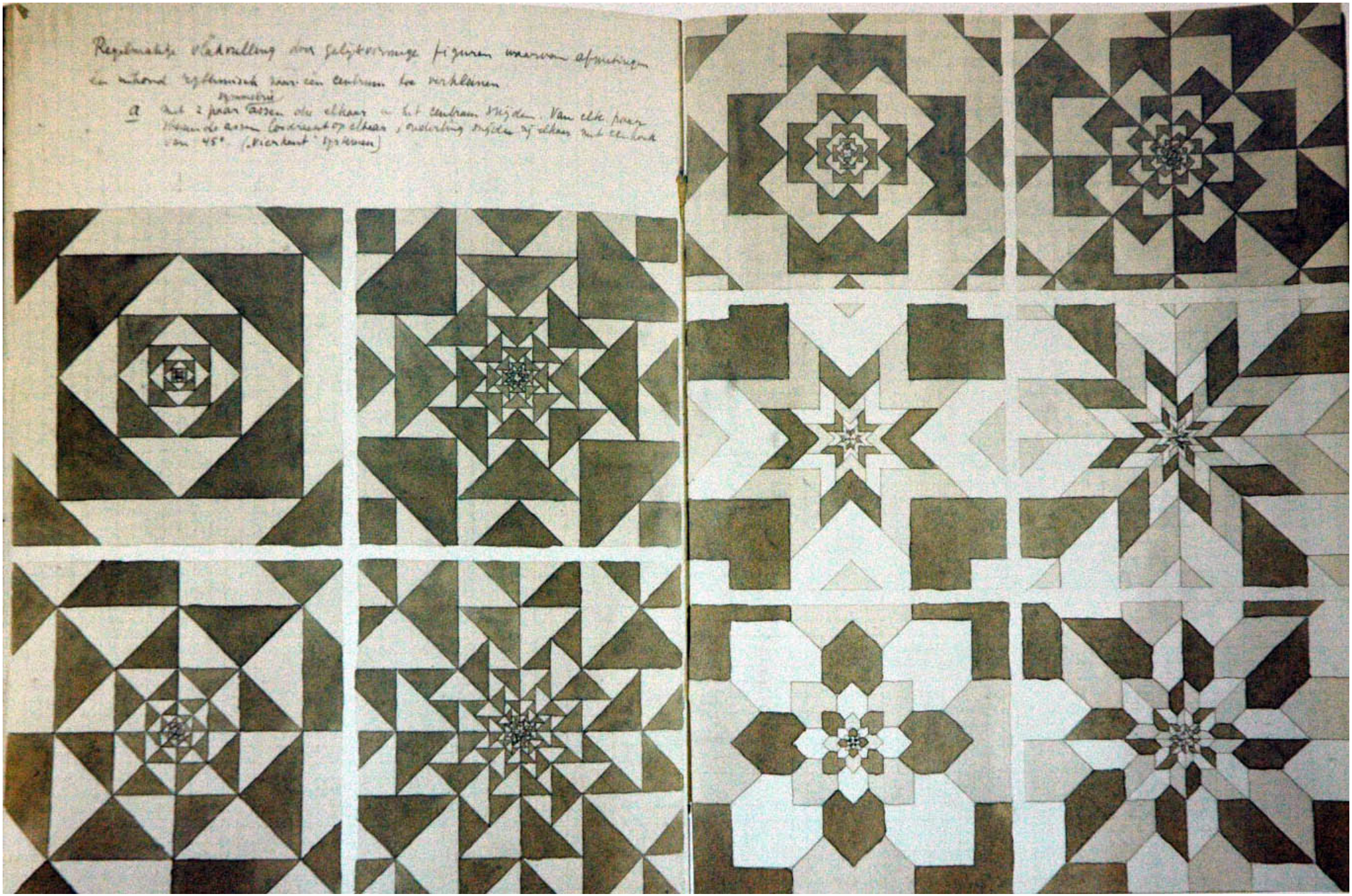


80. *Ornamento I, stampato e colorato*

Modulo e disegno: un gioco continuo

Regelmatige Verdeeling van gelijkvormige figuren waarvan afmetingen
en onderd. rechtmatig naar een centrum toe verkleinen

a Met 2 paar assen die elkaar in het centrum snijden. Van elk paar
assen de assen loodrecht op elkaar, onderling snijden zij elkaar
met een hoek van 45° („vierkant" symmetrie)

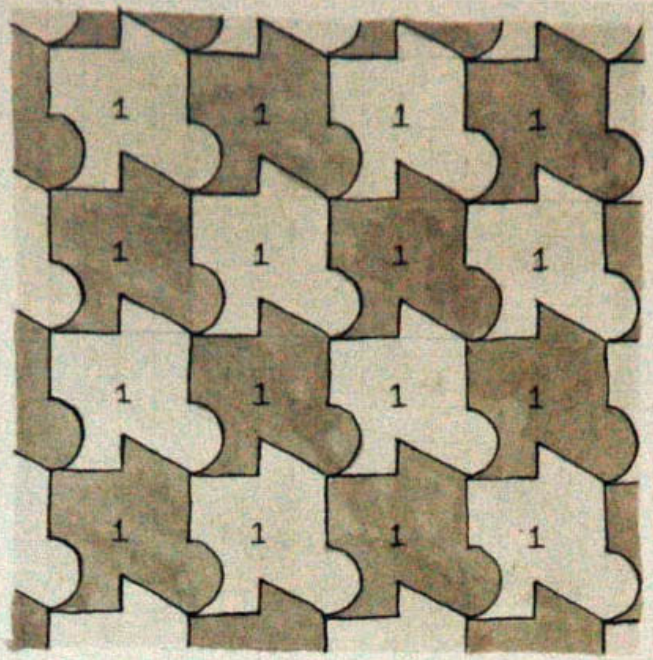


REGELMATIGE VLAKVERDELING.

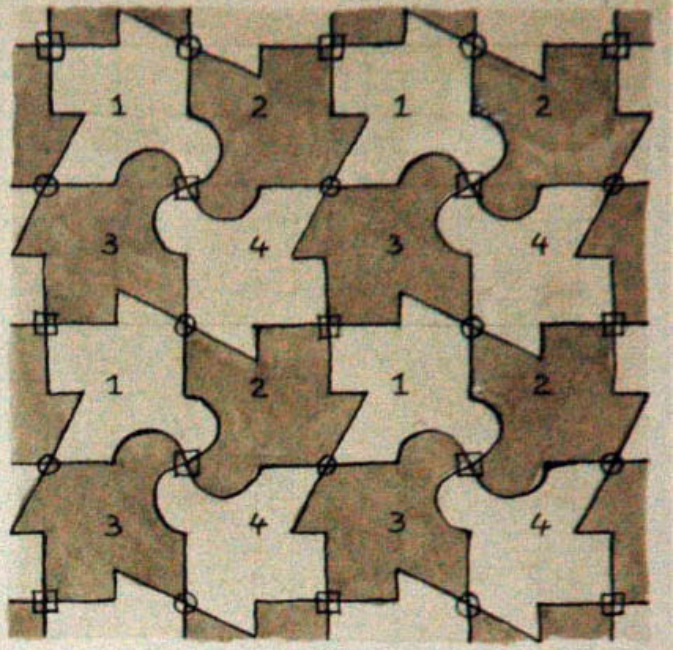
vijf voorbeelden van vierkant-systemen.

de drie hoofdkenmerken zijn:

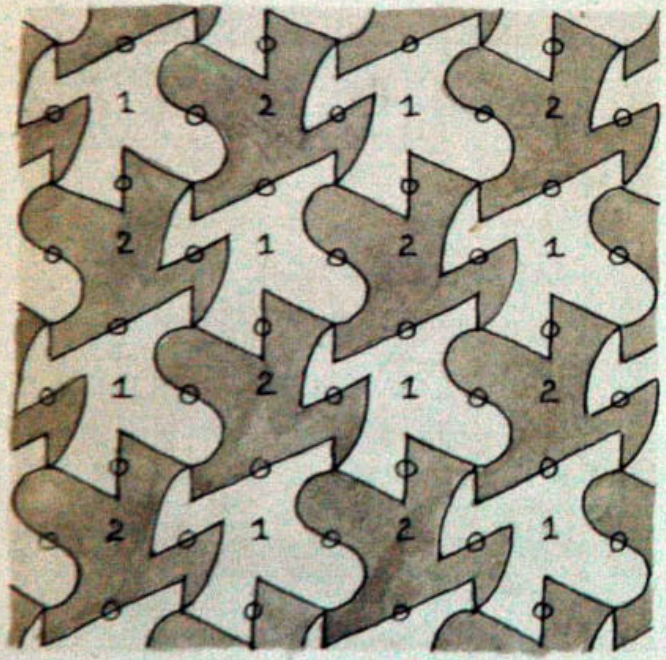
1. verschuiving.
2. assen. (o en □)
3. glijspiegeling.



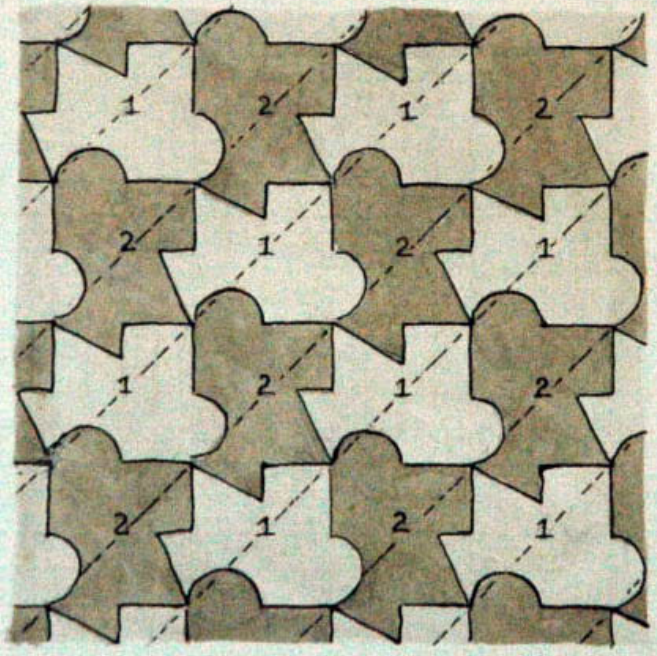
alléén verschuiving.



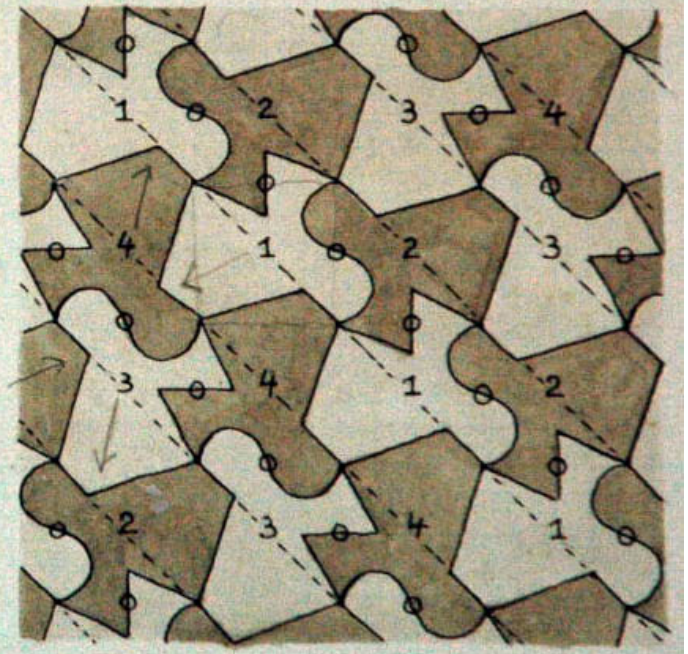
alléén assen.



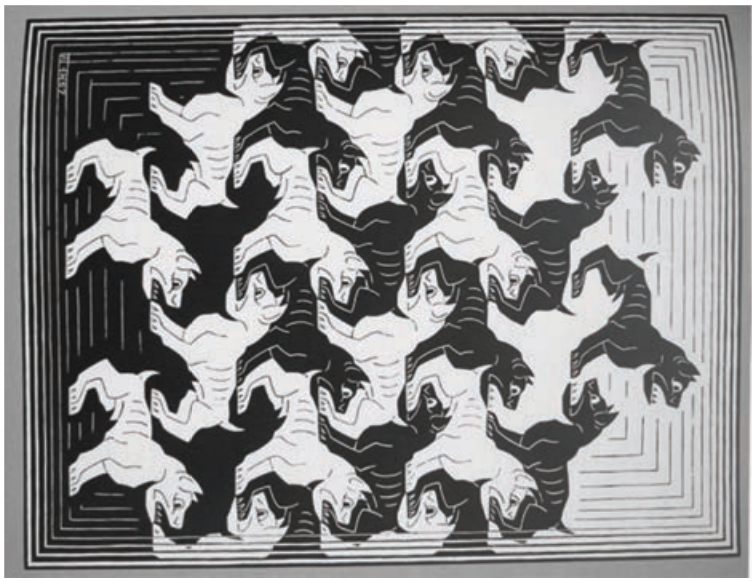
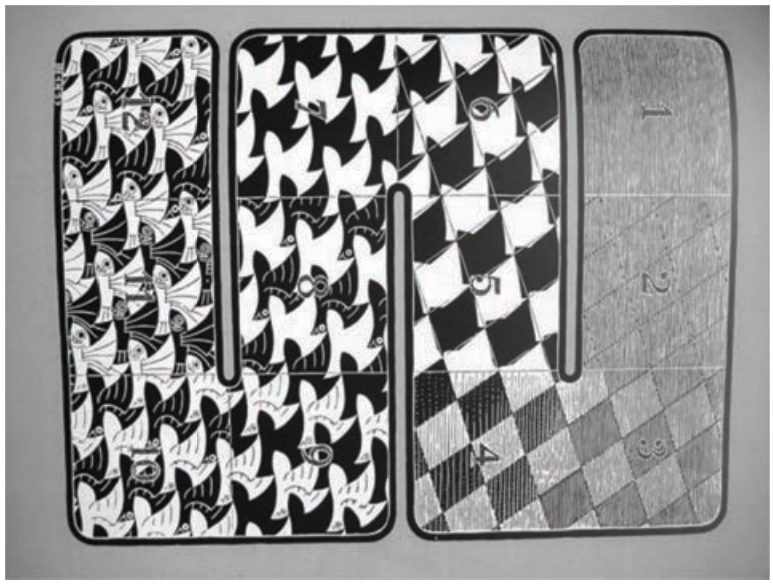
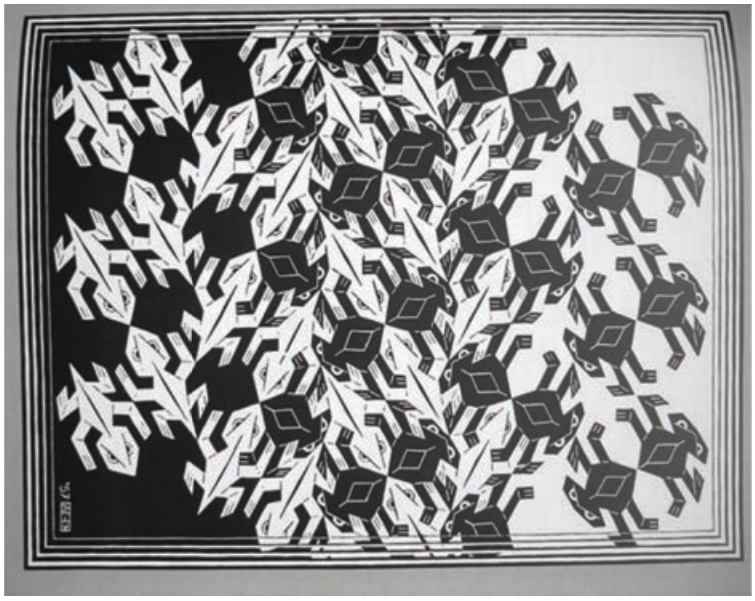
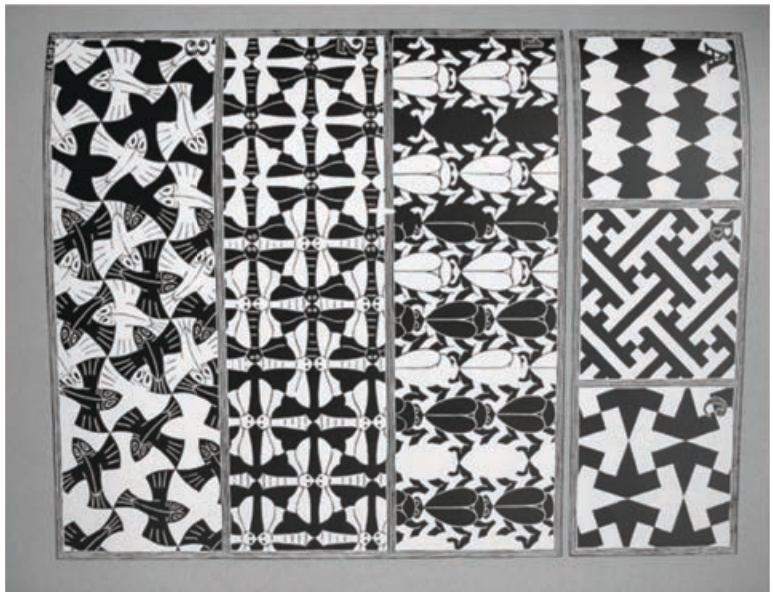
verschuiving en assen.

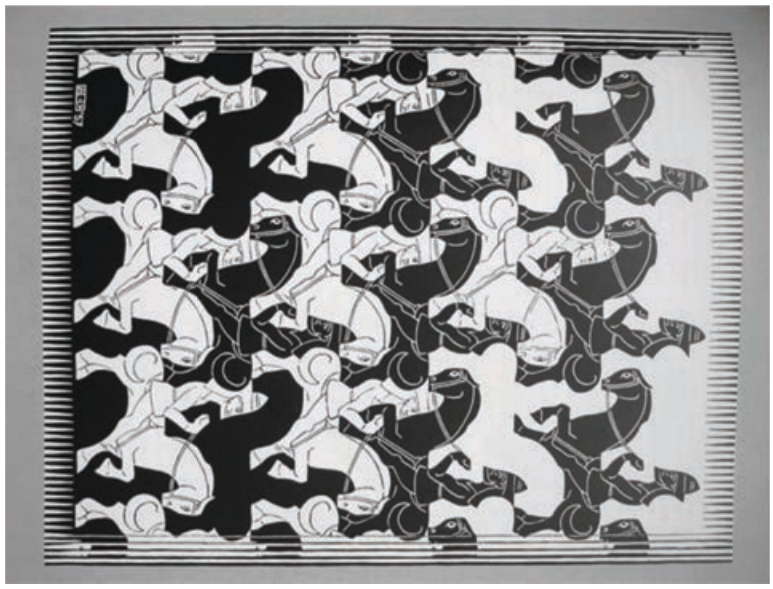


verschuiving en glijspiegeling.

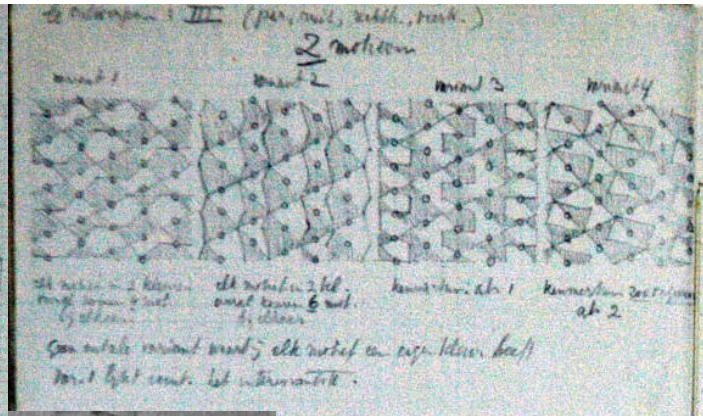


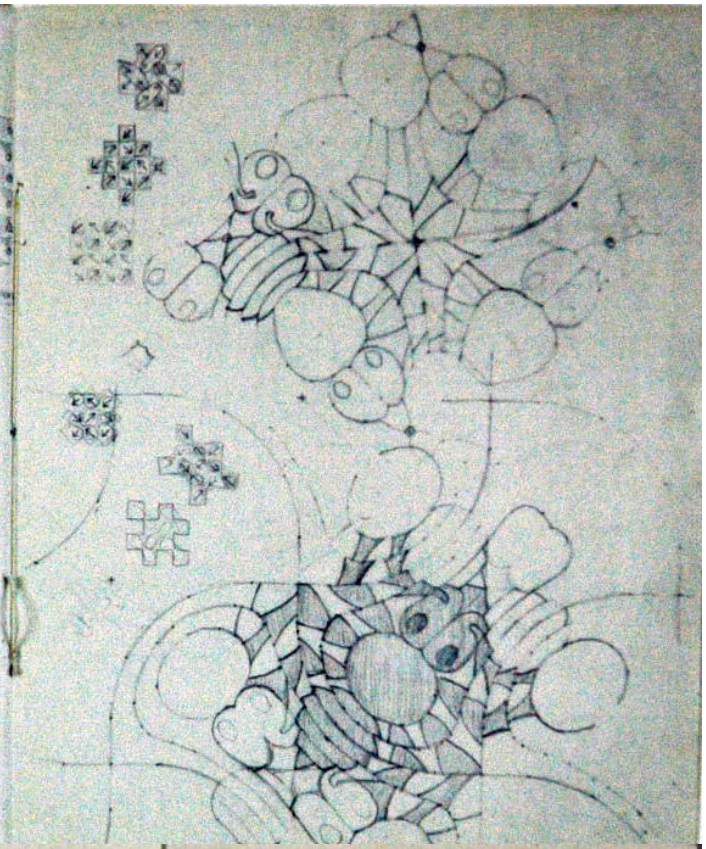
verschuiving, assen en glijspiegeling

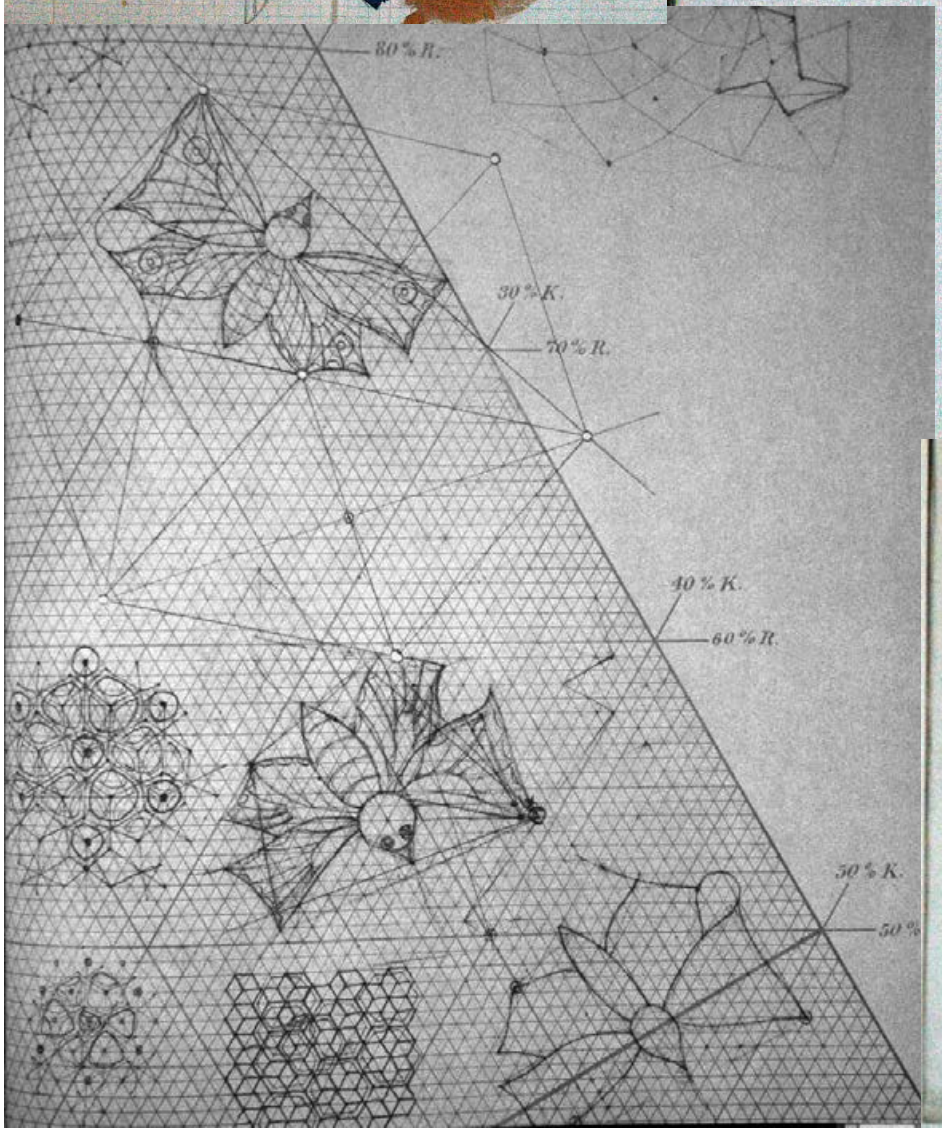





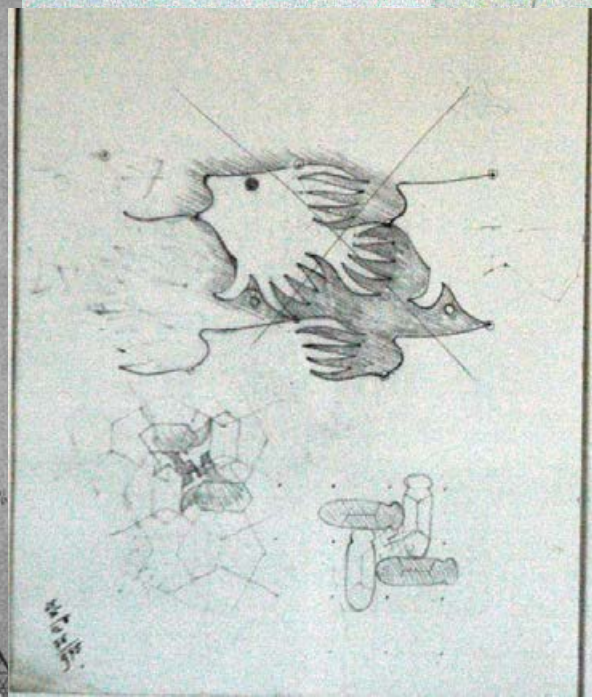


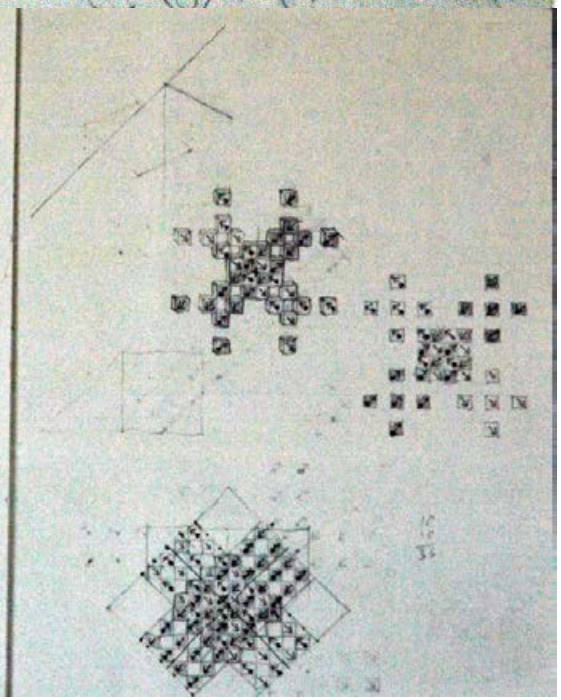
La divisione regolare del piano

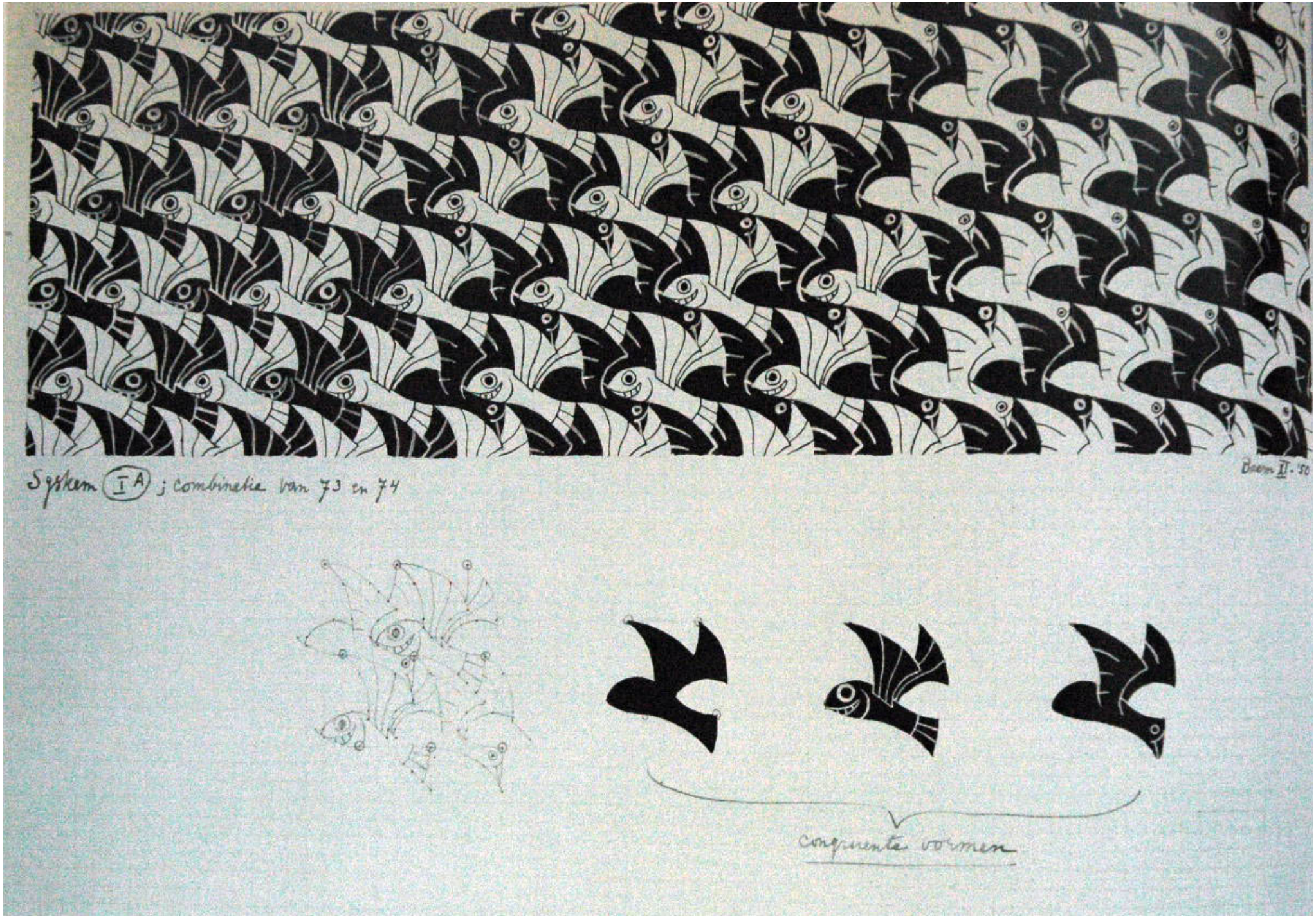

2 motieven

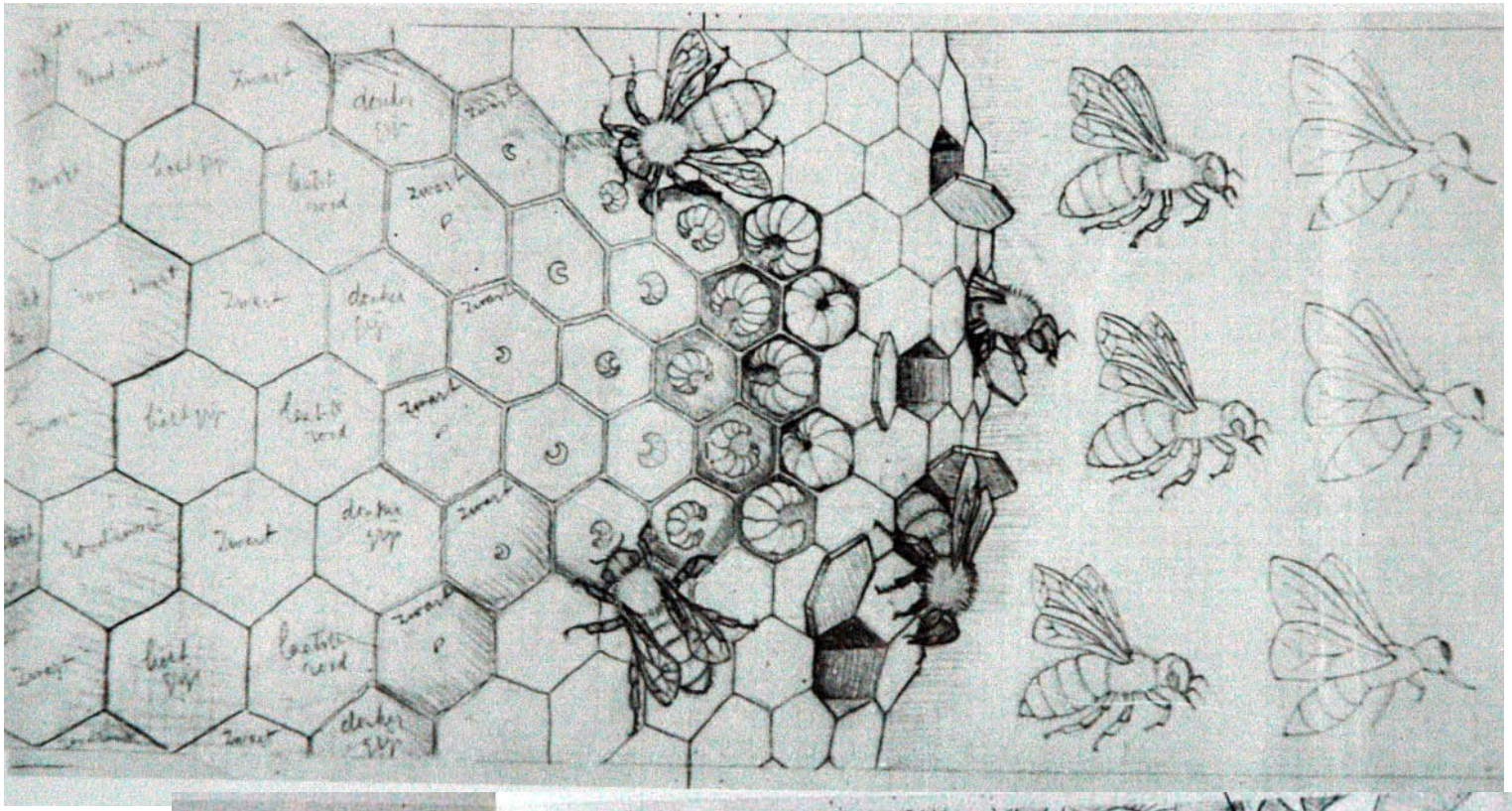


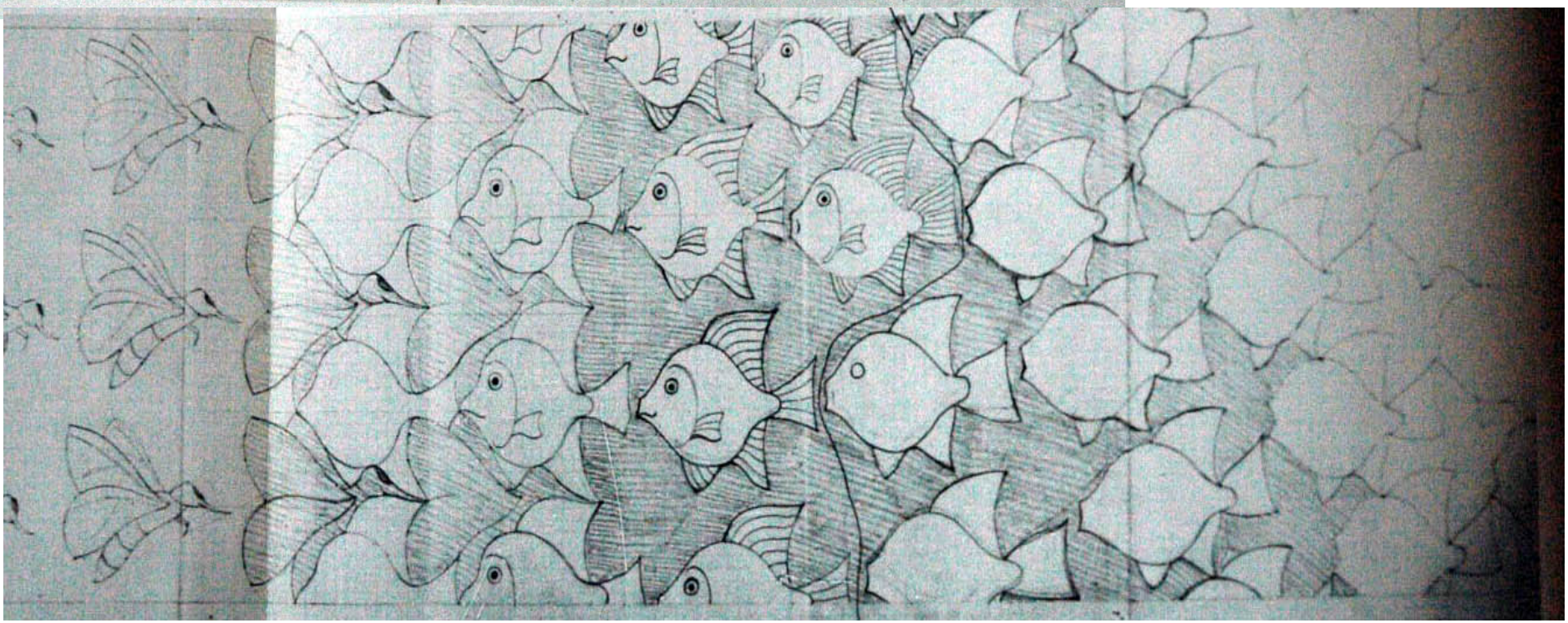

80 % R.
30 % K.
70 % R.
40 % K.
60 % R.
50 % K.
50 %

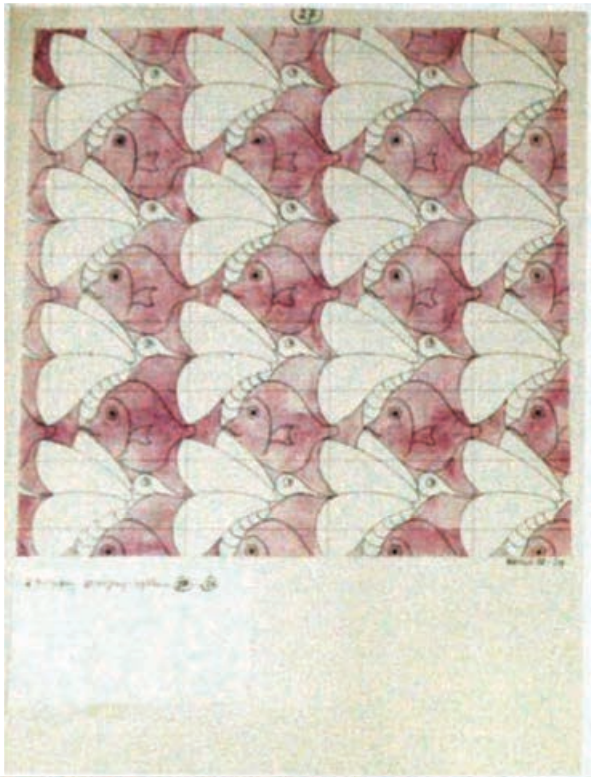


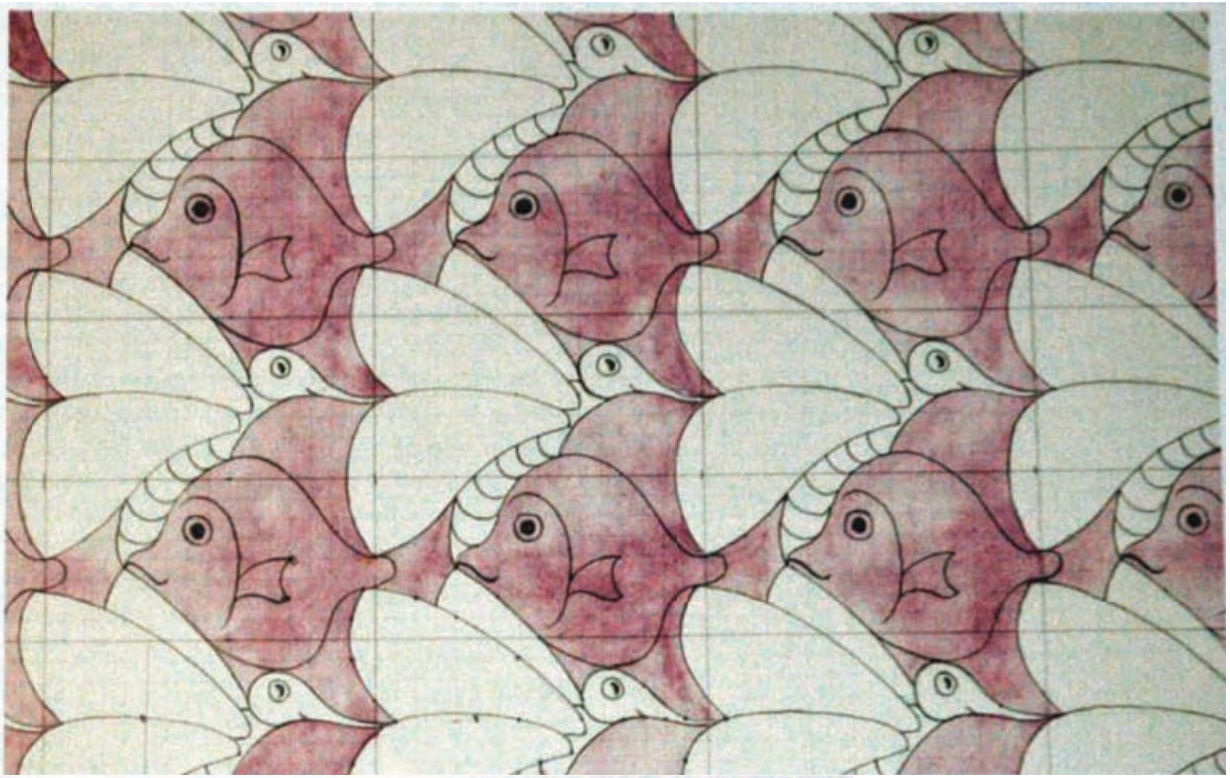


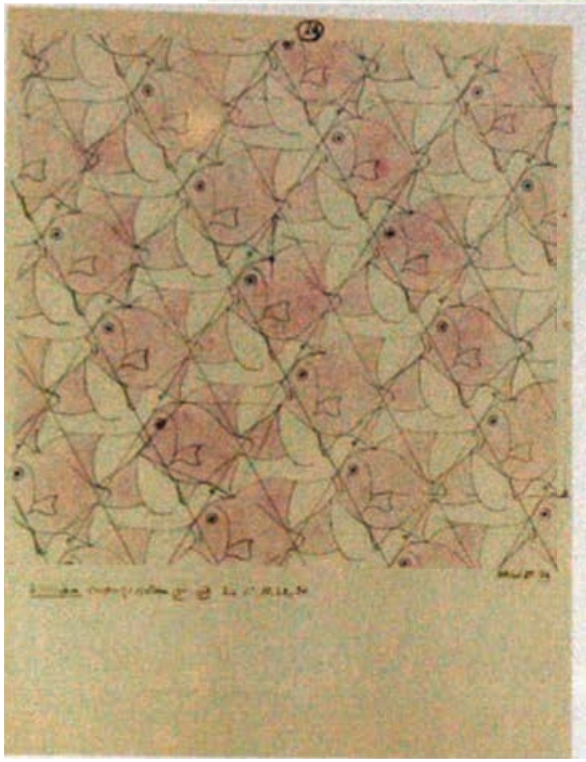

Bussum II-'50
Systeem (I A) ; combinatie van 73 en 74
congruente vormen

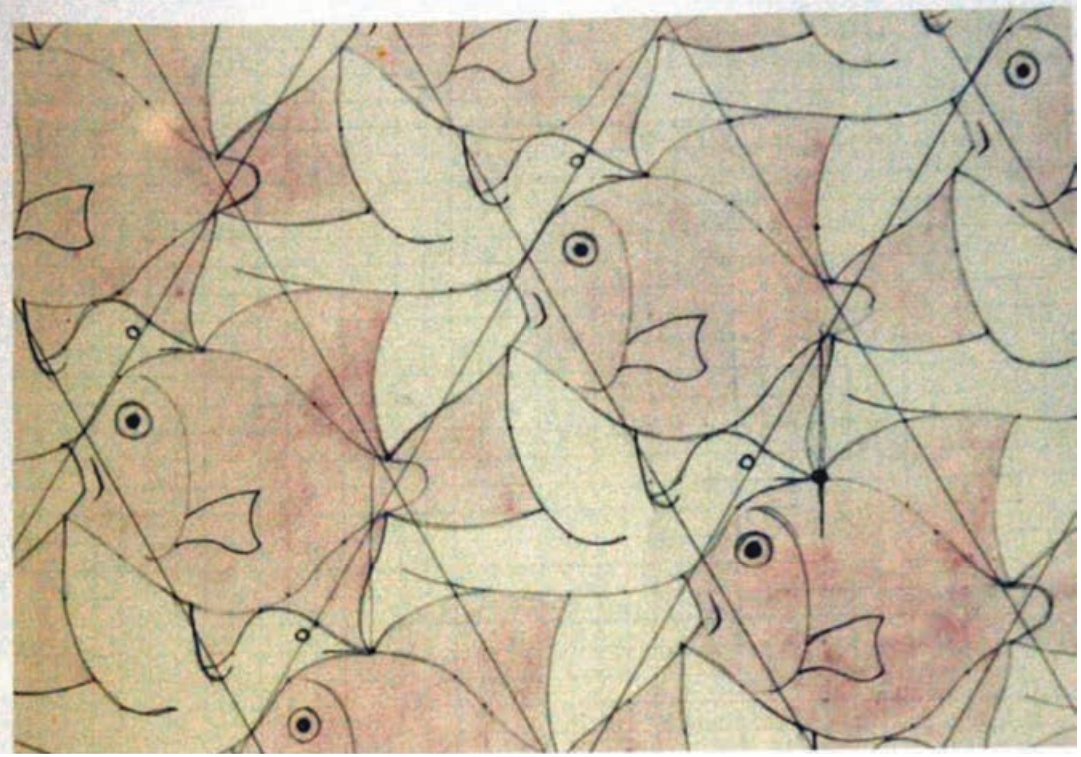


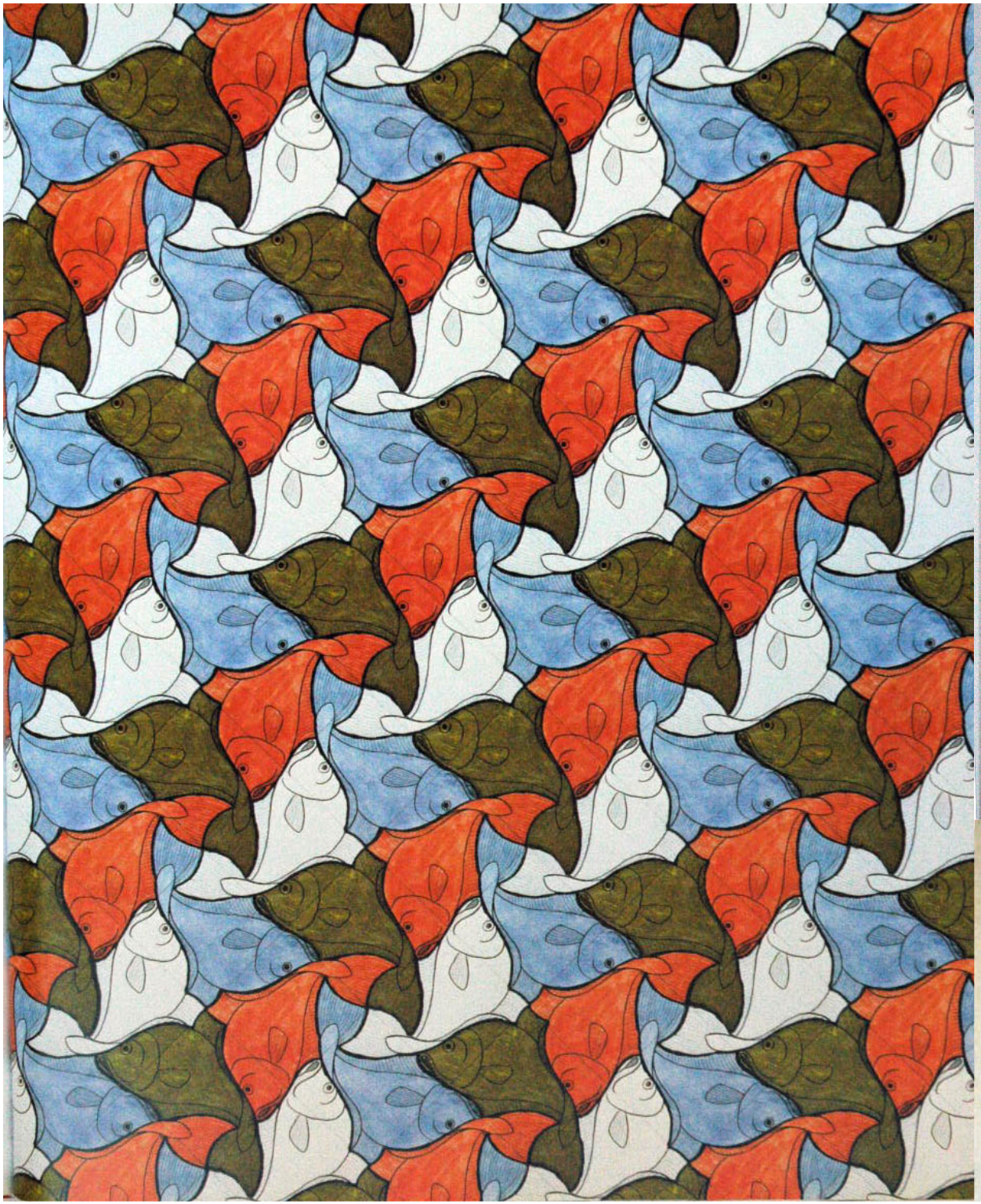


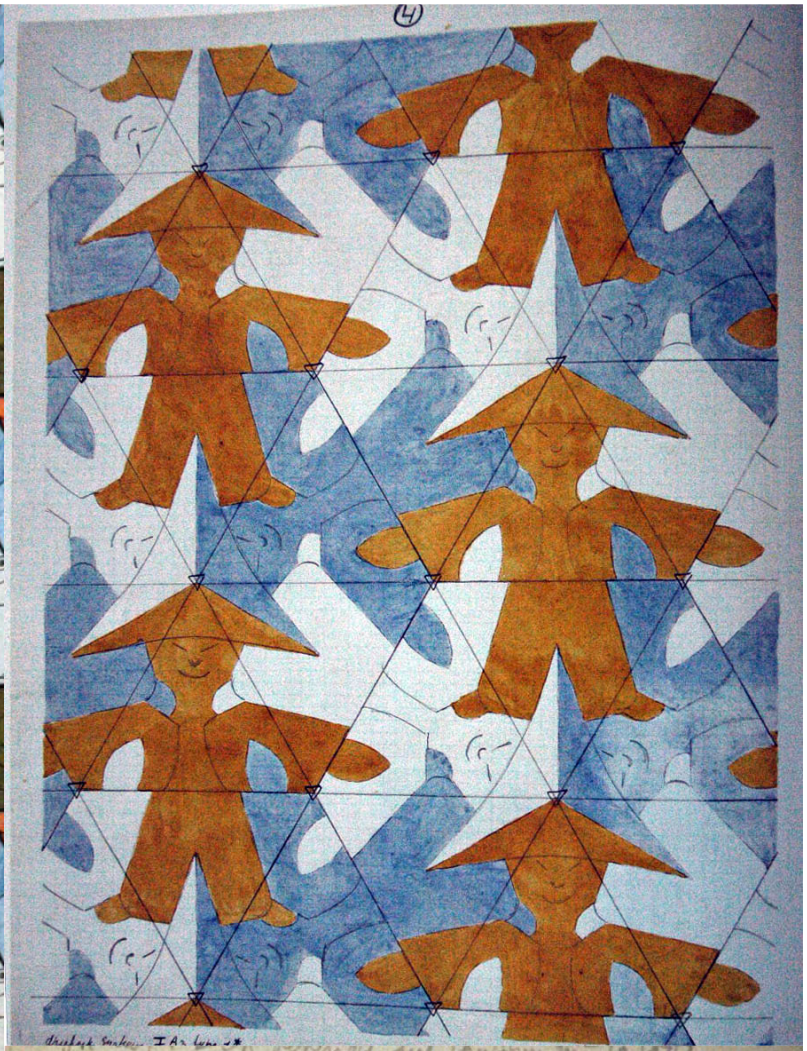


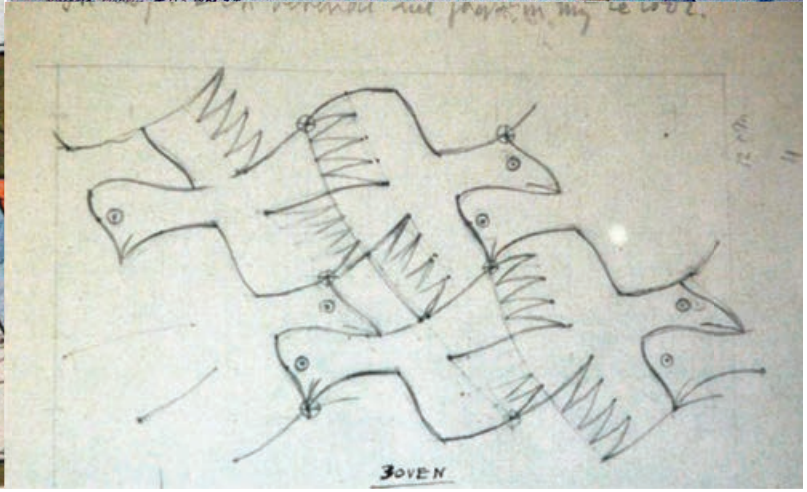


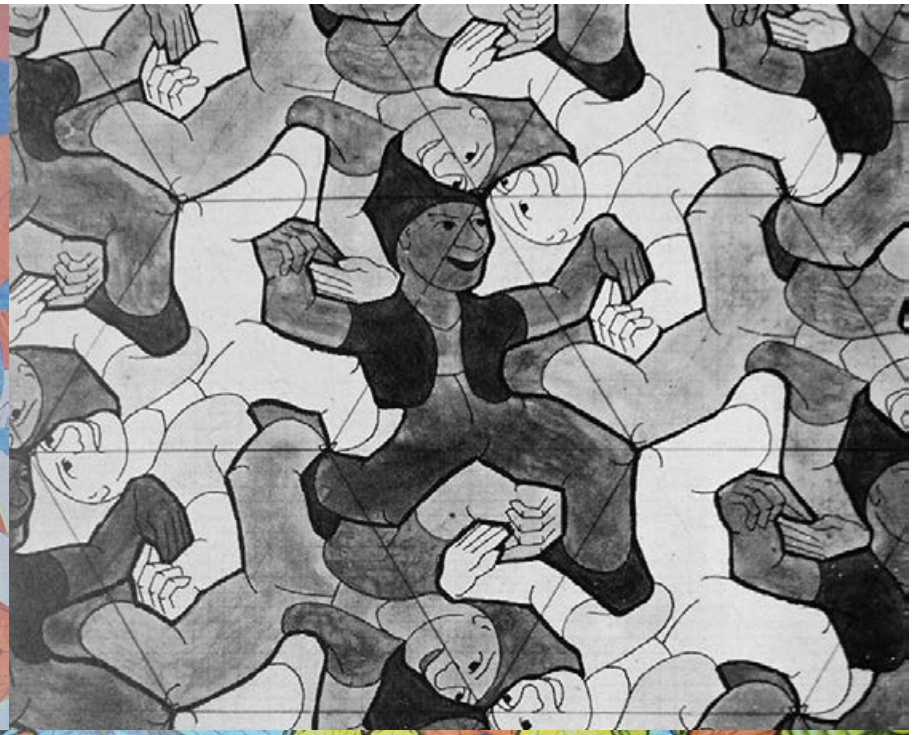


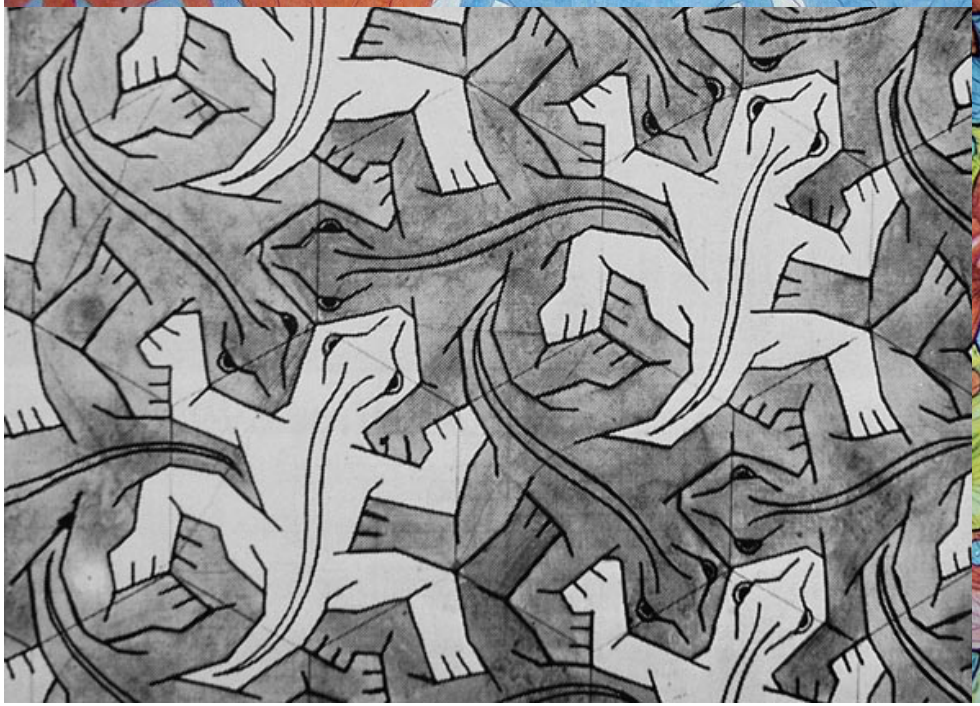


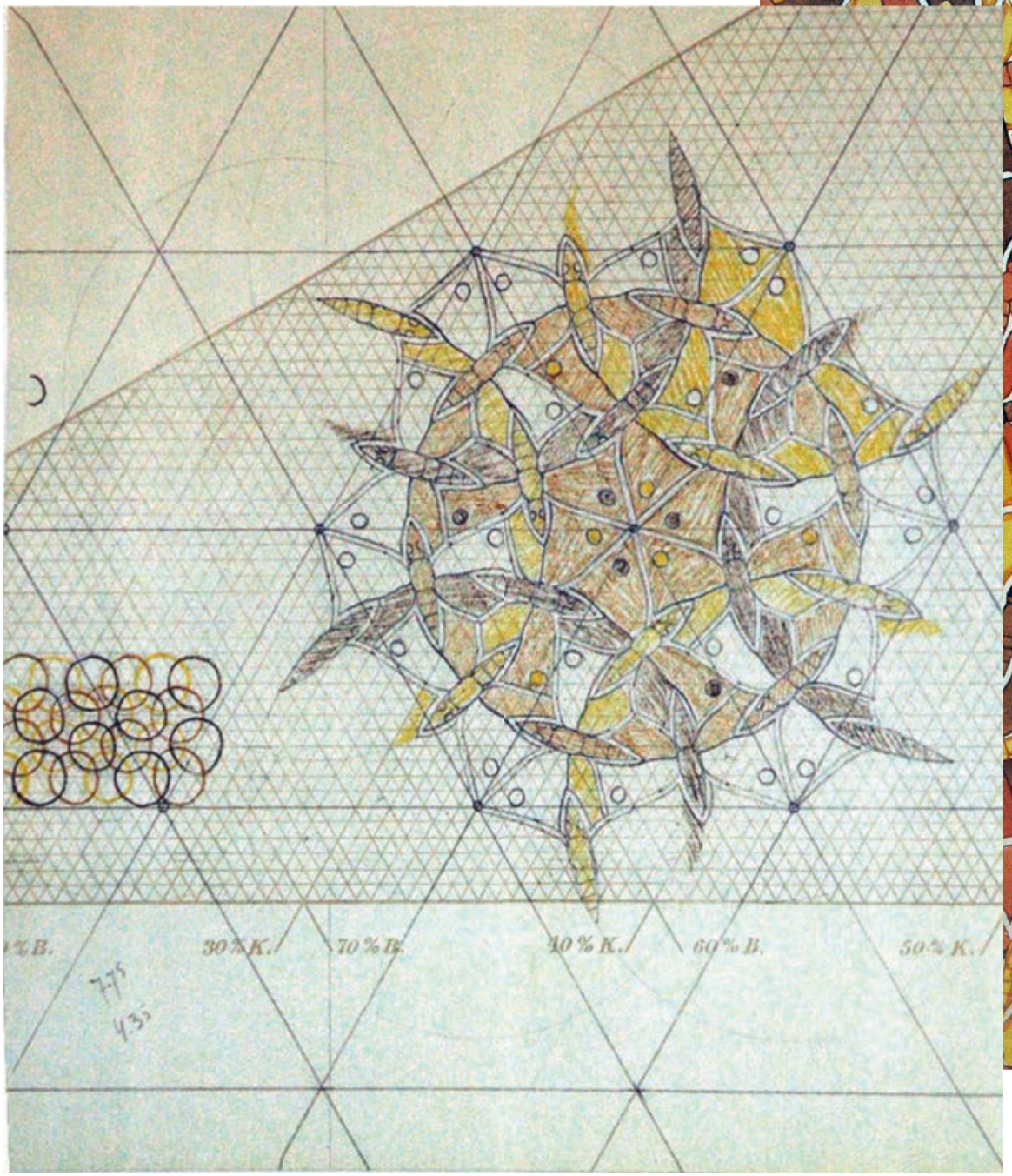


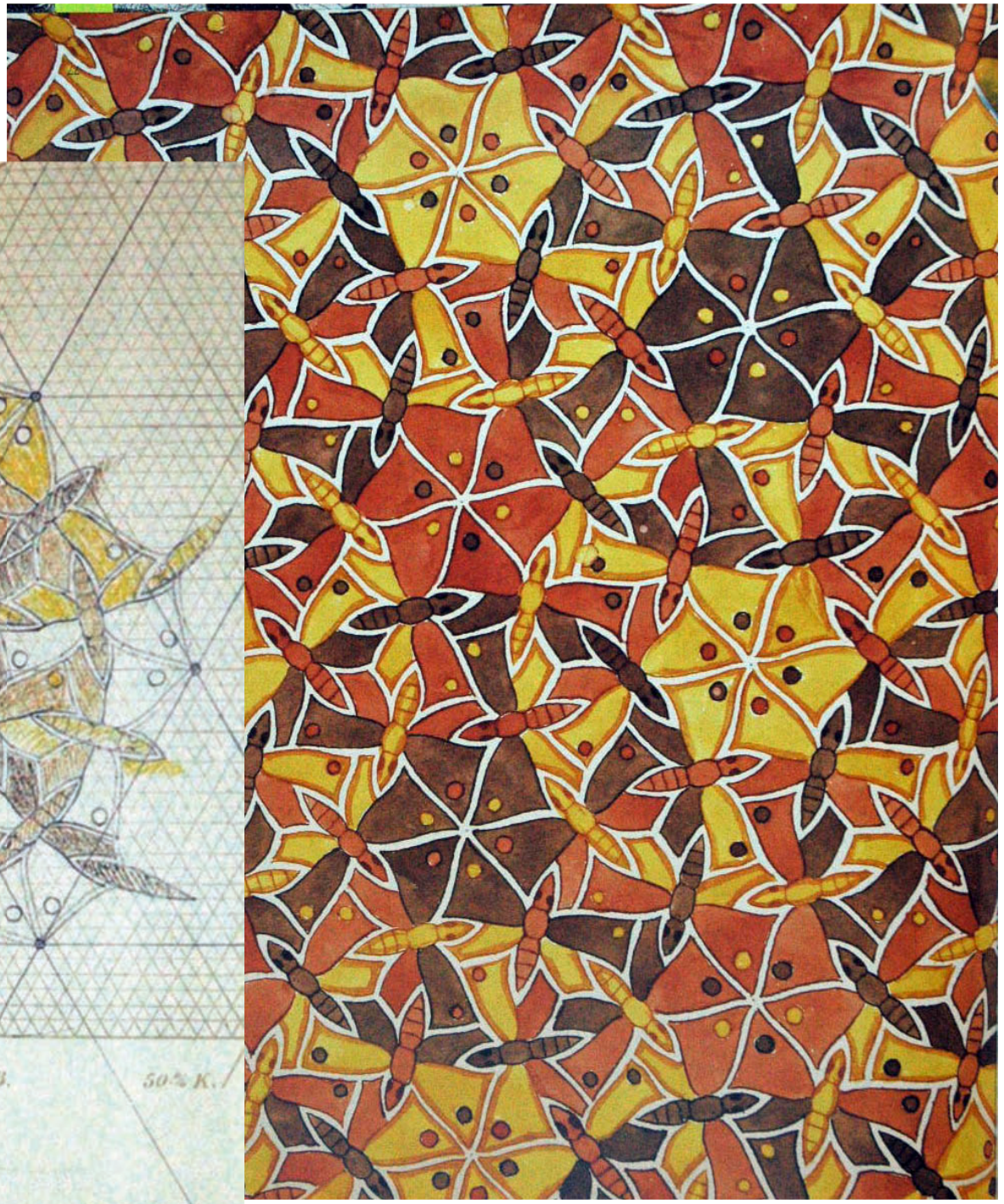


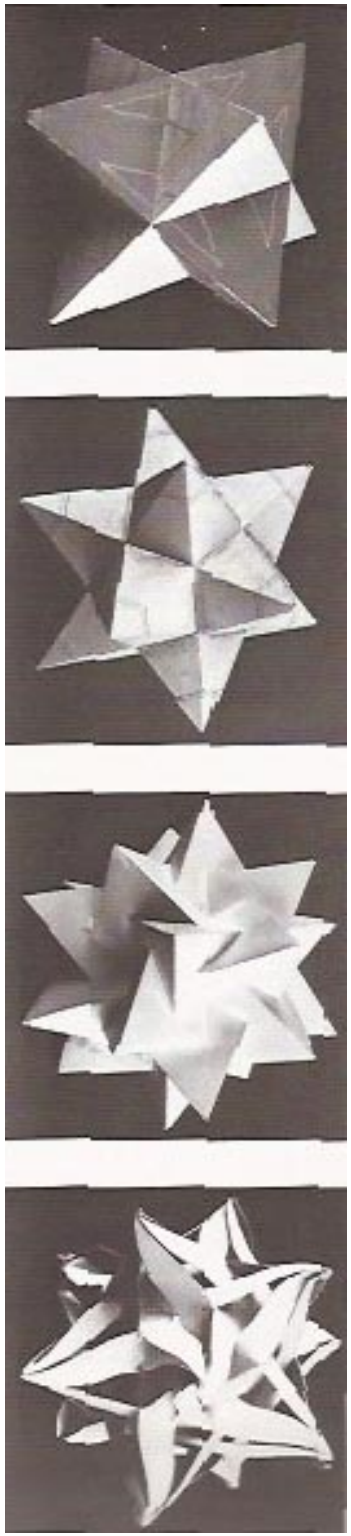

BOVEN

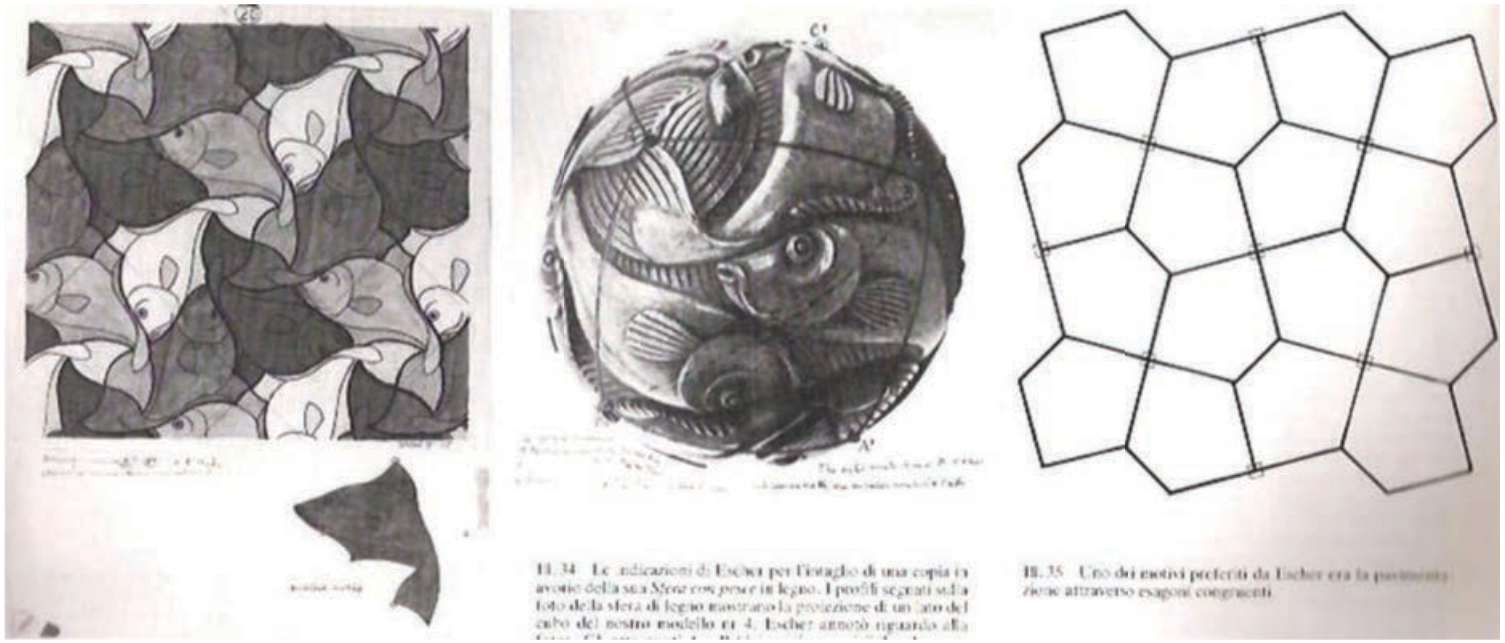




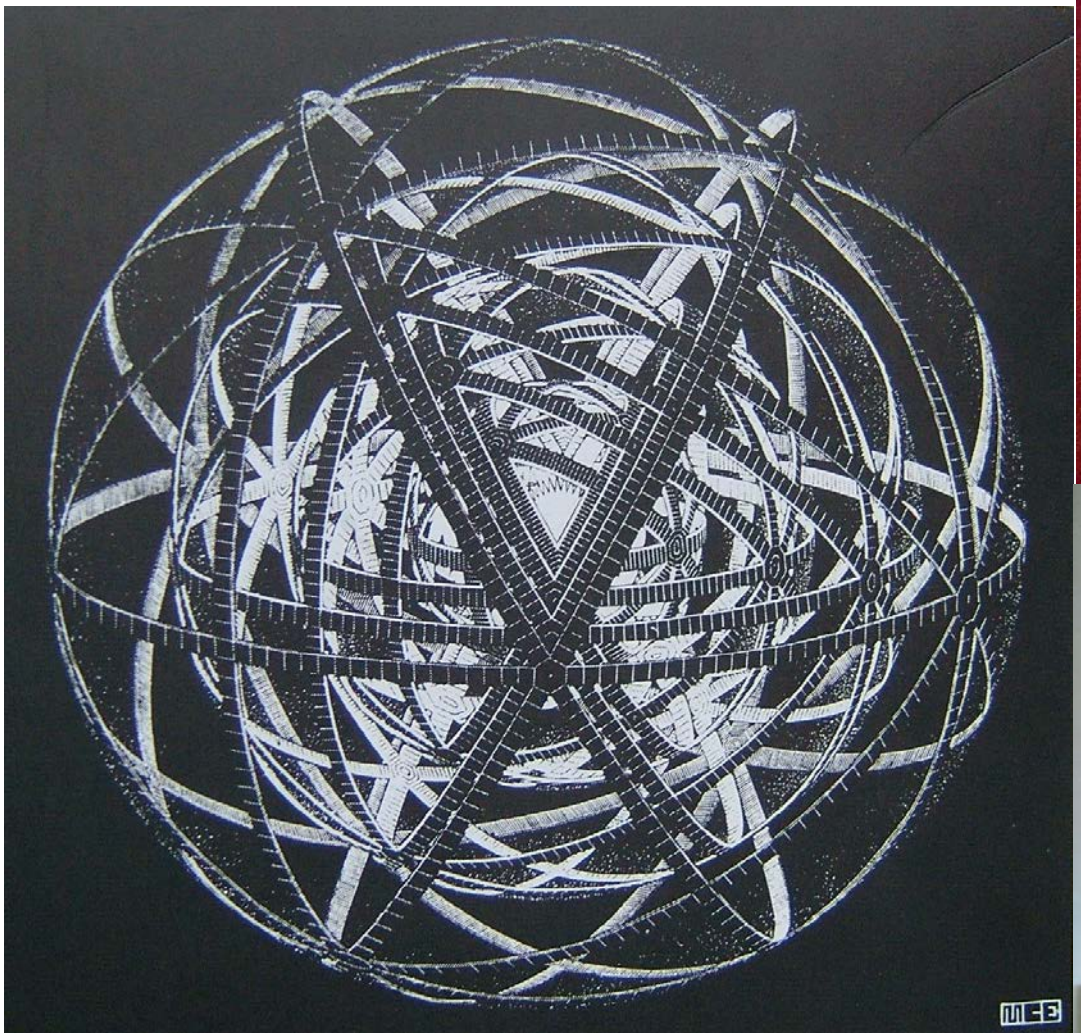

% B.
30 % K.
70 % B.
40 % K.
60 % B.
50 % K.

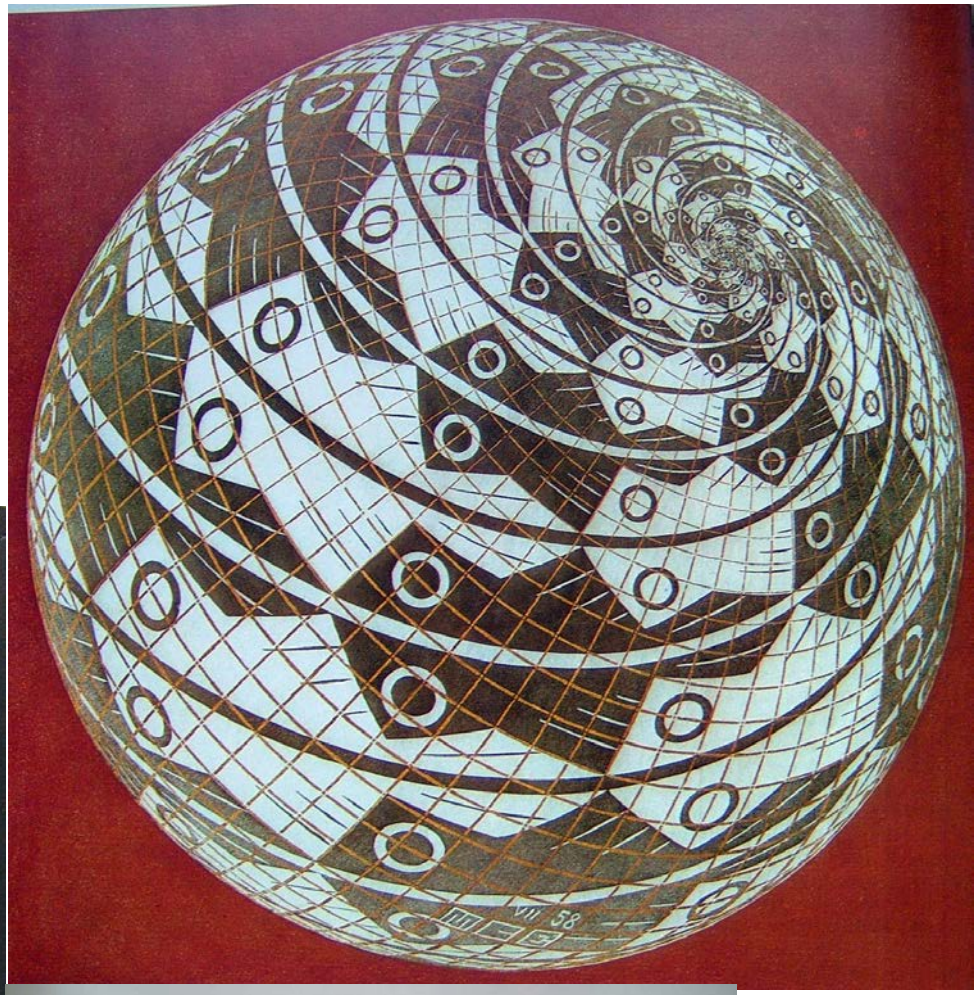


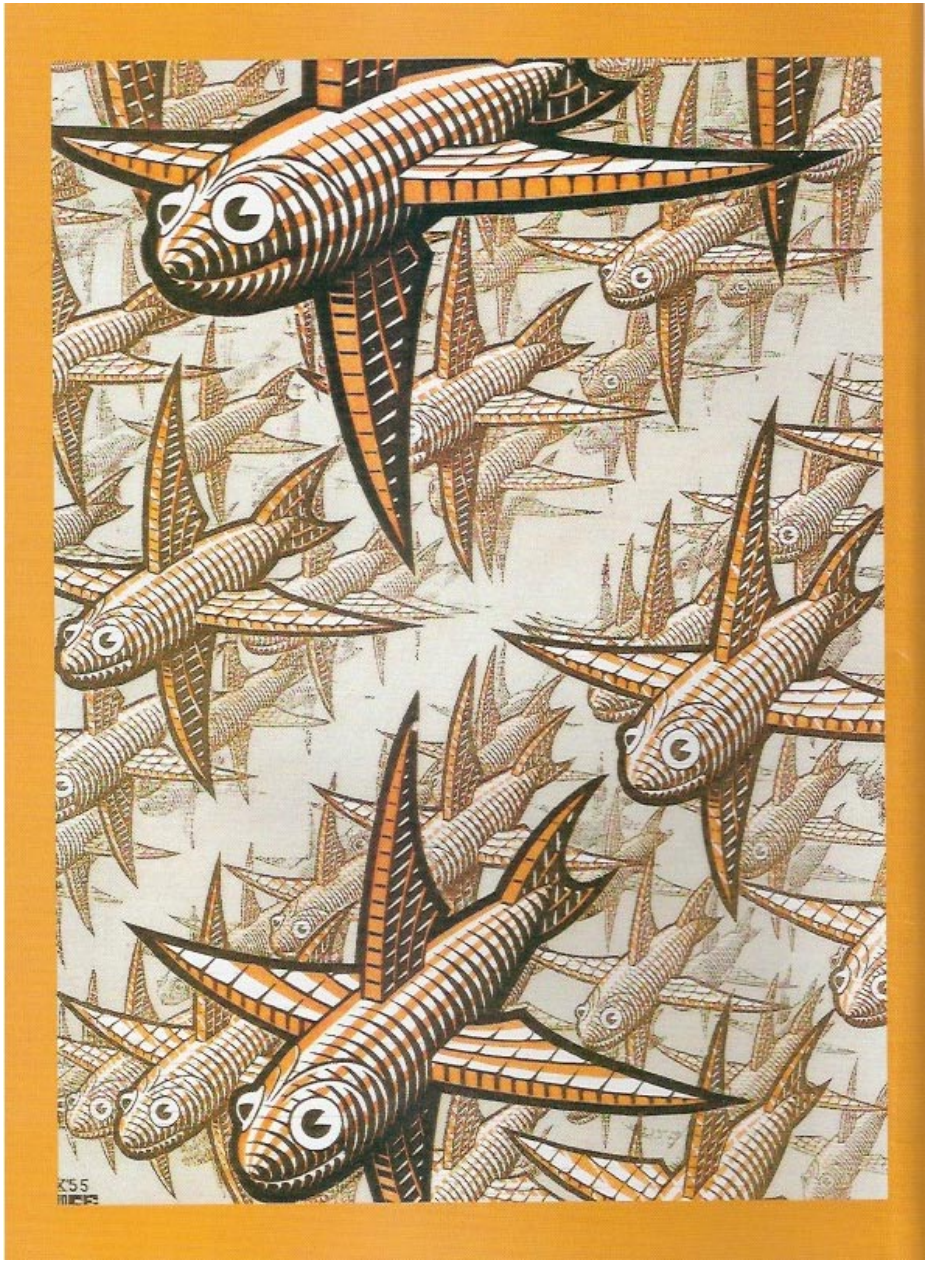




Simmetrie dello spazio

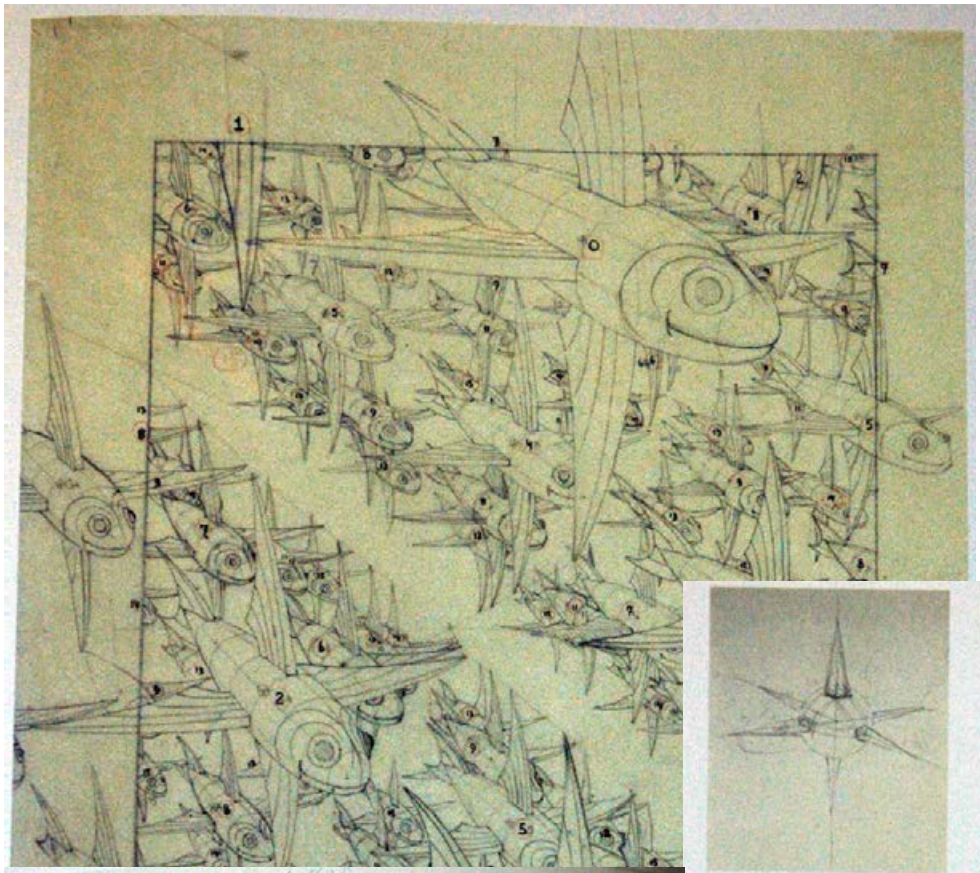


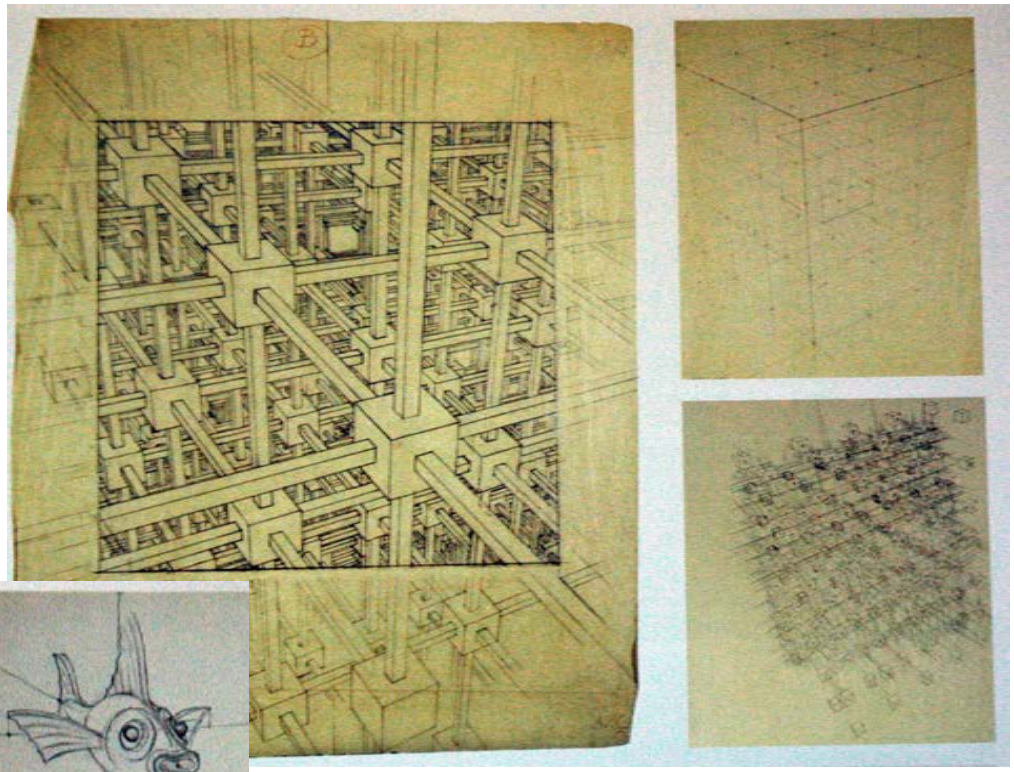


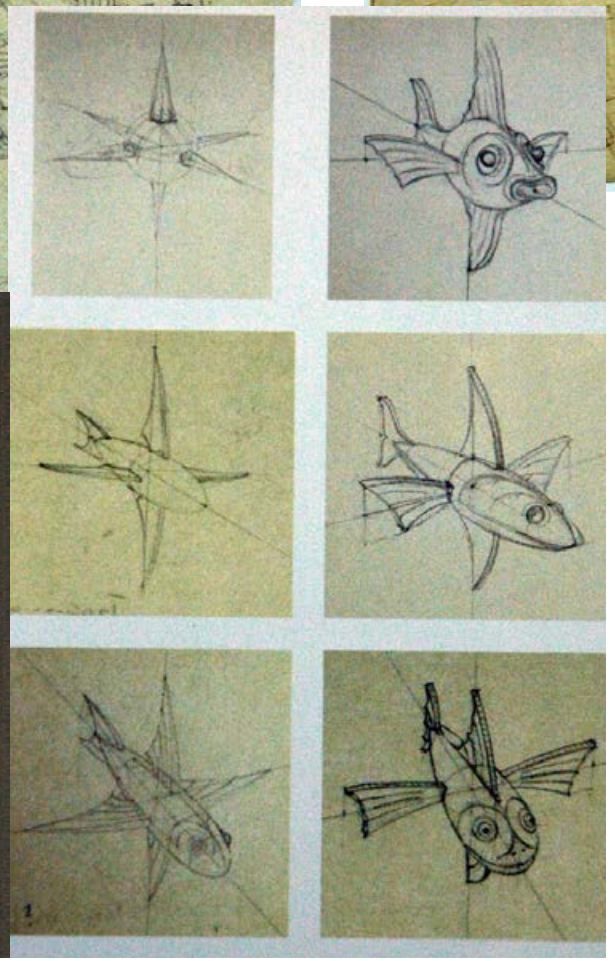


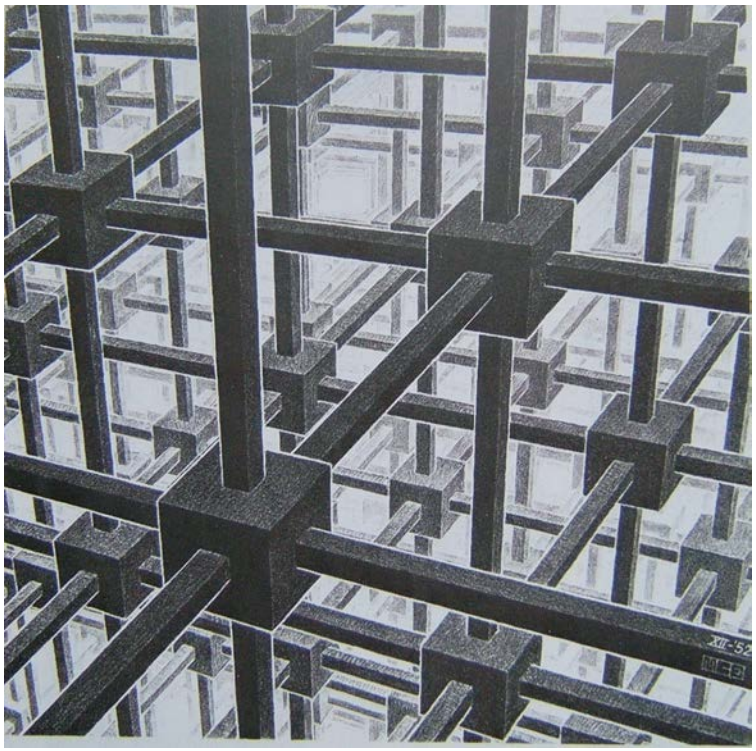
“L’uomo è incapace di immaginare che in qualche punto al di là delle stelle più lontane lo spazio possa avere fine, un limite oltre il quale non c’è che il nulla”

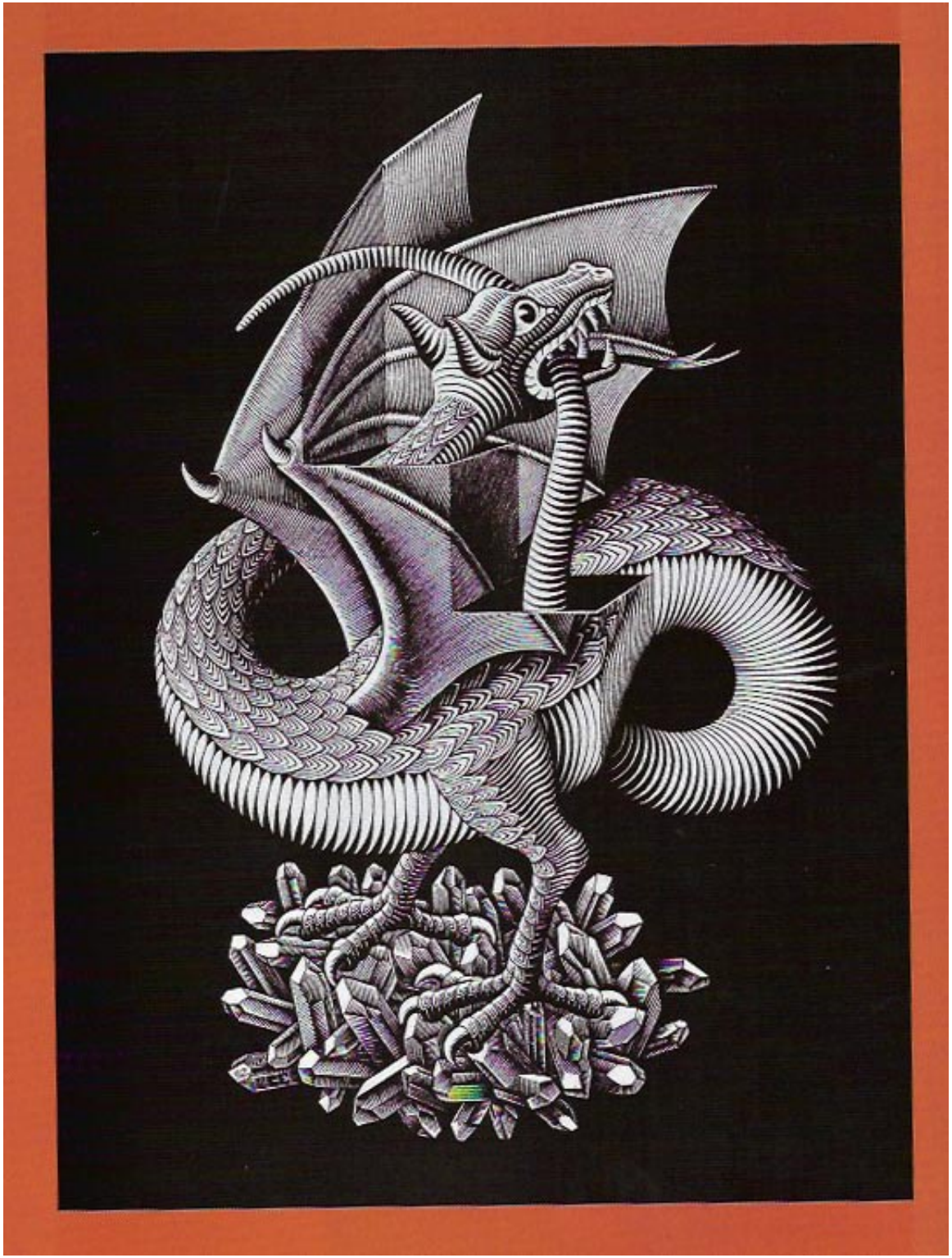
La rappresentazione dell’infinito

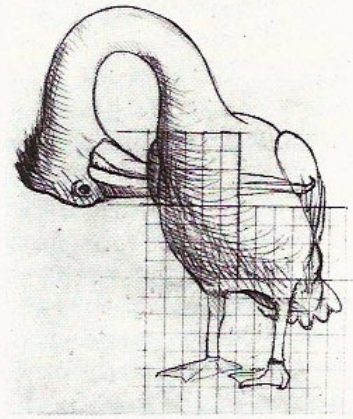


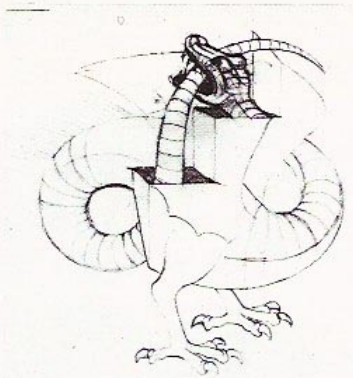












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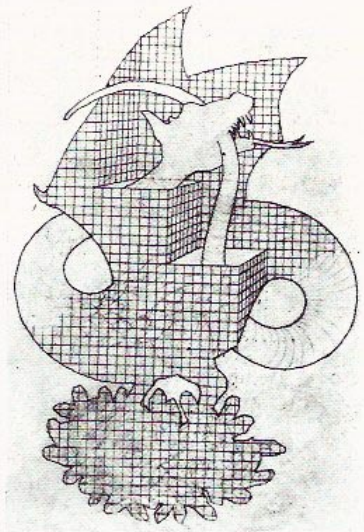

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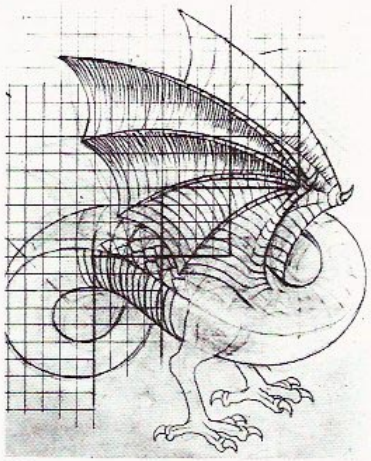

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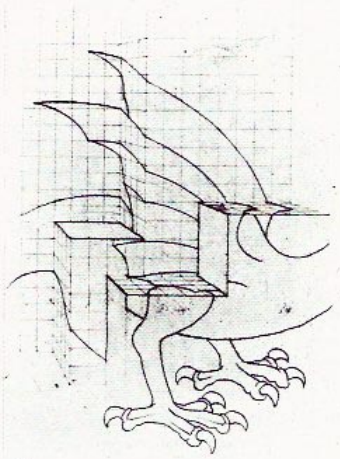
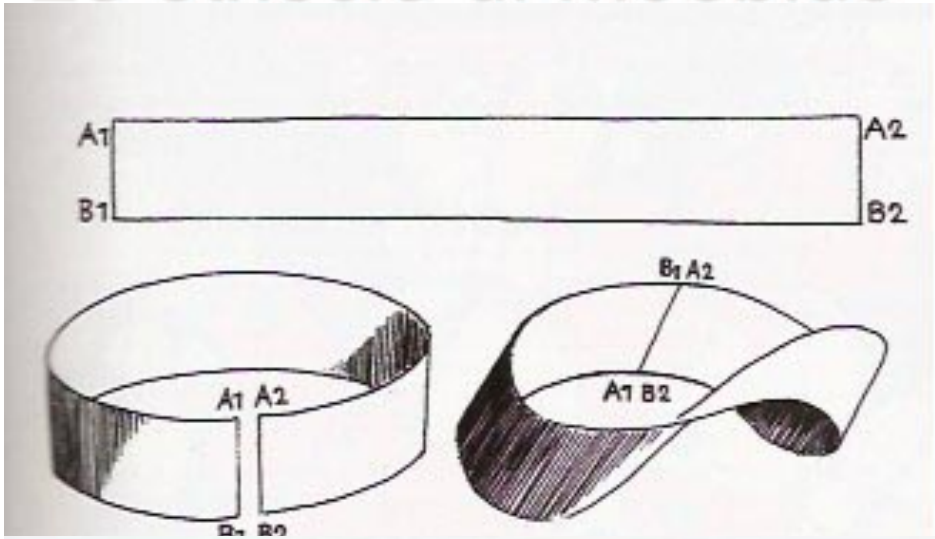
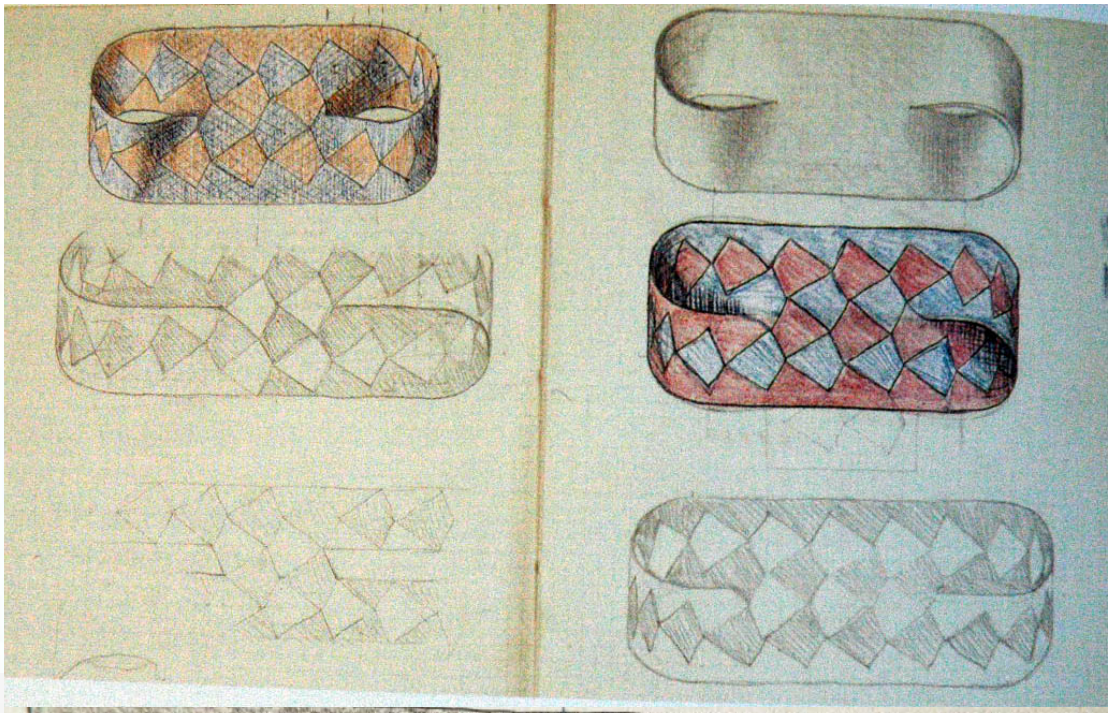


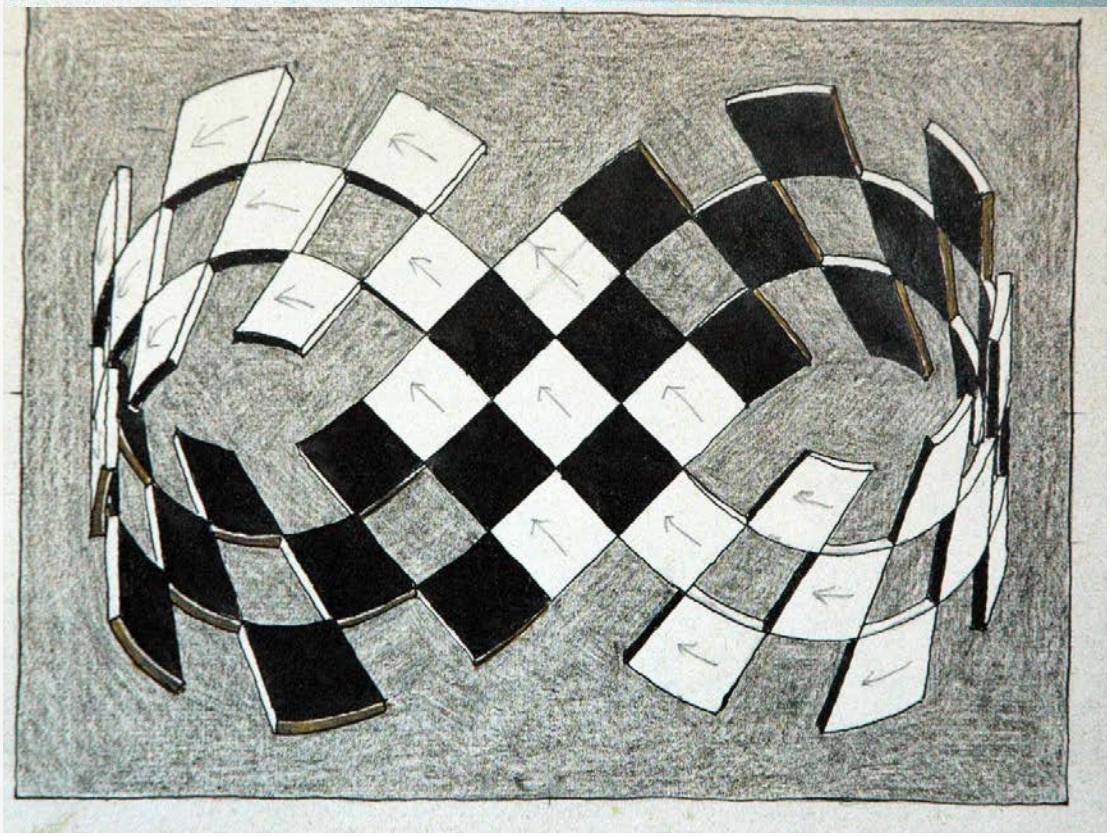
40.

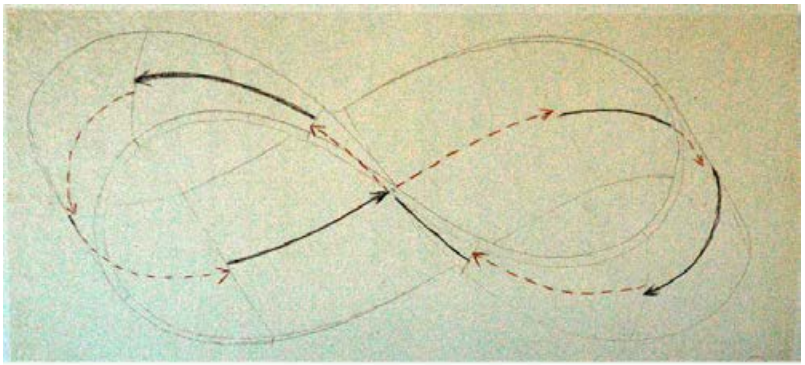
37.–40. *Studi preliminari per «Drago»*

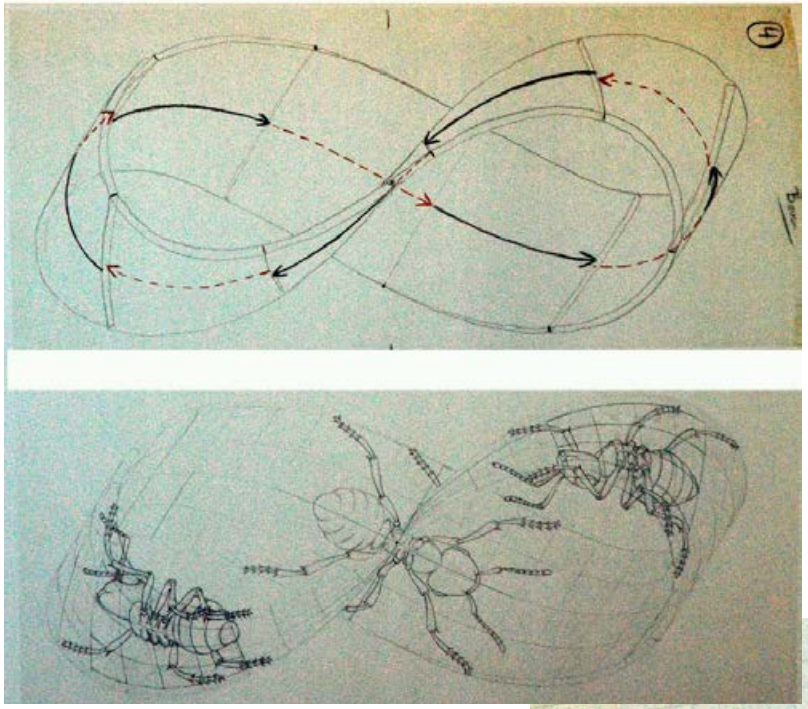
Le striscie di Moebius

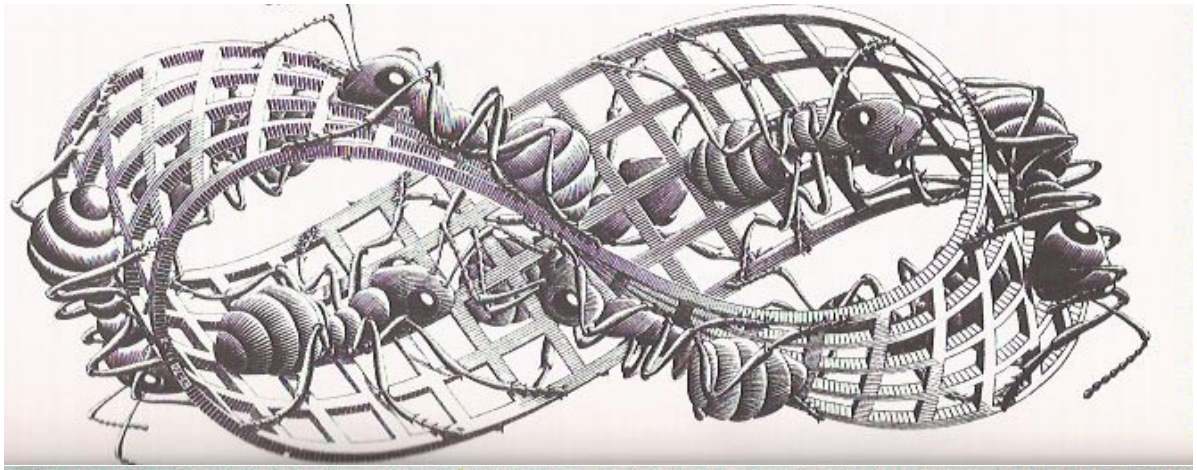


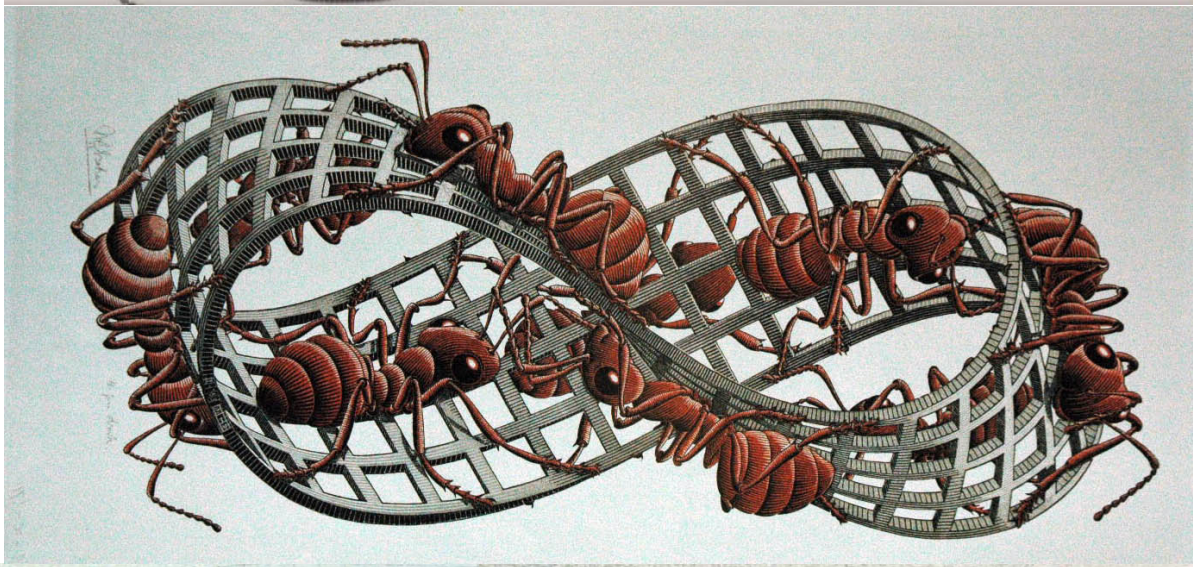




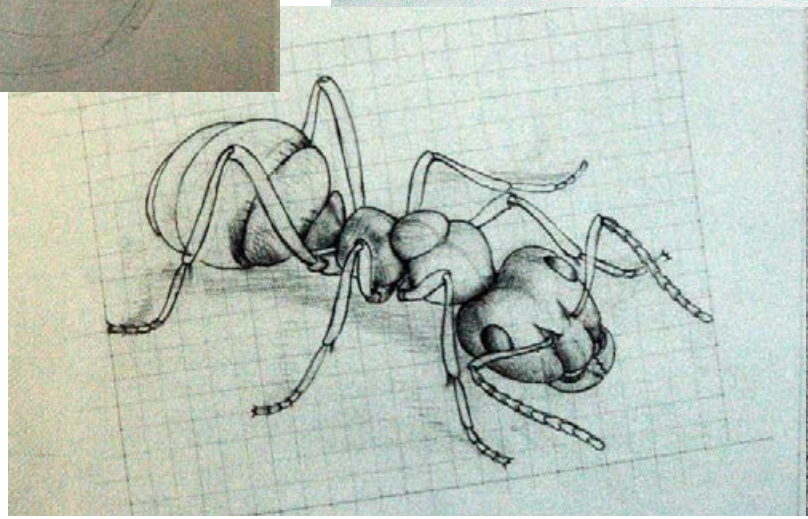


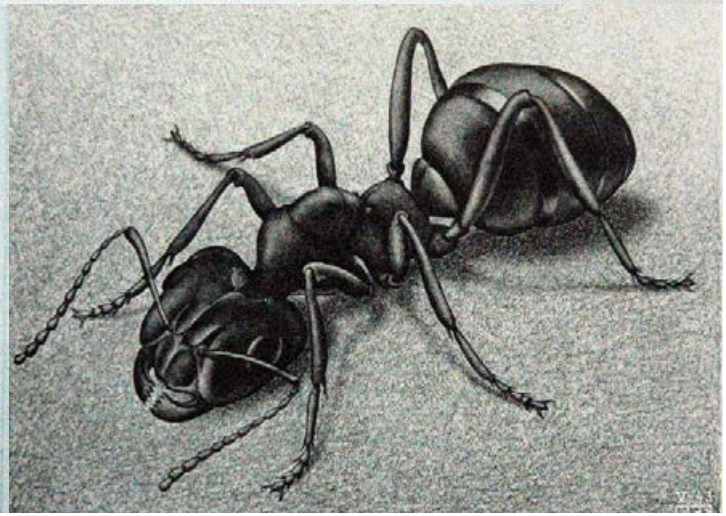


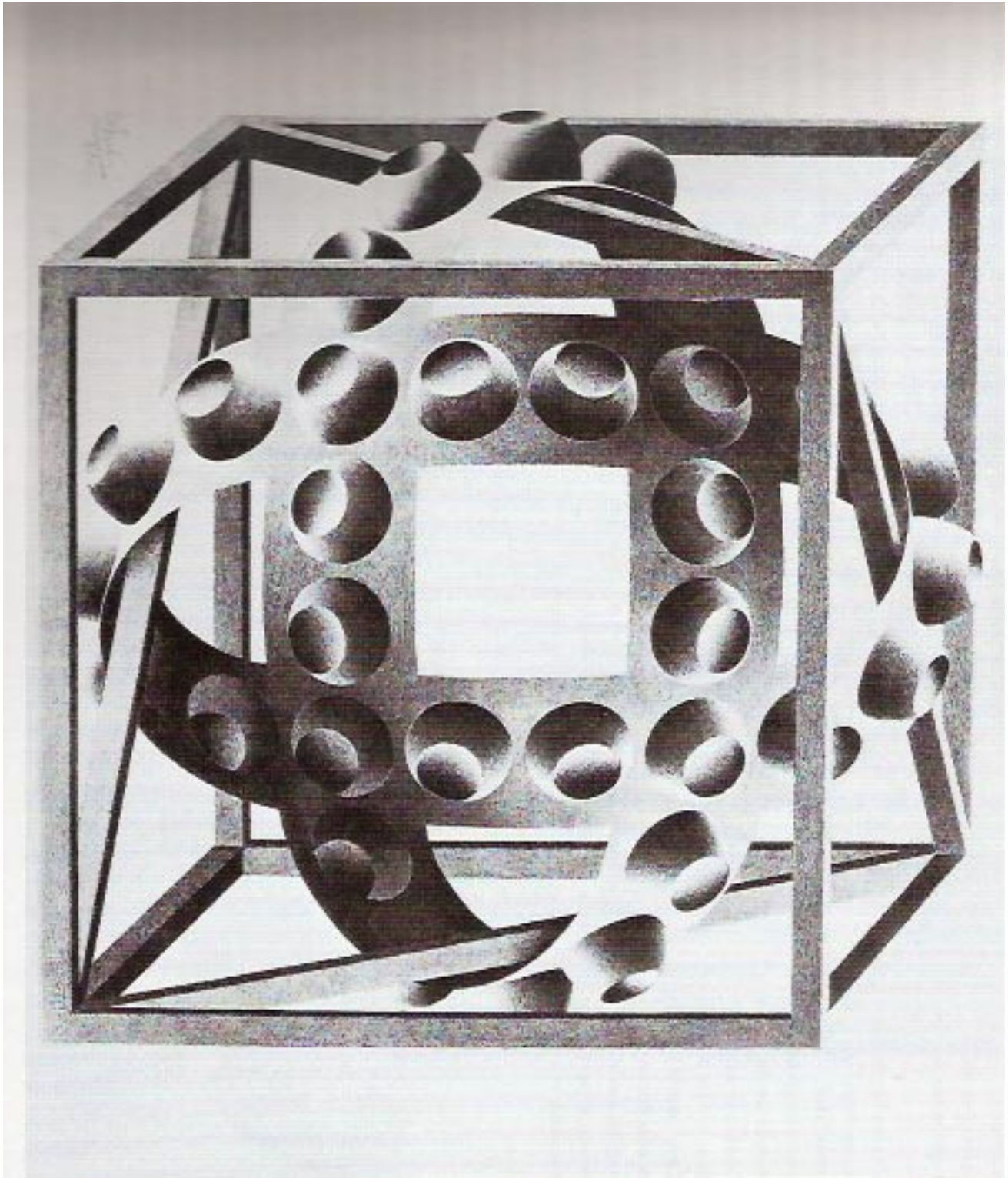




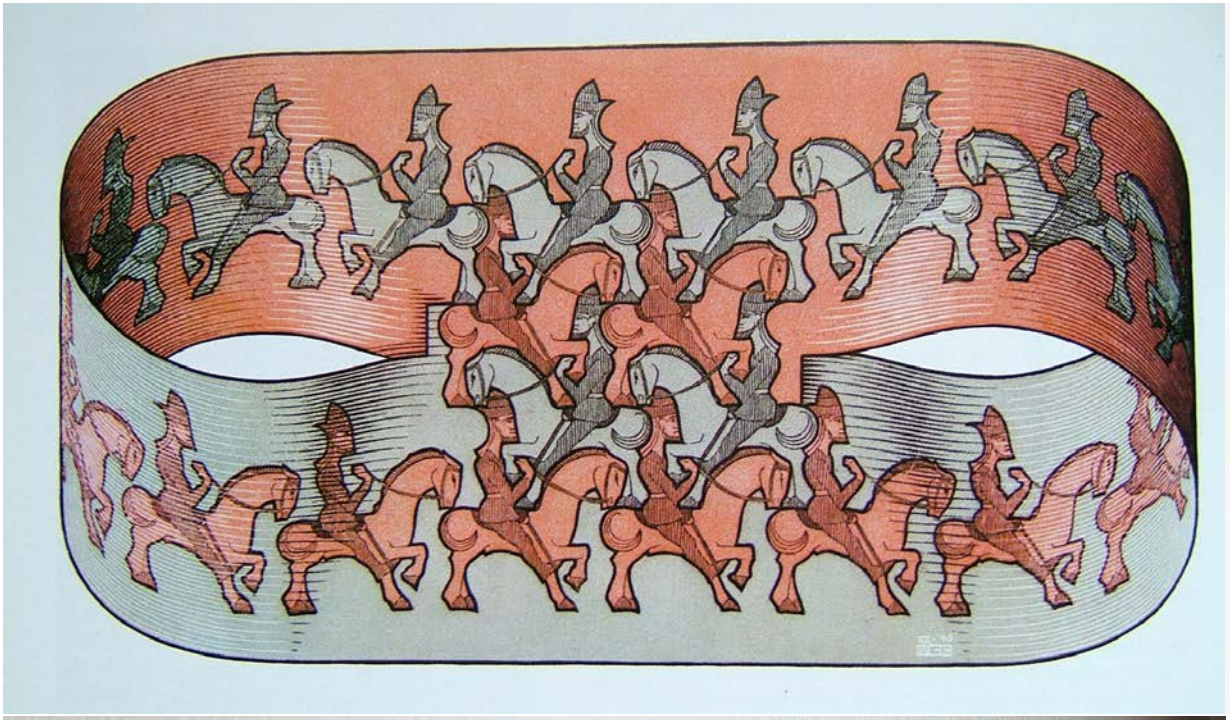
formiche

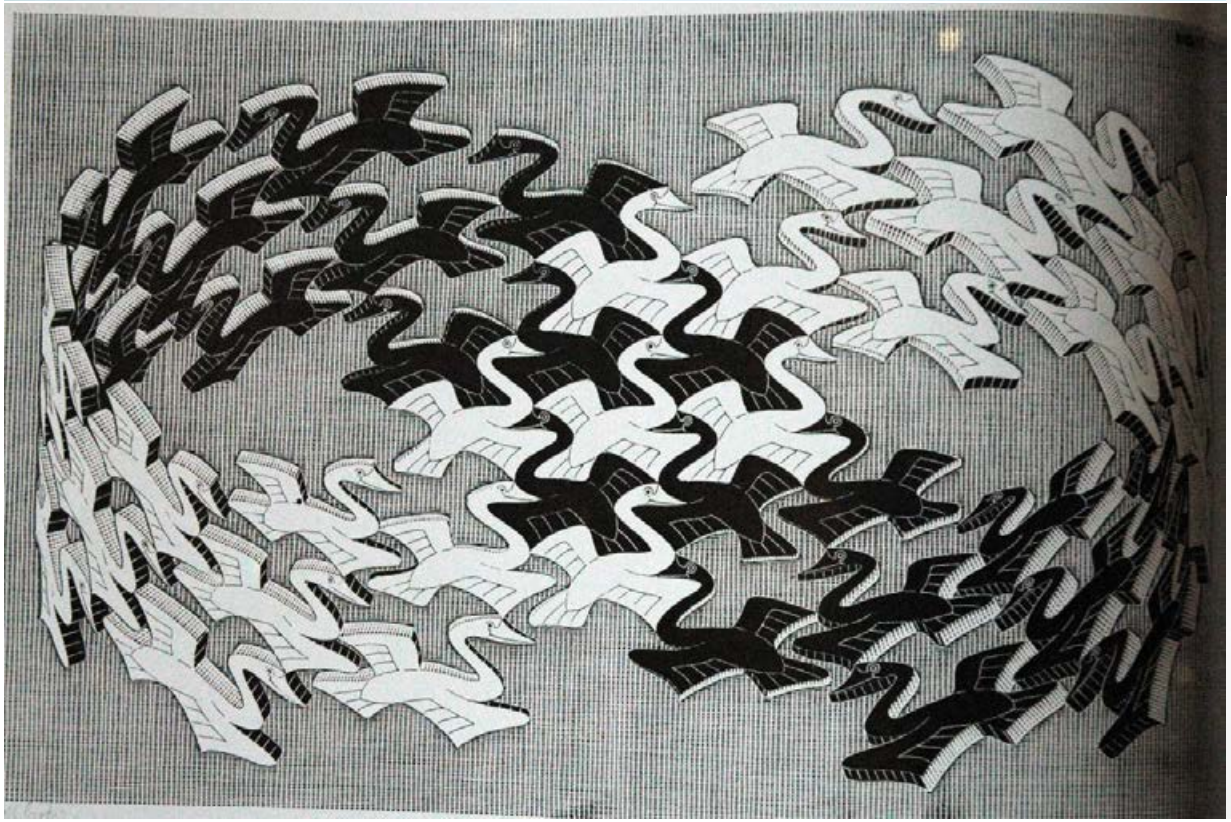




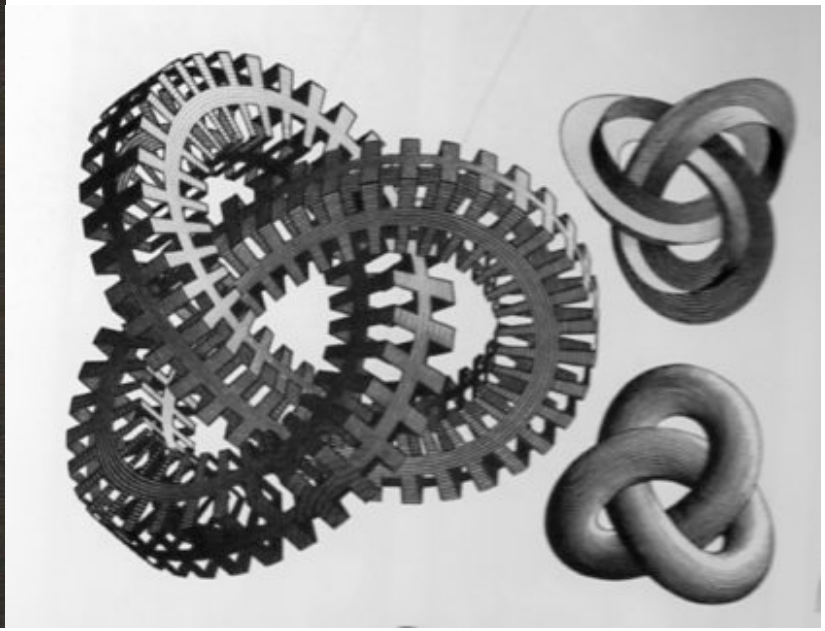


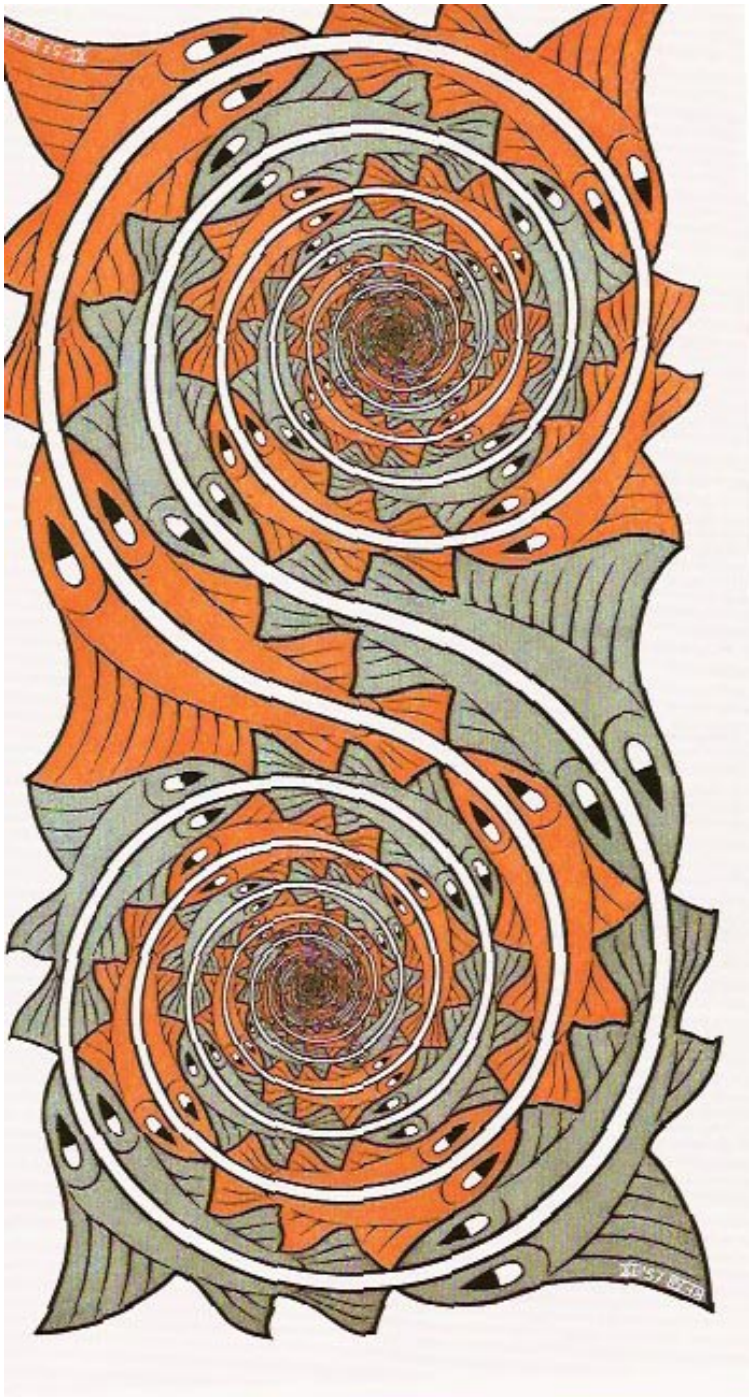
Nastri magici

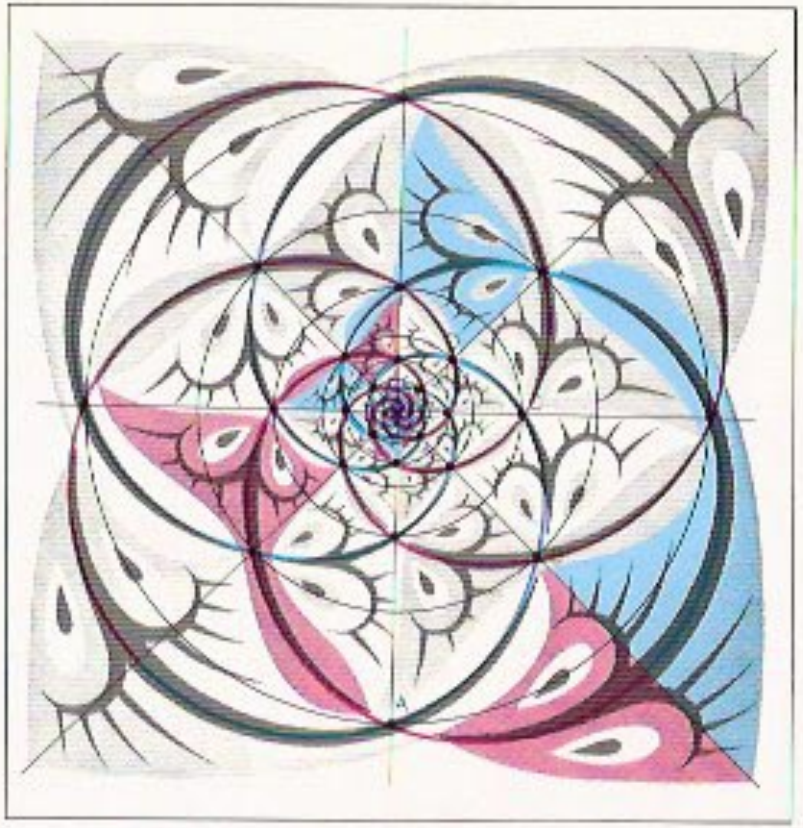




Striscie di Moebius

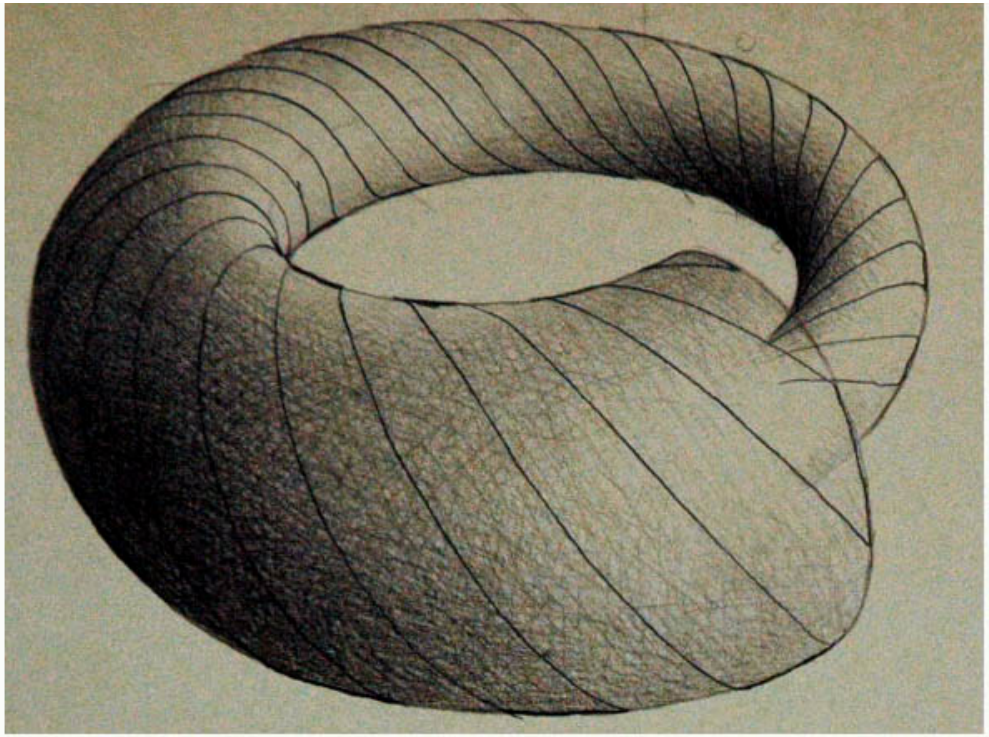


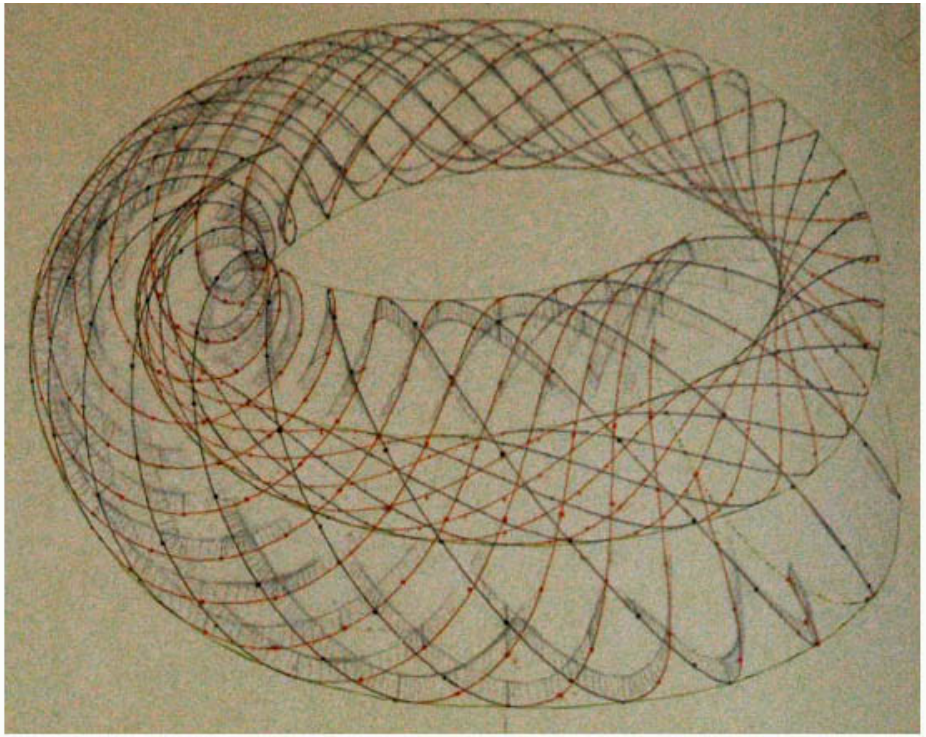


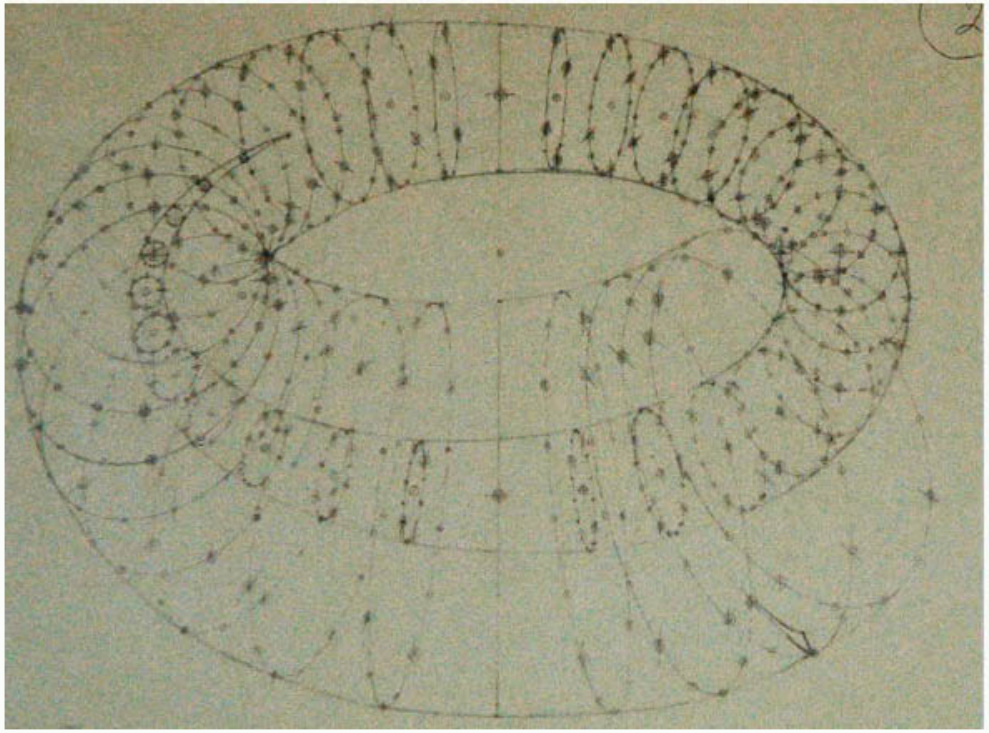


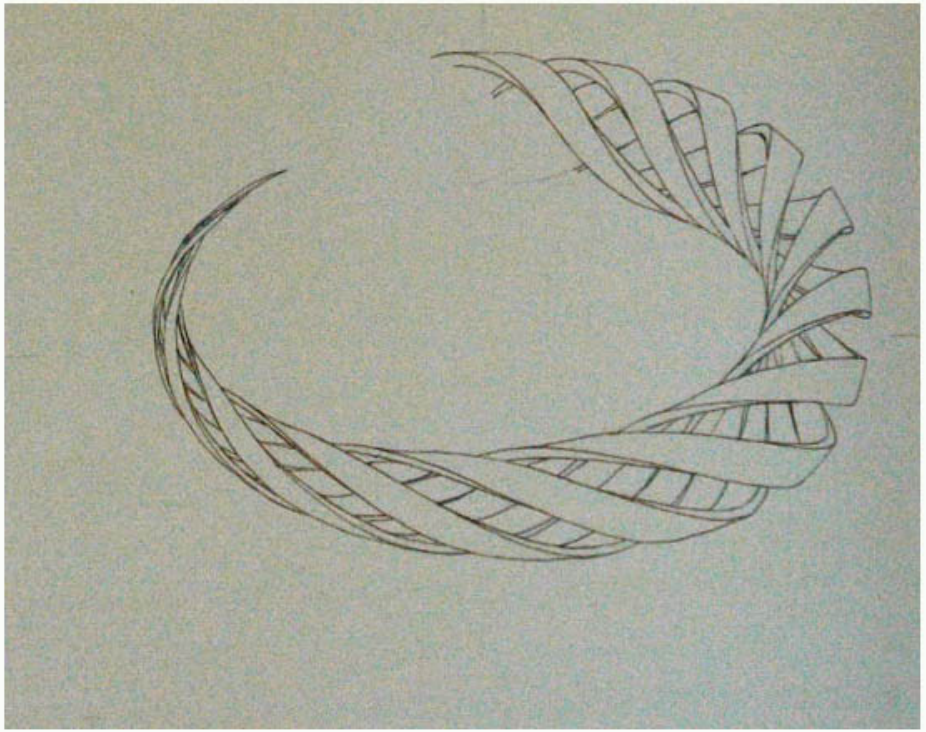
236. *Costruzione di «Sentiero di vita II»*

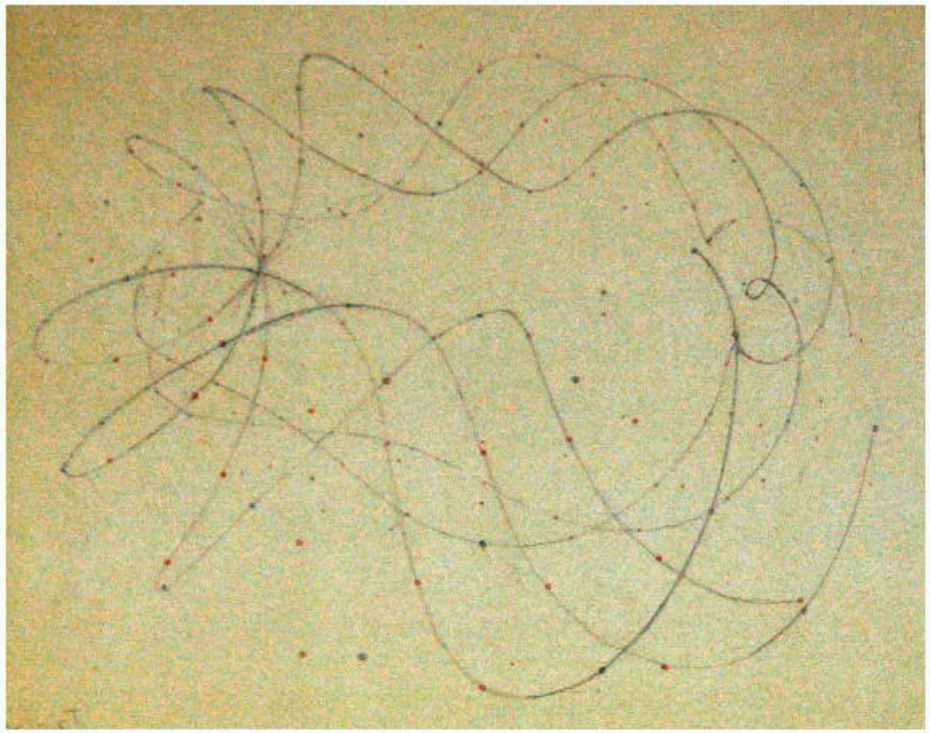
Spirali
(Percorso di vita)

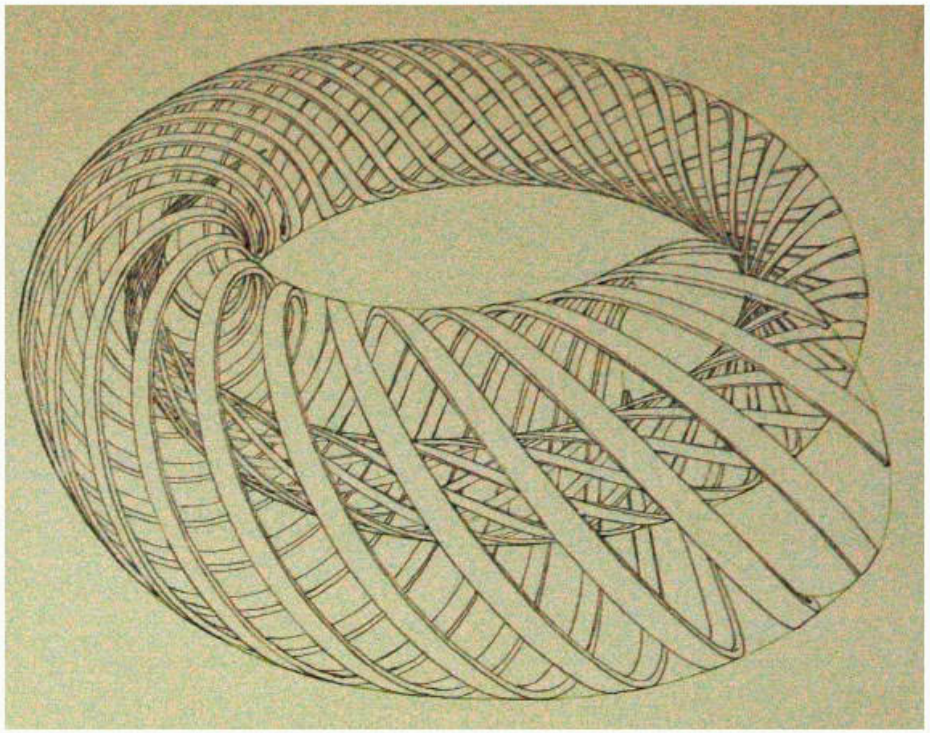


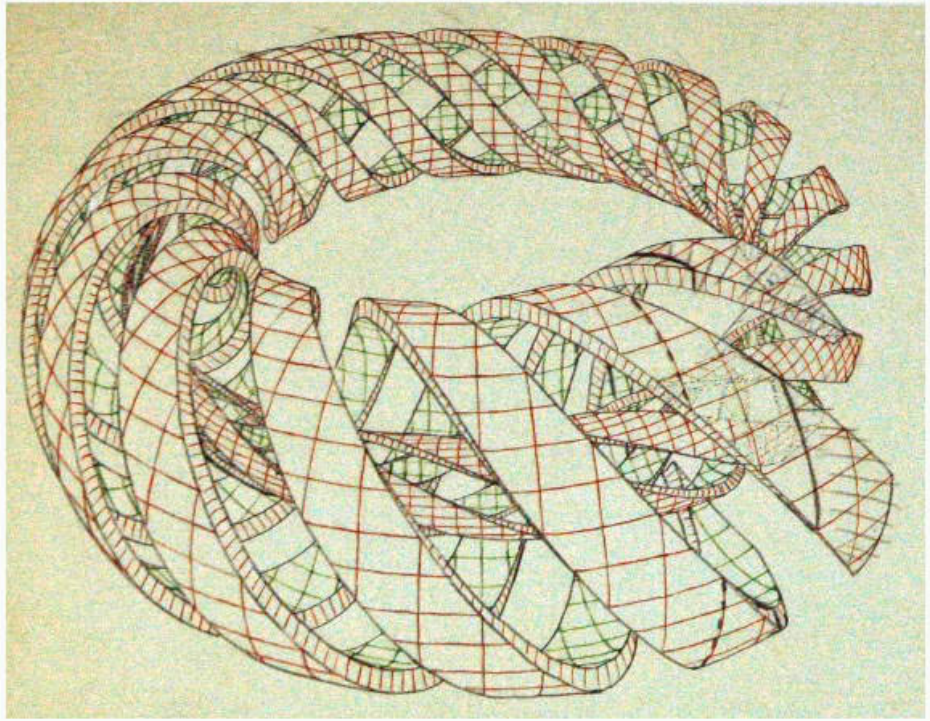


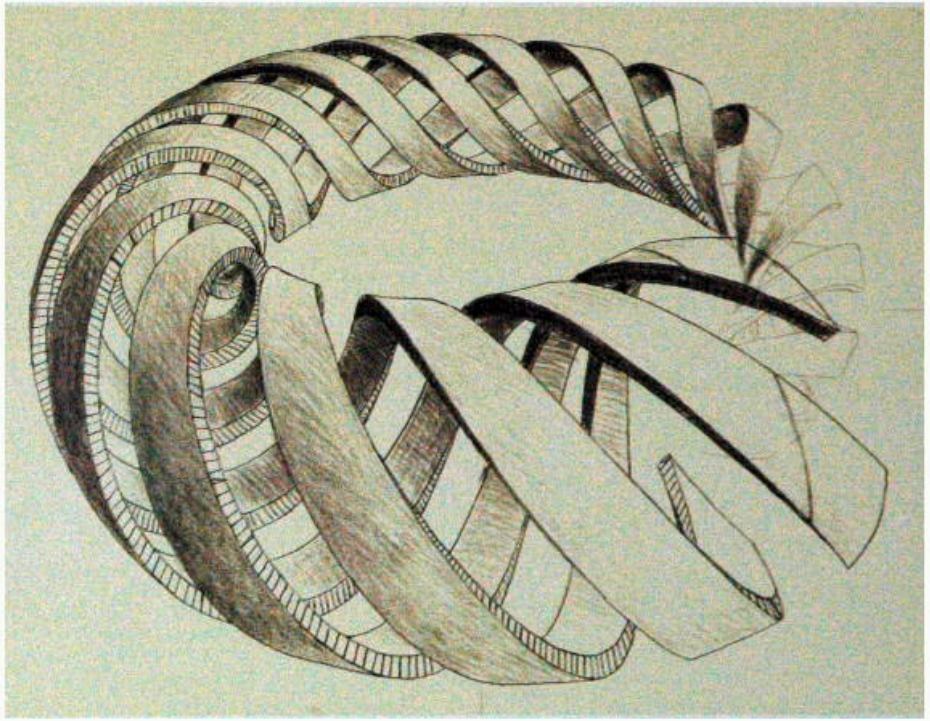




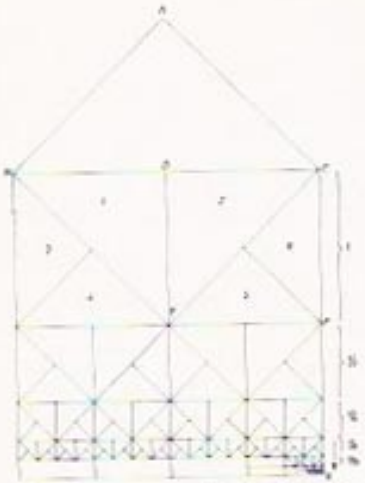




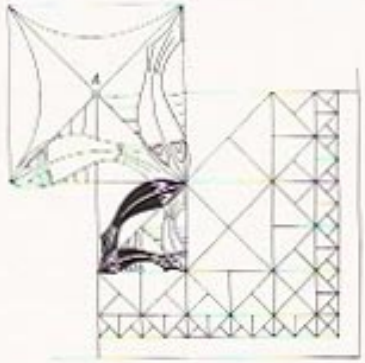




Limite del quadrato



231. Struttura per «Limite del quadrato»

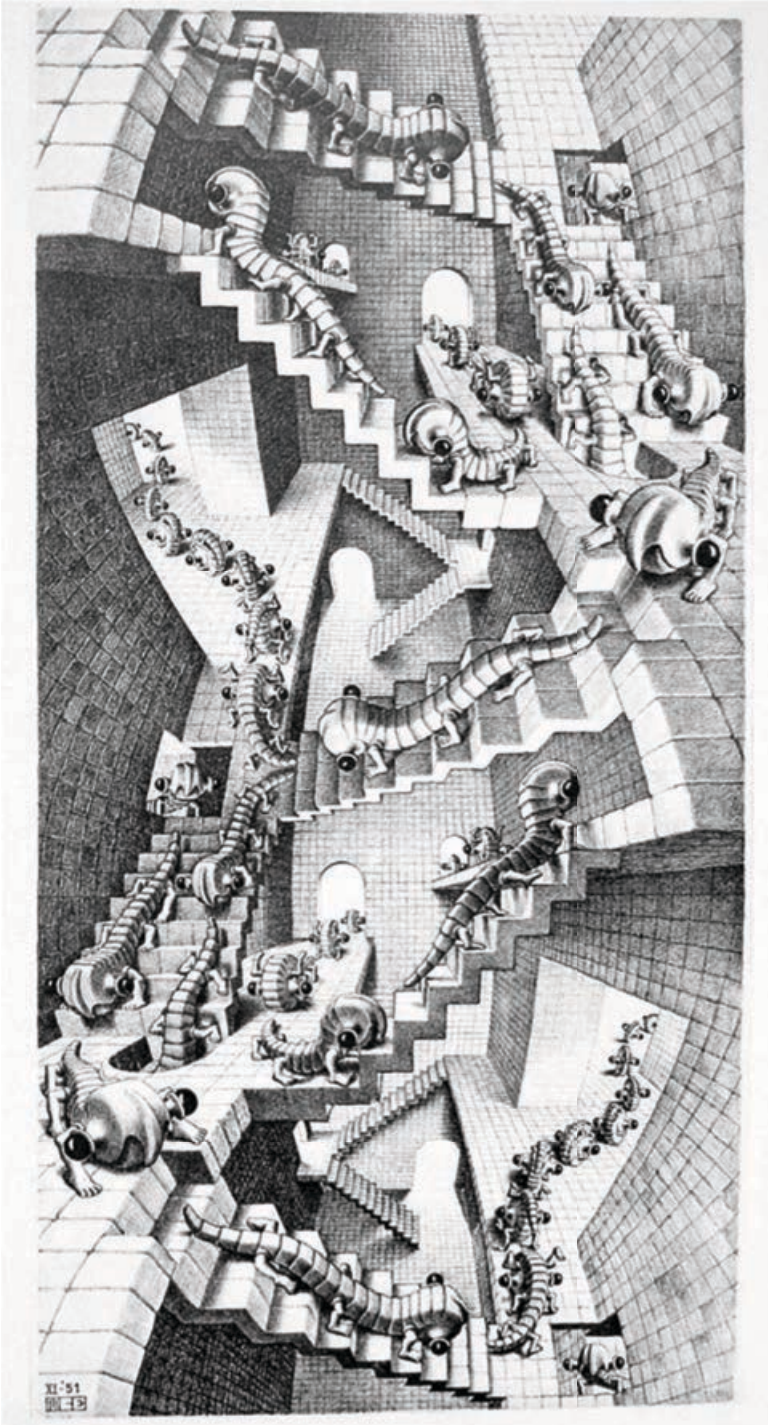


233. Parte di «Limite del quadrato»

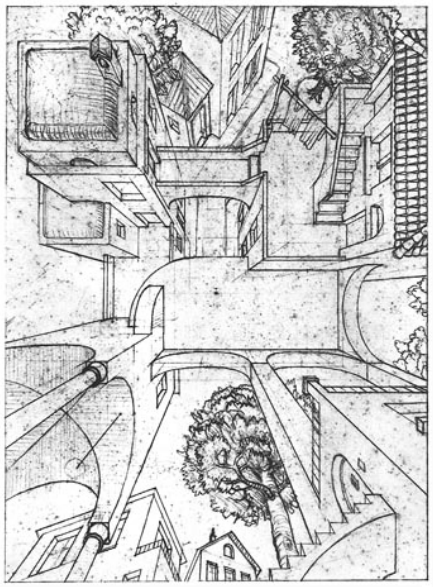
234. I tre diversi punti d'incontro

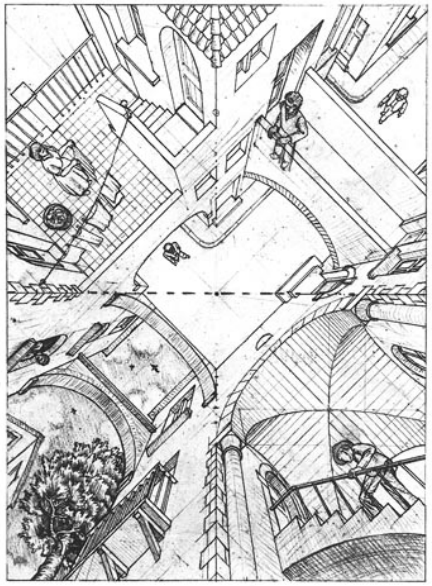
La ricerca di Escher indaga configurazioni spaziali irreali.

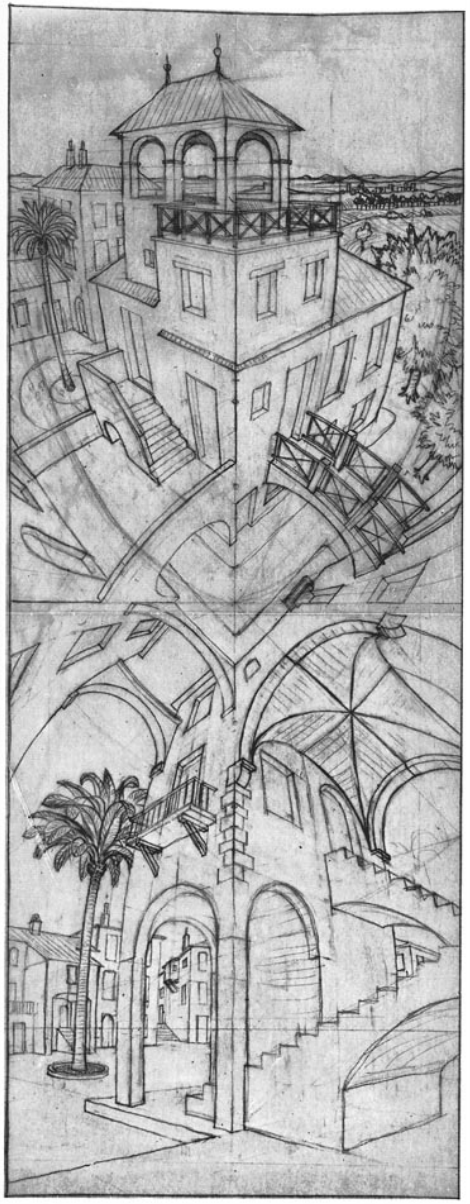
Svariate rappresentazioni sperimentano le ambiguità tra le dimensioni del disegno e quelle di un modello mentale che esula dallo spazio euclideo tridimensionale per indagare gli spazi “curvi” della topologia

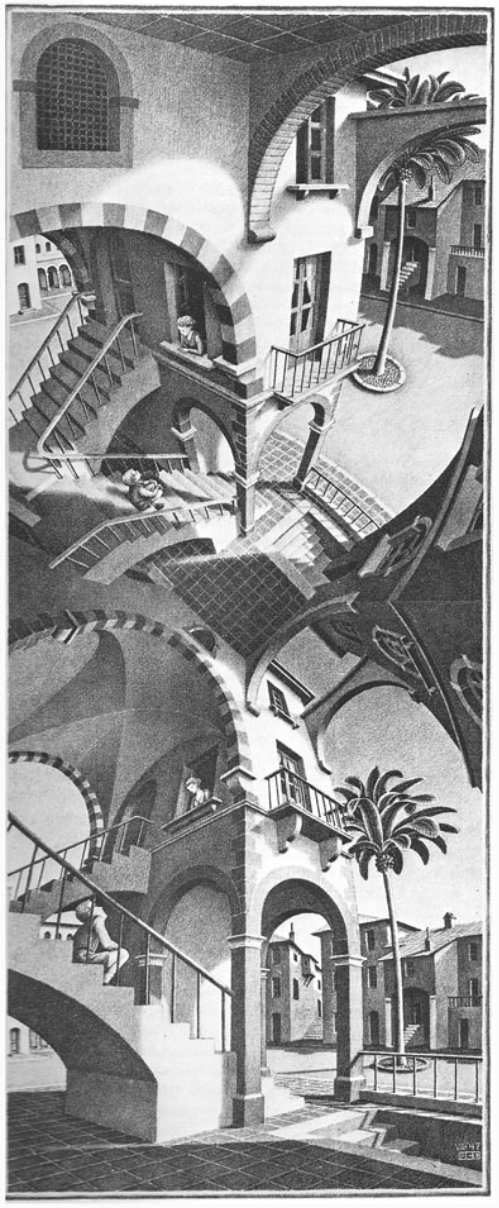


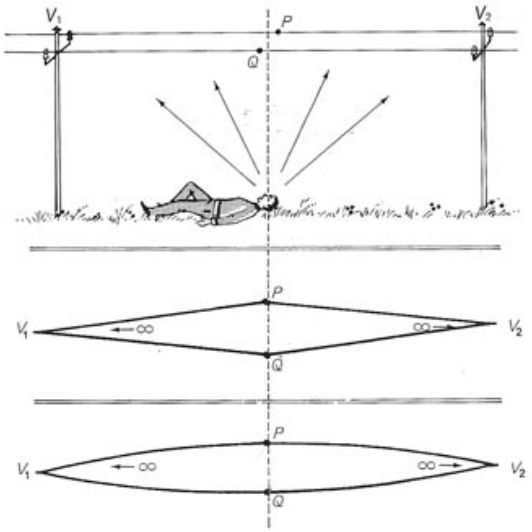
Hause of stairs (1951)

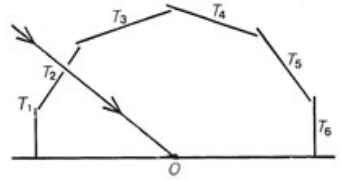


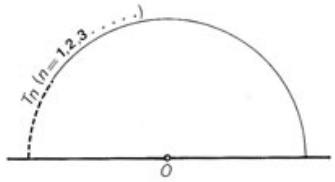


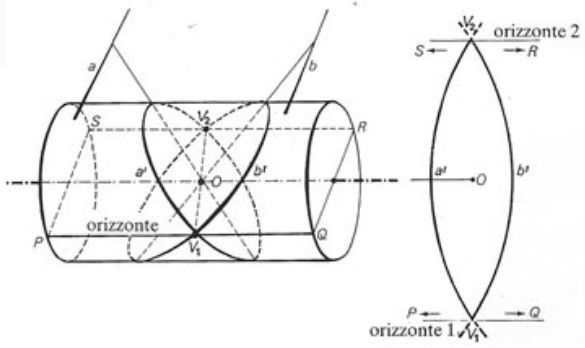




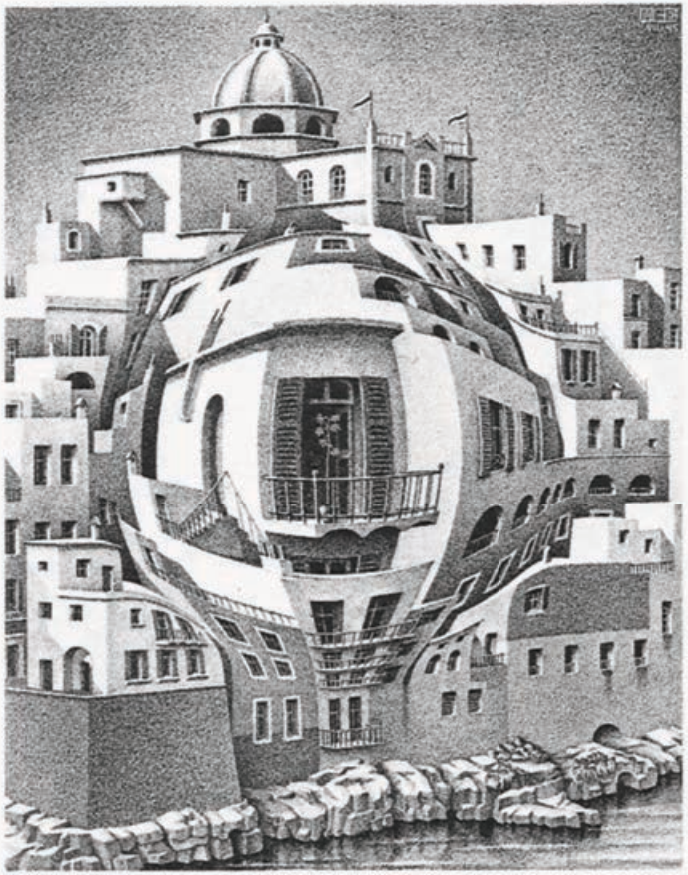






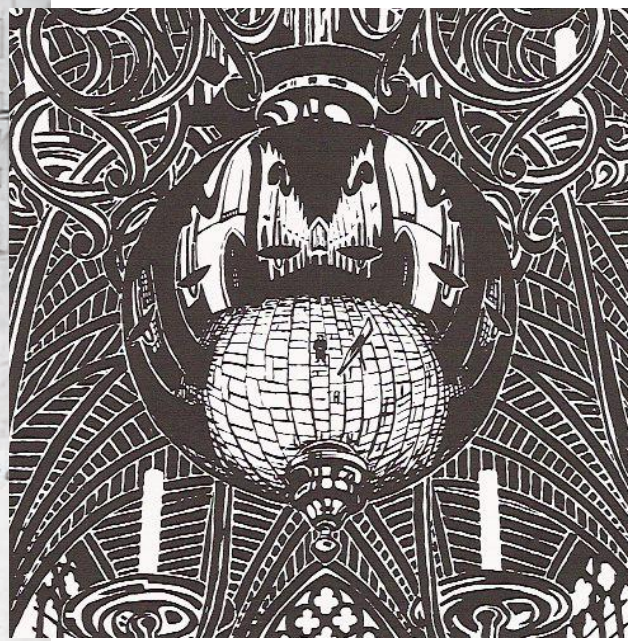


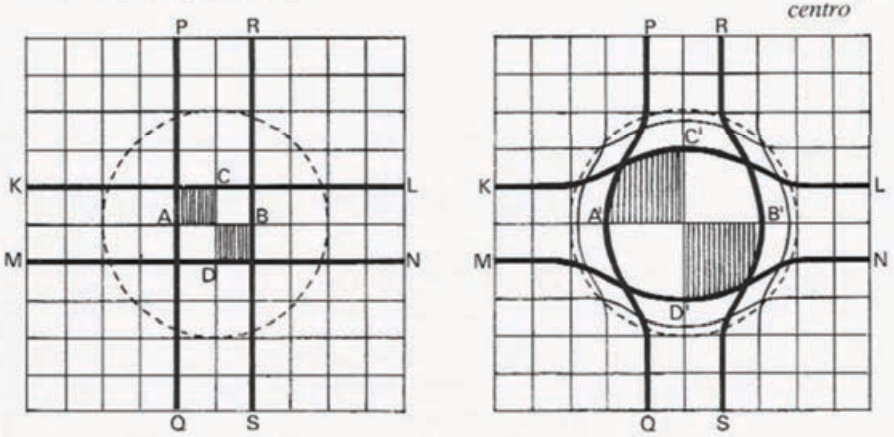
Up and down (1947)



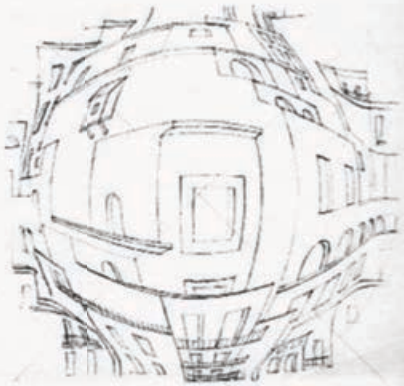
51. *Balcone, litografia, 1945*

55. *Studio per la litografia «Balcone» prima della dilatazione centro*



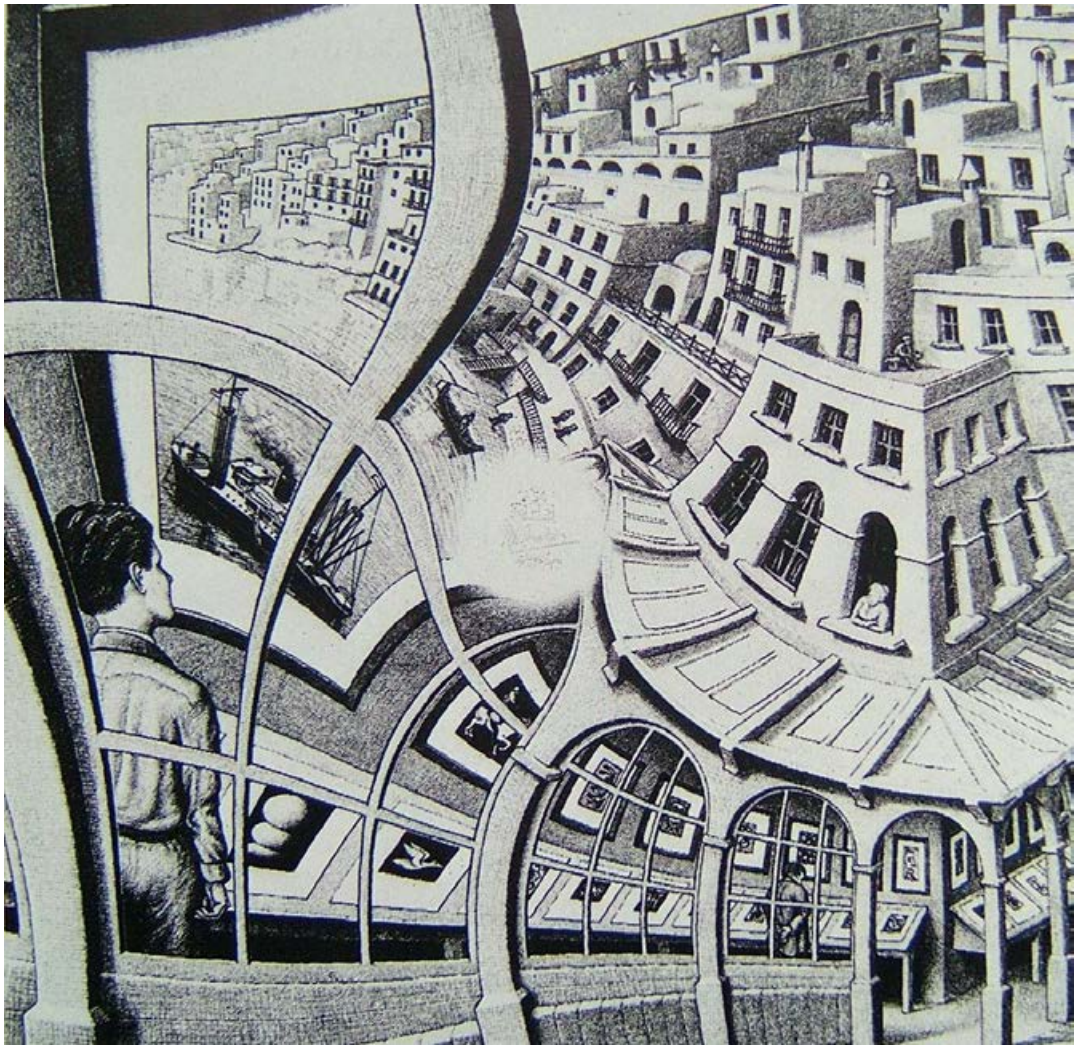


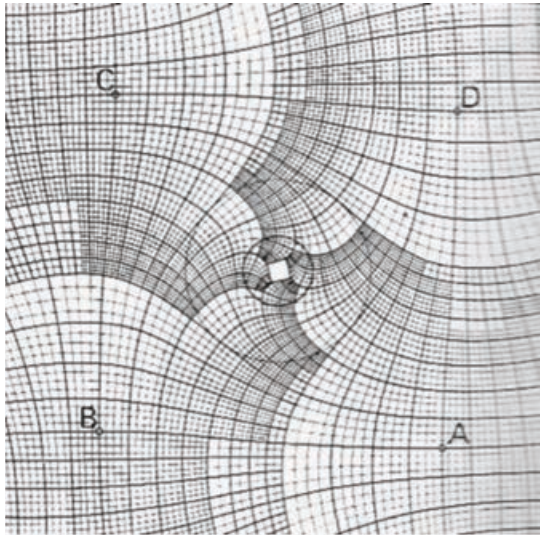
52.–53. *Costruzione del reticolo per la dilatazione del centro*

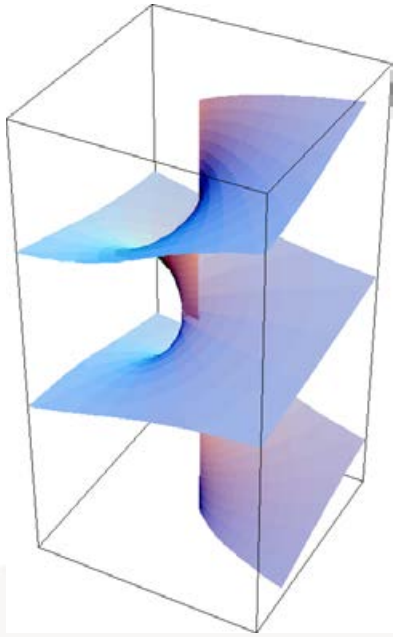


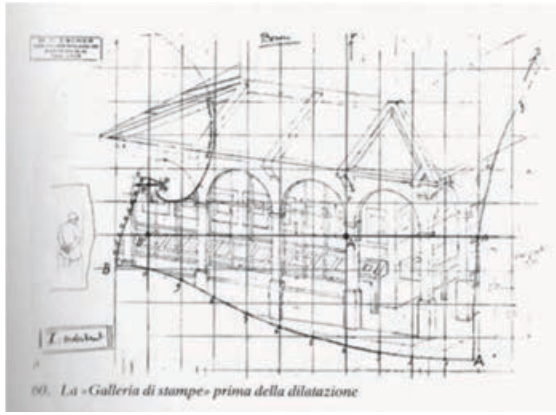
54. *La dilatazione del centro*

Balcony (1945)

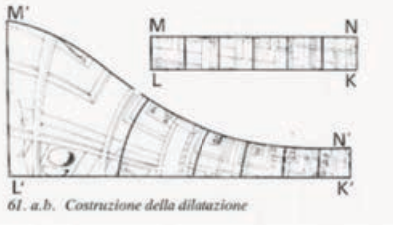








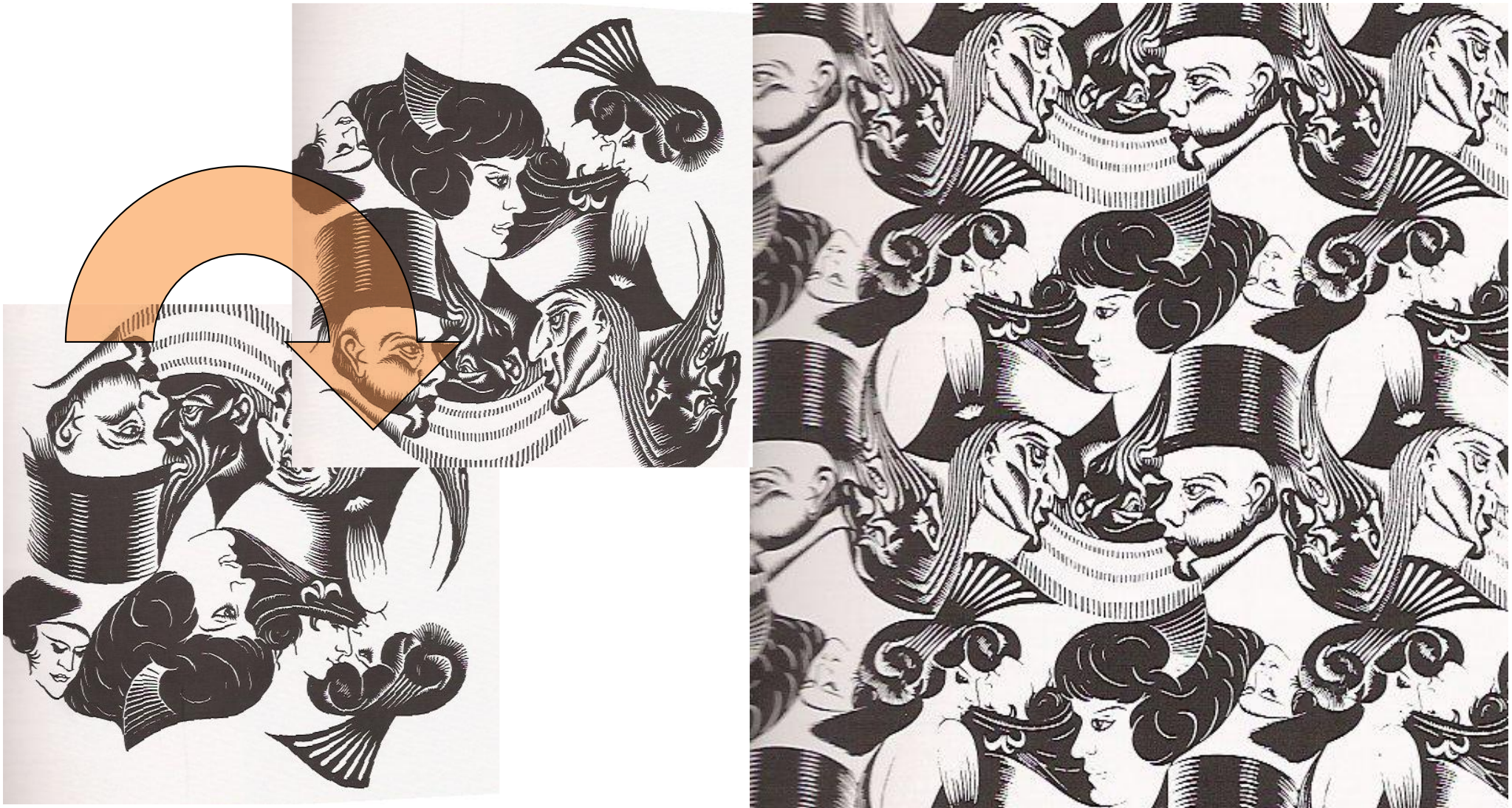
60. La «Galleria di stampe» prima della dilatazione



61. a.b. Costruzione della dilatazione

Print Gallery (1956)

La superficie di Riemann è uno spazio a 1-dimensione con aperti e incollature, espressa da un unico parametro che rappresenta tutti i numeri complessi in un cerchio



“Ho giocato ad un gioco, mi sono sbizzarrito in immagini mentali con nessun altro scopo di indagare le possibilità della rappresentazione stessa.”

M.C. Escher

J. L. Locher. *Il mondo di Escher*. Garzanti, 1978.

Bruno Ernst, *Lo specchio magico di M.C.Escher*, Taschen, 1990.

Doris Schattschneider, *Visioni della Simmetria*, Zanichelli, 1992.

A.A., M. C. Escher – *His life and complete graphic work*, Abrasale press, Amsterdam, 1981.