## Escher's Metamorphosis

A 96 bar strathspey for four couples in a longwise set.
The inspiration for this demonstration dance came while visiting an exhibition of works by M.C. Escher in Lisbon after the December 2017 Curia SCD weekend in Portugal. However it was nearly two years before the idea emerged from its larval stage to become a mature dance.

My favourite Escher drawings are those that show geometrically and/or gravity defying buildings with multiple perspectives. But unlike those, or the eternally climbing monks, the three Metamorphosis woodcuts do at least have both a beginning and an end so are more amenable to representation in dance form.

This dance is a pale reflection of the complexity of Escher's drawings, but is still difficult and suitable only for a group of mathematically and/or artistically minded expert dancers with some time on their hands. It is loosely based on Metamorphosis II, the 2nd in the series, which has roughly 12 sections that transform from one to another. The succession of figures tries, in some way, to match the images with some similar transformations between them.

| Bars | Woodcut image | Dance figure (visual or metaphorical link) |
| ---: | :--- | :--- |
| 1-8 | Metamorphosis: single or crossed | Half turns and hands across. |
| 9-16 | Fields and squares | Rights and lefts (and more hands across). |
| 17-24 | Lizards | Weasel reels (well, they both have 4 legs!). <br> $25-32$ |
|  | Beehive | Teapots (joins between hexagons) and both hand <br> turns (body, upper and lower arms making a <br> hexagonal cell). |
| 33-40 | Bees | Bees of Maggieknockater reels. |
| $41-48$ | Birds passing through fish | Arches and underarm turns. |
| $49-56$ | Fish passing through birds | Mirror reels of four. |
| $57-64$ | Cubes | Diamond poussette (lozenges). |
| $65-72$ | Townscape (Atrani) | Zigzag steps up and down hillside town. |
| $73-80$ | Chessboard | Castling, knight, rook and bishop moves. |
| $81-88$ | Squares and fields | Rights and lefts (and start hands across). |
| $89-96$ | Metamorphosis: crossed or single | Hands across, half turns. |

The M.C. Escher Foundation unfortunately refused permission to include the woodcut image in these instructions. However it can be found at http://www.3quarks.com/en/Metamorphose/index.html or https://uploads7.wikiart.org/images/m-c-escher/metamorphosis-ii.jpg.

## Bars Description

1-8 1 st couple half turn right hand twice, then dance right hands across with 2 nd couple;
while 2 nd couple stand for 2 bars, half turn right hand, then dance right hands across;
while 3 rd couple stand for 4 bars, then half turn right hand twice;
while 4th couple stand for 6 bars, then half turn right hand.
9-16 1 st and 2 nd couples dance complete rights and lefts starting on the sides;
while 3 rd and 4th couples dance right hands across then half rights and lefts starting on the sides.
1 st and 3rd couples end in promenade hold facing down and up on the centre line. The men have their partner on their left (opposite from the usual convention).
2nd and 4th men end on the women's and men's sides respectively and face clockwise.
2nd and 4th women pull left shoulder back on the last bar to end with their backs to each other in 2nd and 3rd places on the centre line facing up and down.

17-24 All dance a complete Weasel reel with 1st and 3rd couples in promenade hold starting by passing 2nd and 4th women right shoulder. Each dancer or promenade pair dances half a reel down or up the centre line, passes right shoulder and dances back up or down the men's or women's side, all ending back in the place they started.

25-28 1st couple with 2 nd woman and 4th woman with 3 rd couple dance right hands across while 2 nd and 4th men half turn with both hands then twirl away passing right shoulder with their partner to end facing 1st and 3rd couples respectively as 2 nd and 4th women end on the women's and men's sides.

29-32 1 st couple with 2 nd man and 4th man with 3 rd couple dance left hands across while 2 nd and 4th women half turn with both hands then twirl away to face out in promenade hold with 4th and 2nd men on the men's and women's sides.

33-40 All dance right shoulder "Bees of Maggieknockater" reels of three on the sides. To start 2nd man with 4th woman pass 3 rd man right shoulder as 4th man with 2 nd woman pass 1 st man right shoulder for the first half reel.
On bar 36 4th and 2nd couples change to take promenade hold with their partner and continue the second half reel by passing left shoulder with 3rd and 1st men respectively. 4th and 2 nd couples end facing each other down and up the dance with nearer hands joined as 1 st and 3rd couples come in to take nearer hands facing the ends. The order is 1,4,2,3 with 4th and 3 rd couples on opposite sides.

41-42 1st and 3rd couples change sides with the women dancing under their partner's raised arm. Meanwhile 2nd couple dance up under an arch made by 4th couple who dance down. All end with nearer hands joined facing down, up, down, up in the order 1,2,4,3 with 1st and 4th couples on opposite sides.

43-44 1st and 4th couples dance down under arches made by 2 nd and 3 rd couples who dance up. 1 st couple faces 3 rd couple as 2 nd and 4 th couples face the ends.

45-46 All repeat bars 41-42 from new places: 2nd and 4th couples change sides with the women dancing under their partner's raised arm. Meanwhile 3rd couple dance up under an arch made by 1 st couple who dance down. The order is now $2,3,1,4$ with 2 nd and 1 st couples on opposite sides.
NB all the arches in bars 41-46 are made by those in 2nd and 4th places.
47-48 All half turn with left hand on the women's side and right hand on the men's side to end in the order 3,2,4,1. 3rd and 4th couples face in and down as 2 nd and 1 st couples face out and up.

49-54 All dance the first six bars of mirror reels of four on the sides with 2 nd and 1 st couples starting up and out.

55-56 4th and 1st couples, in 1 st and 3rd places respectively, dance in and down one place, face partner and take both hands. Meanwhile 3rd and 2nd couples continue the reel for one more bar, then dance in to take both hands. The order is $3,4,2,1$, both hands joined in the centre, with 2 nd and 1 st couples on opposite sides.

57-64 3rd and 4th also 2 nd and 1st couples dance a slightly modified diamond poussette. 3rd woman, 4th man, 2 nd man and 1 st woman have a foot change.
On the first bar, all four couples, still both hands joined, half turn to diagonal lines with 3 rd and 4 th men facing up (unusual), 2 nd and 1 st men facing down (as usual).
All then continue with bars 2-6 of the diamond poussette from these orientations.
On the last two bars all couples half turn and open out, tourbillon style, to end beside partner on the sides.
The order now is 3 rd woman, 3 rd man, 2 nd man, 2 nd woman down the women's side and 4 th woman, 4 th man, 1 st man and 1 st woman down the men's side.

65-72 All set.
Then the top three on the men's side cross down diagonally giving right hands with the bottom three on the women's side.
Then the top three on the women's side cross down diagonally giving left hands with the bottom three on the men's side.
Then the top three on the men's side cross down diagonally giving right hands with the bottom three on the women's side.
The order now is 2 nd man, 3 rd man, 3 rd woman, 4th woman down the women's side and 2 nd woman, 1 st woman, 1 st man, 4 th man down the men's side.

73-76 2nd and 4th couples half turn right shoulder, without hands, face and cast away (castling); while 1st and 3rd couples set and petronella in tandem (knights).

77-80 2nd and 4th couples set and cross back passing left shoulder (rooks);
while 3 rd and 1 st men cross passing right shoulder then set facing in diagonally and pull back left shoulder to face the ends (bishops);
while 3 rd and 1 st women set facing in diagonally then cross passing left shoulder (women bishops). Anyone can consider themselves a queen.
All end opposite partner facing down and up on the sides in the order 2,1,3,4 with 2nd and 3rd couples on opposite sides.

81-88 2nd and 1st couples dance half rights and lefts starting on the sides, then dance left hands across;
while 3rd and 4th couples dance complete rights and lefts starting on the sides.
89-96 4th couple dance left hands across with 3rd couple, then half turn left hand twice;
while 3 rd couple dance left hands across, then half turn left hand, then stand for 2 bars;
while 2 nd couple half turn left hand twice, then stand for 4 bars;
while 1 st couple half turn left hand, then stand for 6 bars.
All end on their own side in the original order 1,2,3,4.

## Music

- Suitable recording: Tom's Friends (Green Ginger: London 75th Anniversary).


## Diagrams（music at the bottom）

| Bar 1 | Bar 5 | Bar 9 | Bar 13 | Bar 17 | Bar 25 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | （3）$\sqrt[3]{3}$ <br> （2） （4） （2）（4） <br> （1） 1 J |  |
| Bar 29 | Bar 33 | Bar 37 | Bar 41 | Bar 43 | Bar 45 |
| （3） 13 （4） <br> （2）4 4 $\stackrel{(2)}{178}$ <br> 』 |  |  |  |  |  |
| Bar 47 | Bar 49 | Bar 55 | Bar 57 | Bar 58 | Bar 63 |
|  |  |  | （1） （2） 2 4）（4） （3）（3） | $\begin{gathered} 10) \\ 1 \end{gathered}$ |  |
| Bar 65 | Bar 67 | Bar 69 | Bar 71 | Bar 73 | Bar 77 |
|  |  |  |  | （4） $1 / 2 \mathrm{C}$（4） <br> ［3） $\mathrm{ST}_{8}$（1） <br> （3） 4 <br> （2） $1 / 2 C \sqrt{2}$ <br> J |  |
| Bar 81 | Bar 85 | Bar 89 | Bar 93 | End（phew！） |  |
|  |  |  |  |  |  |

