## 20211003 ASH Caller Training Session - Mel Wilkerson <br> SHAPE CHANGERS AND WHY THEY ARE IMPORTANT

This session was brought about in response to a question regarding the term Shape Changers. It is apparently something that is said quite often by caller coaches and callers, but it is never really explained exactly what is meant by the term Shape Changer, and why, it is important to be aware of movements that are shape changers.

## WHAT IS A SHAPE CHANGER SQUARE DANCING TERMS?

In its most simplistic form - A shape changer is simply a call that starts in one place and ends with the dances in different places or spots that were not occupied by dancers in the previous call. Essentially what it means is there is a different footprint use of the floor.
What is important with this concept is that it does not matter what the dancer's formation, what dancer is occupying the position on the floor, nor what the facing direction of the dancers is. What matters is that that the occupied boxes on the grid pattern of the floor are different.
For the most part, this is a relatively easy concept to understand but it is also one that is often overlooked, which leads sometimes to back and forth transition without actually changing the shape of the square. Believe it or not, dancers do pick up on this and they appreciate simple variety to make these changes.
To begin with, there is a qualification that needs to be understood when you are looking at the idea of footprints. That qualification belongs to the formation of a static square or a circle. Both formations are viewed essentially as lines. For example, a static square is in principle a line, as is a circle.

- If you have the Heads step in one half step the line is there. (Remember direction doesn't matter and formation doesn't matter. That is not what you are looking at.
- The circle is also viewed the same as a line.

From my readings, this is really not a big issue until you get into the challenge level of dancing when working with things like parallelograms, phantom concepts, and things
 like triple boxes etc but, I do not call challenge so I will not go into that. I will note however that in the notes that will accompany this session, there is a more in-depth analysis from Barry Leiba about the callers and dancers knowing about shape changes when dealing with parallelograms and offset lines etc that you can read at your leisure.
For the basic understanding however, a circle of 8 , a squared set, and a line are essentially all considered the same shape.

The biggest thing to keep in mind when you refer to spots on a dance floor or in a square as "footprints, is that we are talking about the physical position in the grid,
and we do not care if they are facing North, South, East or West or in a corner or all are facing different directions. We are only talking about a spot on the floor.
Let's try and visualise the concept to see what is actually happening to the dancers.
If we have the Sides Lead Right from a squared-up set, we're in eight-chain formation. (Where the people are has changed but if you remember a square (have the heads step in) is just a line... and the four dancers are in the same line - not a shape changer.


Static square
Facing lines circle

If we do a Right and Left Thru, or a Slide Thru, or an 8 chain 4, or a face in, face out or outsides turn back etc from here the occupied spot on the floor has not changed so we are in essence in the same footprints as when we started. Even though dancers may or may not have changed spots, the "footprint positions that are occupied) are not changed. These are not shape changers.


Heads lead right gets us here (same)

- Facing lines
- Circle
- Right and left thru
- Square thru
- 8 chain 4
- Pass thru

However, if we have everyone Veer Left or Pass the Ocean, or fan the top, those calls could be classed as shape changers because the occupied spaces (the actual footprints) that were in use before the movement are different than the occupied spaces after the
 movement.

> Movements like Veer Left or Pass the Ocean etc. change the shape because the same floor footprints are not occupied

## TO GAIN A PERSPECTIVE:

## These are shape changers:

- Recycle, Hinge, Cast Off $3 / 4$, Linear Cycle, Spin the Top, Pass the Ocean, Veer Left, .Follow Your Neighbour, Heads Pass the Ocean (from a static square), Ends fold from ocean waves, Centres Cross Fold from Waves, Ends or Centres Fold from Lines, dixie style, .Chain down the line, , Half Tag, Hinge, cloverleaf


## And these are not shape changers:

- Spin Chain Thru, Slide Thru, Tag the Line, Double Pass Thru, Load The Boat, Chase Right. Boys/Girls/Centres/Ends Run (From Waves), Flutterwheel, square thru, sashays, scoot back, touch $1 / 4$.
Barry Leiba, in an article about shape changers, wrote about why it's important to know about shape changers in Calling. He said simply, that "Understanding Shape Changing is part of formation awareness, which is something that is very important for callers and dancers to understand. A shape changer is simply a call that ends in different spots on the floor than it started in, irrespective of the dancers' facing directions. We call those spots on the floor footprints, but they differ from regular footprints in that we don't care where the toes are pointing.
The basic understanding of shape changing leads to a better understanding of such concepts as square breathing, which is when the square expands "out" such as on a Ferris wheel, or "in" with movements like Flutterwheel or touch $1 / 4$. Generally, movements that have a shape change cause the square to become alive and breathe in and expand while movements that that do not generally cause the square to tighten up a little bit by exhaling and contracting the square.
It's that last part that's the key to the whole idea of shape changing. Another way of looking at it is considering "Is our formation wide, or is it tall?"
That's one way to look at $2 \times 4$ formations, and if we started off wide and ended tall, we've changed the shape.
- How many dancers are in a row in our formation? If we started off in a $2 \times 4$ formation and ended up in a $1 \times 8$ (such as after CAST OFF $3 / 4$ from a righthanded column), we've changed the shape.
The important point about shape changing is: being aware of shape changing gives you help in knowing what formation you'll end the call in. That's help, not a crutch. At basic through A1 this assists in managing the dances around the floor with a feeling of life and movement, in and out and around which allows for good formation management and smooth dancing. At higher levels (A2 and Above)it becomes more important for both dancers and callers, because the ending formation of many calls depends upon the starting formation, and there are calls that are shape changers from some starting formations but not from others
EXAMPLE: MOTIVATE, from its normal starting position of parallel waves, is not a shape changer. But if it's done from two-faced lines, it is a shape changer, ending in an offset formation called a parallelogram (or "triple boxes", as the C1 dancers might know it)

Barry Leiba in an article about shape changers wrote about why it's important to know about shape changers in Calling.
Barry said, that "Understanding shape changing is part of formation awareness which is something that is very important for callers and dancers to understand. A shape changer is simply a call that ends in different spots on the floor than it started in, irrespective of the dancers' facing directions. We call those spots on the floor footprints, but they differ from regular footprints in that we don't care where the toes are pointing.

For instance, if we have the sides lead right from a squared-up set, we're in eightchain formation. If we do a Right-And-Left Thru from there, we finish in exactly the same footprints. Although every dancer has changed spots, The actual spots on the floor that are occupied are exactly the same as the ones before the Right and Left Thru. The call was not a shape changer.
However, if we now have everyone VEER LEFT to make twofaced lines. That call is a shape changer.
 You can clearly see that the footprints occupied before the VEER LEFT are not the same ones occupied afterwards.

In those two examples, the shape changer changed the formation from eight-chain to two-faced lines, while the call that wasn't a shape changer started and ended in eight-chain. But that's coincidental; many calls change the formation but not the footprints, and so they're not shape changers. [Diagram: TOUCH 1/4 from facing lines]


From a squared set, heads LEAD RIGHT and CIRCLE TO A LINE. We have facing lines. Think of the square as having sixteen places the dancers can occupy, and then, look at the diagram. All TOUCH $1 / 4$. We have a right-handed column, and all are facing $1 / 4$ to the right of where they were facing before. But look at the footprints (remember that we don't care about where the toes are)-you've traded footprints with the dancer you touched $1 / 4$ with, and the same footprints are occupied as when the call started. TOUCH $1 / 4$ is not a shape changer!
It's also possible for a call to start and end in the same formation but to change the footprints, and thus to be a shape changer. The most common example of such a call is BEND THE LINE. Let's have the heads LEAD RIGHT and CIRCLE TO A LINE again. That puts us in lines facing the side walls. Now BEND THE LINE. We still have facing lines; the formation hasn't changed. But the lines are now facing the head walls, and the footprints have changed. The ends of the lines after the call are on spots that were unoccupied before the call (try it and see). BEND THE LINE is a shape changer.
First, let's do a quick review. The spots on the floor that the dancers occupy are called footprints. We aren't concerned about the direction the footprints face; we only care where they are. A call is a shape changer if and only if the footprints occupied after the call is done are not the same as the ones occupied when the call started.

PASS THRU, for instance, the dancers take each other's footprints, so the call is not a shape changer. HINGE, on the other hand, is a shape changer, because the footprints change. Remember also that shape changing and formation changing are two different things. A call such as TOUCH $1 / 4$, which changes facing lines to righthanded columns, changes the formation. But TOUCH $1 / 4$ does not change the shape; the footprints remain the same, and the 4 -across, 2-down shape of the formation remains the same.
It's that last part that's the key to the whole idea of shape changing. Is our formation wide, or is it tall? That's one way to look at $2 \times 4$ formations, and if we started off wide and ended tall, we've changed the shape. How many dancers are in a row in our formation? If we started off in a $2 \times 4$ formation and ended up in a $1 \times 8$ (such as after CAST OFF $3 / 4$ from a right-handed column), we've changed the shape. The first important point about shape changing is that awareness of it gives you help in knowing what formation you'll end the call in. That's help, not a crutch, because the ending formation of many calls depends upon the starting formation, and there are calls that are shape changers from some starting formations but not from others
The real importance of knowing about shape changing comes at the Challenge levels, when you must work with distorted formations. [Diagram: Parallelogram and Offset Lines]
For instance, in the C2 concepts of PARALLELOGRAMS and OFFSET LINES it's important to know what a call has done to the shape, not just to the formation itself. In PARALLELOGRAMS, we have lines (or columns) that are shifted so that the people in front of us in the line are actually on a diagonal (see the diagram). In OFFSET LINES the people next to us are shifted on a diagonal. Note what happens
when we PASS THRU (not a shape changer) and then BEND THE LINE (a shape changer) from a parallelogram.
The first leaves us in a parallelogram; the second converts the parallelogram to offset lines. For simple calls like those, there's not much of a problem figuring out where you should go. For more complicated calls, we have to remove the distortion so that we don't get lost, and when we're done, we have to know how to put the distortion back.


Let's try the call FAN THE TOP from our facing line parallelogram. [Diagram: FAN THE TOP from PARALLELOGRAM lines]


First, make note of the offset-which direction is the formation shifted? Now everyone steps to a tidal wave (you have to move diagonally to get to the people in front of you). The centres of each side CAST OFF $3 / 4$ while the ends of each side move up, and we end in waves.

But now we have to put back the offset. If we correctly remembered that the right half of the formation was shifted down, we can shift the ending formation that
way and end in offset waves. But note that it's much easier to do that on paper than it is to do it while you're dancing. When you're dancing you have to remember that the side near the caller is shifted toward a particular wall, and that's usually done by picking a diagonal of the room and orienting yourself against it. It takes practice, and even then, it can be quite difficult. But knowing whether the shape has changed will help, by telling you whether to look for a parallelogram or offset lines. You can see why Challenge level dancing got its name; many of the phantom and distorted formations are quite challenging indeed, and they require a good deal of spatial awareness and experience to master.

## Shape Changing (from offsets $2 \times 4$ s) From the Ceder.net Website

A Shape Changer is any call in which the floor spots occupied by dancers at the beginning of the call are different than the floor spots occupied by dancers at the end of the call. In other words, the geometric shape of the formation has changed either by rotating $90^{\circ}$ or by evolving into a different formation. For this purpose, we will only discuss calls done from $2 \times 4$ s that are offset by $50 \%$ which, after execution, rotate the original starting footprints by $90^{\circ}$.
When dancing calls without Phantoms from setups that are not offset, one does not need to concern oneself with the Shape Changing aspect of a call; however, when dancing Shape Changers from a Parallelogram or Offset 2x4, this becomes a very important aspect indeed. When doing a non-Shape Changing call from an offset setup, you re-establish the exact footprints on the floor at the conclusion of the call that you had at the beginning of the call. With a Shape Changer, however, reestablishing footprints to the exact starting formation is not possible but establishing relative footprints in a complementary formation is possible, and a method for doing so is described below.
There are two parameters to remember when dealing with any offset formation:

1. The "Shear Line" is the imaginary line which evenly divides the formation into two halves, and along which exactly half of the dancers have been shifted $50 \%$ relative to the other half of the dancers. Assuming that you are Squared off to the walls and that the caller is at the North or South end of the hall, the Shear Line is either a North-South dividing line (henceforth called a "Head Shear" since it bisects the square through the Heads initial starting position), or an EastWest dividing line (henceforth called a "Side Shear" since it bisects the square through the Sides initial starting position). Note that the Shear Line always passes through the very Centre of the set.
2. The "Shift Direction" is the direction along the Shear Line in which the dancers have been shifted. The Shift Direction is either Clockwise (CW) or CounterClockwise (CCW). Note that "Right" or "Left" or "Up" or "Down" would be insufficient information, since exactly half the dancers would be shifted in one direction (e.g., "Right") while their opposite dancers would be shifted in the opposite direction (e.g., "Left"). Right-Left fails to clarify which half of the square is shifted in which direction (i.e., is the top half shifted Right, or is the bottom half shifted Right?). CW and CCW, on the other hand, indicate the Shift Direction of both halves of the square at the same time. To determine whether the Shift

Direction is CW or CCW, imagine grabbing the dancers on one side of the Shear Line with one hand and grabbing the dancers on the other side of the Shear Line with your other hand, almost like holding a steering wheel. Now, imagine simultaneously moving both halves of the square along the Shear Line in the direction of the offset, one hand in one direction and the other hand in the opposite direction. If you turn the "steering wheel" to the right, the Shift Direction is Clockwise (CW); if you turn the "steering wheel" to the Left, the Shift Direction is Counter-Clockwise (CCW).
To dance Shape Changers from offset formations, you must determine the Shear Line and Shift Direction of the starting formation, execute the call given, and then make sure that you re-establish the same Shear Line and the same Shift Direction in your ending formation.
Diagrammed below are the four possible combinations of Shear Lines and Shift Directions from a Parallelogram (diagram on the left) and the complementary $3 \times 4$ Matrix Offset setup (diagram on the right).


If you start a call from formation (1a) or (1b), you must end in either formation (1a) or (1b). If the call is a shape-changer you will end in the complementary formation 1a $>1 \mathrm{~b}$ or $1 \mathrm{~b}->1 \mathrm{a}$; if the call is not a shape-changer you will end in the same formation $1 \mathrm{a}->1 \mathrm{a}$ or 1 b -> 1b. If you start from (2a) or (2b), you must end in (2a) or (2b). Similarly, with (3a) and (3b), and also with (4a) and (4b).


The last 2 examples, (3) and (4), are awkward to dance.
It is not something that is really dealt with below A2 (and I only dance and call to A1.
MOTIVATE, from its normal starting position of parallel waves, is not a shape changer. But if it's done from two-faced lines, it is a shape changer, ending in an offset formation called a parallelogram (or "triple boxes", as the C1 dancers might know it).
This is only marginally A2, since the two-faced line starting formation and the parallelogram ending formation isn't likely to get much success with A2 dancers.

On the C 1 list there are a few calls that qualify: PERCOLATE is a shape changer from waves, and it is a shape changer from back-to-back lines but not a shape changer from lines facing out.
TALLY HO is the opposite; it's not a shape changer from waves, but "is" from facing lines (and from trade by). And REGROUP from column formations is not a shape changer, but from line formations it is.

