C4 Concepts
Bill Ackerman
8 August 2014

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<td>21 Oct 2012</td>
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This is the second of three books about C4. The first covers calls, the second covers concepts, and the third covers miscellaneous “notions”.

12 Matrix, 16 Matrix

In addition to being phrases to describe a formation (as in “12 Matrix 3x3 Follow Your Leader” from parallelogram waves), these are concepts in their own right. They date from a time when concepts were less rigorously defined than they are now, and people just had to know how to do various 12 Matrix calls. In modern terminology, they could be defined as “Piecewise Triple/Quadruple Formations Working Forward/Together”. Once one gets accustomed to them, 12 Matrix calls have a very natural feel, without the intimidating aspects of Multiple Formations Working <direction>.

The fundamental call is 12 Matrix (or 16 Matrix) Circulate. It follows the rules completely naturally, with the special definition that you are a trailer (and hence walk straight ahead) if there is any spot in front of you. People in the center line are considered to be trailers.

Calls that normally have N stars will have N+1 stars with 12 Matrix and N+2 with 16 Matrix.
before 12 Matrix Alter and Circulate

Trade, U-Turn Back, Cast 3/4

center 4 Trade, ends Circulate

turn diamonds finished

before 12 Matrix Motivate

Circulate
Here’s a tricky application. Drift Apart, from lines, is defined as trailing centers Circulate and then Cross Over Circulate, while the lead centers Cross Over Circulate and then Circulate. The ends do two Split Circulates. Those all turn into various kinds of 12 Matrix Circulates.

**12 Matrix [Split] [Interlocked] Phantom C/L/W**

These are like Split Phantom C/L/W, etc., but the columns, lines, or waves are short—only 3 spots. The concepts are done from a 3x4 matrix.
4 Phantom Interlocked Blocks

This is related to Phantom Offset C/L/W, in that each person deduces their own distorted or disconnected setup out of an arbitrarily populated larger setup.

This is done in a 4x4 matrix. Each person deduces which “Block” formation he is in, and does the call in that block, however many people it may contain.

6x2

This is not a general concept—it applies to a very small number of calls. The outer 6 people do the outsides’ part of the call, and the center 2 do the centers’ part. Examples are 6x2 You All and 6x2 Turnstyle.

There may have been a very old usage in which the outer 6 did a Circulate as in 6x2 Acey Deucey, while the centers did the given call, as in 6x2 Shazam.
**MxN as Couples, MxN Tandem, MxN-some**

Divide people into couples or tandems the same way you would for the MxN concept—count from front to back or right to left. Then do the call in those groups. The number 1 means that person isn’t paired at all.

![Diagram](image.png)

before 1x3-some Couple Up  

after

**Anchor the *<anyone>***

The call is done in such a way that the designated people stay on the same spot on the floor, and the other people in her setup compensate for that by adjusting their ending setup so that it has the correct shape. The designated person can still change facing direction.

The call must be one in which the setup is divided into smaller sub-setups, each of which does the call. There must be one designated person in each sub-setup. The sub-setups shift themselves around as needed to keep the designated person on the same spot.

![Diagram](image.png)

before Anchor the Girls, hinge  

after
**Any Hand**

This is used, typically on calls that have a specific handedness, to remove the handedness. So, for example, Any Hand Swing Thru is a Swing and Slip, even when called from a left handed wave.

However, it affects calls more profoundly than that. Any Hand calls are often done from setups of arbitrary facing directions, and the meaning seems to be:

- Turn any Arm Turn 1/4 or 3/4 into a “pushy” Cast Off if necessary.
- Turn any Arm Turn 1/2 into a Trade.
- Start the call with everyone working, which generally means centers and adjacent ends do the first part.
- Progress from one part to the next by working with the person on the hand opposite the person with whom you just worked. If there is no one on that hand, you can’t do that part.
**Boxsome, <anysup>some**

These are extensions of Twosome, but applied to complete setups instead of couples or tandems. Everyone in the setup must be facing the same way. They move as a complete N-some unit.

**before Boxsome Shazam**

**after**

**before Diamondsome Hinge**

**after**

**before Y-some Single Wheel**

**after**
One can also do these “Solid”, which is the same as the “working as a unit” concept from C2. The usual way this is called is “Diamonds are Solid”, etc.

One can also do these Fractional Twosome, as in “Y-some 1/2 Solid”, or “Diamonds are Solid 1/4 Diamondsome”.

**Common Spot**

This requires the dancers to imagine that they have just completed some call that had people collide and take right hands. Some or all of the people will be in right-handed miniwaves. Those people imagine that they are on the same spot, as they would have been at the instant of the collision. They do their part of the common spot call from that compressed virtual setup.

This concept is sometimes used when the miniwaves are left-handed.

This concept is sometimes called “Common Point”, “Common End”, or something similar, indicating who should be considered to have collided.

![Diagram of common spot](attachment:common_spot_diagram.png)

before Common Point Diamonds
Exchange the Diamonds 1/4

after

There is much more extensive discussion of this (oriented toward users of the Sd computer program) at [http://www.challengedance.org/sd/appnote4.html](http://www.challengedance.org/sd/appnote4.html).

**Concentric Triple Boxes**

This is the obvious thing, from a 2x6. There is an inner box, an intermediate box, and an outer box. The complexities of the Concentric rule (“lines to lines”, etc.) do not apply. Just work to spots.
[Reverse] Crazy, <N/4> [Reverse] Crazy

Crazy causes the call to be performed on each side, then by the (new) centers, then on each side again, and then by the centers again. It has 4 parts. When there is a choice, the splitting is into 2x2 boxes rather than 1x4’s. Reverse Crazy starts in the center, then each side, then in the center, and then each side. Both of these can be fractionalized. 3/4 Crazy means each side, centers, and each side. 3/4 Reverse Crazy means centers, each side, and centers. When fractionalized, the result has that many parts.

The word order “Reverse 3/4 Crazy” used to be commonplace, but there are now those who frown upon it. In any case, it means the same thing as the other order.

[Reverse] Crazy Phantom C/L/W, <N/4> [Reverse] Crazy Phantom C/L/W

This applies the Crazy concept to a mixture of Split Phantom formations and the center phantom formation. So Crazy Phantom Lines is sort of like Split Phantom Waves, Center Phantom Waves, Split Phantom Waves again, and Center Phantom Waves again, except for the following tricky point: Do not re-evaluate the meaning of “Lines” or “Columns”. Once the orientation of the splitting is determined from the first part, continue to use the same absolute orientation of the splitting. This is often described as “painting stripes on the floor”. For example, on a Crazy Phantom Waves Split Checkmate, the first part is done in Split Phantom Waves, and the second part in the Center Phantom Columns, because people’s orientation changed. The third and fourth parts are in T-boned 2x4’s, oriented according to the stripes that were painted at the start.

\[
\begin{align*}
\bullet 3 & \quad + \quad \bullet 2 \\
\bullet 2 & \quad + \quad \bullet 3 \\
+ \quad 1 & \quad + \quad 4 \\
+ \quad 4 & \quad + \quad 1 \\
\end{align*}
\begin{align*}
\bullet 4 & \quad + \quad \bullet 1 \\
\bullet 1 & \quad + \quad \bullet 4 \\
+ \quad 2 & \quad + \quad 3 \\
+ \quad 3 & \quad + \quad 2 \\
\end{align*}
\]

before Crazy Phantom Waves Split Checkmate

(stripes are horizontal)

(after)

Crossed Triple Boxes

This is an extremely old concept the creates five 2x2 boxes in the shape of a “plus” sign. From a squared set, everyone is a lead in one the five boxes, which is behind them, and there is a fifth, unoccupied, box in the center.
Diagonal C/L/W

This applies to a 1x4 that is the “main diagonal” of a block formation, or other similarly oriented 1x4’s. They work in that distorted line or column.

The difference between a line and a column is important—it tells the dancers which way the distortion goes. These are among the trickiest distortions to handle. Remember that your facing direction will be the same as though you had done the call in an undistorted setup. Only your position is distorted. If the call would go to a 1x4 oriented the other way (e.g. Lockit), change to the other diagonal.

![Diagram of Diagonal C/L/W](image-url)
Diagonal 1/4 Tag, Diagonal 3/4 Tag, etc.

This is a distorted 1/4-tag-like or diamond-like setup obtained from block spots. The “main diagonal” of the block formation comprises the “center line” of the virtual 1/4 tag. It's always a line, that is, the centers always consider the others to be in front of them or behind them.

Diamond

This is two very different concepts. Which one to use depends on the call.

For calls that involve sequences of arm turns (Swing Thru, 1/4 Thru, Swing the Fractions, etc.) all arm turns that would involve centers and ends are turned into that many Diamond Circulates, and all arm turns that would take place in the center are done just by the center two people.
All handedness requirements of the call must still be met. The diamond handedness must be consistent.

Otherwise, it must be a 2-person call. The points of each diamond do that call in their disconnected setup. If the call is a shape-changer (e.g. Shazam) they go into the center spots of the diamond. The centers of each diamond also do the call. If the call is a shape-changer they go into the point spots of the diamond. In all cases the diamond's orientation remains the same.

There are also a few calls that have “diamond” in their names, such as Diamond Recycle and Diamond Inlet. They are not related to these concepts.

**Distorted**

In a distorted setup, one must find the real people, who will be in some distorted version of the “virtual” setup in which the call is logically executed. Typically the distortion consists of lines or
columns not being straight:

before Distorted Columns
Transfer the Column

after

before Distorted Tidal Wave
Grand Mix

The distortion may consist of people being spread out:

before Distorted Waves
Swing Thru

Sometimes specific people may have a distorted subset of a normal setup:

before Girls in your
Distorted Box Bingo

after
In general, shape-changing calls are not allowed, because it is impossible to put the same distortion back on a different setup. But there are a number of “nice” cases in which the distortion can be put back unambiguously:
**Double Offset 1/4 Tag**

This is a general 1/4 tag (1/4 line, 3/4 tag, diamonds, etc.) which has been distorted into a 2x4. The distortion effectively occurs in two stages—the outsides of the 1/4 tag are off to one side, and the result is compressed to a 2x4.

The caller must identify the people who are centers of the imagined 1/4 tag, as in “Heads are Centers of a Double Offset 1/4 Tag”.

actual setup before Girls are Centers of a Double Offset 1/4 Tag, All 8 Recycle

imagined setup before the All 8 Recycle

finished

**Drag the <anyone>**

The designated people don’t think about doing the call. They just note who their (lateral) partner is, and stay with that person. The other people do the call. Whoever is the partner of a designated person “drags” that person around, making sure he stays in the same rigid relationship.

before Drag the Head Boys, Mix

after

**[Reverse] Echo**

This is a meta-concept, that is, it applies to a concept. It causes the concept to be applied to the call in the usual way, and then the call to be performed without the concept. Reverse Echo performs the call first without the concept, and then with the concept.

Any application of Echo has two parts.
Echo 2/3, Recycle—do a 2/3 Recycle, followed by a full Recycle.
Reverse Echo 2/3, Recycle—do a Recycle, followed by a 2/3 Recycle.

Applications of Echo can be extremely difficult, particularly when used with other meta-concepts or with supercalls. For example, “Initially Echo 1/2, Settle Back” applies “Echo 1/2” to the first part, which is Reset 1/2. So the actions are:

- Reset 1/4 (that’s 1/2 of the first part)
- Reset 1/2 (the complete first part)
- centers Cross Back while the ends do 2 O Circulates

Echo Tally Ho but Flip Back is an application with a supercall. It is Tally Ho but Flip Back followed by another Flip Back.

**Emulate**

This is sort of the opposite of Stable. Do the turning motions required by the call, but stay on your spot.

**Facing Parallelogram, Back-to-Front Parallelogram, etc.**

These are like Facing Jay, Back-to-Front Jay, etc., but the people in the center line who work in the same group are adjacent.

```
1 2
4 1 2
3 2 1
3 4 1

before Facing Parallelogram Touch 1/4

1 2
4 1 2
3 2 1
3 4 1

after
```

The flexibility of the Jay concept has made this largely obsolete.
**Ferris**

This is the generalization of the behavior of Ferris Wheel. From 2-faced lines, all 1/2 Press Ahead, then do the call in triple lines, and compress phantoms where possible.

The compression of phantoms may be unusual:

Or it may be impossible:
Finally

This is a meta-concept that picks out the last part of the subject call and applies the concept to it.

Finish

Skip the first part of the call, and do all the rest of it. This has a very precise meaning at high challenge levels. In the past, it has been used in a very common-sense imprecise way, but it is no longer used that way. An example of the old usage is “Chain Reaction but the centers finish like a Wheel the Ocean” when the final Cast Off is a counterclockwise push-cast. In modern terminology, that would be considered an abuse of “finish”. The correct modern way of saying this is “Chain Reaction, centers Like a Wheel the Ocean.” (One could also say “centers Finish Wheel the Ocean”—since Wheel the Ocean has two parts, the two concepts are equivalent.)

See Like a, page 26.

Firstly, Secondly, Evenly, etc.

These are meta-concepts that pick out the indicated part(s) of the subject call and apply the concept to it. “Firstly” picks out the first part of the call. It is the same as “Initially”. “Secondly”, “Thirdly”, etc. pick out the indicated part. “Oddly” picks out the first, third, and so on. It is the same as “Random”. “Evenly” picks out the second, fourth, and so on. It is the same as “Reverse Random”. “Piecewise” picks out each part, and applies the concept to those parts individually. This is useful with concepts like “1/2”, in which the action of applying the concept to the parts one at a time is different from that of applying the concept to the call as a whole. See the discussion of re-evaluation in http://www.challengedance.org/sd/book3.pdf.
**Fractal**

This concept turns all 1/4 turns (arm turns, star turns, casts) into 3/4, and vice-versa. Turns of 1/2 are not affected. Fractal Remake is the same as Reverse Order Remake.

```
before Fractal Cast a Shadow

2 2 3 3
1 1 4 4

after

1 4
2 3
```

**Fractional Stable**

Each person stops turning (but otherwise continues moving) after having turned the given fraction. If you turn one way and then the other, all of those turns add up.

```
before 3/4 Stable Swing Thru

1 1 2 2

after

1 2 1 2

3 3
2 4
2 4
1 1
```

This can lead to the necessity to know call definitions quite rigorously:
**Fractional Twosome, Twosome Fractional Solid**

With the “Couples/Tandem <N/4> Twosome” concept, each Couples or Tandem group adds up their total turning action (as with Fractional Stable) until they reach the given fraction, and then become Twosome for the rest of the call.

To do things in the other order, the caller will give the Twosome concept, then a fraction, and then the word “Solid”. The groups are Twosome until they reach the fraction, and then become Solid (Couples or Tandem.)

The groups can also be Siamese, Tandems of 3, Threesome, Diamondsome, etc.

The nomenclature sounds intimidating at first (and the concept wasn’t adopted for a while because of this) but it is actually quite logical. The two ways of working (Solid or N-some) are done in the same order in which they are spoken. The fraction is spoken between them. Do things the first way until you reach the fraction, then do them the other way. So, for example, “Couples 1/2 Twosome” means “Couples until you have turned 1/2, then Twosome”. Other examples are:

- Tandem 1/4 Twosome
- Couples of 3 1/2 Threesome
- Siamese 1/4 Twosome
- Boxes are Solid 1/4 Boxsome
- Diamonds are Solid 1/4 Diamondsome
- Tandem Twosome 1/4 Solid
- Couples Threesome 1/4 Solid
- Siamese Twosome 1/4 Solid
- Diamondsome 1/4 Solid

**Grand Working <direction>**

This is used in a setup in which the call could have been directed to each side, or could have been directed to the centers. For example, Ah So from a tidal wave, or Reach Out from columns. It directs people to make their own decision about which subsetup to work in, based on the given direction. The starting setups overlap, and the resulting setups typically overlap the same way.

This concept is described in more detail in Book 3.

**Gruesome Twosome**

This is Phantom Couples Twosome in a 2x8, resulting in a virtual setup which is parallel waves. The point of this concept, aside from the funny name, is that the starting setup is always taken to be a 2x8, instead of the 4x4 that concepts like “Phantom Couples Twosome” normally indicate. That is, from normal parallel 2-faced lines, Phantom Couples Twosome places the phantoms to make a 4x4, so the virtual setup is columns. Gruesome Twosome places the phantoms to make a 2x8, so the virtual setup is parallel waves.
“Gruesome” is also used with other couples/tandem concepts, as in “Gruesome as Couples” or “Gruesome Tandem Twosome”. In general, it directs that the phantoms be placed to make a 2x8, and that people be associated in pairs parallel to the long axis, creating a virtual 2x4.

**Half and Half**

This takes two calls. Do the first half of the first call, and then the second half of the second call.

**Halfway**

This meta-concept is the same as “First 1/2”—apply the concept that follows to the first 1/2 of the call, and then do the rest of the call normally. It has the advantage of having a distinctive and nice sound that removes some possible ambiguity. Unfortunately, it doesn’t generalize smoothly to other fractions.

**Headliners, Sideliners**

These are designators. The headliners are the people facing head walls at a given moment. The sideliners are those facing the side walls.

**Head Corners, Side Corners**

These are designators. The head corners are the head boys and side girls. The side corners are the side boys and head girls.

**In <anything> Out <anything>**

This is intended to combine things like Wheel and Deal with Turn and Deal. From 2-faced lines, the people facing in take one call while the people facing out take the other.

```
before In Wheel and Deal
Out Turn and Deal
```

```
2  2  3  3
1  1  4  4
```

```
2  2  3  3
1  1  4  4
```

after
Initially

This is a meta-concept that picks out the first part of the subject call and applies the concept to it. It is the same as “Firstly”.

Inrigger, Outrigger, etc.

These are typically done from a setup commonly called a “rigger”, and involve two offsets. The first is the “rigger offset”, and is always taken out. This consists of the end two people moving (usually) forward or backward, dragging the adjacent person with them, until they are facing in or out of a parallelogram. The call is then done in that parallelogram. When it completes, the outer pairs of people move as required to center themselves in (usually) a new “rigger” formation.

If the call is a shape-changer, the result of doing it in a parallelogram might be an offset formation. In this case the outer people move as required to center themselves.
Facing directions don’t matter in any of this. All that is required is that the outermost people know which direction to move. The “Rightrigger” and “Leftrigger” concepts tell them to move right or left, respectively. The adjacent person goes with them.
One may also hear “Frontrigger”, telling the outermost people to go forward, or “Backrigger”, telling them to back up.

These concepts can also be used in 1/4-tag-like setups. The outside people both move in the direction indicated (which must be consistent), and then everyone does the call in offset lines or columns.

The final recentering operation is sometimes used as a call in its own right: “Like a Rigger”.

**Interlace**

This takes two calls. The parts of the calls are done alternately—the first part of call A, then the first part of call B, then the second part of call A, and so on. If one of the calls runs out of parts before the other, that other call finishes all of its parts.
Interlocked Boxes

This concept identifies two rectangular 2x2 boxes of real people, each of which does the call. The most common application is from a 3x4.

\[
\begin{array}{ccc}
2 & + & 3 \\
1 & 2 & 4 & 3 \\
+ & 1 & + & 4 \\
\end{array}
\quad \begin{array}{ccc}
1 & + & 2 \\
4 & 1 & 3 & 2 \\
+ & 4 & + & 3 \\
\end{array}
\]

before Interlocked Boxes Ripoff after

Note that Interlocked Parallelogram could be applied to the same setup, and would have a different meaning.

Interlocked Parallelogram

This concept identifies two parallelogram (non rectangular) 2x2 boxes of real people, each of which does the call. This is commonly done in a 2x4:

\[
\begin{array}{ccc}
1 & 1 & 2 & 2 \\
1 & 4 & 3 & 3 \\
\end{array}
\quad \begin{array}{ccc}
1 & 1 & 4 & 4 \\
2 & 2 & 3 & 3 \\
\end{array}
\]

before Interlocked Parallelogram Bingo after

Another application is from a 3x4:

\[
\begin{array}{ccc}
2 & + & 3 \\
1 & 2 & 4 & 3 \\
+ & 1 & + & 4 \\
\end{array}
\quad \begin{array}{ccc}
2 & + & 2 \\
1 & 3 & 1 & 3 \\
+ & 4 & + & 4 \\
\end{array}
\]

before Interlocked Parallelogram Ripoff after

Note that Interlocked Boxes could be applied to the same setup, and would have a different meaning.
**Invert**

This is not a precisely defined concept. It applies to calls that have centers’ and ends’ parts, and exchanges those parts. For example, Invert Acey Deucey has the centers Circulate while the ends Trade.

**Jay, Left Jay, Back-to-Front Jay, etc.**

In the modern terminology for these concepts, one direction is given, and it tells the people in the center 1x4 which outside pairs they work with. The outside pairs notice which center people have chosen them, and they work with those same people, so that the virtual 2x2’s are consistent. The given direction does not apply to the outsides. The people in the center 1x4 who work with a given pair of outsides may be adjacent or not.

The older terms such as “Back-to-Front Jay” had the dancers pick out whatever distorted 2x2 setup would result in the given facing directions. From a 3/4 tag, for example, Back-to-Front Jay (or, equivalently, Front-to-Back Jay) would be the same as Front Jay. This is because the outsides had their backs into the 2x2 in any case, so the centers need to be facing into the 2x2. The term “Front-to-Front Jay” was never used—it was just “Jay”. The “Jay” concept is of course still commonly used.

**Leftrigger**

See Inrigger, page 22.

**Like a**

Do the last part of the call. This has a very precise meaning at high challenge levels. Compare it with “Finish” which means do all but the first part.
Matrix

This is a modifier given before some kind of phantom concept that involves multiple formations adjacent to each other, such as Triple Boxes or Split Phantom Lines. Normally, when a shape-changing call is performed under such a concept, the resulting setups “breathe” or “shrink wrap” so that they are once again directly adjacent. The Matrix concept prevents that. Each formation remains centered on its original position (performing whatever internal breathing is required) and does not move in response to the other formations. This may create empty space, or it may cause the formations to overlap.

The obvious way to do this concept is to concentrate very hard on where the center of your group is. Another method that some people use is to note how many matrix spots separate you from your counterpart in the other setup, and do the call in such a way as to preserve that.
Melded As couples, Melded Tandem

This is like Tandem or As Couples, but the person you would naturally be paired with may not be facing the same direction as you. Just do your part of the call, mindful of the location (left, right, in front, or behind you) where that person would be. If things work out well, someone will appear in that position at the end of the call.

One can also do twosome, fractional twosome, and phantom versions of these, as in

- Melded Couples Twosome
- Melded Couples 1/4 Twosome
- Melded Tandem Twosome 1/4 Solid
• Melded Phantom Tandem
• Melded Phantom Couples 1/2 Twosome

**Melded Siamese**

This is like Melded Tandem/As couples, except that some people may be in couples and the others in tandem.

The person whose spot you are paired with might be T-boned to you. This makes it much harder to identify the spot you should consider yourself paired with. The most common case is a 2x4 setup, in which case everyone is paired with the other spot in their quadrant.

There are a few other setups in which it is clear from the geometry how people should be paired.
Overlapped Siamese is an obsolete name for this concept.

**Melded Skewsome, Melded Skew**

This is like two Skewsome or Skew groups in the same box, with each pair occupying the spots not occupied by the other pair. There are effectively two virtual people on the same spot. This can lead to interesting things.

**Meta-Concepts**

Concepts like Initially are called meta-concepts. They operate on a concept rather than a call, causing that concept to be applied in the indicated way, or to the indicated parts of the call. The result of applying a meta-concept and concept to a call has the same number of parts as the original call.

When meta-concepts that pick out parts of a call are nested, that is, two meta-concepts operate on a concept and a call, they nest their actions of picking out parts. That is, they pick out a part, and then pick out a subpart of that part. “Initially Finally Cross Concentric Settle Back” picks out the first part as though it is doing “Initially (Finally Cross Concentric) Settle Back”. That part is 1/2 Reset. It then applies “Finally Cross Concentric” to that 1/2 Reset, picking out the last part and causing the Hinge to be Cross Concentric.
**Mini-Butterfly, Mini-O**

These concepts select 6 people and direct them to act in distorted columns of 6. Mini-butterflies may be found in hourglasses:

Before Mini-Butterfly
Circulate

After

Mini-O’s may be found in galaxies:

Before Mini-O
Circulate

After

See Short 6, page 52.

**More or Less, Less or More**

On More or Less, leaders do the call and then “more”. Trailers do “less” of the call. Leaders and trailers are identified in the usual way, even if that has nothing to do with the logic of the call. It is the original leaders and trailers.

On Less or More, the roles are reversed—leaders do less. In all cases the leaders do the first named action and trailers do the second.

“More” always means Roll. “Less” is not so precisely defined. It typically means “N-1 Stable”, that is, omit the last 1/4 turn. So, for example, on a Sidetrack, the “more” people Roll a second time, while the “less” people omit the Roll that is part of the call.
However, the “less” action is not so precisely defined as that, for this is an old concept. On calls like Trail Off or Peel and Trail, “less” can apply to the trailers, who would normally (left shoulder) trade. If More or Less is given, they do 1/2 of a (left shoulder) Trade, that is, a Left Hinge.

Multiple Formations Working <direction>

This is used in a setup in which the call could have been directed to Split Phantom formations, or could have been directed to the center Phantom formation. For example, Relay the Top from quadruple waves. It directs people to make their own decision about which subsetup to work in, based on the given direction. The starting setups overlap, and the resulting setups typically overlap the same way.

This concept is described in more detail in Book 3.

Mystic

Centers do the call Mirror, while the ends do it normally. On Invert Mystic, the centers do it normally while the ends do it Mirror.

Near Formation, Far Formation

These are used in unsymmetrical sequences. They designate the four people closest to, or farthest from, the caller.

Offset

The various Offset concepts (including Parallelogram) are like Distorted, except that the distortion is of a very special kind. There is a “shear line” down the middle of the set, and the distortion consists of a rigid shift along that line.

Because of this restricted characterization of the distortion, Offset concepts can tolerate a variety of shape-changing calls. The offset is characterized by the shear-line axis, direction of shear, and amount (percentage) of the shear. The percentage is the fraction of each subsetup that has been shifted so that it is no longer lined up with the other subsetup. By far the most common percentage is 50%. For example, in a normal parallelogram, each subsetup is a 1x4, and 2 of those people (50%) overhang beyond the other 1x4.

The rule for doing offset shape-changers is that the resulting sub-setups must be put together with the same shear line, direction, and percentage. If the resultant offset is not an integral number of people (e.g. Lockit from parallelogram waves), the call is illegal. This prohibition is known as the Solomon rule, after King Solomon (I Kings 3:16-28) who made good use of the common aversion to cutting people in half. There is another pathological case that is legal, even though it would seem
to suggest a violation of the Solomon rule—if the result is a 1x8 with the shear line right down the middle, the people do not shear themselves. In this case we say that “the offset goes away”.

Sometimes specific people may have an offset subset of a normal setup:

An offset box as part of a 2x4 is called a diagonal box. Don’t bother with the offset percentage—just get into the obvious right place:
before Girls in your Diagonal Box Pass the Ocean

after

**Offset Triple Boxes**

This concept has 3 distorted 2x2 boxes in a 2x8 matrix. The “shear line” is parallel to the overall 2x8. Each box is offset by 100% across its own shear line.

An Offset Triple Boxes concept apportions the 3 boxes according to one of these two diagrams:

```
@ @ X X # # + + + + @ @ X X # #
+ + @ @ X X # # @ @ X X # # + +
```

this or this

As with other offset or parallelogram concepts, the actual population of live people determines which way the offset goes. But in this case it’s trickier, because there are only 8 real people, so some of the 12 spots labeled “@”, “X”, and “#” will not be occupied. The rule is that the occupation by real people must unambiguously determine one or the other of the two cases above. A plain 2x4 would be ambiguous, for example. But this:

```
1• + 2• 1• 2• +
+ 4• 3• 1• + 3
```

is sufficient to determine that the diagram on the left applies.

Legal calls include non-shape-changing 2x2 calls:
Calls that go to a 1x4 oriented perpendicular to the original long axis of the set are also legal:

The result in this case is 3 1x4 formations, each offset by one matrix position, which is 100%. The overall result is a 4x4 matrix. This interpretation fits well with the Offset Triple Waves concept, described next.

One can use the “Working Forward/Back/etc.” designators with this concept.

The Offset Triple Boxes concept is the successor to the old “Parallelogram Triple Boxes” concept, which had been defined in such a way that the percentage of offset was determined by the locations of actual people within the phantom matrix. That formulation was totally unworkable, and the concept was quickly abandoned. See the discussion at http://www.challengedance.org/sd/book3z.pdf.

**Offset Triple Columns/Lines/Waves**

This concept has 3 distorted 1x4 setups in a 4x4 matrix. The “shear line” crosses the individual 1x4 setups, with an offset of one matrix position, or is 100%.

Because the overall setup is a 4x4, it is necessary for the caller to indicate which way the 1x4 subsets go. Hence one must specify “Columns”, “Lines”, or “Waves”. One can use “Standard” to help with this.

As with other offset concepts, the actual population of live people determines which way the offset goes, and the placement of live people must be unambiguously consistent with one or the other of these diagrams (assuming that the 3 1x4’s run up and down the page):
This population:

\[ \text{This population:} \]

\[ + \quad 4 \quad 3 \quad 2 \]
\[ + \quad + \quad + \quad 1 \]
\[ \cdot 3 \quad + \quad + \quad + \]
\[ 4 \cdot 1 \cdot 2 \quad + \]

is sufficient to determine that the diagram on the right applies.

Legal calls include non-shape-changing 1x4 calls:

\[ \cdot 4 \quad 3 \quad 2 \quad + \quad + \quad 1 \]
\[ + \quad + \quad 1 \]
\[ \cdot 3 \quad + \quad + \]
\[ 4 \cdot 1 \cdot 2 \]

before Offset Triple
Waves Switch the Wave

Calls that go to a 2x2 box are also legal:
The result in this case is 3 2x2 formations, each offset by two matrix positions, which is 100%. The overall result is a 2x8 matrix. This interpretation fits well with the Offset Triple Boxes concept, described previously.

One can use the “Working Forward/Back/etc.” designators with this concept, as well as “standard”.

**Once Removed**

In the Once Removed concept, the setup is partitioned into slices, alternately between one group and another group. The process has been likened to imagining that the setup is a loaf of bread with alternate light and dark slices. The division is along the long axis of the starting setup. The people in each group do the call among themselves. At the end of the call the groups must once again be interleaved by slices. If the call changes shape, the number of slices may change, and this makes the interleaving tricky.

It is not legal to use the Once Removed concept unless the slices are straight and are one matrix position thick. So, for example, it is not legal in diamonds or an hourglass.

If the call involves the Ocean Wave Rule or the Facing Couples Rule, the evaluation of slices is done directly on the actual starting setup, before any rearing back from a wave or stepping to a wave.

There are a number of survival skills for this concept. For non-shape-changers, one can work to spots. When the setup consists of couples or tandems (or siamese) along the Once Removed axis, the concept is equivalent to Twosome, and many people like to do it that way.
But beware: you might not actually be able to do it that way.

If the setup almost consists of couples or tandems, failing only in that the people in each pair aren’t facing the same way, some people still like to think in terms of “virtual twosomes”—they imagine that they are in a twosome with their paired person. Not everyone is comfortable with this method.

If the setup is a tidal wave, a common method is to have everyone step forward slightly to identify their Once Removed line, and then work in those spots. If the call is something like Here Comes the Judge, it is easy. If it is something like Wheel and Deal, the groups have to merge back carefully.

Another common method, particularly when the call is complex, is often called “drag and drop”, and is the analogue of removing the distortion in a parallelogram. The slices in one group are all one position “west” (or whatever; one doesn’t actually think in terms of compass directions) of the corresponding slice in the other group. Each group collects itself onto the west or east side of the set, does the call, and then re-interleaves with the other group.
do the call, however complex it may be  “drag and drop”

How are the coalescing and re-interleaving done? For a 2x4, it is simply a Slither (or equivalent “Vertical Slither” if people are in column-like orientation.)

For a 1x8, the interleaving is removed by doing a Slither on each side, followed by the center pairs sliding past each other as though doing a Stretched Line call. Re-interleaving is done by having the center pairs slide past each other, followed by a Slither.

before Once Removed Vertical Tag Your Criss Cross Neighbor “Slither”

For other setups, there is no simple trick. The people in each group establish eye or hand contact, do the call, and, with a minimum of pushing and shoving, re-interleave themselves.

before Once Removed Siamese Breakdown coalesce
Unfortunately, the “Twosome” method and the “Drag and Drop” method have incompatible traffic patterns, so it is necessary for everyone to agree on which method to use. In general, the Twosome method is used where it applies (though not everyone agrees with this), and “Drag and Drop” in other cases. For calls in which no shape-changing ever takes place, people typically work to spots. For example, in a tidal wave, Once Removed Here Comes the Judge is usually just done to spots, even though it is quite a difficult call.

Sometimes each setup has only one slice after doing the call. In that case no re-interleaving is required.

There are some obscure cases in which the total number of slices is odd, so one group has an even number of slices and the other group an odd number. In this case neither group is “east” or “west” of the other—they are both centered on the center of the set. Such calls simply have to be executed carefully.
**[Left] [Twin] Orbitboard/Orbitbox/etc.**

These concepts are variations on the Checkerboard types of concepts. The people facing out, instead of doing a Trade Circulate, do the appropriate type of Orbit Circulate. The others do the same thing as in Checkerboard or Checkerbox.

**Outrigger**

See Inrigger, page 22.

**Overlapped Diamonds, Overlapped C/L/W**

The word “phantom” may or may not be used in front of these concepts.

In the Overlapped Diamonds concept, people in an actual line imagine that they are centers or points of a diamond, with phantoms in the other spots. Centers of the line become centers of the diamond, with phantom points perpendicular to the line. Ends of the line similarly become points of the diamond.
Overlapped Siamese

See Melded Siamese, page 29.

Parallelogram Blocks

This is a “blocks” formation made from a 4x4 that has a 50% shear offset.
Parallelogram Split Phantom C/L/W

This is the Split Phantom Column/Line/Wave concept starting with a 50% offset between the two 2x4’s. The individual 2x4’s are not distorted.

This usually starts from a real parallelogram. The phantoms are placed directly outside of each real 1x4.

```
+ + + +
1 1 2 2
4 4 3 3
+ + + +
before Parallelogram
Split Phantom Columns
```

The concept can also be done when the initial occupation is not in the inner 1x4’s, as long as the offset direction is unambiguous.

[Split] [Interlocked] Phantom Columns, Lines, Waves, Boxes, Diamonds, 1/4 Tags, etc.

These are the generalizations of things like Split Phantom Waves, introduced at C3A. At C4 all combinations are legal.

Four 4-person setups (considering a 1/4 tag to be a “single” 4-person setup) are arrayed one after another. With the “Split Phantom” concept, the two adjacent groups on one side work together, as an 8-person formation, as do the two adjacent groups on the other side. With the “Interlocked Phantom” concept, each end group works with the far center group. With the “Phantom” concept, the center groups work together and the outer groups work together.

When 1x4 setups are involved, they may be end-to-end, forming virtual 1x8 setups. The complete actual setup is a 1x16 in this case. Similarly diamonds or 1/4 tags may be point-to-point.

Shape-changers are allowed. The split or interlocked nature of the setups persists.

Phantom as Couples, Phantom Tandem, Phantom Couples Two-some, etc.

Expand the setup to a 4x4 if possible, and then, with phantoms where necessary, form the required Couples or Tandem pairs and do the call.
Phantoms are always placed to make a 4x4 if that is possible, even if that seems incongruous:

The only time this is not done is if the initial formation already has people outside of the 4x4 boundary. In that case a 2x8 is formed.
Phantom Interlocked 1/4 Tag (or 3/4 Tag, or Diamonds, etc.)

This is a rather strange concept, that doesn’t really play well with modern ways of thinking about concepts. Note first of all that it is not the same as Interlocked Phantom 1/4 Tags. Also, callers are not always precise about the order of the words they use. The two concepts are generally distinguished by the starting setup. This one is done in a 4x6.

This concept is essentially two 1/4 tag setups once removed in the front-to-back direction, or the equivalent diamond-like formation.

In nearly all cases it can be danced as Once Removed along the long axis, or as Tandem/Couples Twosome where appropriate.

\[
\begin{array}{c}
\begin{array}{ccc}
\text{before Phantom Interlocked 1/4 Tag} & \text{after} \\
+ & 3 & \\
\text{3} & + & \\
2 & + & 4 \\
+ & 2 & + \\
1 & + & \\
\end{array}
\end{array}
\]

The exception is for calls that end in a 2x8 along the long axis. In that case the two “interlocked” setups are put back as though they were Interlocked Phantom Boxes. This is perhaps done with the appropriate “drag and drop” operation at the conclusion of the call. See Once Removed, page 37.
Phantom Butterfly or O

This is related to Phantom Offset C/L/W, in that each person deduces their own distorted or disconnected setup out of an arbitrarily populated larger setup.

This is done in a 4x4 matrix. Each person deduces whether they are on Butterfly spots or “O” spots, and does the appropriate call.
**Phantom Offset C/L/W**

These are the phantom versions of the Offset C/L/W concepts. Recall that those concepts are done in a 4x4 occupied as “clumps”. In the phantom version, everyone does the call as though in their own pair of diagonally placed clumps.

```
  4  3  1  2
  4  3  1  2
+  +  2  1  +  +  3  4
  2  1  +  +  3  4  +  +
```

before Phantom Offset Columns
Wind the Bobbin (boys are in one pair of clumps; girls in the other)

This is a case of the general family of “Phantom <formation>” concepts. These concepts can apply in any formation in which each person can deduce unambiguously which of the various distorted or disconnected sub-setups he is in, selected from a larger actual setup. Other examples are “4 Phantom Interlocked Blocks” and “Phantom Butterfly or O”.

**Quadruple <formation>**

See **Triple <formation>**, page 59.

**[Reverse] Random**

This is a meta-concept that is followed by another concept and then a call that has parts. The concept is applied to the odd-numbered parts of the call (starting with part 1). Reverse Random applies the concept to the even-numbered parts of the call.

**Randomize**

This takes two concepts and a call. While Random turns its concept on and off for alternate parts of the call, Randomize switches between the two concepts. The first given concept applies to the first part of the call, the second concept applies to the second part, and so on.
before Randomize between
Tandem and Stable,
the Difference

Reflect and Revert

These are tagging modifiers. They are not tagging prefixes (like Flip), or tagging suffixes (like Chain Thru Reaction). They modify the act of walking forward during the tagging action itself. The special thing is done when the half-tag point is reached.

For Revert, all Cast 3/4 when they reach the 1/2 tag spot, and then continue with the rest of the call, if any. This is older and less commonly used than Reflected.

For Reflected, all Counter Rotate when the 1/2 tag spot is reached, and then continue. There is a tricky point here: the Counter Rotate is in the formation that Reflected is done in. Flip the Line 1/2 is a 4-person call, resulting in a 2x2 box, so the Counter Rotate is in that box. Reflected is actually on the C3B list.

It is considered tasteless to use these modifiers when the tag is to less than the 1/2 tag spot.

Rewind

Much has been written about this call elsewhere. (See http://www.challengedance.org/rewind/rewind.html.) Each dancer imagines himself facing a phantom on his own spot, who has just completed the call. Push that phantom backward (typically while you are walking forward) through the call.

Rightrigger

See Inrigger, page 22.

Sandwich

This is really the same as “Interrupt after 1/2”. It takes two calls, as in “Sandwich Swing Thru around Mix”. Do the first half of the first call, do the second call, and do the last half of the first call. The first call does not need to have an even number of parts—it just needs to be able to be interrupted at the halfway point.
Applications of Sandwich have 3 parts, independently of the structure of the calls. Of course, nested concepts can go more deeply into the structure of the calls.

Scatter

This is the essence of “Scatter Scoot”, applied to some other calls. If a call normally starts (from waves) with the leads doing a Split Circulate, they do an All 8 Circulate instead. The calls to which this may be applied include:

- Scatter Follow to a Diamond
- Scatter Reach Out
- Scatter Follow and Cross
- Scatter Follow and Criss Cross

Shadow <anysetup>

From any setup in which the outsides are in tandem with each other, they do their part of Cast a Shadow, but without the final Spread. The others do whatever the call is. The concept names the centers’ setup.
Shift \(<N>\), Shifty

On Shift \(<N>\), the first \(<N>\) parts of the call are skipped, the rest of the call is done, and then the \(<N>\) skipped parts are done. Shifty means Shift 1.

A Shift 1 Alter the Wave is:

Fan Back
Counter Rotate the Diamond 1/2
Flip the Diamond
Trade

This concept can become quite complicated when mixed with fractional concepts, Reverse Order, and meta-concepts.

[Grand] Single [Cross] Concentric

Single Concentric is a 4-person version of Concentric. It is applied to 2-person calls.

before Single Concentric Shazam after
before Single Concentric Shazam (not the same as Concentric Shazam) after

Grand Single Concentric has the center 2 work with each other in the very center, the next 2 work around them, and so on.

Single Cross Concentric is the obvious thing. On Grand Single Cross Concentric, the center 2 do the call and go to the very outside, and so on. The rule about “let the centers do the call first and get out of the way” applies very strongly here.

before Grand Single Cross Concentric Single Turn and Deal after
**Short 6, Tall 6**

These designate 6 people in a galaxy. The short 6 are the people who would squeeze on a Squeeze the Galaxy. The tall 6 are the center 4 and the other 2 points.

Unlike Mini-Butterfly and Mini-O, these concepts simply designate the people. They do not direct them to act as if in a column of 6. The caller can direct them to do things like Exchange the Triangles.

**Single File**

This was originally a generalization of the “put the belle in front” action at the start of calls like Ladies Chain, Dixie Style, Dixie Chain, and Flutter Wheel. It skips that first action. The call finishes normally.

It has been extended to apply to any 2x2 call in which some people cross the center line of the 2x2 before the others. It is done from a 1x4, and the role of the person who crosses the center line first (in the 2x2) is played by the person already in the center.

It was applied to calls done in a single file column, in which people cross the center in a forward direction:

![Diagram of Single File](image.png)

before Single File Flutter Wheel after

or a backward direction:

![Diagram of Single File](image.png)

before Single File Cross and Turn after
It was then extended to “lateral” calls like Reach Out, and done from a 2-faced line. (On a Reach Out, the leads cross onto the other lateral side; the trailers do not.) Many people consider this sort of thing excessive, and such usage is extremely rare.

**Skew, Skewsome**

Skew is like As Couples or Tandem, but the people being paired are neither beside each other nor in tandem. They are diagonal from each other in a 2x2 box. Skewsome is the Twosome version of this. The concepts are essentially Phantom Solid Box or Phantom Boxsome, but the boxes must consist only of two diagonal people.

See *Melded Skewsome*, page 30.
**Snag, Snag the **<anyone>**

The designated people do half of the call, while the others do the whole thing. If “Snag” is given with no designator, the centers do half of the call. This evolved from the old call “Snag Circulate”—centers 1/2 Circulate while the ends do a full Circulate.

**Standard**

This is a word that is used before a concept like Split Phantom Columns, to force the axis of the division to be a certain way. In the normal use of such concepts, the word “columns”, “lines” or “waves” determines the division axis. For example, Interlocked Phantom Columns would cause a different division from Interlocked Phantom Lines. But that only works when everyone faces the same general direction. (It is still legal to call Interlocked Phantom Columns when people are T-boned, but in that case everyone uses their own, inconsistently oriented, Interlocked Phantom Columns.) If people are T-boned, designating people as Standard says that everyone divides the setup the way the column/line/wave word applies to those people.

```
3 +
3 4
+ +
3 3 4 4
+ +
2 2 1 1
+ +
2 1
+ 1
```

before Boys are Standard  
in Split Phantom Lines  
after Counter Rotate 1/4

**Straight**

The end looking in (who must be in line-like orientation) does a Cross Over Circulate, while the others do the call normally.
Stretched <anysetup>

A slightly more restricted version of this is used at lower levels. The general rule is that the number of people who cross over to the other setup must be between 2 and 4. In some cases (diamonds, for example), only the very center 2 move over to the other subset
Stretched Split Phantom C/L/W/Boxes

This is analogous to the Stretched <anysetup> concept. In a setup in which one might use a Split Phantom formation concept, the center two of the four subsetups move past each other as they start the call, and finish in the Split Phantom formations.

\[
\begin{align*}
&\bullet 4 + \bullet 2 \\
&\bullet 1 + \bullet 3 \\
&\bullet 2 + \bullet 1 \\
&\bullet 3 + \bullet 4 \\
&\bullet 1 + \bullet 3
\end{align*}
\]

before Stretched Split Phantom Columns
Track 2 after

Tall 6

See Short 6, page 52.

[Interlocked] Trace

Trace is done from a 1/4-tag-like or diamond-like setup. It is sort of like Jay, but with people working in inconsistent groups and doing different calls. Each end of the center line, and his adjacent person, do the first call with the outside people that he faces. That call is done in a distorted 2x2 box. Those outsides work with the other two people in the center line for the second call, which is also done in a distorted 2x2 box.

The only significant facing directions are those of the ends of the center line. Everyone else's actions are dictated by their locations.
On Interlocked Trace, the end of the center line and person once removed from him work with the outsides that the end of the line faces. Those people work with the other two once removed people in the center.

Reasonable shape-changers are allowed, as for the Jay concept.

There is an obsolete usage, in which numbers are given instead of calls. Do the indicated number of Box Circulates.

**Triangle**

Box of four calls can be done from a tandem-based triangle. The apex effectively backs up and plays the role of a trailer. The spot in front of him is a phantom. The call completes in a 4-person setup with a phantom. If the result is a 1x4, the phantom spot must be on the end. In this case, the setup is turned into a 1x3—the phantom spot goes away. If the result is a 2x2, there must be an unambiguous person in tandem with the phantom spot. That person moves 1/2 position forward or back to become the apex of a new triangle. If the result is a diamond, the phantom spot must be a point. That spot goes away, and the result is the triangle formed by the other 3 people.
The preceding is the “formal” definition of the concept. That definition is way more general than is acceptable in practice. In fact, it is clearly defective—“Triangle Circulate” is ambiguous. Exactly where to draw the line between acceptable and unacceptable uses has never been worked out. Most callers stick to Peel Off types of calls.

**Triangular Boxes**

A Triangular Box is a large 2x2 (as in the “Blocks” concept) that has had one person move inward.

Identify such formations, with real people, and do the call in that distorted 2x2 box.

Triangular boxes are most commonly found in “Blocks” formations. They are not very easy to see.

They sometimes occur in other formations, and are even harder to see.
**Triple/Quadruple/Quintuple <formation>**

Some of these are introduced at lower levels. At C4 all combinations are legal.

Some number of setups (considering a 1/4 tag to be a “single” 4-person setup) are arrayed one after another, and do the call independently.

**Triple Twin C/L/W**

These are done from a 4x6 setup. The setup is divided into three 2x4 setups, and the call done in each of them.

**Twice Removed, Thrice Removed**

These are the “obvious” extensions of Once Removed. Twice Removed can be done as a threesome if that is applicable (though it rarely is.) Thrice Removed can be done as a foursome if applicable.

![Diagram of Twice Removed and Thrice Removed](before and after diagrams)

**Twin <anysetups>**

This denotes two of some setup next to each other. Typical setups are thars and alamo rings.

**Twin Parallelograms**

This is done from a 3x4 setup occupied as if for the Offset C/L/W concept. However, the same 1x4’s used in those concepts are instead treated as distorted (diagonal) 2x2 boxes.
**Twin Phantom Tidal C/L/W**

This is done from a 2x8 setup. The setup is divided into 1x8's, with phantoms, and the call is done in each of those. Shape-changers are allowed.

![Diagram of Twin Phantom Tidal C/L/W](image)

**Twin Phantom Diamonds (or 1/4 Tags, or 3/4 Tags, etc.)**

This is like Split Phantom Diamonds or 1/4 Tags, except that the pairs of diamonds (or 8-person 1/4 tag setups) are adjacent in the opposite direction. It is done in a 4x6 setup.

![Diagram of Twin Phantom Diamonds](image)
Twisted

This was originally intended to apply to calls that begin with a Pull By or Pass Thru. Halfway through that Pull By or Pass Thru, the two people do an Arm Turn 1/4, and then they continue.

It was then extended to any initial action that causes two people to exchange places. No matter what else they are doing, halfway through that action they must be in a 1x2 along the opposite axis. They must have “orbited” clockwise or counterclockwise to get there. When the Twisted concept is applied, they orbit another 90 degrees at that point, in the same direction, and then finish whatever they were doing.
Doing the orbiting halfway through a call can be disorienting. In difficult cases, it may be easier just to do the call, note which way the orbiting went, and then do the orbiting afterward.

The Twisted concept applies to any call which either is, or begins with, such an action. It only applies to the first such action in the call. However, meta-concepts like Finally or Piecewise can change that.

The last part of Line to Line is Pass in, and “Twisted” applied to that. The first part of Pass In is a Pass Thru. The dancers did a Twisted Pass Thru and then a normal Face In, re-evaluating their position just prior to the Face In.

**Yoyo**

The Yoyo concept was originally intended to apply to those calls that start with an arm turn 1/2, such as Spin the Top or Relay the Deucey. It turns that into an arm turn 3/4.
It was then extended to apply to the first arm turn 1/2 (or equivalent trade) that occurs, wherever that is.

It must be a distinct trade or arm turn 1/2. Yoyo does not simply add another 1/4 to the first arm turn.

The concept can be applied in ways that really test one's knowledge of call definitions. For example, the first part of Mix is a Cross Run. It is not a Trade followed by a Spread. The second part is a Trade.

Some uses can be quite esoteric.
While Yoyo only applies to the first arm turn that occurs, concepts such as Piecewise can affect that.

The concept has sometimes been used to turn a Partner Trade into a (pushy) Cast Off 3/4. The tastefulness of this is not widely agreed upon.

**Z C/L/W**

This is just a special case of Distorted Columns, Lines, or Waves. The shape of the setup is that of waves after and Ends Press Ahead or Centers Press Ahead. Such a setup contains two Z's, but this concept removes the distortion, so that the Z's don't explicitly exist. Hence it is illegal to call something like “Z Lines Z Axle”, since Z Axle requires an explicit Z. Shape-changers are not allowed with this concept.