The 3x3 Concept—Theory and Practice

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Preface

Most calls and concepts follow a rather deterministic, straightforward "algorithmic" thought process, in which one simply follows the directions laid out in the definition. But there are a few concepts that frequently require the dancer to work out how the call would work in an imagined formation that is different from the actual one, interpolating their actual position relative to the imagined formation.

Using these concepts therefore effectively requires a great deal of experience mentally mapping their actual position into the imagined one. Few people can actually preform this analysis correctly at dance speed. But most people can, with experience and practice, handle most cases by applying various "rules of thumb" or "artifices" or "tricks". This article is largely about those tricks.

The process, when done from first principles, consists of analyzing the base call and finding pairs of people who undergo the same turning motions, interpolating an imagined third person halfway between the people in each pair, and matching that larger setup with the setup that is actually present, and then doing the expanded call, with the interpolated person staying between the original people and going through the same turning motions.

In practice, this generally requires a great deal of experience in recognizing the patterns, and applying the tricks.

Different tricks work in different ways for different people. Some people may be helped more by some mental formulations than others for various calls, concepts and applications. Some people may not find any of these techniques useful at all.

This article is intended as a companion to Book 3 of the "C4 books"—http://www.challengedance.org/sd/book3.pdf.

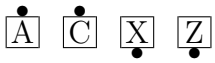
Chapter 1

First Step–Find Pairs of People

The accepted definition of 3x3 and 4x4 (and NxN for higher values of N), from http://www.challengedance.org/3by3/3by3.html, begins something like this:

Find pairings of people in the original ("2x2") version of the call, that start facing in the same direction, go through the same turning motions, and end facing in the same direction.

Bend the line is a simple example:

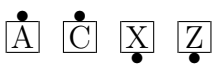


before Bend the Line

A and C form a pair, both facing North and turning clockwise 90 degrees. X and Z are another pair, both facing South and turning clockwise 90 degrees.

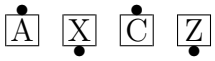
This case is easy, because the pairs are trivial to identify, they clearly work together in the call definition, and they are adjacent before the call. That won't always be the case.

Cross Roll to a Wave is similar, except that the turning is 180 degrees.



before Cross Roll

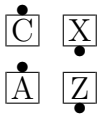
Switch to a Wave and Ah So are more complicated:



before Switch the Wave or Ah So

A and C are paired, as are X and Z, but they are once removed from each other, rather than adjacent. Each pair turns clockwise 180 degrees.

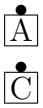
Here is a case in which the paired people are in tandem with each other:



before Split Transfer

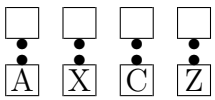
The paired people are in tandem; all turn clockwise 270 degrees.

Some cases are really simple, like Mesh:



before Mesh
There is only one pair; they don't turn.

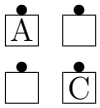
Some cases are complex. This one involves 8 people and 4 pairs. It is not at all easy to see, so much so that it is hardly ever used.



before Load the Boat

Analysis of this call will show that the people in the A+C pair will turn clockwise 270 degrees, while those in the X+Z pair will turn counterclockwise 270 degrees. Their opposites in the other line will do likewise. This remarkable case will be revisited in chapter 6.

The people in each pair must be colinear—in either the same column or the same line. Otherwise it would be impossible to place the interpolated person.

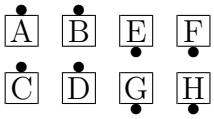


Trixie

A and C would need to be a pair, but the interpolated person would not be on a matrix spot. 3x3 Trixie is illegal from here.

Many of the base calls have more varied definitions at challenge. For example, Switch can be done from two-faced lines, and Mesh can be done from facing people. But Switch from a 2-faced line would have people who are facing the same direction turning in opposite directions. The same is true for Cross Roll starting in a Wave. Therefore, 3x3 Switch the Wave requires a 6-person wave, and 3x3 Cross Roll to a Wave requires a 6-person 2-faced line (a couple of 3 adjacent to a couple of 3 facing the other way.) Other arrangements are illegal.

Some calls, like Ferris Wheel, are ambiguous when identifying the pairs.



before Ferris Wheel
Too many pairs, along different axes.
Which pairing do we choose?

The next step (matching to the actual setup) should disambiguate these cases. In some cases this will be impossible, and the 3x3 concept won't work.

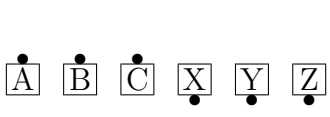
It is important to note that the concept is only concerned with the *motion* of the people in the base call, not with how the definition caused them to go through that motion. The concept is indifferent to the actual verbal definition of the call. 3x3 Split Transfer is an example of this; the people in each pair (A and C in the previous example) are not paying attention to the definition that the other people are following. They just happen to be going through the same motion. 3x3 Load the Boat is an even more glaring example.

Chapter 2

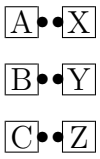
Second Step–Interpolate People Into Each Pair

Once the pairs are identified, the definition of the 3x3 concept says that, for each pair in the original call, a third person is placed, linearly, halfway between them. The person interpolates between the motions of the other two, following the same turning motion. (That person is commonly called the “cheese”, in analogy with a cheese sandwich.)

So the setup is expanded so that each pair has a person interpolating the two people in that pair, that is, halfway between them and facing in the same direction. The 3x3 call is done by having the people in each pair doing the normal call but with extra space, and the interpolating person going through the same motions and staying halfway between them.



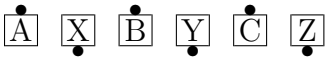
before 3x3 Bend the Line



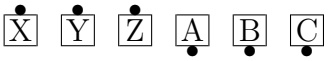
after

This one is extremely easy. B stays between A and C, and Y stays between X and Z.

When the people in each pair are not adjacent, they have to spread out from the “cheese”. There should be a place for everyone, with uniform spacing within each group.



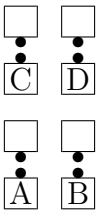
before 3x3 Switch the Wave



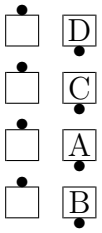
after

A and C are a pair, with B interpolating. X and Z are likewise a pair, with Y interpolating.

In addition to the rule that pairs be colinear, there is a requirement that, if there are multiple ways of pairing people, that is, there are 4 people undergoing the same turning motion, and those 4 are all colinear at the end of the call, those pairs must not have a common center at the end of the call. If they did, the “cheese” people would have to end on the same spot.



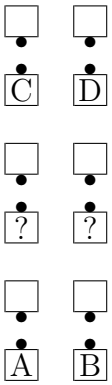
before Beaus Advance to a Column



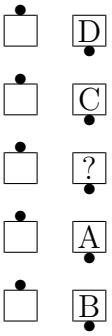
after

All 4 marked people turn clockwise 180 degrees.

If A and C were paired together, and B and D, the two interpolated people for these pairs would have to occupy the same spot.



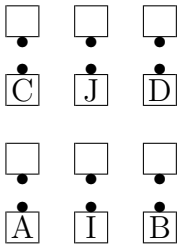
before 3x3 Beaus Advance to a Column, pairing A with C and B with D



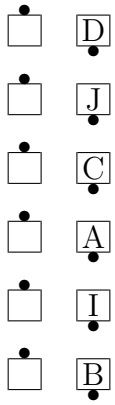
after

The interpolated people (or “cheese dancers”) for the two pairs would be on the same spot, because the two pairs have a common center spot.

But if we pair A with B and C with D, they have distinct common spots.



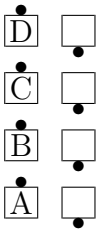
before 3x3 Beaus Advance to a Column



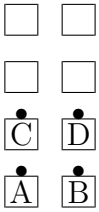
after

In many cases like this, the potential 12-person starting formations are different—3x3 Beaus Advance to a Column is illegal in 2x6 columns—so the dancers don’t have to analyze all this.

But sometimes the ambiguity can’t be resolved by the starting geometry.

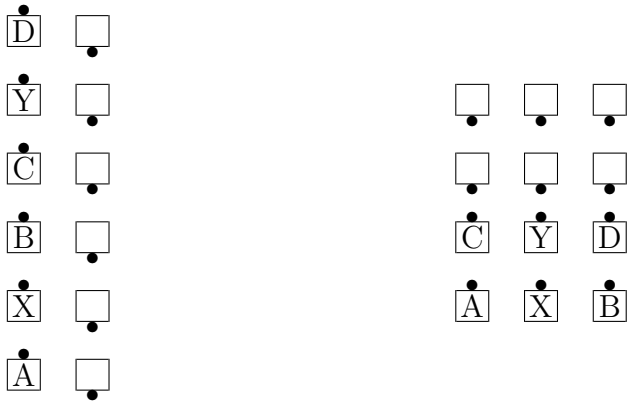


before Scoot and Fancy



after

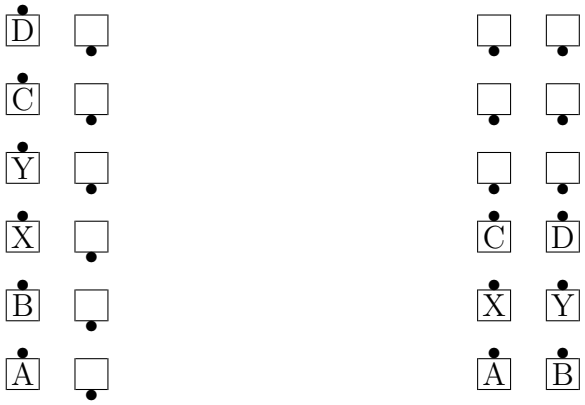
First, consider pairing A with B and C with D:



before 3x3 Scoot and Fancy

after

Next, consider pairing A with C and B with D:



before 3x3 Scoot and Fancy

after

Both of these pairings proceed from the same 12-person geometry, and both would seem to work, giving different results. This seems to be genuinely anbiguous, not a good state of affairs.

The 3x3/4x4 definition states that, in cases like this, the ambiguity is resolved by pairing the people that are physically closer. So the first of the above examples is the correct way to do 3x3 Scoot and Fancy.

The final step is, of course, to match the mentally expanded setup with the actual setup and do the call, paired people doing what they do, and the “cheese” people staying beteen them

The 4x4 concept is the same, except that each pair has 2 “cheeses” spread out uniformly betwwen them. The same reasoning applies to any NxN call.

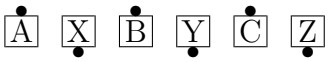
To do 3x3 or 4x4 calls smoothly and confidently at dance speed, it is helpful to develop skills in a number of techniques for dealing with these concepts The remainder of this article will list some of these techniques as used in situations that commonly arise in practice.

Different tricks appeal to different people. Some people might not like any of them.

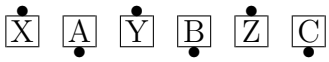
Chapter 3

The Tricks

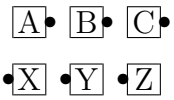
- Trivial 4-person calls made by juxtaposing 2-person calls can easily be extended—just introduce a third group. This includes arm turns of any amount:



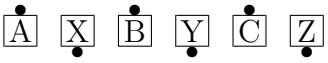
before 3x3 Trade



after

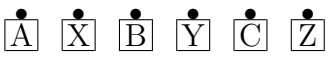


before 3x3 Cast Off 3/4

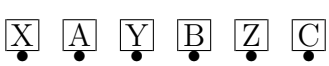


after

And 1-faced Partner Trade or Hinge:



before 3x3 Trade



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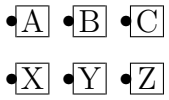
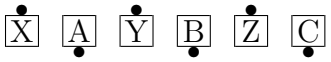
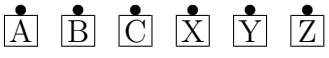


before 3x3 Hinge

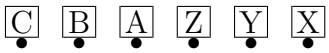


after

But beware!



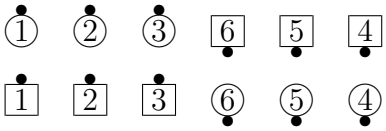
before 3x3 Wheel Around



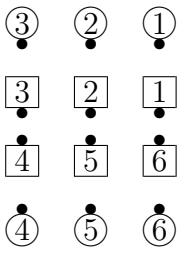
after

In this case the people were turning left rather than trading toward each other, so the pairs identify differently. Think of Wheel Around as an As Couples U-Turn Back to the Left.

- If the call is an "As Couples" or "Tandem" action, do the call in a Couple of 3 or Tandem of 3. We already discussed 3x3 Bend the Line at the beginning of this article. Other examples include 3x3 Wheel and Deal, 3x3 Couples Circulate, 3x3 Cross and Wheel, and 3x3 Ferris Wheel. Here is 3x3 Ferris Wheel from a 2x6:



before 3x3 Ferris Wheel



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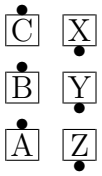
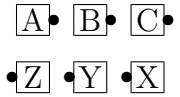
Later we will discuss doing 3x3 Ferris Wheel from a 3x4, with 3 lines of 4, and people in tandems of 3.



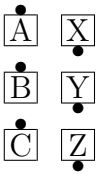
before 3x3 Box Counter Rotate



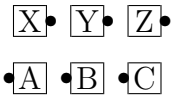
after (It's a Tandem Hinge.)

This next example illustrates the fact that these concepts are indifferent to the actual definition of the call, and relate only to the directions and turning motions of the dancers.

<anyone> Run the Wheel, in general, can't work with these concepts. In fact, in its most general form, it can be a space invader. But it can be done with the 3x3 or 4x4 concept, as long as the designator is Leads. One can use a "cheat" definition. Leads Run the Wheel is equivalent to Box Counter Rotate 3/4. Hence 3x3 or 4x4 Leads Run the Wheel is just a Counter Rotate 3/4 in columns of 6 or 8.



before 3x3 Leads Run the Wheel



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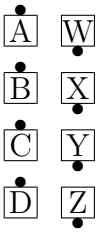
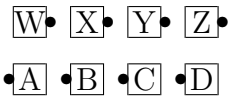


before 4x4 Leads Run the Wheel



after

Now the actual definition of Run the Wheel (Run and natural Wheel Thru; Trade and Roll), is quite different from Counter Rotate 3/4, so much so that doing it by the definition would have to be considered not very cheese-friendly.

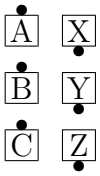
- If the call (or restricted version of same) can be formulated in terms of a sequence of other calls that can be done 3x3 in compatible ways, do the call

that way.

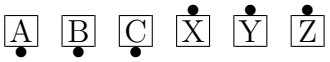
For example, Ah So is Hinge and Counter Rotate, so 3x3 Ah So is 3x3 Hinge (that's just a Hinge) and 3x3 Counter Rotate (that's a columns of 3 Counter Rotate). Split Recycle is Counter Rotate and Hinge, so 3x3 Split Recycle is 3x3 Counter Rotate and 3x3 Hinge.

This trick is extremely important, and makes nearly all the other tricks worthwhile.

- What was written above about Couples and Tandem also works for Twosome, or Fractional Twosome, or Twosome Fractional Solid.

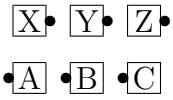


before 3x3 Peel Off

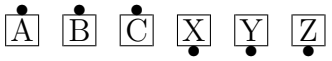


after

(Peel Off is a Tandem 1/4 Twosome U-Turn Back Away, so this is a Tandems of 3 1/4 Threesome U-Turn Back Away.)



before 3x3 Follow Thru

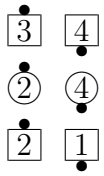


after

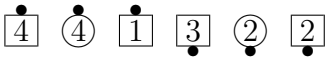
(Follow Thru is a Tandem Twosome Hinge, so this is a Tandem Threesome Hinge.)

It even works for the nonexistent "fractional anti-twosome" concept, in which the people in each group orbit around each other opposite the direction they would if working solid. (Such a concept was proposed once, but, fortunately, no one could figure out how to express it.)

Scoot Apart could be thought of as a sort of Tandem 1/4-Anti-Twosome Trade. So 3x3 Scoot Apart is a Tandem 1/4-Anti-Threesome Trade:

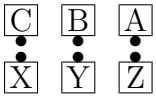


before 3x3 Scoot Apart

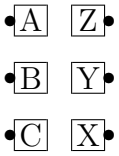


after

3x3 Split Swap is similar:

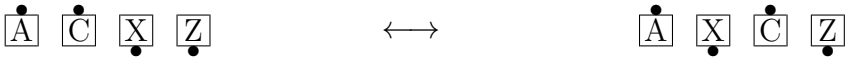


before 3x3 Split Swap



after

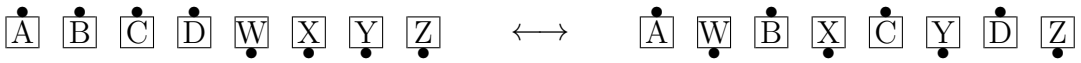
- While the call Slither isn't commonly used in its own right, its fundamental operation is extremely important. Slither changes a wave to a 2-faced line and vice-versa. (It can be used with other facing directions of course, but that won't work with 3x3.) From a wave, Slither could be thought of as "gathering"—drawing the centers over, to collapse them into a compact group of dancers facing the same way, that is, to make a 2-faced line. From a 2-faced line, Slither can be thought of as "scattering"—taking the compact group of dancers facing the same way, and spreading them out.



Slither

it works either way

3x3 Slither



4x4 Slither

Some people do these by heading in the "obvious" direction (towards their partner or towards the center) and then making a setup of the appropriate type (waves or two-faced lines), consistent with the base call.

From a wave of 6, go past everyone who is facing opposite you, until everyone facing in the same direction is in one adjacent group. To go the other way, from couples of 3, spread yourselves all the way out until everyone is in a miniwave.

The most common applications of this phenomenon were shown earlier—3x3 Switch the Wave (Trade and 3x3 Slither) and 3x3 Cross Roll to a wave (3x3 Slither and Trade).

Other applications of this are 3x3 Scatter Circulate (from 2x6 two-faced lines), and 3x3 Go First Class (from 2x6 waves).

- 3x3 Scatter Circulate is 3x3 Slither and Split Circulate, or Couples Threesome Circulate and 3x3 Slither.
- 3x3 Go First Class is Split Circulate and 3x3 Slither, or 3x3 Slither and Couples Threesome Circulate.

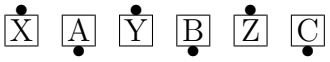
Make sure that you end in the correct handedness. All of these calls "preserve handedness", in the sense that if you start in a Right-Hand setup, you will end in an Right-Hand setup.

before 3x3 Scatter Circulate after

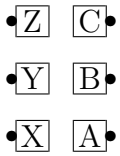
before 3x3 Go First Class after

Also, 3x3 Cross and Divide can use this. Cross and Divide, from a wave, is just a Slither and Retreat the Line, so 3x3 Cross and Divide can be just 3x3 Slither and 3x3 Retreat the Line. (Cross and Divide can be used from arbitrary lines, but a wave of 6 is required with 3x3.)

People may be tempted to head in the incorrect direction. Remember that the centers normally head towards the far ends, which would be to the *left* from right-hand waves.



before 3x3 Cross and Divide



after

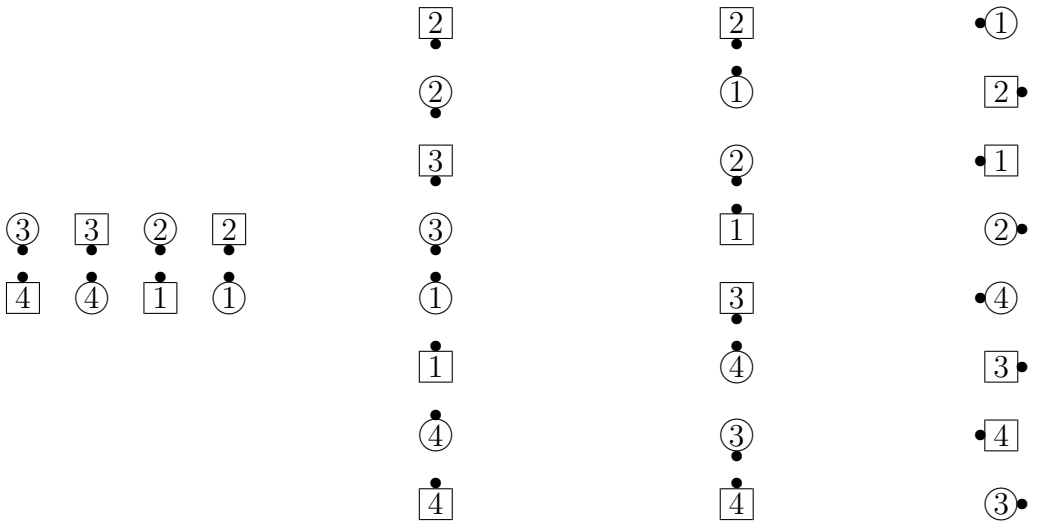
- A generalization of this is a type of "gather"/"scatter" action is a type of "3x3 Vertical Slither" or "4x4 Vertical Slither". (No, these are not real calls.) This can be useful for 3x3/4x4 Dixie Style, and for the Double Pass Thru versons of 3x3/4x4 Grand Chain 8. People move forward.

  Vertical Scatter/Slither goes from a single file Starting Double Pass Thru setup to a single file Eight Chain, by having the centers Pass Thru. It's analogous to an ordinary Slither spreading out from a 2-faced line to a wave. For the 3x3/4x4 version, have everyone Pass Thru until everyone is facing someone, in a "3x3/4x4 Eight Chain" setup. (There could also be a "gather" variety of this, but it isn't used.)

  Then, to do a 3x3 Single File Dixie Style, from a starting Triple Pass Thru setup, do a "3x3 Vertical Slither", and then Everyone Left Touch 1/4 to create a 3x3 Left Hand Tidal Wave.

  For a 3x3 Single File Dixie Sashay, follow this with a (normal) 3x3 Slither.

  To do the facing couples versions of these, do a 3x3 "put the belle in the lead" (Single Shuffle) first.



before 4x4 Dixie Style to a Wave | after 4x4 belle in Lead | after 4x4 Vertical Slither | finished

If the call is 4x4 Dixie Sashay, then do the 4x4 Dixie Style, followed by a "4x4 Slither" to create a 4x4 Left-Hand Two-Faced Line. This will flow naturally from the Left Touch 1/4. Make sure you go far enough so that you have everybody on one side facing the same direction.

You can think of the "Vertical Slither" as the same as the Once Removed adjustment that is often done by "Drag and Drop". You could have the center 4 do a Double Pass Thru, then the centers of each side do a Pass Thru. That will give you the required setup for the Left Touch 1/4.

In practice, most dancers don't do these calls slowly by pieces. They know where they are going to end, and they just go there. Just make sure you end in a Left-Hand Tidal Wave (for Dixie Style) or a 3x3 Left-Hand Two-Faced Line (for Dixie Sashay).

Vertical Slither is also useful for the starting-Double-Pass-Thru version of Grand Chain 8. From a Triple or Quadruple Pass Thru setup, do a 3x3 or 4x4 Vertical Slither (starting with a right pull by for the very centers; what happens after that doesn't matter). That is, pass thru until everyone is facing someone. Then Left Touch 1/4 like a Couple Up (or Quarter Out and Courtesy Turn, if you prefer).

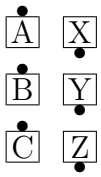
before 3x3 Grand Chain 8 after

3x3 and 4x4 Grand Chain 8 are difficult calls, and are not commonly used. However, 3x3 and 4x4 Dixie Style (and Dixie Sashay) are commonly used.

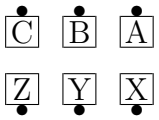
Chapter 4

General Considerations

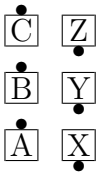
Some 3x3 calls will change shape, even when the base call starts and ends in a 2x2 Box. This could violate one's long-held intuition about 2x2 calls not changing shape. A number of calls fall into this category, and it is worthwhile to look at these examples carefully and get accustomed to this type of shape-changer.



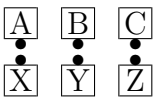
before 3x3 Walk and Dodge



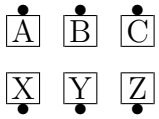
after



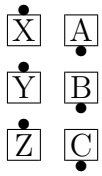
before 3x3 Couple Up



after

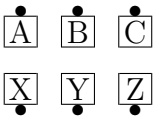


before 3x3 Wheel the Ocean

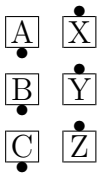


after

(Wheel the Ocean is a Wheel Around followed by Belles Cross, so this is a line of 3 Wheel Around followed by 3x3 Belles Cross. Pay close attention to the 3x3 Belles Cross.)

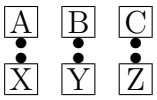


before 3x3 Wheel the Sea

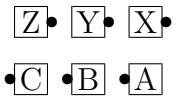


after

(Wheel the Sea is a Wheel Around With the Flow, so this is a line of 3 Wheel Around followed by 3x3 With the Flow. Pay close attention to the 3x3 With the Flow.)

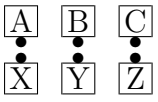


before 3x3 Circle to a Wave

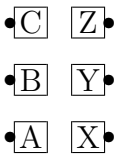


after

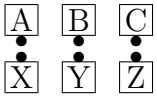
In the example above, the call does not actually change shape, but it feels like it changes shape twice.



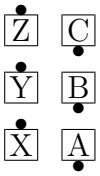
before 3x3 Split Swap



after



before 3x3 Vertical 1/2 Tag



after

Note that only the facing couples version of Vertical Tag can be used with 3x3, as that is the only case that meets the requirements on facing directions and turning motions.

The 3x3 versions of 2-dancer calls are 3-dancer calls. Don't try to do them in a larger setup. Find your group of 3 and work with them only.

before 3x3 Half Sashay

after

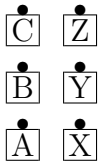
before 3x3 Mesh

after

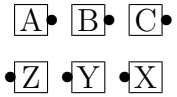
In general, Mesh can be done with other facing directions, but 3x3 Mesh requires all 3 dancers to be facing the same direction.

Sometimes a common "cheat" for doing the call will be helpful. For example, some people do Drift Apart (from lines) as Tandem Cross Roll to a Wave. 3x3 Drift Apart is Tandems of 3 Cross Roll to a Wave.

Some people think of Stack the Line as a Tandem Partner Hinge forcing right hands..



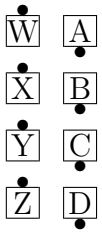
before 3x3 Stack the Line



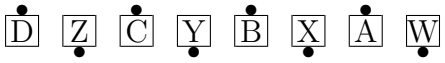
after

It is not necessary to know these “cheats” to do 3x3, but you may find that they make it easier.

Some calls that normally start or end in a Wave, such as Ah So or Box Recycle, can essentially be done Concentric (particularly with 4x4). This works because the “cheese” dancers must remain in the center. We showed 3x3 Ah So earlier. Here is 4x4 (Box) Recycle:



before 4x4 Recycle



after

This can also be done as Counter Rotate and Hinge.

The caller may say “4x4 Box Recycle” or they may just say “4x4 Recycle”. The wave-type Recycle cannot be done NxN, so NxN Recycle will always mean the box type.

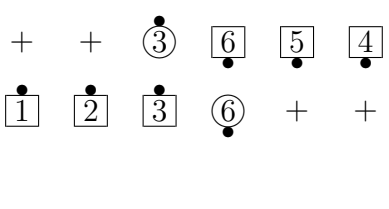
Chapter 5

Tricky/Ambiguous Situatons

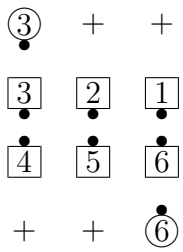
There are some calls that are unusually difficult to perform with these concepts. Some of them involve ambiguity in choosing the paired people, as suggested in Chapter 2. What is usually going on is that some calls (or suitably restricted versions) have the interesting property of being able to be defined in terms of Couples and Tandem concepts, in two ways, along different axes. When this happens, there will be two 3x3 versions, depending on which of the Couples / Tandem concepts was expanded to 3x3. Fortunately, the ambiguity is typically resolved by the starting setup-3x4 or 2x6. But it isn't easy.

Note: The analyses shown here are probably beyond what one would think about in an actual dance. The objective here is to provide some insight into what is going on. In particular, doing Roll Out to a Column as shown below could probably be judged an utterly tasteless use of nested fractional twosome.

- Ferris Wheel is probably the most straightforward case of this. The original call can be thought of as As Couples, Tandem Twosome, Single Wheel. This is most commonly reduced to As Couples, Single Ferris Wheel–the As Couples is expanded to Couples of 3. It gives a call that works on a 2x6 matrix:

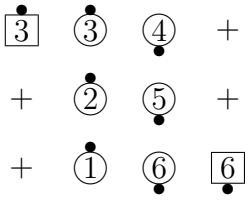


before 3x3 Ferris Wheel,
6 wide; 2 deep

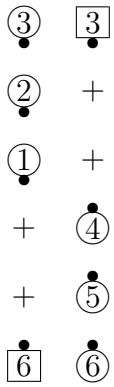


after, expanding the As Couples

But if we treat it as Tandem Twosome, Single Ferris Wheel, expanding the Tandem Twosome to Tandem Threesome, we get the other version:



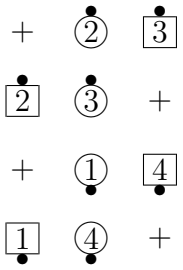
before 3x3 Ferris Wheel,
4 wide; 3 deep



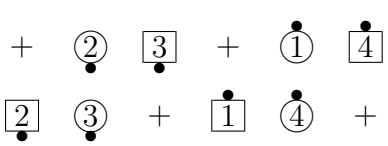
after, expanding the Tandem Threesome

Do whichever version fits the actual geometry.

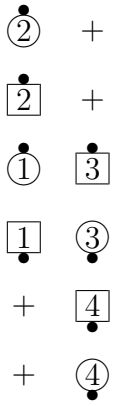
- Another call that has this issue is Polly Wally. It can be thought of as Couples Twosome, Tandem Twosome, Reverse Turn to a Line. As usual, the actual definition of Polly Wally is much more powerful and nuanced than what can be done 3x3. As before, only one of these concepts gets expanded from two to three.



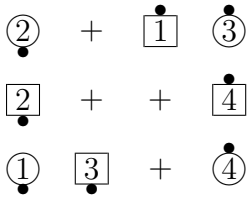
before 3x3 Polly Wally



after, expanding the Couples Twosome



before 3x3 Polly Wally

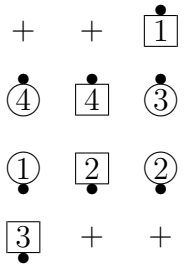


after, expanding the Tandem Twosome

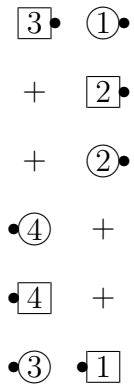
(From a 2x6, this latter solution requires the Completed Double Pass Thru version.)

- Countershake could be thought of as Boxes Are Solid 1/4 Boxsome, Latch On.

  Exactly how people are paired is determined by the starting setup-3x4 or 2x6.

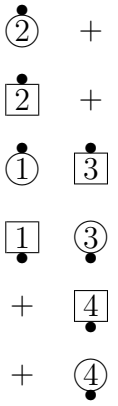


before 3x3 Countershake

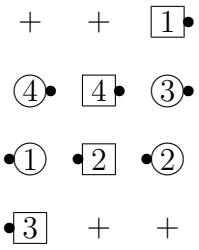


after

However, from a Completed Double Pass Thru, it is also possible to pair the original beaus with each other and the original belles with each other, producing a 2x6 starting setup:



before 3x3 Countershake

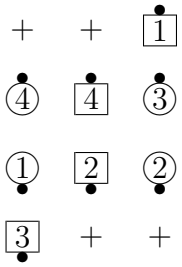


after

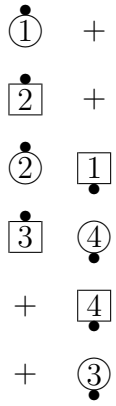
There are multiple ways to approach dancing the 2x6 version:

- Visualize the base call as first doing a Concentric Shakedown, then having the Boxes of 4 work Solid for a Touch. Viewed this way, the 3x3 call starts with having 3 Concentric groups doing a 3x3 Concentric Shakedown, and a Box of 6 working Solid for the Touch.
- Visualize the original call as starting with everybody 1/4 Right, Counter Rotate, and Roll, and then having the Boxes of 4 work solid for a Touch. This way, do the 3x3 call with the same definition but finishing with a Box of 6 working solid touch.

- Roll Out to a Column can be thought of as Couples 1/4 Twosome, Tandem Twosome, Right Roll to a Wave. Like the others, it can be done from a 3x4 or a 2x6.



before 3x3 Roll Out to a Column



after

before 3x3 Roll Out to a Column

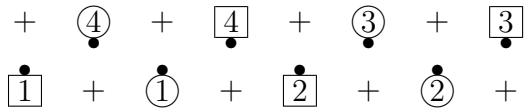
after

Chapter 6

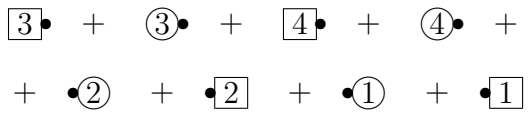
Extremely Difficult Applications

We have pointed out that these concepts are really not always suitable for dancing "cold" except in the simple cases, and that one needs to learn "tricks" to get through the hard cases without having the dance degenerate into a mathematics symposium. Perhaps the most notorious case of this, as of this writing, is 3x3 and 4x4 Load the Boat.

Load the Boat has the property that the person who is undergoing the same turning motion as you, whom you have to quickly locate, starts once removed from you, finishes once removed from you, never interacts with you, and is following a definition completely different from yours. But the 3x3 and 4x4 concepts are indifferent to all of this, so 4x4 Load the Boat works.



before 4x4 Load the Boat



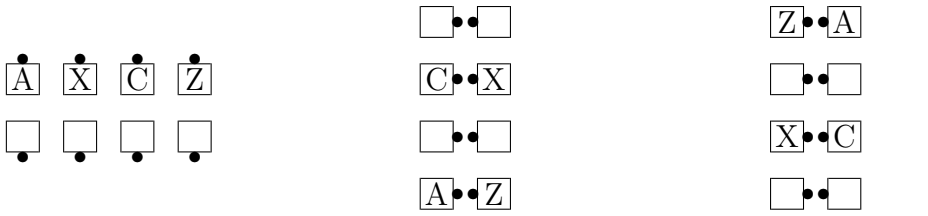
after

Here is a "trick definition" of Load the Boat that one could use to get this result. Whether it is of any use in practice is questionable. A little checker pushing will show that Load the Boat is equivalent to a big line-of-4 Wheel Around followed by a 1/4 In to your immediate partner. Those "trick" components are suitable building

blocks for doing the call 3x3 or 4x4. For a 4x4 Load the Boat, from facing lines of 8, do a huge line-of-8 Wheel Around, preserving phantom spots of course, followed by a 1/4 In. 3x3 Load the Boat is similar, with a line-of-6 Wheel Around.

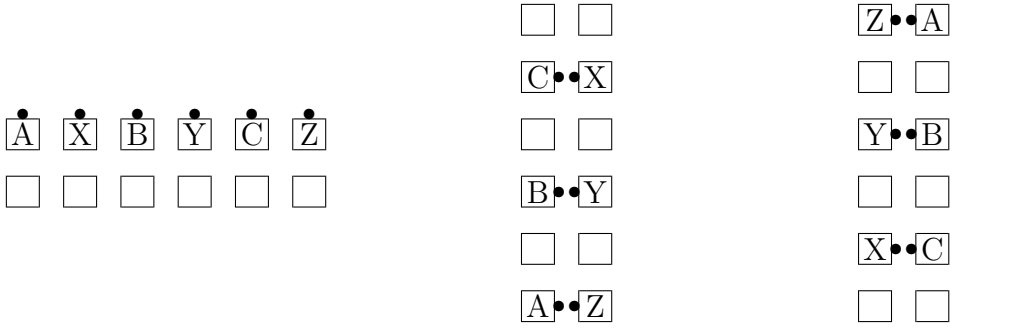
> If one really wanted to do this in a proper, stylish, elegant, and aesthetically pleasing manner, one would actually Pass Thru, Own the Belles for a big line-of-8 Wheel Around by big line-of-8 Reverse Wheel Around, Pass Thru, and then 1/4 In.

There are two other calls that share this property of having the people in each pair not start adjacent, not finish adjacent, not interact with each other, and follow completely difference defined actions: Regroup and Trip the Set.



before after Regroup or Trip the Set

A and C are paired, as are X and Z. Their opposites do likewise.



before 3x3 after 3x3 Regroup or Trip the Set

B interpolates A and C; Y interpolates X and Z.

There don't seem to be any tricks that help with these.

One final note on 3x3/4x4: The astute reader may have noticed that any four-person call can technically meet the definition of 3x3 by doing the call in Triple

Boxes, Triple Waves, or Triple Diamonds. That could result by starting with a 2x4 setup (for example), pairing the corresponding people in each box with each other, spreading the boxes apart to make Triple Boxes, and considering the "cheese" dancers to be in the center Triple Box. These examples are generally not called with the 3x3 concept because we already have better names (e.g. Triple Boxes) that are more clear.

If you are concerned that one of the 3x3 box calls we mentioned earlier might be ambiguous from a 2x6 because we could either do it in each 2x3 or in Triple Boxes, then remember the "closest possible pairing" rule. The 2x3 version comes from pairing adjacent dancers and the Triple Box version comes from pairing once removed dancers. Thus, the 2x3 version is chosen if both are theoretically possible.

Chapter 7

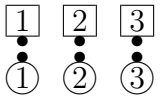
Single

The informal meaning of this is well known—for a call that has people working in obvious pairs (As Couples, for example), they work individually, with each person doing the part of one of the pairs in the base call. For example, in Single Wheel, each person does the part of one of the Couples doing Wheel and Deal.

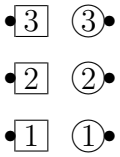
The more precise definition of Single used at C4 today allows people to be paired in a variety of ways (not just Couples) the same way we allow a variety of pairings for 3x3/4x4. The formal definition of Single states that you replace each of the pairs of dancers with a Single dancer located halfway between the two in each pair (and compress the setup if necessary). However, there is another way to look at Single, now that you are already familiar with 3x3/4x4.

To create the Single version of a call you know how to do 3x3, start with a diagram of the 3x3 call, remove the ends of each group of 3 from both the "before" and "after" pictures, and compress the setup if necessary. (That is, move the remaining dancers closer together if necessary to remove gaps). You'll be left with the center (or "cheese") person from each group of 3. Their dance action is the same as doing the call Single.

Let's consider an example. Recall that we discussed 3x3 Split Swap earlier.



before 3x3 Split Swap



after

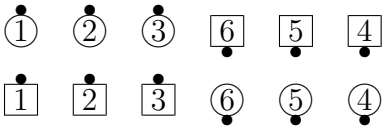
Below is Single Split Swap. Note the similarity between the action of the center 2 dancers in 3x3 Split Swap and the two dancers in Single Split Swap.

before Single
Split Swap

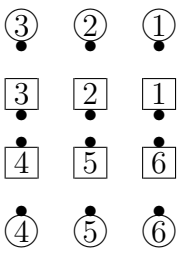
after

There are quite a few lower level calls that contain the word “Single”. Many of these calls do follow the Single definition presented here (and in fact, inspired the definition). Examples include Single (or Split) Checkmate, Single (or Split) Transfer, Single Ferris Wheel, Single Polly Wally, Single Rotary Spin, Single Shakedown, Single Strut Right/Left, Single Cross Chain Thru, Single Cross Chain and Roll, and Single Turn to a Line.

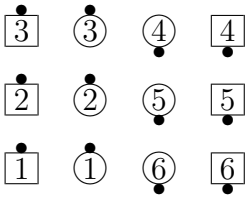
Single Ferris Wheel is worth a longer discussion. Ferris Wheel presents an interesting challenge because the dancers can be paired in multiple ways in order to do Single, 3x3, or 4x4. First, recall the two ways of doing 3x3 Ferris Wheel:



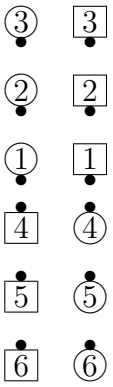
before 3x3 Ferris Wheel



after

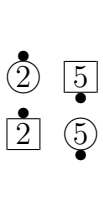


before 3x3 Ferris Wheel



after

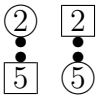
When you remove the ends of each group of 3 in the first example (and compress the setup), you get the familiar box-of-four Single Ferris Wheel. When you remove the ends of each group of 3 in the second example (and compress the setup), you get a call that looks like Wheel and Deal from Two-Faced Lines.



before Single Ferris Wheel

after

before Single Ferris Wheel



after

Both of these are valid interpretations of “Single Ferris Wheel”. However, only the first one (the box-of-four call) is commonly used. The second one often causes dancer confusion because dancers are expecting to do the box call. Also, the second one has another name (Wheel and Deal), As a result, the second interpretation of Single Ferris Wheel is not very useful in practice.

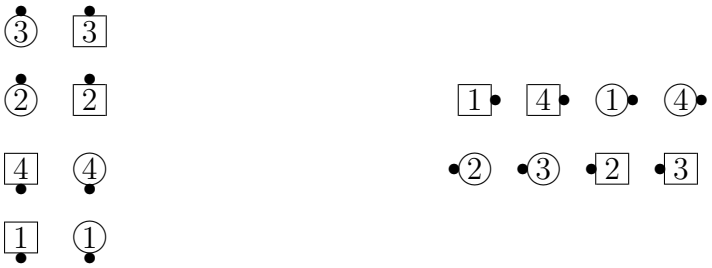
You might also wonder if the call Single Ferris Wheel is actually ambiguous from a 2x4, as you have both a box and a line you could conceivably work in. It turns out that this call is not ambiguous because different facing directions are required for each version of this call. If you are in Parallel Waves, then only the box version is possible. If you are in Parallel Two-Faced Lines, then only the 1x4 version is possible.

There are several other calls that permit multiple pairings of this type. Consider the C4 call Hang a Right. ‘Single Hang a Right” is usually called from a 1x4 Completed Double Pass Thru, and it is “Tandem Right Roll to a Wave”. However, under the C4 Single definition, it is equally valid to use “Single Hang a Right” from Couples Back-to-Back, where it would be “As Couples Right Roll to a Wave”. It turns out that this call is also unambiguous from a 2x4 because each dancer must be facing out of the setup they are working in. From a 2x4 completed Double Pass Thru, you can only do it in each 1x4 column. From Lines Facing Out or a Trade By formation, you can only do it in each box.

The call “Sidetrack” causes confusion for some dancers if they try to apply the Single concept. The challenge on this call is that many facing directions are valid, and we cannot disambiguate based on facing directions. Instead, the convention established at C3B for Sidetrack is that “Split Sidetrack” always means work in each box, and “Single Sidetrack” always means work in each 1x4 column. Just do the definition in the implied setup, and don’t think too hard about Single.

Below are a few more examples where multiple pairings produce multiple ways of applying Single to a given call. In each case, one must think carefully about the facing directions of the dancers to determine which setup to work in.

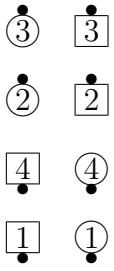
On Single Countershake (below), the first setup is more commonly used but the second setup is also valid.



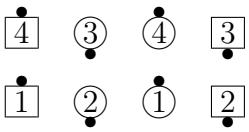
before Single Countershake after

before Single Countershake after

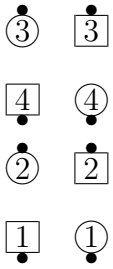
On Single Roll Out to a Column (below), the first setup is more commonly used but the second setup is also valid.



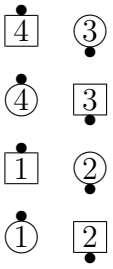
before Single Roll Out
to a Column



after



before Single Roll Out
to a Column



after

Some Single calls are in relatively common use at C4. Examples are Bridge the Gap, Bring Us Together, Mark Time, and Shuffle the Deck/Single Shuffle. Some other Single calls include: Single Slimdown (from a diamond), Single Turn Away (from a box or 1x4 Completed Double Pass Thru), and Single Turntable (from a 1x4 column).

There are a few lower level calls containing the word "Single" that do not follow this Single concept exactly (although they may include working Single for a portion of the call):

- Single Rotate is not the "Single" concept applied to Rotate. If it were, Single Rotate would always be done in a 4-person setup. It isn't.
- Single Cross and Wheel is the "Single" version of Cross and Wheel, but Single Cross Trade and Wheel is not the "Single" version of Cross Trade and Wheel.
- Single Circle to a Wave is not the same as applying the Single Concept to Circle to a Wave. It is a Plus call.

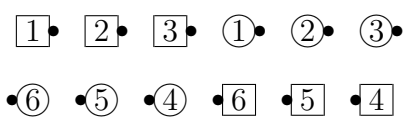
One other thing to be aware of with Single is that if the caller uses it in combination with a meta-concept such as Initially or Finally, they generally mean the Single

Concept as defined here, and not some arbitrary use of the word Single as part of a name.

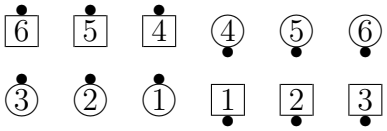
Chapter 8

3x1 / 1x3

These concepts can often be analyzed in terms of some pairs of people in the original ("2x2") call being expanded to three people while others are reduced to one. However, it is probably best to think in terms of 3x3, with some of the groups of three reduced to a single person. 3x1 Checkmate provides an example:

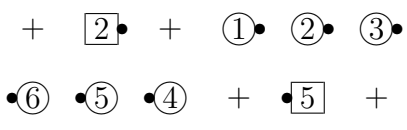


before 3x3 Checkmate

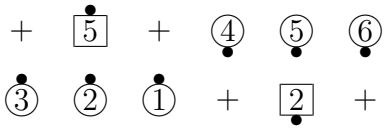


after

We reduce some of the groups to 1:

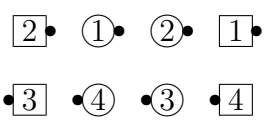


before 3x3 Checkmate

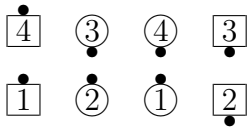


after

The 3x1 version is formed by compressing both the "before" and "after" pictures:



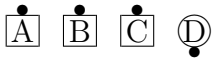
before 3x1 Checkmate



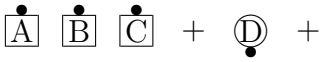
after

Of course the dancers don't actually have the luxury of making pictures and compressing them. So the principal problem in doing 3x1-types of calls is identifying what 3 real people remain the "real" 3x3 people and what individual person is associated with two phantoms to become the other 3x3 group. After making that determination, do the 3x3 call, and then compress out the extra phantoms to make the final setup.

First, there is a convention about how to choose the "3" people and the "1" person. For many calls it is easy to make the determination based on facing direction. 3x1 Cross Roll is an example:

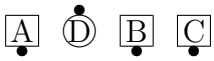


before 3x1 Cross Roll



mentally expand to 3x3

do the 3x3 call

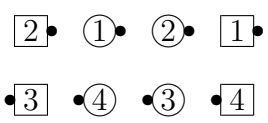


recompress

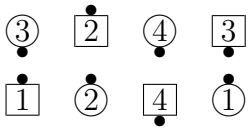
This is a good point to notice something tricky about calls like this—person "D" had to go into the center spot, that is, take hands with the centermost of the other 3 people. This is sometimes hard to see. This will show up in things like 1x3 Transfer.

In cases like Cross Roll, in which the facing direction determined how people were grouped, it doesn't matter whether the caller says "3x1" or "1x3".

The other situation is the one in which the 3 people who are grouped and the one who is single are all facing the same direction. In that case the convention is that, if they are in tandem, they count from the front to the back, and if they are side-by-side they count from right (belle side) to left (beau side.) That is, 3x1 in columns means that the front 3 people are grouped and the last person is single, whereas 1x3 means that the front person is single and the remaining 3 are grouped. From one-faced lines, 3x1 means that the 3 rightmost people are grouped and the leftmost one is single.

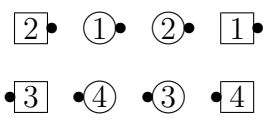


before 3x1 Transfer

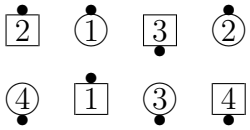


after

Notice that the side boys had to be very careful here. After the Cast Off 3/4, they are facing 3 people. They come out to the center of those people, and take right hands. Compare this with the 3x1 Checkmate shown previously.



before 1x3 Transfer

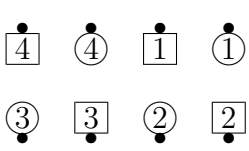


after

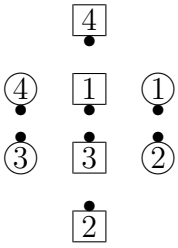
In this 1x3 Transfer, the head boys have to deal with the center of the 3 people extending to them.

These 3x1 Checkmate and Transfer calls are in fact on the C2 program, and the current definition was designed to be compatible with those calls.

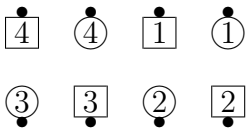
Recompression is sometimes necessary and sometimes not:



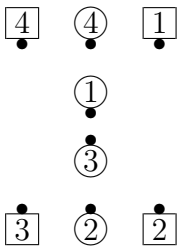
before 3x1 Turn and Deal



after



before 1x3 Turn and Deal

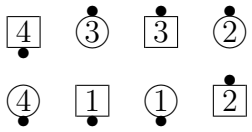


after

In the first example above, no compression was necessary. In the second example above, we do not compress the setup because that would distort the groups of 3. We never compress in a way that distorts the groups of 3.

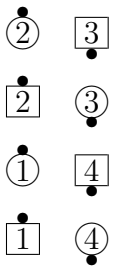
In the example below, we start by doing the call on each side, temporarily resulting in a 2x6. We then compress the setup to a 2x4 because we can do so without distorting the groups of 3. It is not necessary to keep the "single" dancers lined up with the "cheese" of the 3x3 group.

before 3x1 Turn and Deal

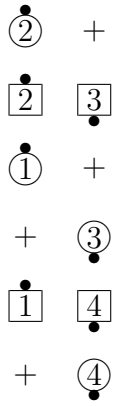


after

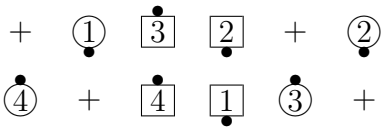
Similarly, when starting a 3x1 call, you will not necessarily begin with the "single" and "cheese" dancers lined up. Be careful about identifying the group of people with whom you are working.



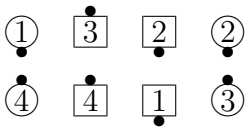
before 3x1 Split Recycle



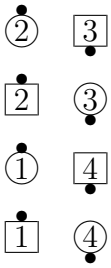
mentally spread out groups



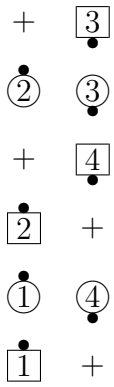
do the 3x3 call—
this is very hard!



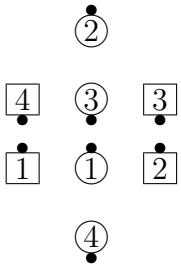
recompress



before 1x3 Walk and Dodge



mentally spread out groups

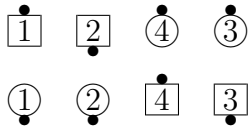


do the call

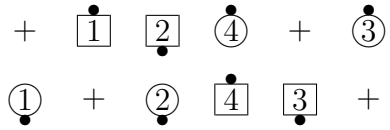
This is not the “obvious” thing people might be tempted to do when they hear 1x3 Walk and Dodge.

When doing a 3x1 or 1x3 version of a call that normally starts in a wave, the center

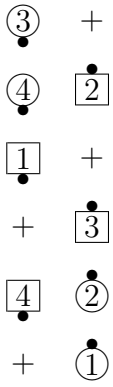
2 people of the actual line determine the handedness of the 6-person wave that people need to think about. Those people will often say “right” or “left” to indicate the handedness that the end people should infer. Those end people then spread out appropriately to make a wave of 6 with the correct handedness, and do the 3x3 version of the call.



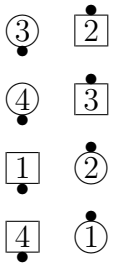
before 3x1 Ah So



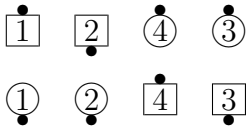
mentally spread out groups
to match handedness of center 2



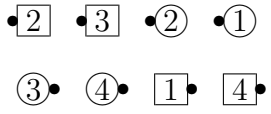
do the 3x3 call



recompress

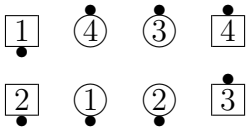


before 3x1 Follow Your Leader

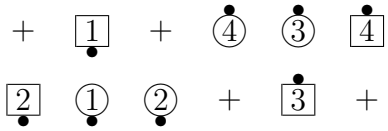


finished

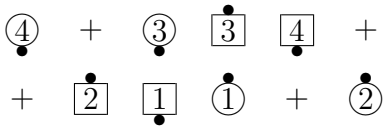
Here is an example that is just hard:



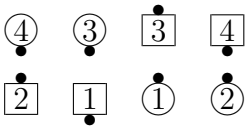
before 3x1 Scatter Circulate



mentally spread out groups

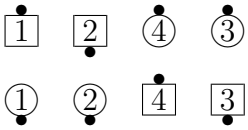


do the 3x3 call—head boy goes to center miniwave

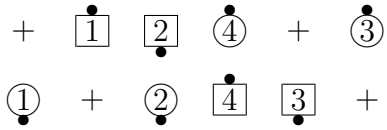


recompress

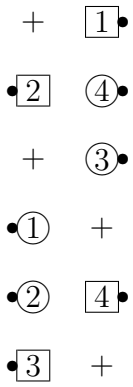
In the example below, note that because the dancers start in a 3x1 wave, we are doing the "wave" version of Cross and Divide. Again, the dancers spread out into 3 miniwaves. As usual for calls that start in waves, the handedness of the center 2 determine the handedness of these miniwaves.



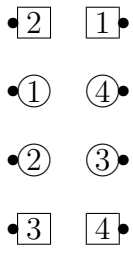
before 3x1 Cross and Divide



mentally spread out groups to match handedness of center 2



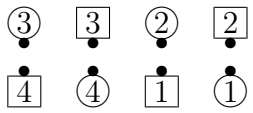
do the 3x3 call



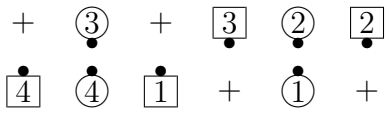
invasively recompress

Some Notoriously Hard Cases

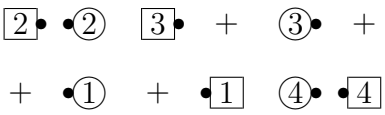
This example shows how hard this concept can be when used in an extremely unaccustomed way:



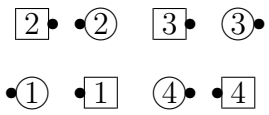
before 1x3 Load the Boat



mentally spread out groups



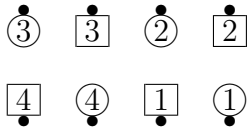
do the 3x3 call (huge Wheel Around and each couple 1/4 In)



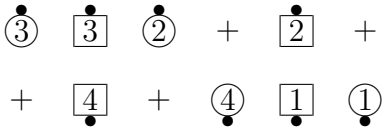
recompress

Recall the “cheat” from chapter 6.

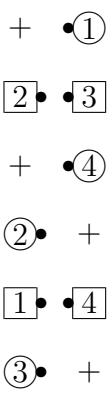
These next two are just as bad.



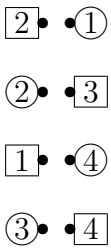
before 1x3 Regroup



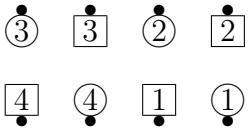
mentally spread out groups



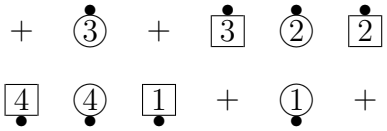
do the 3x3 call



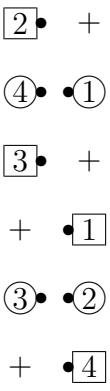
recompress



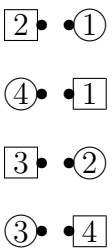
before 3x1 Trip the Set



mentally spread out groups



do the 3x3 call



recompress

Summary of the Rules for Spreading Out

- If the 4 people in each row or column have 3 people facing one way and an ”outlier” facing the other way, and that outlier is an end, that outlier is the “1”. Place a phantom on each side of them, giving a line or column of 6, looking like a 3x3 2-faced line (or whatever). Do the 3x3 call.
- If there is one outlier facing opposite the other 3, and that outlier is a center, the centers have a miniwave handhold. They call out their handedness to help the other people, who then place a single phantom on whichever side will place them in a miniwave of the same handedness. There is now a wave of 6. Do the 3x3 call. It’s analogous for columns, though much harder.
- If there are no outliers, so all 4 people face the same way, count from the front of a column, or right side of a line, up to the first number of the concept name. Those people become one group; whoever remains are the other group. Whichever group has just one person expands to 3 by placing a phantom on each side, or in front and in back, yielding a line or column of 6. Do the 3x3 call. This is the only case in which the name of the concept, 1x3 or 3x1, makes a difference.