

written by:  
SEAN GANDINI  
KATI YLA-HOKKALA

poser images  
designed by:  
SEAN GANDINI

jugglers on video:  
SEAN GANDINI  
SIMON MYLIUS  
ALIX WILDING  
KATI YLA-HOKKALA

performance jugglers:  
LINDSEY BUTCHER  
BEN CRAFT  
MIKE DAY  
SEAN GANDINI  
SIMON MYLIUS  
BEN RICHTER  
ALIX WILDING  
KATI YLA-HOKKALA

video filmed by:  
MARK MORREAU

sounds on video:  
This video is in  
silence, allowing  
you to use your  
own choice.

mediacircus  
14 De Havilland Studios  
20 Theydon Road London E5 9NY  
info@mediacircus.biz  
info@gandinijuggling.com

tel : +44(0)208 442 4989

web site: <http://www.mediacircus.biz>

Copyright © 1998 Gandini Juggling Project

GANDINI VIDEO PRODUCTIONS

# "Patterns 1"

ernie \_\_\_\_\_ ●  
grover  
takeaways

shares  
counting ●  
3/3 = = = = turbines

middlesboroughs

cranes 1/1/2  
more counting ← cranes ●

what about elmo? ●

burke's

assisted four

over grover ●

aura

*and many more patterns for two Jugglers...*

# contents:

PAGE NUMBER

Introduction	2
Symmetric Takeaways	3-9
Asymmetric Takeaways	9-10
Complex Takeaways	10
Round and Round Takeaways	11
Different Positions	12
Middlesborough Family	13-15
4 Balls	15
Reverse Takeaways	16
Building Blocks	17
5 Balls	17-19
Sesame Street	20-21
Performance Extract	22
Conclusion	22

## Performance Extract

A small extract from "Caught Still Hanging". This is here to illustrate using the simple patterns to cross breed more intricate material.

It features cranes, assisted 4's and various takeaways and multiplex variations.

## Conclusion

We hope that you will enjoy learning these patterns as much as we have. Hopefully they are sufficiently challenging to make them interesting but not too much so as to make them inaccessible. The systems which generate the various patterns will hopefully seem clear to you, enabling you to find and name your own patterns.

We are in no way saying that these patterns are a complete picture, a complete map or a snapshot. This is just one journey through pattern space. There are some landmarks that most travellers will see. It would be hard to travel through two handed pattern space and not encounter a shower or a one up two up. By this I mean that multihanded juggling is a virtually unexplored territory. I'm sure that we've missed some really obvious gems and picked up some unnecessary pebbles along the way.

We would greatly appreciate feedback in both form and content. This is the first in a series of tapes so your input will affect the future ones.

Thanks to all the people who have helped us try out these patterns over the years. All the Gandinis past and present! Thanks to Chris and Simon for proofreading and Alix, Sharon and Maksim for endless "can we try something" moments.

## Grovers

A simple variation on Burke's. Since the first throw returns to the same hand, you can hijack its orbit. So by catching the ball at the apex of its curve with the non playing outside hand one can transfer it in a circle back to the inside hand, in time to be thrown again.

## Over Govers

A pleasing 4 ball extension of Grovers. Rachid starts with an extra ball in his outside hand. As he goes in to catch his first Grover ball he throws the outside hand ball over the pattern to Shamira. Shamira then does the same. To learn this pattern, practice just doing Burkes whilst holding a ball in your outside hand.

## Ernie

A cross breed between cranes and grovers. Basically the outside hand holds an extra ball and crane-exchanges it for the second burke throw (The one that goes from one juggler to the other, the siteswap 3). This is another knuckle breaker that is perhaps easier to learn with soft balls.

## Half Grover Half Ernie

A fun mixture of the above. The possibilities for these combinations are endless.

## 3/3 Aura Takeaways

This pattern is not strictly speaking from the same family, but it was homeless so we will put it here. Now as you have probably realized the aura idea is applicable to ordinary takeaways. We actually found the auras around the middlesboroughs first, so this order makes sense to us ...perhaps you will find it otherwise.

# Introduction

This video, like the title implies, is a collection of 2 person patterns. It is the first in a series of releases covering multihanded juggling.

The patterns are a mixture of classic patterns and company discoveries. Although we have tried to focus on its appearance the video is meant primarily as a learning tool. Bearing this in mind we have included patterns which can assist in the learning of other patterns even though their own interest might be questionable. There are academic inclusions (I wonder if that pattern is possible?) and medicine patterns (practice that 11 count). Other inclusions are purely whimsical. Most patterns are shown twice, once in real time and once in slow motion. We have let each pattern run about 30 seconds in order to be able to absorb the information.

After trying all sorts of soundtracks we decided to leave the video in silence. This is partly to let you use your own soundtrack and partly because however much you may like the music to start with, by the time you hear it for the 50th time you'll want to change it!

We hope that you will enjoy trying all these patterns out.

*We have assumed that you can juggle three objects already and that you know or can find out what a Mills Mess or a Burke's Barrage is.*

*We have also assumed that you can count to 11.*

## The Tic-Tic Start

We have found it useful to precede a given pattern by some sort of timesetting introduction.

As in music, where one can use a count in: *one two three four na na na na na na na* we find it useful to do a couple of introductory throws before beginning a given pattern.

We have found from experience that the traditional "slow start" is too long if you are about to restart a pattern 500 times and that "straight in" gives us no time to synchronize our timing. So as a convention we will assume a "tic-tic" start.

The tic-tic start is simply two introductory throws before beginning.

Opinions differ as to the usefulness of a get-in sequence, I would suggest experimenting with and without.

## Symmetric Takeaways

The basic concept behind the takeaway patterns is the replacement of hands within a juggling pattern. That's it. One person juggles, the other takes some or all of the pattern away. Hence the name *t a k e a w a y*.

The first bunch of patterns are just cyclic replacements. By this, I mean patterns that, like pop music, repeat in nice concise loops. You juggle for three beats, I juggle for three beats, then we start all over again.

In traditional group juggling these cycles tended to be quite straightforward. Cycles of 2, 3 or 4 throws. We have pushed it further by generalizing.

Our generalization is, that on any given beat there can be a replacement; so the replacing need not happen as neatly or as regularly as described above.

But more of that later.

*A word on positions: Contrary to the Kama Sutra and for simplicity's sake we will limit ourselves to a simple number of positions. Obviously you can extrapolate at will.*

In an idealized scenario the balls stay in place and the hands weave around them.

This is easier said than done. There is a tendency to give the balls to the taker.

In this respect a clarity of counts is very useful.

One of the most common drops on *takeaways* occurs, when one is not sure if the other person is taking or not, "*the hovering hands*".

Help your partner by being as clear as you can.

### Side by side

Let's assume that the two jugglers are standing (sitting, lying) side by side.

(Illustration 1). Our jugglers are called *Rachid* and *Shamira*. In the simplest possible scenario *Rachid* juggles 3 objects. At any point *Shamira* can replace either of *Rachid's* hands. If one thinks of the 3 balls as independent from the hands, then any landing ball can be caught by any of the free hands. Think for a moment of a juggling pattern as floating in space. There are two points where the hands meet the balls, it is at these points that the replacing can happen.

## Sesame Street Family + some cousins

Most of the following patterns begin with the notion of sharing (1\1 takeaways) Millsmessified patterns and proceeding to alter the structure from there. The possibilities are endless.

### Mill's Mess 1/1 In

Mills Mess 1/1 in. (as you may notice the description and the pattern are the same!)

### Mill's Mess 1/1 Out

An excuse to get real close to your fellow Juggler!

### Burke's Barrage 1/1 In

This is an inside hand share of *Burke's Barrage*. One of the *Mill's Mess* versions of 342. An easy way of remembering this pattern is to think that each Juggler does 2 throws in a row. The first throw is to oneself on the other Jugglers side. The next throw is to the other Juggler and is closer to oneself. During this time the other Juggler weaves her hand through the pattern. Although theoretically this pattern is three beats long (34 2 siteswap), in reality the timing between the 3's and the 4's evens out and the whole thing feels like two throws each. *Shamira Shamira, Rachid Rachid*. There are two ways for the held ball (siteswap 2) hand to travel. One is to weave through the middle of the pattern. The other is to go round the pattern.

### Burke's Barrage 1/1 Out and Grover

Apologies for the placement of this pattern. You should have a look at *Grovers* first, and then come back to this one. Juggler doing *Grovers*, be aware of your arm being very close to your fellow Juggler's head!

### Eric's Extension

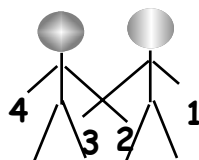
*Eric's Extension* is a popular solo three ball pattern. When done as a solo pattern it requires considerable flexibility. Juggling it with another Juggler put less stress on the torso. Whereas in a *Mill's Mess* share you do under, over, over and you have a cycle of six beats, here you do under, over, over, over, over and you have a cycle of ten beats before you get back to the beginning. Careful not to dislocate your arms...

## Turbines

A variation on the pre-crane pattern. The two inside hands begin overlapping. It starts with the 2,1,3,4 sequence. Note that because of the overlapping this is a different sequence of hands than in the pre-cranes pattern. As soon as the underneath crossing hand releases its ball it makes its way to the top.

## Reverse Turbines

Same as above except that the hands weave from top to bottom.



## Side to Side

A 2 person 5 ball pattern with one juggler standing behind the other. The juggler at the front exchanges balls with the back juggler on alternate sides. As it gets easy it is helpful and indeed aesthetically pleasing to lift from ones elbow and facilitate the throwing of the exchanging ball.

## Swings

This pattern starts with the two jugglers face to face. One juggles, the other (Swinger) replaces balls. The Juggler throws a right hand throw slightly higher. This throw is exchanged at the top by the swinger's awaiting right hand. The Juggler catches the throw with the SAME hand. One cascade throw later the process starts all over again with the left. Because the exchanged throw goes back to the same hand the process repeats on a 2 count cycle even though it alternates sides.

*The Jugglers arms are uncrossed, but she throws across.*

*The Swingers arm cross but he releases the ball straight down.*

*The Swinger does a breast-stroke type of movement with his arms and can help the Juggler by giving the ball a little lift as he releases it. (A little Loft!)*

## Back Swings

This is basically the same as plain swings, but the Swinger stands behind the Juggler, and has to start with the opposite hand.

## Back and Side to Side Together

Or indeed Side and Back, it makes no difference. Basically a cut and paste between the two above patterns. Remember you still only throw one self in the middle, unless you decide otherwise.

For simplicity's sake we shall begin by replacing right with right and left with left. By this I mean that a ball thrown from a left hand will always be caught by a right hand and vice versa. Whether this hand is mine, yours, the pope's or a zebra's is u n i m p o r t a n t . This restriction is purely for simplicity and to provisionally limit the amount of patterns involved. As we shall see later, we can lift the restriction to generate a whole other family of p a t t e r n s .

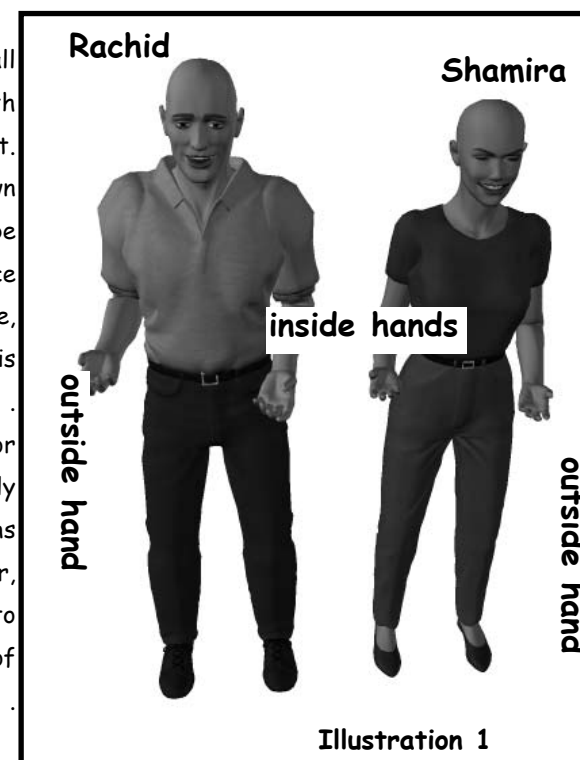


Illustration 1

## 3/3 Out

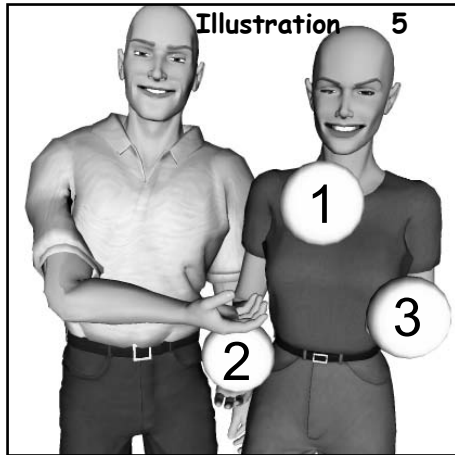
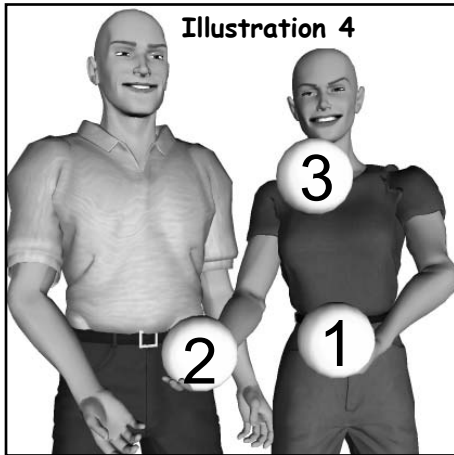
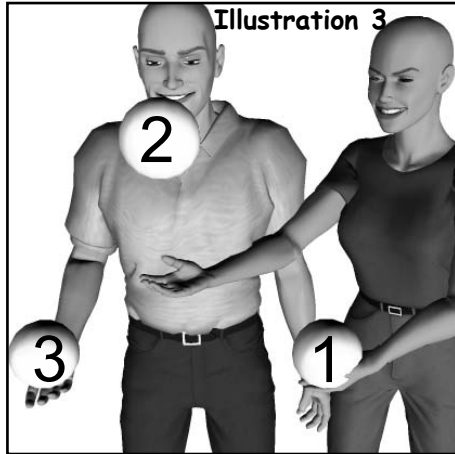
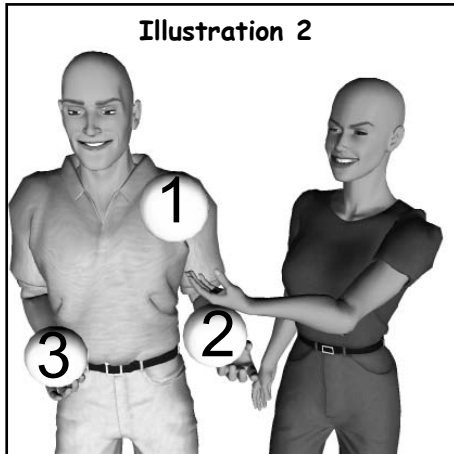
Let's start by learning 3/3. The notation 3/3 means that each juggler catches three times. So we get a 6 beat cycle that goes:

r= right    l= left

Rachid			Rachid			Rachid			Rachid			Rachid			Rachid
r	l	r	l	r	l	r	l	r	l	r	l	r	l	r	l
1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4
			Shamira			Shamira			Shamira			Shamira			

For simplicity's sake we will also refer to the two closest hands as **inside hands** and the two further away hands as **outside hands**. (Illustration 1)

Rachid starts with 2 Balls in the right hand and 1 Ball in the left hand. He throws the first ball from his right hand to Shamira's outside hand. (Illustration 2). She then catches the second ball with her inside hand (Illustration 3) followed by the third ball with her outside hand (Illustration 4). Three catches in all. Rachid then does the same, his outside hand followed by his inside hand, followed by his outside hand (Illustrations 5,6,7). And so on ad-infinity (or not).



Although this pattern is easy to do without counting I would encourage you to start by counting it. The more you count now the easier it will be not to count later.

### 3/3 Side by side

When we do workshops with less experienced Jugglers, this is the pattern we start with. Shamira wants to take the 3 ball pattern from Rachid. She already has 2 balls, so she only needs one of Rachid's balls. She juggles for three beats and Rachid takes his ball back. Like 3/3 with 3 balls, you can colour code this pattern. Or indeed shape code it, by making it be a small dodecahedra, small animal or any solid you may wish.

#### Pre-Cranes

From a side by side position the hands throw one at a time in the sequence below. (See Building Blocks, Block 3)



#### Cranes

.. eventually realizing that you have a lot of free time, during which to change your arms. As you wait for the ball, you have time to lift your outside arm up. When the ball arrives you do exactly the same exchanges with your hands, but you now have to throw higher with your inside hand to be able to catch with the outside hand. Remember you have to still throw across with your inside hand to your outside hand which means reaching slightly across towards the other juggler with your outside hand. (ie. you throw outside the outside arm) You can really help your comrade Juggler, by slightly lifting the ball that is being exchanged up with a little swing from the wrist (technically known as lofting the ball).

#### Reverse Cranes

Same as cranes, but now you are lifting the inside hand. This is where the swinging action with the wrist really comes in handy.

Barroche Cranes are the same as above, but you add a little fancy circle with your wrist. It doesn't need to be the one we're using, eventually you'll notice that the pattern is in fact quite slow, leaving you plenty of time to be as fancy as you like.

*You don't both need to be doing the same crane,  
every crane can be different.*

#### Lift into 5 balls from Cranes

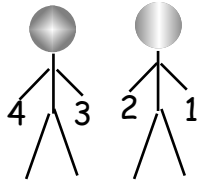
A party trick.  
Great for getting free drinks  
at parties.

## Building Blocks

For reference we have included one person Mill's Mess and Burke's Barrage. A lot of the Sesame Street patterns are based on these. There are many available descriptions of these patterns, so we will not go into them here.

### The Blocks

These patterns may feel extremely academic, but they are a starting point for lots of interesting other patterns, including a lot of the ones in this leaflet. Again we have assumed a side by side position. For the purpose of illustration let's refer to the hands as 1,2,3,4 and count them from right to left.



The numbers refer to the throwing hand. These are 5 ball patterns.

### Block 1

The first one is a very straight forward **1 2 3 4**. After the last number you go back to the beginning, which in this case means you throw an over the top throw back to hand 1.

*1 2 3 4 = 4 3 2 1 and 1 2 3 4 = 2 3 4 1 etc.  
so we have not included these.*

### Block 2

**1 2 4 3** Another standard you should not have problems with.

### Block 3

**1 3 4 2** The same as Pre - Cranes .

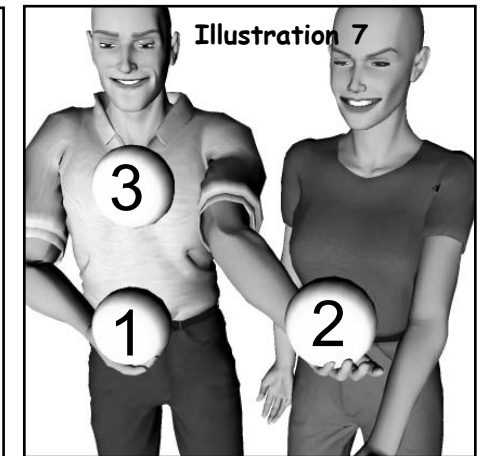
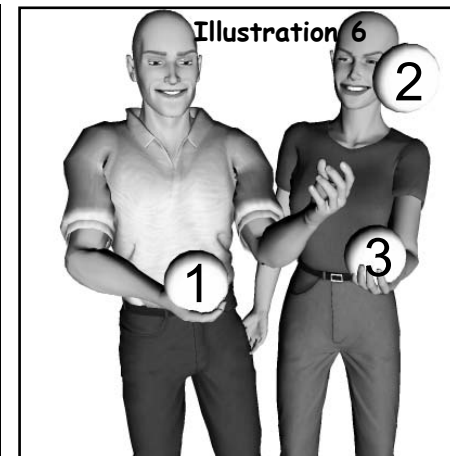
### Block 4

**1 3 2 4** There is something slightly peculiar about this one.

## 5 Balls Between Two Jugglers

### 4/4 Round and Round

I find this pattern easier to do than a lot of the 3 Ball takeaways. In this pattern you only exchange one ball. Other than that, it is the same as the standard 4/4 round and round.



This pattern is quite instinctive to most westerners. Remember that you always take away from the outside hand first. If you colour code the balls you will always end up with the same balls in the same hands in the same order. So if you start by taking a mauve ball with your outside hand you will both take the mauve ball as your first ball with your outside hand.

Now what could be easier?

You take the balls and you give them straight back!

### 3/3 In

Same idea, only the inside hands take first. This is a lot harder.

You have to reach right across your partner. The colour coding works as well.

As you learn this pattern you will find that there is a pleasant weaving that begins to happen between the inside hands. (Illustrations 8,9,10)

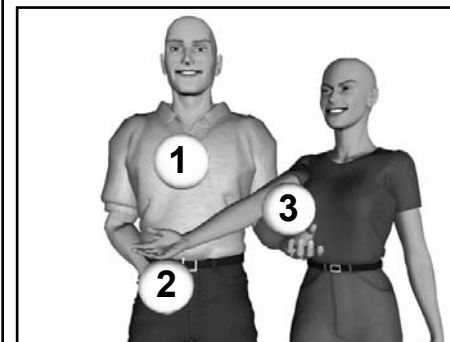


Illustration 8

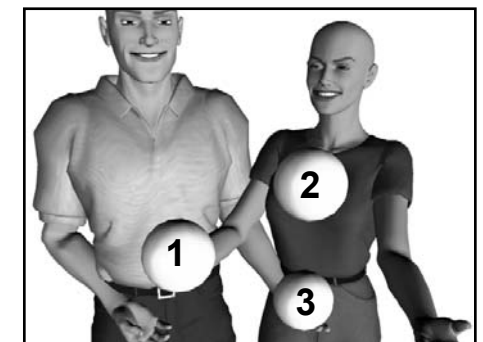


Illustration 9

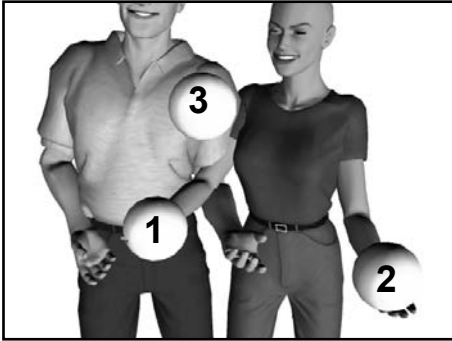


Illustration 10

### 4/4

I think by this point our procedure becomes self explanatory. This pattern is not symmetrical, therefore the two jugglers do different things. By this I mean that you get a different pattern if Shamira starts from the pattern you get if Rachid starts. Its good practice to have a go at both roles.

The initial colour coding is no longer valid.

### 5/5 Out

This is very similar to the above but you wait for one count longer between takings.

The extra wait is what makes this pattern slightly tricky for most people.

On the other hand you have longer to steady the pattern.

This is a very useful pattern for learning odd counts.

Needless to say the initial colour coding is no longer valid.

### 5/5 in

Included for thoroughness.

Same as **3/3 in** but with two extra juggling beats.

### 11/11 In or Out

Medicine for the countingly challenged !

### 2/2

Now things start to get interesting but tricky. What is odd about this one is that once the pattern gets going you end up catching your own first throw. It really helps to slow this down as much as you can. Take each throw one at a time and count it out loud.

Note that both jugglers do different things. One does Inside Hand followed by Outside Hand whilst the other does Outside Hand followed by Inside Hand.  
(Illustrations 11,12,13,14,15)

## Reverse Cascade Takeaways

Ok, now here it all starts to get tricky again. Any of the takeaway patterns can be done from a reverse cascade. What is interesting about taking away from a reverse cascade is the fact that you need to reach over the middle of the pattern to take away. Once you have taken, your hand keeps travelling down through the middle of the pattern and travels outward. Its worth thinking about the spatial differences between a reverse cascade and an ordinary cascade.

In the classic cascade the hands catch outward and throw inward in relation to the center of the body. In a reverse cascade this is reversed. One catches almost in the middle and brings the hand outward to throw. What this means, is that in reverse takeaways the taking hand grabs a ball and travels through the juggling pattern.

### 3/3 Out Reverse Cascade Takeaways

C o n f u s i n g

if you've been practicing the normal cascade patterns. Go slowly at first just to make sure you don't reverse the hands or throw in the wrong place.

### 3/3 In Reverse Cascade Takeaways

Has a pleasing weaving hand topology.

### 2/2 Reverse Cascade Takeaways

More pleasing topologies remembering that one catches ones own first throw. I would also remind you that the two jugglers do different things and that there are therefore two versions of 2/2.

### More complexity

*You can also play with these patterns starting from a half reverse, a cross armed cascade or indeed just about any other pattern or siteswap permutation: In principle with any amount of balls. I sincerely believe that the beauty of a lot of this material comes from its structural complexity instead of its maximalist qualities. That said, I would love to see 2/3/1 5 ball Mills Mess takeaways!*

### All the Auras

This sort of speaks for itself. Needless to say this is very difficult but its a great buzz if and when it works. I would recommend starting Twin 1 with aura 3 in his Outside hand and Aura 2 in his inside hand, twin 2 with the three takeaway balls plus Aura 1.

### Reverse Middlesboroughs

Same as Middlesboroughs but starting with the other hand. The variation on the video has a nice trailing hand. Needless to say you can add all the auras!(Good luck!)

## 4 Balls Between Two Jugglers

### Assisted 4

The two Jugglers start one behind the other. Juggler at the front throws straight up on the outside of her 3 ball pattern. At the same time the Juggler at the back throws his ball straight up on the opposite side and goes to catch the front Juggler's ball with his other hand. Juggler at front catches the ball on the opposite side, does two self throws and then begins the exchange again on the other side. Juggler at the back has an easy life. This feels similar to three count passing.

### Assisted 4 Takeaways

An insert into the above pattern or a pattern in its own right. Essentially a 4 ball round and round takeaway pattern. Start the same as above. As soon as front Juggler has thrown ball 1 to the side (back Juggler throws ball 4 at the same time the opposite side) he throws 2&3. The order of the balls seen from the front is



*If you wish to start your pattern with the left hand, the order would be reversed ie. 4231.*

It's very important that balls 1&4 get thrown always at the same time. Number 3 ball needs to be thrown under the arriving Juggler's arm. If you've gone through a bunch of the takeaway patterns this should be refreshing because of its sense of columns.

This pattern is also not symmetrical .

You will get a different pattern depending on which one of you starts. Again, its very useful to do both versions.

### starting position

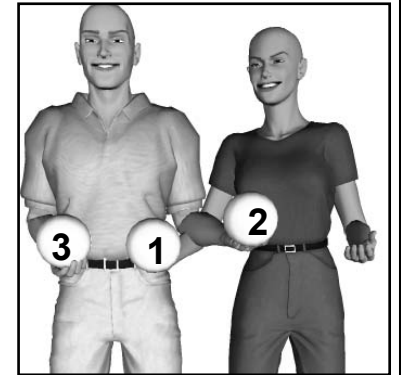


Illustration 11

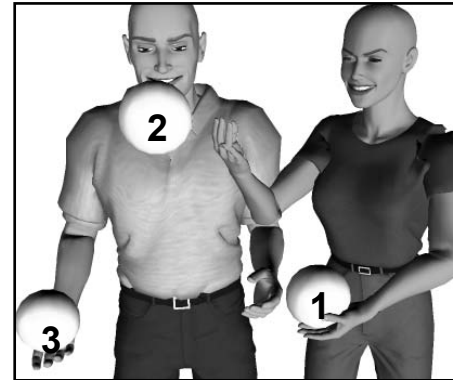


Illustration 12

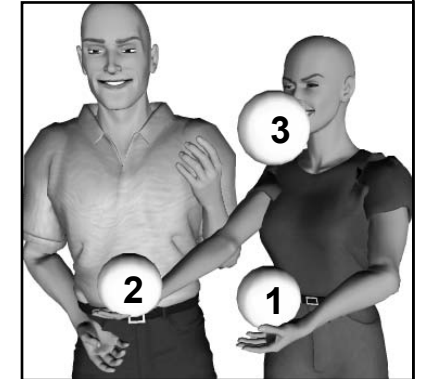


Illustration 13

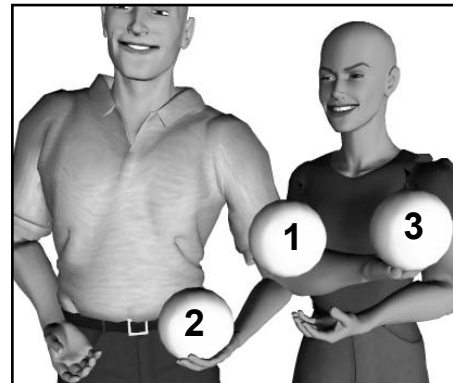


Illustration 14

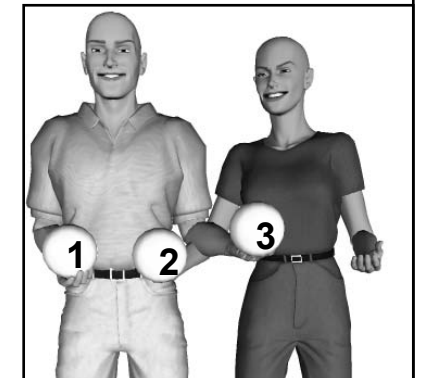


Illustration 15 "Patterns 1" 8

### 1/1 Out

Outside hand to outside hand is what is usually called a share. It is simply a shared 3 ball cascade.

This is one of the most common 2 person juggling patterns.

(Illustration 16)

### 1/1 In

The other 1/1 Pattern, inside Hand to inside Hand, is wonderfully different and seldom seen.

(Especially done by two androgynous naked men.)

Remember in the beginning we said we'll always replace the right hand with the left and vice versa.

Initially you could think that the crossed arms is an aesthetic addition, but if you respect the above rule, you'll find its not so.

(Illustration 17)

## Asymmetric Takeaways

We've been doing patterns of the a/a variety. We could go on forever, although perhaps this would be pointless. I would nonetheless recommend playing with some different counts: 6 / 6 , 7 / 7 , 8 / 8 ...

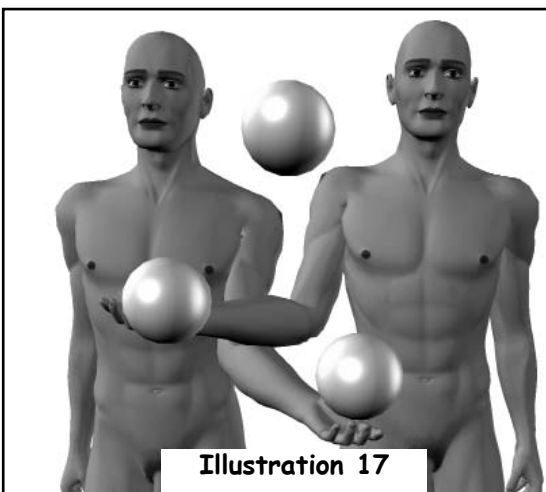
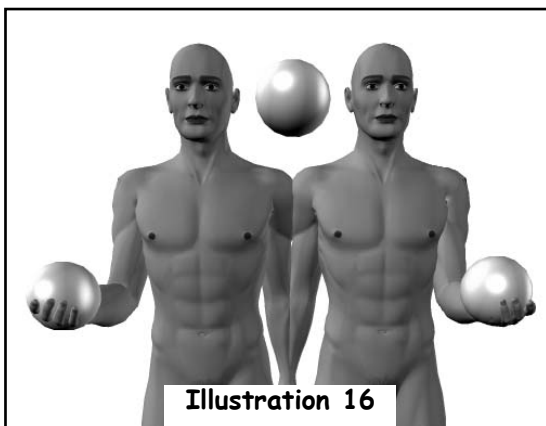
13 4 / 13 4 great for taking turns at cooking the evening meal...

But needless to say the two numbers don't need to be the same so:

### 2/3

Rachid catches twice followed by Shamira catching three times. If you practiced 2/2 and 3/3 then this pattern is a cut and paste between the two. Contrary to the previously encountered patterns this pattern cycles through its 2 states. By this I mean that the second time you go and grab the balls you will begin with a different hand. It takes ten throws (or catches) to get back to the beginning.

9 "Patterns 1"



### Outside Aura 3

As in the standard 3 ball 2 person 3/3 inside takeaways one hand works twice as much as the other. This is the easiest hand to add a ball to. Twin one starts with aura 3 Ball in the outside hand. The aura gets thrown just before catching takeaway ball 2. It travels from outside hand to outside hand. There is a certain logic to throwing this Aura since you need to get rid of it in order to take the balls. It might help to colour code the Aura for this, and for all the following patterns.

### Outside Aura 1

Very similar to the above but slightly illogical. One throws the Aura as the first take away is being thrown. If you have tried Aura 3 it will probably be difficult not to let the timing shift to that pattern. I would suggest starting this with twin one holding all four balls. The Aura ball is held last and is thrown at the same time as twin 2's first throw of takeaways.

### Inside Aura 2

This is very difficult and a potential knuckle breaker. Twin one starts with Aura 2 ball in his inside hand. As he goes to take the first ball he throws the aura slightly over the first takeaway ball to twin 2's inside hand. Then vice versa. The secret is to delay the throwing of the ball as much as possible but to try and throw a good lofty, precise throw nonetheless. When it works the throw feels like the first uncross throw of a Mills Mess.

### Auras 1 and 3

A combination of the 2 above patterns. There is a certain margin of freedom in regards the throwing of the above patterns that is lost when they are both thrown at the same time. What this means is that if one is throwing just one aura from the hand that catches the least there is a large margin of error. However by adding the 2 auras one fills all the gaps and has to be a lot more exact. I would recommend starting Twin 1 with aura 3 in his hand twin 2 with the three takeaway balls plus Aura 1. If you can switch the middlesborough pattern on to automatic pilot then the outside hand just cascades two balls backwards and forwards.

### Inside Aura 2 and Outside Aura 3

If you have tried both of these auras separately then you know what you are letting yourself into. I found this a lot more concentration than Auras 1 and 3.

# Middlesborough Family

## Middlesborough Shuffles

I love these ones. I think we spent about a year fiddling with endless variations of this. The Middlesborough shuffle is so called because Kati and I came up with it whilst we were in the town of Middlesborough UK. The basic pattern is cross armed reverse cascade inside hand 3/3 takeaways. Let us repeat that sentence: The basic pattern is a cross armed reverse cascade inside hand 3/3 takeaways. Now what could be simpler?

To do this pattern it helps if you can do a crossed arm reverse cascade on your own. The pattern is quite difficult at first but soon settles into something quite comfortable.

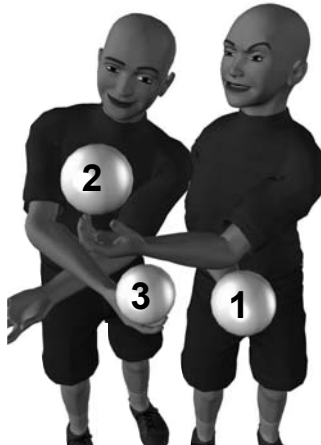
There is an odd anatomical rightness about this pattern. As in solo mills mess the pattern seems to flow. There are a bunch of similar patterns that just don't have the same smooth quality about them.

What is tricky is that when one does the inside hand version it feels like an outside throw since its being thrown by the inside hand on the outside. I think that the twins in the illustration and the video show this better than words can.

Illustration 18

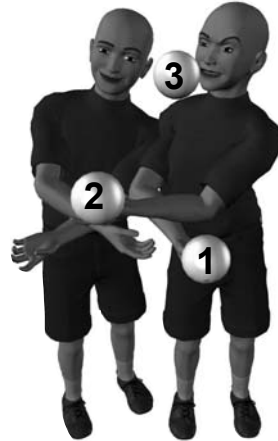


Illustration 19



Auras

Illustration 20



After playing with the Middlesborough patterns a while we realized that there is room for many more balls. Because of the way the added balls draw circles around the takeaway pattern we decided to call the balls Auras.

*We are planning a whole series of pseudo spiritual patterns.*

*Stigmata 33, reverse communion...*

So for example Rachid alternates between Right,Left and Left, Right, between Inside/Outside and Outside/Inside. Shamira alternates between Right, Left, Right and Left, Right, Left between Outside, Inside, Outside and Inside, Outside Inside.

7/9

Another Medicine pattern.

2/1

One version of this pattern is a real standard although it is usually done one juggler behind the other. The juggler juggling the 1 ends up throwing the same ball backwards and forwards to herself.

3/1

This pattern feels almost like there's just one juggler, the other person just takes a ball every three throws and throws it straight back. Easy life!

*4/3, 5/3, 4/2, 11/3 and so on ad infinitum*

## Complex Takeaways

Let's go further by adding one more segment!

3/2/1

Rachid does 3 catches, Shamira does 2 catches, Rachid does 1 catch and it starts all over again with the roles reversed, Shamira does 3 catches, Rachid does 2 catches, Shamira does 1 catch and we are right back to where we started.

This is a difficult one. I would strongly recommend spending time on some of the simpler patterns first. Just as in 2/2 there are two versions of this, depending on who does the initial taking.

*This pattern can seriously hurt the mind.*

2/2/1 and 1/1/2

These are total brain melters, monitor how long it is before you can have a conversation at the same time.

*5/3/1, 2/3/1, 11/2/124, 2/1/2/3, 4/17/2/124*

*Needless to say you can add as many segments as you desire.*

## Round and Round Takeaways

By round and round we mean that the 2 jugglers circle each other, instead of staying side by side. Again for now we will assume that the hands alternate. Initially it is easier to take with the outside hand as you approach.

### 4/4 Out

Beautifully symmetrical pattern with each juggler doing exactly the same thing. One gives the pattern away, goes around the other juggler and 4 throws later takes it back. Notice that because you are going round and round, this is different from the side by side version. In this version both jugglers take with their outside hand first. This pattern is a real standard. If I was writing this twenty years ago I would advise you to also trade hats and cigars. I won't.

Try also 4/4 In  
Same as above but taking with the Inside Hand first. This is a lot harder than the outside version and is an odd anatomical logic. Experiment to see how it is best to grab the first ball.

### 5/5

Alternates between outside hand taking and inside hand taking.

### 3/3

Same as above , but because its two throws less you have to go round much quicker.

### 2/2 Out

Another classic pattern. As we saw in the side by side Takeaways its peculiarity is that you end up catching your own first throw. It helps to stay close and go fast.

Try also 2/2 In  
Very difficult because of the catching with the inside hand. It might help to catch on the other side of the throwing juggler.

3/2  
Again experiment with how you reach for the inside ball.

2/1  
maybe possible.

1/1  
très difficile ...

And so on and so forth.

Add segments. Obviously you can apply all the side by side ideas to these round and round patterns.

The lower numbers are definitely harder since it takes time to get around to the other side to catch a ball.

Try to go round and round the other way, or face each other.

## Different Positions

All of the above patterns can be done facing each other, for example:



### 3/3 Front

Exactly the same as above but you stand facing each other.

You can choose to either keep the pattern in the middle of you or throw the balls to each other.



### 2/2 Front

Same as the standard 2/2 , but facing each other.

*This one is not featured on the video due to height restrictions in the studio...*



Some of these positions are illegal in certain countries.