



Inside Ed's Head

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Predicted Coincidence, Part 2

Last month, I talked about the basic way of doing “Any Card at any Number” (ACAAN) with a memorized deck. Although this effect, in the hands of many performers, can be very magical and entertaining, I didn’t like the obvious foreshadowing *before* the necessary actions to accomplish the effect are taken. I know David Berglas can do it; I wanted to see if there was a better way for me to do it.

I figured using two decks would turn the trick from an unlikely 1 in 52 shot to an almost impossible 1 in 2700. Along the way, I noticed it would make the effect *easier* as well!

Two Decks

My first thought was simply to give a spectator a deck, have him name a card and then we’d each deal cards face up from our decks, and the only card that would be a match would be the card named. This is simple conceptually—once the spectator names a card all you need to know is its position in both decks. Then you’d use the ACAAN formulas above to set the card in one deck to the same position in the other.

Obviously, you can’t do a coincidence of this nature with two decks with the same stack—all the pairs would be identical. You might be able to do it if you’ve memorized two different stacks but there’s no guarantee that there wouldn’t be several matches preceding the match you’re expecting.

It occurred to me to make the second deck a mirror of the first—in the same order, but from *the bottom to the top*. This way all you’d need to know is the stack number (SN) of a card in the second deck (SN2) would be fifty-three minus the SN in the first deck. If the Queen of Hearts is the second card in deck one, it will be the fifty-first in deck two. If the King of hearts is twenty-seven in deck one, it will be twenty-six in deck two.

So, as well as giving you *two* different stacks you can essentially memorize, you can be sure that there is only one matching pair seen when the two decks are dealt. (There are actually two matching pairs, twenty-six cards apart, but the spectators need not be aware of this; later, I’ll deal with how you do it.) You can skip the following math and go to the “AHA” section on the next page if you so desire.

Formula 4: $SN2 = 53 - SN1.$

Now we derive two more formulas for how many cards to cut to the bottom of deck one to cause a named card to be in the same position in two mirrored decks.

Formula 5: (Derived from Formula 1) the stack number is greater than 26

$$\begin{aligned} \text{CTC} &= \text{SN} - (53 - \text{SN}) = \\ &= \text{SN} - 53 + \text{SN} = \text{SN} + \text{SN} - 53 = \\ &= 2 * \text{SN} - 53 \end{aligned}$$

We can simplify Formula 5 by rewriting it as

Formula 6: $\text{CTC} = 2 * \text{SN} - 53 = (2 * \text{SN} - 52) - 1$

We can now factor the first term to get

$$\text{CTC} = 2(\text{SN} - 26) - 1$$

which makes it a little easier to calculate when the number given is greater than twenty-six.

Formula 7: (Derived from Formula 2):

$$\begin{aligned} \text{CTC} &= 52 + \text{SN} - (53 - \text{SN}) = \\ &= 52 - \text{SN} - 53 + \text{SN} = \text{SN} + \text{SN} + 52 - 53 = \\ &= 2 * \text{SN} - 1 \end{aligned}$$

AHA

Things have just gotten a little easier. Using two decks with a mirrored memorized stack, we don't have to do any subtraction of the stack numbers to arrive at our final total. So if you're the type of guy who has to think a bit while subtracting twenty-seven from forty-three, your life just got a little easier! If we are holding deck one (the deck in normal stack order), we just have to multiply the stack number of a named card by two and subtract either 1 or 53 to find the number of cards we have to cut to the bottom to get it to occupy the exact same position as in deck two (the mirrored deck).

Now that's not the trick I mentioned at the beginning, but it's a start. Your effect up to now is that you can ask a spectator to name any card, and you can have two decks dealt out simultaneously and that card will be the only card in the deck dealt out with its mate. You'll also know at which position it will fall (53 - SN). If that number is greater than 26, you count from the *face* of the deck, so the spectator will not see the match that occurs in the lower half of the deck.

Frankly, I'm not too crazy about this effect. You have no knowledge of where the match will be. It may occur on the third card (too early) or the twentieth—there's no "magical moment." The cards are being dealt and eventually the card the spectator named shows up in both hands at the same time. It's OK, but in my book, not magical enough.

Verrrry Int-er-est-ing

Up to now, we've been assuming you've been holding deck one, the one in normal stack order, and Alice has been holding deck two, the one in mirror

order. What would happen if the decks are switched? Could you still do the trick? Yes you could, but in order to get the named card in proper position, you would use the same formula to determine how many cards to cut and then cut the calculated number of cards from the *bottom to the top*.

Let's examine how this affects our effect. (I love that sentence!) We can simplify the procedure by having Alice name a *number* instead of a card. All you have to do now is double that number and subtract one or fifty-three, cut that number of cards from the bottom to the top and the cards at the number Alice has named will be a match. You've achieved a minor miracle, and you did it *without the need to memorize anything!* Cutting the proper number is easy also, since you are now holding the mirrored deck, you just need to find the card with the desired stack number and get a break *above* it, then cut all of these to the top. (Remember, with the stack numbers marked on the back of the deck, there's no problem finding the stack number in either deck.)

Now let's look at the effect so far—the spectator names a number, two decks are dealt face up and you point out that none of the cards match the card in the other deck. The card at the spectator's number is dealt face down, creating some suspense. You have a few more cards dealt face up to show there are no other matches. Finally, the magic moment arrives—the face-down cards are turned over, and they match.

But What If Her Number Is Greater Than Twenty-Six?

You're best off with a number twenty-six or less. A number greater than twenty-six means you'll have to double a relatively high number and then subtract fifty-three from it. There will also be another matching pair twenty-six cards before you reach her number. There are several ways to deal with this.

First, when you ask Alice to name any number, tell her she and Bob will be responsible for dealing that number of cards onto the table, and that the more cards she deals the longer the trick will take. Point out that a number lower than "about half the deck" will make life easier for all. This is usually sufficient.

If it doesn't work, you still have two options. You can proceed with the trick, and when you come to the first match you can say, "Wow! There's a match. The odds of having more than one match when dealing two decks of cards is much lower than having one. I'm afraid the odds of a successful finish are really low now." Resume the dealing process and finish as above.

If you're absolutely unwilling to show the two matches, you can say, "Well, to save time, we'll deal cards from the face and count down." Start with each of you holding the cards *face up*, and count the cards backwards from fifty-two. When you get to the card one *higher* than the number Alice named, stop the deal and point out the impending match. Personally, I wouldn't use this alternative; I've mentioned it for completeness sake. If

you do choose this out if Alice is uncooperative, I suggest leaving the cards in a face-up spread when you ask Alice to name a number. It seems somewhat more logical to deal backwards from the face when the cards start in a face-up condition.

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