February 2017

Clocking the Deck
(It's Time to Learn Something New)

I'm sure many of you know that if you add up all the values of all the cards in a deck, you'll get a total of 364. You've probably heard that you can use this to your benefit in some magic effects. If one card is removed from the deck, and you add the values of all the remaining cards, the total will be less than 364, so, obviously, the value of the remaining card is needed to bring the total up to 364.

You probably think that actually *implementing* this is beyond practical use.

Well, it's not trivial but it's not rocket science. I'll explain the idea behind it, and then explain a couple of ideas that will make the concept simpler to implement.

The first thing that you need to know is called "casting out thirteen." What this means is that as you're adding up the individual cards, any time your total gets to thirteen or more, you subtract thirteen from it, so you never need to remember a total higher than twelve. (You'll add eleven for the jack, twelve for the queen, and you can *ignore* the kings, because if you were to count it as a thirteen, you'd add thirteen, and then immediately subtract thirteen—so kings don't affect the total.)

Let's say the top card of the deck is a four. Remember this value—it's the current total. Now take the next card, let's say it's a six; add this to the total which is now ten. The next card is an eight. The total is now eighteen.

Now, subtract thirteen from the total so it becomes five. If the next card is a jack, add eleven, getting sixteen. Since the total has gone over thirteen, you subtract thirteen again, getting to three. A two will bring the total to five, a king will *keep* the total at five, and a ten will bring the total to two. (5 + 10 – 13.)

There's a very easy way to practice this: take out thirteen cards, one of each value. Turn them face down, shuffle them and then remove one card, putting it aside, also face down. Now start adding up the values of the twelve remaining cards. When you're done, *subtract your total from thirteen!* The *remainder* will be the value of the card you set aside.

If you've actually bothered to do this, you probably found it gets pretty easy after a couple of practice runs.

I don't believe it's ever taken me more than a minute to clock a full deck. Unfortunately, I don't always come up with the right total, which tends to minimize the value of the whole procedure.

What are the causes of this problem? There are two. The first is that as I'm hurrying through the deck, I inadvertently miss a card. Obviously this will mess up my total. The second is that I just get the math wrong. This is inexcusable for a grammar school graduate, but under performance pressure, trying to go *too fast*, messing up can happen. The obvious solution is to slow down a bit; an extra ten seconds might make the difference between a failure and a miraculous hit. Going at the proper speed *for you*, avoiding rushing, will ensure correct results.

Unfortunately, that extra ten seconds might also help to bore your audience to sleep.

Unless you're of the Harry Lorayne ilk that can talk entertainingly for a minute or two while adding up the total of a deck of cards, you'll need a hell of a rationale to sit in silence while you add the values of fifty-one cards together. The way to do it properly is break it into pieces. Practice running off groups of about ten cards and pattering for a bit. Then another then, and so on.

There is an even easier way to speed up the count. Perform a trick that lets you know the *color* of the removed card before you clock the deck. I won't get into *how* you do this right now; all I can say is, try it. Take out all the red cards from your deck, discard one of them and try to clock the remainder. You'll find that it's a lot easier, and faster, than clocking the whole deck.

Now remove a different unknown red card. Shuffle the rest of the red cards in with the blacks, and clock the red cards. You'll see that mixing the red cards in with the blacks even makes things *easier*—the black cards in the deck give your mind some time to relax as you're adding up the red cards. With just a bit of practice you should be able to find the value of an unknown red card in about thirty seconds or less.

Now if you actually *have* been playing along with a real deck of cards, you've probably noticed something important. Let's say you have a total of eight, and the next card is a queen (12). Eight plus twelve is twenty. Twenty minus thirteen brings you down to seven. Adding a queen to the total is exactly the same as *subtracting one from it*. So if you *always* think of a queen as "minus one," you'll make your life a little easier. (If your total happens to be zero when you see a queen, just subtract one from the value of the next card.)

Similarly, a jack acts as a "minus two." I don't normally take it beyond this point; a ten can be a "minus three" but I don't always use it as such—

although on occasion I will—it depends on the count.

But wait, there's more! What if the unknown card is a red *spot card?*

Happily, the total of the twenty red (or black) spot cards is 110. This makes life considerably easier, because now you can clock the cards by *casting out ten!* That's right, if your first card is a seven and your second one is a five, your new total is two! You can ignore the tens; they don't change the total. If you're no smarter than a fifth grader you can find the value of an unknown red spot card by clocking just nineteen cards! All you have to do is add all the nineteen cards, casting off ten as you do so. When you're done, subtract the total from *ten* to get the value of the unknown card.

I'm sure you've noticed that clocking only gets you the *value* of the unknown card. You must look through the deck one more time to see which suit is missing to know the *exact* card that has been removed.

As it happens, I have tricks in mind that make use of clocking the deck. Both Paul Cummins and Michael Powers have very good tricks using this principle. Tune in next month to see which one has granted me permission to use his trick.

Note: When I sent this column over to Sal, my invaluable editor, he wrote back the following comment:

First, you have to clock the deck to get the value. Then you have to go through the deck again to determine the suit! The trick by Paul Cummins or Michael Powers better be INCREDIBLE to be worth all this effort, not to mention the *snore-effect* on your audience.

I gave him a call and then sent him a YouTube link to a trick that uses clocking.

His reply follows:

Ed-   You're right!   It IS a FANTASTIC Trick! . . . Thanks for the link!   I'm dying to see how the trick is done!   Sal

See you in March!