**2019全国卷I （阅读理解C篇）**

As data and identity theft becomes more and more common, the market is growing for biometric（生物测量）technologies—like fingerprint scans—to keep others out of private e-spaces. At present, these technologies are still expensive, though.

Researchers from Georgia Tech say that they have come up with a low-cost device（装置）that gets around this problem: a smart keyboard. This smart keyboard precisely measures the cadence（节奏）with which one types and the pressure fingers apply to each key. The keyboard could offer a strong layer of security by analyzing things like the force of a user’s typing and the time between key presses. These patterns are unique to each person. Thus, the keyboard can determine people’s identities, and by extension, whether they should be given access to the computer it’s connected to — regardless of whether someone gets the password right.

It also doesn’t require a new type of technology that people aren’t already familiar with. Everybody uses a keyboard and everybody types differently.

In a study describing the technology, the researchers had 100 volunteers type the word ＂touch＂four times using the smart keyboard. Data collected from the device could be used to recognize different participants based on how they typed, with very low error rates. The researchers say that the keyboard should be pretty straightforward to commercialize and is mostly made of inexpensive, plastic-like parts. The team hopes to make it to market in the near future.

**2019全国卷III （阅读理解C篇）**

Before the 1830s,most newspapers were sold through annual subscriptions in America, usually $8 to $10 a year. Today $8 or $10 seems a small amount of money, but at that time these amounts were forbidding to most citizens. Accordingly, newspapers were read almost only by rich people in politics or the trades. In addition, most newspapers had little in them that would appeal to a mass audience. They were dull and visually forbidding. But the revolution that was taking place in the 1830s would change all that.

The trend, then, was toward the "penny paper"— a term referring to papers made widely available to the public. It meant any inexpensive newspaper; perhaps more importantly it meant newspapers that could be bought in single copies on the street.

This development did not take place overnight. It had been possible(but not easy)to buy single copies of newspapers before 1830,but this usually meant the reader had to go down to the printer's office to purchase a copy. Street sales were almost unknown. However, within a few years, street sales of newspapers would be commonplace in eastern cities. At first the price of single copies was seldom a penny—usually two or three cents was charged —and some of the older well-known papers charged five or six cents. But the phrase "penny paper " caught the public's fancy, and soon there would be papers that did indeed sell for only a penny.

This new trend of newspapers for "the man on the street" did not begin well. Some of the early ventures(企业)were immediate failures. Publishers already in business, people who were owners of successful papers, had little desire to change the tradition. It took a few youthful and daring businessmen to get the ball rolling.

**2019全国卷III （阅读理解D篇）**

Monkeys seem to have a way with numbers.

A team of researchers trained three Rhesus monkeys to associate 26 clearly different symbols consisting of numbers and selective letters with 0-25 drops of water or juice as a reward. The researchers then tested how the monkeys combined—or added—the symbols to get the reward.

Here's how Harvard Medical School scientist Margaret Livingstone, who led the team, described the experiment: In their cages the monkeys were provided with touch screens. On one part of the screen, a symbol would appear, and on the other side two symbols inside a circle were shown. For example, the number 7 would flash on one side of the screen and the other end would have 9 and 8. If the monkeys touched the left side of the screen they would be rewarded with seven drops of water or juice; if they went for the circle, they would be rewarded with the sum of the numbers—17 in this example.

After running hundreds of tests, the researchers noted that the monkeys would go for the higher values more than half the time, indicating that they were performing a calculation, not just memorizing the value of each combination.

When the team examined the results of the experiment more closely, they noticed that the monkeys tended to underestimate（低估）a sum compared with a single symbol when the two were close in value—sometimes choosing, for example, a 13 over the sum of 8 and 6. The underestimation was systematic: When adding two numbers, the monkeys always paid attention to the larger of the two, and then added only a fraction（小部分）of the smaller number to it.

"This indicates that there is a certain way quantity is represented in their brains, "Dr. Livingstone says. “But in this experiment what they're doing is paying more attention to the big number than the little one.”