It's hard to imagine a world without email. It's now the dominant form of exchange, with the typical American adult spending more than an hour a day managing the inbox. (People under 25 now spend more time texting from their cellphones than talking on them.) The shift has been most dramatic for "knowledge workers" like computer programmers and lawyers, who devote nearly half their workdays to email.

Email has also profoundly influenced the kinds of people we interact with. According to a new study by Stefan Wuchty and Brian Uzzi at Northwestern University, we exchange the highest volume of email with those people we know the least. Perhaps it’s a new colleague, or a friend of a friend, or a total stranger writing out of the blue: Email makes these exchanges possible.

"These are folks you almost certainly wouldn’t talk to on the phone,” Mr. Uzzi says. "You also probably wouldn't bump into them on the street. But email allows us to communicate with them all day long.”

What makes this study noteworthy is that the researchers had access not only to the complete email records of a midsize company—nearly 1.5 million messages sent by 1,052 employees over a six-month time span—but also to a detailed map of social relationships. (The employees were asked to list all of their personal contacts.)

By comparing these two data sets, Messrs. Wuchty and Uzzi developed an algorithm that let them predict the nature of a given relationship based solely on the details of an email exchange. "We didn’t need to read the messages or anything like that,” Mr. Uzzi says. "Just looking at the speed of a reply was more than enough.”

People reply to their close friends, on average, within seven hours of getting the email, the data show. Professional contacts take a bit more time: We don’t hit send for nearly 11 hours. But the biggest difference came when the scientists looked at those people we barely know. On average, it took us 50 hours to reply. In other words, there’s a surprisingly easy way to figure out how you feel about someone—just count the hours before you hit the "reply” button.

"Although these messages [from people we don’t know well] account for the majority of messages, people replied much more slowly to them,” Mr. Uzzi says. "We clearly give email priority to our close friends, just as we do in real life.”

The researchers imagine many practical applications for this algorithm, at least once the obvious privacy issues are settled. Companies, for instance, could use it to more effectively assign people to teams, searching for the optimal mixture of close friends and total strangers. Email programs might use it to sort our messages automatically into
various folders, while social networking sites could use the algorithm to construct more accurate maps of online connections, thus allowing companies to precisely target their advertising.

This research is also reassuring. Like all new technologies, the Internet has provoked a tremendous amount of anxiety, as people worry about the decay of our attention spans and the dissolution of authentic human contact. We are sometimes so busy texting that we forget to talk, and it seems to some that our online "friending" has ruined real friendship.

But this study is a reminder that even in a world transformed by digital devices, the most important things remain constant. Although we can interact with anyone, we still respond most quickly to our closest friends. We now know many more people, but we haven't forgotten which members of our circle really matter.

The same constancy also applies to social networking sites. The average Facebook user has more than 130 online "friends," but the site hasn't fundamentally changed the nature of real-world friendship. When surveyed, those with the most Facebook contacts still have roughly the same number of close relationships as everyone else. The only difference is that they seem to get more emotional support from these friends.

We always fret over new things, but so far, it's hard to see a social downside to the Internet. Online interaction has allowed us to meet many new people, but it has not diminished our yearning to maintain older relationships. As the song about new and old friends goes, one is silver and the other is gold.