

# Texting has rewired your brain

September 28 2011, by Deborah Braconnier

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(Medical Xpress) -- Do you know what the numbers 5683 and 3327 mean? According to a recent study, if you are a person who frequently sends text messages, your brain knows what these numbers mean and is unconsciously influencing how you feel about phone numbers you dial.

Professor Sascha Topolinski, a [psychology professor](#) from the University of Wurzburg studies embodiment, or the area of study that looks at the information your body provides to your [brain](#). The new research is published in this week's issue of *Psychological Science* and shows how repeated texting has linked together your brain and motor functions to the point that when you dial a [phone number](#), your brain also receives the possible letter meanings of the numbers you dial.

Topolinski's study consisted of three different experiments. Participants were university undergraduate students that were under the impression they were participating in an ergonomic study. They were all given phones that had the letters removed from the keypad.

The first experiment divided the participants into two groups. One group was dialing a number on a computer screen while the other was dialing the number on a cellphone. After dialing the number, they were presented a word on a computer screen and had to decide if the word was real or not. Those that dialed the corresponding word on the cellphone were able to identify the word on the computer screen more quickly and showed the researchers that by dialing the word, the word was unconsciously activated in the brain.

The second experiment looked more at the emotional side of [words](#). Participants were asked to dial a number and then rate the number on how pleasant it was to dial. The ratings showed that positive meaning words rated more pleasant than words with a negative or neutral meaning.

The final experiment looked at company phone numbers that had business related words made from the numbers. For example, a number like 800-RENT-CAR for a car rental company. The participants showed a preference for companies whose numbers showed this, even though they were not given the words to dial. The brain recognized the connection of the numbers to possible words.

The study suggests that by simply choosing the right telephone [number](#), companies could subliminally shape consumers attitudes towards their business.

**More information:** I 5683 You: Dialing Phone Numbers on Cell Phones Activates Key-Concordant Concepts, by Sascha Topolinski, *Psychological Science*, Published online before print January 26, 2011, [doi: 10.1177/0956797610397668](https://doi.org/10.1177/0956797610397668)

## Abstract

When people perform actions, effects associated with the actions are activated mentally, even if those effects are not apparent. This study tested whether sequences of simulations of virtual action effects can be integrated into a meaning of their own. Cell phones were used to test this hypothesis because pressing a key on a phone is habitually associated with both digits (dialing numbers) and letters (typing text messages). In Experiment 1, dialing digit sequences induced the meaning of words that share the same key sequence (e.g., 5683, LOVE). This occurred even though the letters were not labeled on the keypad, and participants were not aware of the digit-letter correspondences. In Experiment 2, subjects

preferred dialing numbers implying positive words (e.g., 37326, DREAM) over dialing numbers implying negative words (e.g., 75463, SLIME). In Experiment 3, subjects preferred companies with phone numbers implying a company-related word (e.g., LOVE for a dating agency, CORPSE for a mortician) compared with companies with phone numbers implying a company-unrelated word.

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