

# New study identifies the QWERTY effect, or how typing shapes the meaning of words

March 7 2012

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Words spelled with more letters on the right of the keyboard are associated with more positive emotions than words spelled with more letters on the left, according to new research by cognitive scientists Kyle Jasmin of University College London and Daniel Casasanto of The New School for Social Research, New York. Their work shows, for the first time, that there is a link between the meaning of words and the way they are typed - a relationship they call the QWERTY effect. Their study is published online in Springer's journal *Psychonomic Bulletin & Review*.

In the past, language was only spoken and therefore, only subject to the constraints on hearing and speaking. Now that language is frequently produced by the fingers – typing and texting – it is filtered through the keyboard i.e. through QWERTY. As people develop new technologies for producing language, these technologies shape the language they are designed to produce. What Jasmin and Casasanto's work shows is that widespread typing introduces a new mechanism by which changes in the meaning of [words](#) can arise.

Some words are spelled with more letters on the right side of the keyboard, others with more letters on the left. In a series of three experiments, the researchers investigated whether differences in the way words are typed correspond to differences in their meanings.

They found that the meanings of words in English, Dutch and Spanish were related to the way people typed them on the QWERTY keyboard. Overall, words with more right-side letters were rated more positive in

meaning than words with more left-side letters. This effect was visible in all three languages and was not affected by either word length, letter frequency or handedness.

The QWERTY effect was also found when people judged the meanings of fictitious words like "pleek," and was strongest in new words and abbreviations like "greenwash" and "LOL" coined after the invention of QWERTY.

Why should the positions of the keys matter? The authors suggest that because there are more letters on the left of the [keyboard](#) midline than on the right, letters on the right might be easier to type, which could lead to positive feelings. In other words, when people type words composed of more right-side letters, they have more positive feelings, and when they type words composed of more left-side letters, they have more negative feelings.

Linguists have long believed that the meanings of words are independent of their forms, an idea known as the "arbitrariness of the sign." But the QWERTY effect suggests the written forms of words can influence their meanings, challenging this traditional view.

Should parents stick to the positive side of their keyboards when picking baby names – Molly instead of Sara? Jimmy instead of Fred? According to the authors, "People responsible for naming new products, brands, and companies might do well to consider the potential advantages of consulting their keyboards and choosing the 'right' name."

**More information:** Jasmin K & Casasanto D (2012). The QWERTY effect: how typing shapes the meaning of words. *Psychonomic Bulletin & Review*. [DOI 10.3758/s13423-012-0229-7](https://doi.org/10.3758/s13423-012-0229-7)

Provided by Springer

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