

How a hedge fund's social network reacts to market swings

April 20 2016, by Heather Newman

When an organization experiences stressful or unexpected news, does it use its social networks to reach out or to hunker down?

To answer that question, a University of Michigan researcher and colleagues analyzed more than 22 million instant messages exchanged in 2010 and 2011 among decision-makers at a large [hedge fund](#) and their network of hundreds of outside contacts.

They found that whether the market went up or down, the group reacted in the same way. They communicated more with their closest connections, rather than reaching outside their sphere to gather new information.

The researchers refer to this process as "turtling up," the way a turtle pulls its head and feet into its shell in times of stress.

"The results suggest that social networks in the face of stress broadly exhibit features associated with 'turtling up' rather than opening up," said the study's principal author, Daniel Romero, an assistant professor at the U-M School of Information. "Social networks become more intensely interconnected among third parties, rely more on information from strong rather than weak ties, and disproportionately attend to organizational insiders."

As might be expected, the language in the messages was more positive when the market was going up and more negative when it was going

down.

"What was surprising is that the pattern of turning inward to their closest contacts stayed the same in both situations," Romero said. "We saw that personnel tended to draw inward to their closest and perhaps most trusted contacts during these stressful periods.

"As a result, they were probably not gathering new information, when they could potentially have gained new and more helpful information by going outside their normal networks."

He cites another study that shows people who face the threat of job loss disproportionately turn to their weak ties, presumably broadening their options to access new job information.

Romero and colleagues conclude that understanding how a network reacts to shocks can be an important factor in understanding the organization more broadly. It may be applied to behaviors of social networks in other organizations where personnel may be in situations of sudden stress, such as law enforcement personnel facing a terrorist attack or health professionals responding to disease outbreaks.

The paper resulting from the study, "Social Networks Under Stress," won best paper recently at the International World Wide Web Conference 2016 in Montreal. In addition to Romero, authors include Brian Uzzi of the Northwestern University Institute of Complex Systems and Jon Kleinberg of Cornell University.

More information: Social Networks Under Stress:
[dromero.org.s3-website-us-east ... worksUnderStress.pdf](http://dromero.org.s3-website-us-east-1.amazonaws.com/worksUnderStress.pdf)

Provided by University of Michigan

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