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Street Dogs: Instant messaging helps traders buy and sell at the right time

Animals are thought to manage risk through synchronous behaviour that spontaneously arises without leadership.

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Published: 2011/03/30 08:29:53 AM

ANIMALS are thought to manage risk through synchronous behaviour that spontaneously arises without leadership. Birds, for example, often launch simultaneously in response to a loud bang and form a dense group in the air.

Their synchronous behaviour allows them to obtain and process information collectively from widely distributed sources.

Now, researchers at Northwestern University's Kellogg School of Management have found that stock market traders achieve better results by trading in synch with others. In other words, the emergent crowd wisdom helps people reach good decisions.

Serguei Saavedra, Brian Uzzi and Kathleen Hagerty tapped into more than 2-million instant messages sent between 2007 and 2009 by traders scrambling to buy or sell stocks in a fluctuating market. The more the instant messages came in waves — unlike what would be expected if the messages were sent and received randomly, as in casual conversations — the more synchronous trading became. And the higher the traders' synchrony, the more likely they were to dodge losses.

"The reason synch is thought to exist is that any animal on its own cannot process the complex information they're sometimes faced with. So when complexity increases, the animals appear to manage it better with a collective response that emerges from their individual responses, even though they are not trying to co-ordinate," explains Uzzi. "We've seen this in nature and were excited at the prospect of it happening in human systems."

"In animals, synchronised behaviour is mediated through vision, sound, odour, and other sensory cues. But in humans, the catalysts and payoffs have been unclear because human senses are not as tuned to the environment as they once were. Instead, we have become sensitive to signals coming from various devices. Instant messaging — called 'IMing' — is part of a trader's routine. As ever-changing news on the housing market, the Federal Reserve, job figures, bankruptcies, and other data pours in, traders need to figure out quickly which information applies to their stocks and what should be done about it. No one person could successfully sift through the flood alone, so traders try to figure out the meaning by IMing bits and pieces of information with their IM network of contacts."

As waves of IMs formed — as opposed to a random distribution through the day — individuals increasingly traded within seconds of each other but often in unrelated stocks, ruling out the idea that the market was directly guiding their choices.

Instead, cues from the market triggered IMs, which in turn influenced synchrony.

The window to qualify trades as simultaneous was seconds, meaning traders were not simply following one another — a phenomenon known as herding behaviour. "If external stimuli were guiding trades, the stock market would be easy to figure out. But it's not," says Uzzi. "Synchronisation is telling us something unique about the system that no individual trader could tell us on their own. The idea that collective genius can surpass the intellect of a single person is radical. But I think there is a growing sense that collective dynamics may help us solve tough problems that a single genius simply can't." — Adapted from Synchronicity Pays, posted at Kellog Insight.

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