

Study: successful day traders stay in the black by syncing up via IM

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In a new paper released by *PNAS*, a group of researchers from Northwestern University examine three years worth of day-trading data, and find that traders who unconsciously time their trading activity to synchronize precisely with that of their peers are less likely to close out in the red at the end of the day. The researchers, it seems, were motivated by an analogy from nature—cicadas that chirp in perfect sync with the rest of the swarm are best able to balance the reward of finding a mate and the risk of being located by a predator. The paper also explores the role of instant messaging in synchronizing trading activity, as it exposes traders to information that helps them unconsciously synchronize in an unplanned, decentralized manner.

For the purposes of the study, the researchers gained access to almost two years worth of trading data from an anonymous trading firm, where 66 day traders sat in front of computer terminals trading stocks in different sectors during regular market hours. And because all outbound instant messaging traffic is logged by the firm per federal regulations, they were also able to get their hands on millions of IMs sent over that same time period, and to compare the IM traffic to the day trading data and to the market as a whole.

What the researchers found confirms the trading maxim that being early or late with a bet on a stock's direction is often the same as being wrong. Traders who engaged in what the paper calls "synchronized trading," where their trades are timed with those of their peers down to the second, are much more likely than their slightly early or late peers to close out the day with no losses. (The reason the paper focused on losses instead of on gains is that its goal was to examine the role of human synchronicity and communication in managing downside risks.)

Of course, this synchronous trading doesn't happen deliberately—at least, not "deliberately" in the sense of "on my mark, get ready, trade!" Rather, these episodes of natural synchronicity, whether they arise in cicada swarms or in trading pits, are spontaneous and decentralized, with the actors making individual decisions on when to act based on a mix of local information and their own sense of timing.

The individual insects, and also, presumably, the individual traders, have a sort of internal timing mechanism that gives them a sense of the appropriate moment to act. The synchronicity happens when some communication-based coupling mechanism enables all of those individual internal clocks to be brought into sync. For cicadas, it's the sound of a neighbor chirping on the next branch. For day traders, it's apparently a steady stream of IM traffic with colleagues and contacts.

The team examined the traders' IM log traffic and found a strong correlation between the volume of IM and the volume of trading activity. They then went further and correlated this trade/IM correlation, at the level of the individual trader, with the previously observed moments of synchronicity. They found that there was a strong positive correlation between trade/IM coupling and synchronous trading activity.

"This result," the authors claim, "reveals that the instant messaging patterns of traders are associated with their trades such that the observed level of synchronous trading increases as the communication pattern is increasingly different than what would be expected by chance. The more nonrandom the instant messaging pattern is, the greater the synchronous trading."

They go on to conclude that "the local communication patterns of individuals have an important association with the rise of simultaneous activity, which in turn is associated with their performance."

The paper doesn't suggest that traders are somehow coordinating their trades via IM. Rather, a mix of trader chatter, personal talk, and communication with a network of sector-specific contacts enable the trader to sample "separate local inferences about the eventual meaning of market information."

"When these diverse points of view converge," they write, "the traders trade in synchronicity such that the synchronous timing of trades reflects a point of crowd wisdom despite no conscious intention to do so on the part of any individual trader."

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The authors ultimately attempt to draw some preliminary conclusions about their work with traders that can apply more broadly to national security and disease control. It's a good idea to try to generalize their work to other domains, because in focusing on the human day trader, they may be studying an endangered species.

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