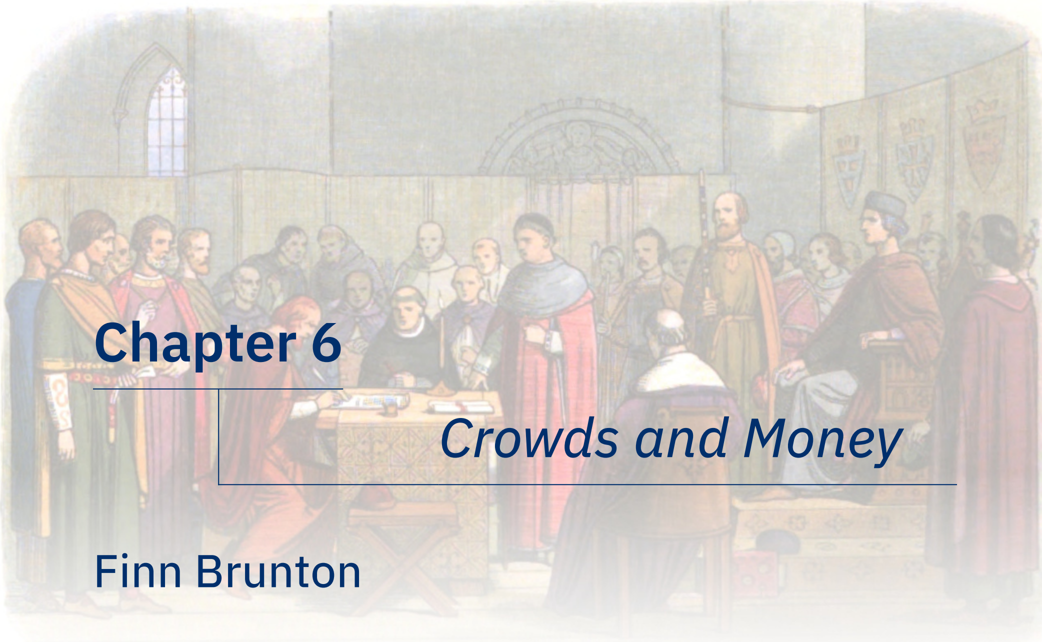

Chapter 6

Crowds and Money

Finn Brunton

> [They are] two perfectly insignificant and incapable individuals, whose existence is only rendered possible through the high organization of civilized crowds. Few men realize that their life, the very essence of their character, their capabilities and their audacities, are only the expression of their belief in the safety of their surroundings. The courage, the composure, the confidence; the emotions and principles; every great and every insignificant thought belongs not to the individual but to the crowd: to the crowd that believes blindly in the irresistible force of its institutions and of its morals, in the power of the police and of its opinion.
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> —Joseph Conrad, *An Outpost of Progress* (1896)

Markets Are Crowds

Not all crowds are markets, but all markets are crowds. A religious gathering, a house party, a book club, or the Storming of the Bastille: crowds, but not markets. A market without a crowd, though, is a onehand-clapping thought experiment. A transaction or exchange takes two, and a market takes many. A market without a crowd is like a language spoken by only one person.

The crowd that makes up a market can be as varied in its form as any crowd in general.

Constituents A market, as a specialized type of crowd, can be all sellers and a single buyer, like contractors bidding for a job. It can be all buyers and a single seller, as with an auction. It can have a clear division between those roles, like a trade show with fees and badges for those allowed to vend. Or the two parties can be more fluid: in a stock market or the rare book business most agents are buyer and seller at once.

The constituents of a digital market-crowd are not necessarily human. In order of sophistication, they can include scripts and bots; recommendation, pricing, and trading algorithms; and now potentially more advanced forms of machine learning and artificial intelligence.

Space and time A market-crowd can, of course, be local and immediate: the ancient Athenian *agora*, or a North African *souk*, or a flea market in a parking lot. It can be remote and delayed: buyers and sellers across the geography of the Silk Road, for instance. It can be local and delayed, as with "silent trading" throughout the ancient African world (one group deposits goods in a place and withdraws; the other party leaves what they will exchange, and withdraws; the first group returns and either takes the exchange goods, closing the deal, or leaves them, continuing the negotiation), or newspaper classifieds. Or, finally, remote and immediate.

This last category has transformed the nature of the market-crowd in the last century and a half. This development began with the introduction of the stock ticker (first installed in 1867). This realtime feed of market-crowd sentiment is the prelude to transactions executed by remote, immediate communication. The remote crowd, both delayed or immediate, is the primary market of social and platform media.

Rules and structure The market-crowd is bound by rules. The rules can be formal, like contracts, licenses, and requirements under which one operates to sell a house or buy a car, or the EULA and TOS of an e-commerce platform. The rules can be social, informal, and implicit: consider the many cultures in which haggling is expected, and the stated price just a starting point, or one of Erving Goffman's famous "breaching experiments"—tests of tacit social norms—in which his graduate students shopped in a grocery store by taking items from the carts and baskets of other shoppers in the aisles.

There many other ways to characterize various market-crowds: deliberate or incidental (like commuters on a subway platform); porous or impermeable; how they hail or signal new members, and how they communicate within themselves. One commonality among them all, in the language of investment analysis, is the problem of *sentiment* or *spirit*.

And Markets (Which Are Crowds) Have Some Interesting Properties

A market-crowd has feelings and moods, and its moods are of a peculiar kind: self-referential and self-reflexive. A key determinant of a market's activity is how the market feels about itself, and how it feels about how it feels about itself. Any participant in the market crowd must to some extent think about how they feel about the market, and part of that thinking is their estimate of how other participants also feel. A run, a panic, a bubble: all are to some extent, depending on the specific context, dependent not just on how the market reacts but on how it understands its own reaction.

The most obvious examples of this are in financial markets (bull, bear, boom, bust), but all market-crowds are faced with this problem of sentiment and its management, whether panic buying toilet paper or driving up the price of baseball cards. Indeed, we accept money itself in the belief that it will be accepted from us; while each exchange of money may be local and immediate, it is always a transaction in the context of a great crowd who act as the ultimate guarantors of the value that moves through the exchange. (Recent cryptocurrency crises provide perfect illustrations of what happens when that distributed crowd's spirit fails and its sentiment turns.)

In a market crowd, therefore, fake causes can have real effects. Rumors and lies can be understood as such, without being any less actionable: the question is not whether you believe it, but whether you believe other people believe it, and how you behave as a consequence. In Lichtenberg's aphorism, a king can command on pain of death that everyone treat an ordinary stone as a diamond. Eli Lilly's stock took a dive after a Twitter post ("we are excited to announce insulin is free now") by a fake Eli Lilly account: did people sell because they believed it, or because they were concerned that other people would believe it, or because they were reacting automatically to market movements triggered by belief or belief in belief?

Facilitating New Crowds Entails Facilitating New Markets

I was part of the market-crowd at a Trader Joe's grocery store where the shelves were noticeably empty. Was the truck delayed? Yes, said my cashier, but did I know what the real problem was? TikTok, he said. He was in charge of the protein bar section. Sometimes a protein bar sells out as fast as it arrives, chronically out of stock; he orders more, then demand drops back down to normal and he has a glut taking up space. After the fact, asking around, he learns that the bar has been recommended by one or another TikTok fitness influencer: they have convened a social media market-crowd that sweeps through the physical retail space.

Creating new crowds creates new markets. This point may seem trivial in the context of social media platforms, but consider it more broadly. The crowd gathered by TikTok is not just a market for advertisers: it hosts some uncounted number of other markets, one of which clears the shelves of protein bars at a California Trader Joe's. The crowd gathered on Instagram is not just a market for Meta, or for personal brand building influencers: Insta accounts sell halal lamb in Dubai, Japanese manga in Djakarta, and cosmetics in Singapore, with a WhatsApp phone number in the bio for the transaction and the goods delivered by scooter.

Telegram facilitates crowds of many kinds, from Russian and Iranian dissidents to American and Canadian QAnon conspiracists and antivaxxers. These crowds can be markets in themselves—QAnon culture is rife with scams of all kinds—but there are many other more

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explicit market-crowds, especially for retail drug dealing. Twitter and Reddit are at once social media platforms and, again, a site of many market-crowds, most notably for this essay those in the cryptocurrency business. Reddit and Twitter did not directly facilitate a marketplace in cryptos, any more than TikTok had a direct marketplace in protein bars; rather, they enabled the hailing and convening of new crowds, with their laser-eye avatars, in-joke usernames, and jargon-dense bios, who could boost prices, make predictions, and otherwise keep the faith. In some cases their posts could move other markets.

Which Enables Our Current Situation: Augmented Manipulation

Of course, many of the posters in the cryptocurrency market-crowd were not human. They were social media bots, manipulating trends, boosting particular messages, and in some cases communicating directly with human participants. The mediated, remote, digital market-crowd can be characterized and distinguished from other types of market-crowds by its susceptibility to manipulation by the activity of non-human participants: *augmented manipulation*.

Many of the obvious examples of this are crude, blunt-edged instruments: the "snipers" that always win auctions with a one-penny bid at the last second, or the armies of dummy accounts that sweep up everything from concert tickets to streetwear drops for scalpers to resell. However, the takeaway I would like to leave with the reader is more complex in two ways, and the situation in cryptocurrency offers a good example for both.

The first takeaway is that a part-automated market-crowd is not much different to one without automation. Non-human market signals and actions are often indistinguishable from real market activity—but wait: "real" market activity in what sense? We sometimes use "real" to mean the actions of authentic, independent humans, not automated bots. We also use "real" in this sense to mean true signals, rather than lies, rumors, and mendacious claims. But the market-crowd undercuts both of those uses of language. Many kinds of nonhuman actors engage in real market activity: following instructions to buy and sell, reacting to keywords in the news, looking for statistical patterns and responding to them. Their activity is not in any way different from much of the human activity in the crowd of which they are a part. And the humans often seem no less automated, reacting in ways that, if not rational, are still largely predictable. The same problem applies to their sometimes mendacious signaling and market activity: humans are just as prone as crews of bot accounts to circulate media and make purchases that can, they hope, set off a run on an asset they've shorted, or inflate the value of an asset they hold. At least the bots, as they auto-retweet false promises and generate the illusion of interest in a crypto property, do not release multi-hour podcasts and YouTube videos as part of their scam.

The second takeaway is that the fact of the augmented manipulation of the market-crowd has been incorporated into the crowd's theory of itself. Price fixing, pump-and-dump, managed bubbles and panics and the like are open secrets if they are secrets at all. The barons—crypto whales, financial brand managers, traders who hedge market sentiment—have their thumb on the scale, but that's no secret for the mob at this point. Any person in the crowd can follow the movement of cryptos on their various ledgers, and can learn to spot bots on their social networks and even to work with them. Their theory of the mind of the market-crowd can now assume and incorporate the fact of its augmented manipulation.