

## Blockchain and Money

You sit down with several friends to play Monopoly<sup>®</sup> and find the stack of play money missing.

Rather than each player starting the game with “\$1,500” in the form of 27 pieces of paper fiat money in specified denominations<sup>1</sup>, the assigned banker writes each person’s name in pen above “1,500” on a single sheet of blank paper. As the game progresses, each player’s financial transactions are recorded sequentially in pen on the “banker’s sheet” along with their running total balance. Each transaction is written in pen, viewed and accepted by all players before the next turn. Any mistakes or adjudicated changes are rectified by striking out the figures in error and adding the correct ones. No erasing is allowed. Bankruptcy occurs when a player’s cumulative balance reaches zero.

The banker’s sheet is a form of accepted collective memory<sup>2</sup>. Note, we have not videotaped all the plays in the game, hence the accepted memory merely pertains to elements of the game that involve financial transactions. It is as though we had only recorded the progressive *score* of a basketball game.

The banker’s work process is the essence of blockchain aka “distributed ledger technology”.

What is “money” in this game? Or, “where” is money in this game?

We are perplexed for we are seeking an avatar for money—a concrete manifestation of money.

We might naively say that money, in this game, is simply the ink marks on the paper.

Note: this is not saying the ink marks are *representations* of money, but money. In this game there is never a “conversion” into token money. Token money never appears in the game.

Immediately it is obvious that for ink marks to serve a role in this or any game, they must be accompanied by a set of rules, definitions, regulations, customs, and enforcement mechanisms.

Ledger money is quite drably dressed but its interior is contextually rich.

Blockchain is a technology for managing ledger money that enables high-speed verifiable transactions accounting among legally separate entities. Yet it is important to recognize its ability to play a useful role in the payments system rests upon a rich supporting environment, the same environment supporting ledger money and token money.

This needs to be said because our day-to-day experience with avatar money, token money, tends to lead us to neglect those contextual foundations and the need to foster and develop them.

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<sup>1</sup> See Hasbro.com website for the details.

<sup>2</sup> See Kocherlakota(1998) *Money is Memory* (Journal of Economic Theory 81).