Existing economic theories about capital markets are structured around two compelling but limited approaches. The literature in neoclassic finance sees actors as rational, prices as instant indicators of value, and markets as efficient. In contrast, the literature in behavioural finance presents actors as boundedly rational, prices as exuberant, and markets as bubble-prone. However both approaches share three important limitations. First, the rationality of actors’ calculations is evaluated ex-post, which underestimates the degree of uncertainty faced by actors in real time. Second, it is presented as strictly individual process, even though trading is conducted socially. Third, the role of technology is ignored, even though trading is a high-tech activity. In short, the economic literature on capital markets offers a dichotomous, presentist, under-socialized and over-abstracted view of individual economic calculation.

To address these limitations, we propose to study calculation in practice. We draw from the literature in distributed cognition, which argues that the process of thinking is not separable from the tools used to do so; and from the sociology of social networks, which contends that transactions rarely happen without pre-existing social ties. In the context of the capital markets, we examine the possible ways in which traders use sociability and technology to measure value in contexts of Knightian uncertainty, when no consensus exists as to what information is relevant (Callon, 1998). We address the question with a three-year ethnographic study of the trading room of an investment bank on Wall Street.

Our study finds that calculation cannot be separated from the technology and social relations in which it takes place. A trading room is a shared space with several tables where teams of five-four people work on trades for several months. During this time, different teams follow different trading strategies and use different technologies. Each trading technology is shaped by the choice of strategy, and in turn shapes the traders’ interpretation of incoming news, to the point that different desks often espouse contradictory beliefs. The shared space promotes debate among different desks about how to interpret existing data. Trades, then, emerge from such juxtaposition of data, beliefs, tools and social interaction. We propose the term network rationality to denote the multiple and situated aspect of the economic calculations performed by traders.

The notion of network rationality reconciles and advances the debate between the neoclassic and behavioral literatures on rationality and capital markets. To the neoclassic view of individuals as purposive and intelligent, it adds the consideration of how they address their own cognitive limitations: their networks. Different networks produce different beliefs, so prices cannot be reduced to the underlying economic data. Bubbles are possible. Network rationality also contrasts with the behavioral notion of bounded rationality by presenting actors as creative and self-aware individuals that organize themselves to overcome their cognitive limits. Network rationality inspires an aggregate view of markets that differs from the neoclassical notion of efficient
processors of disperse information and the behavioral view of exuberant measurement devices. but **forums** for generating and resolving disparate beliefs about the economy.