Collective intelligence, or the wisdom of crowds, refers to a phenomenon by which, under the right conditions, groups of individuals can render highly accurate judgments. This phenomenon has long played an important role in economics, where understanding the behavior of groups is often essential to explaining economic outcomes. More recently, political scientists have shown that trends in public opinion show evidence of collective intelligence. This article further explores how the wisdom of crowds affects politics. I look at two types of decision-making processes, those governed by group dynamics versus those rendered by organizations. Distributional analysis of financial markets and foreign exchange rates shows that when policies are determined by groups they are less prone to instabilities, evidence that in certain issue areas decision-making by groups is more readily adaptive to shifting environmental cues than decisions made through organizational deliberation.

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1. Introduction

One of the first academic inquiries into the wisdom of crowds was inspired by a trip to a livestock fair by Francis Galton, the English polymath, in the early 20th century. At the fair he came across a contest in which villagers were asked to guess the weight of an ox. About 800 guesses were entered into the contest, some by butchers and farmers who could be considered experts in assessing the weight of cattle, but most by individuals who could not claim any expertise with livestock. Afterward, once the ox had been weighed and prizes given to the most successful guessers, Galton collected each entry and arrayed them by magnitude. He discovered that the median guess, what he termed the vox populi or “voice of the people,” was accurate to within 1% of the ox’s true weight, a more successful estimate than many of the cattle experts put forward. Galton noted that “this result is, I think, more creditable to the trustworthiness of a democratic judgment than might have been expected” (1907, page 451).

Citizens of democracies have good reasons to wonder about the trustworthiness of the judgments made by their peers in matters of public affairs. If much of the public is politically uneducated or uninterested, what confidence can we have in its ability to select competent representatives? This was a chief concern of the founding fathers who through institutions such as the Electoral College tried to mitigate the public’s role in the electoral process. Galton’s findings from the livestock fair are reassuring for advocates of democratic governance; while individual judgments are often of dubious quality, judgments rendered by crowds are sometimes highly sophisticated in the sense that they are accurate and responsive to new information. For example, the crowd response in Galton’s article reacted to observational evidence about the ox, rather than idiosyncratic notions about cattle that may have been held by individual contestants.

While groups and their conditional abilities to render sophisticated judgments have featured prominently in
economic studies for centuries, political scientists have only recently begun to appreciate how collective intelligence can coordinate political activities. Early studies of political attitudes showed that most individuals possess very little accurate political knowledge and furthermore that they update their opinions randomly with no regard to environmental circumstances (Campbell, Converse, Miller, & Stokes, 1960; Converse, 1964). However, studies in the 1990s shifted the focus from the individual to the mass public and in doing so found evidence for certain systematic tendencies (Page & Shapiro, 1992; Stimson, 1991). For example, it was found that public opinion appears to counterbalance the partisanship of the president, such that when the president is a Republican, opinion moves in a liberal direction, and when a Democrat occupies the White House the public grows more conservative (Wlezien, 1995). This type of responsiveness to external stimuli (simple as it is) is apparent when looking at mass political opinions but largely absent at the individual level.

This article continues to explore the ways that collective intelligence affects political outcomes, with a particular focus on the role of group decision-making in the policymaking process. Scholarship has shown that policymaking proceeds in a series of fits-and-starts, with long periods of stasis interrupted by brief, but dramatic periods of change. Leading theories argue that this instability is evidence of intermittent information processing on the part of governmental organizations; some information gets prioritized, but much gets ignored (Baumgartner & Jones, 1993; Jones & Baumgartner, 2005; Jones, Sulkin, & Larsen, 2003). I compare patterns of change from public organizations and financial markets to show that the instabilities characteristic of organizational decision making are much less pronounced in collective decision-making processes. I then look at foreign exchange rates – a policy area that operates according to either organizational or group dynamics depending on the country – finding that policies based on collective decisions tend to be much more stable over time. The implications are twofold: first, that given the right conditions groups can improve on the informational efficiency of organizations and second, that collective decision-making has a direct application to the policy process.

2. The wisdom of crowds

What mechanism gives rise to collective intelligence? One crucial difference between group and individual judgments is that groups gain through aggregation. Of the 800 participants in the weight-judging contest, many had little experience with cattle and therefore guessed randomly at the ox’s weight, but some subset of the group was composed of farmers and butchers who could make expert assessments based on the ox’s appearance. Aggregating to consider the collective crowd response, Galton amplified the signal coming from the subset of expert contestants because the responses of the uninformed, who guessed randomly, averaged out with about the same number guessed too high as guessed too low. Likewise, political scientists have found that although most individuals have idiosyncratic political attitudes, collective opinion has a coherent structure. Thus an intelligent crowd response can emerge even if most of the crowd’s members possess little knowledge relevant to the question at hand. This principal has been stated mathematically as the diversity prediction theorem (Page, 2007). Simply put, the theorem shows that the error of the group prediction is equivalent to the average individual error minus predictive diversity. Thus diverse groups tend to have smaller prediction errors than individuals, and the capacity for accurate prediction increases along with a group’s diversity. Crucially, however, that dynamic works both ways; simply increasing a group’s size without increasing the diversity of its participants can lead to asymmetric biases and less accurate predictions.

In his examination of collective intelligence in modern society, Surowiecki (2004) identifies independence, diversity, and private judgment as three conditions that must be met for groups to behave intelligently. Independence means that individual participants in the group must not coordinate their behavior, diversity means that participants must bring esoteric knowledge to bear in their decisions, and private judgment means that individuals must not broadcast their decisions to other participants. When these conditions are not met, groups can produce some very bad outcomes. For example, even though large financial markets are incredibly diverse, investors are highly attuned to the behavior of their counterparts, violating requirements for independence and private judgment. This occasionally leads to investor contagion: waves of irration exuberance that lead to speculation bubbles and subsequently market crashes (Basu, 1977; Sell, 2001; Shiller, 2000; Sornette, 2003).

3. Policy punctuations and organizational decision-making

Market bubbles occur when individuals collectively overinvest in certain industries, pushing stock prices far higher than could be justified from a realistic accounting of fundamental values. Often, investors in a market bubble know that prices are too high, but they still buy assets, hoping to ride the wave of collective enthusiasm before prices crash. This type of behavior, while alarming when observed in large groups, has its roots in basic limitations of human cognition. Simon won the Nobel Prize in 1978 for research that considered the implications of bounded rationality on economic behavior. His argument was that economic models must allow for the reality that humans are often overwhelmed by the complexity of their surrounding environments. Consequently, human behavior is characterized by uncertainty and this leads to instability as people rapidly update their behavior, either in response to information that was previously discounted or in an effort to mimic the behavior of a trusted counterpart (Simon, 1977, 1983).
Policy studies within political science have taken Simon’s admonition to consider the importance of bounded rationality on institutional behavior seriously. In their 1993 *Agendas and Instabilities in American Politics*, Baumgartner and Jones argue that the same cognitive structures that lead to market bubbles also result in a phenomenon that they called policy punctuations. Starting with the premise that humans have limited information-processing capabilities, they consider the degree to which these capabilities are enhanced by governmental organizations. They conclude that although organizations allow governments to carry out many routine tasks simultaneously, altering course in any meaningful way requires the attention of a small subset of gatekeeping policymakers, such as the House and Senate leaders and the president. At this point, the cognitive “carry-capacity” of these high-level decision makers comes into plays, limiting the total number of issues that the system can address.

Baumgartner and Jones reasoned that because organizations can process information only intermittently, policies should follow what they termed a “punctuated equilibrium” pattern of change. The idea is that policies fall into long periods of temporary equilibrium when political attention is directed elsewhere and that during these periods policy changes are only modest. Occasionally, however, shifting socio-environmental circumstances place an old policy under intense scrutiny, leading a dramatic overinvestment in a new solution. Thus policy change alternates between two extremes—stasis and punctuation—and this lurching pattern is attributable to limits of human cognition, which constrain the amount of information that can be processed simultaneously. If organizations were capable of processing information more comprehensively, then policy change would proceed more smoothly over time, with policies seamlessly updating in response to shifting environmental cues rather than alternating between periods of under and overresponse.

Padgett (1980) showed that information processing models can be linked to specific distributional forms. His insight was that a system where information is processed comprehensively will produce normally distributed changes. For example, if the US government processed information comprehensively, then distributions of annual changes in federal spending should be Gaussian in form. Conversely, the disproportionate information processing proposed by Baumgartner and Jones should lead to leptokurtic distributions, which have extremely high central peaks, weak shoulders (indicating a lack of moderate changes), and wide tails.\(^1\)

In *The Politics of Attention* (2005), when they found that distributions of policy changes where invariably leptokurtic, they took it as evidence in support of their theory, with the stasis called for by their theory matching the high central peak of leptokurtic distributions, and the occasional punctuations corresponding the extremely wide tails. Subsequent policy studies have relied heavily on distributional analysis to test models of governmental information processing and findings consistently link policy outputs to leptokurtic change distributions, cementing Baumgartner and Jones’ disproportionate processing model as a leading theory of policy change.

4. Hypotheses

Thus far policy studies have focused predominantly on the information processing capabilities of governmental organizations, with relatively little attention directed toward group systems. This oversight is regrettable as collective decision-making is not an exclusive feature of the private economy. It also plays an important role in many public sector operations, such as the management of monetary policy. Students of politics therefore have good reasons to explore the decision-making capacities of groups, especially in areas of overlap where collective processes directly affect policy outcomes.

Simon argued that organizations are foremost among human systems in their ability to mitigate cognitive limitations, but while organizations can perform many routine functions simultaneously their overall processing capabilities are still limited. This, above all, is the central finding of recent studies seeking to understand policy change; governments adapt, but they do so in a disjointed and unpredictable fashion. Is the same true for group systems? That is, to what extend does bounded rationality inflict collective judgments with instability? Of course, groups are also subject to waves of irrational exuberance (this is what happens during a market bubble), but under the right conditions they are also capable of remarkable intelligence.

We can formulate three competing hypotheses regarding the relative informational efficiency of organizations and group systems. The first is that organizations will outperform groups. If true, we can expect to observe fewer instabilities resulting from organizational outputs as compared to those generated by collective processes, hence distributions of changes in organizational outputs should show lower levels of kurtosis. This proposition finds support from a long line of scholarship casting doubt on the rationality of group decisions. Moreover, even proponents of collective decision-making are quick to point out that groups behave intelligently only under certain conditions. It may be the case that none of these conditions are met in the areas where group decision-making can be applied to policymaking.

**Organizational efficiency hypothesis:** organizations are more informationally efficient than groups and distributions of changes in organizational outputs will therefore show lower levels of kurtosis.

The rival hypothesis is that group systems are often more informationally efficient than organizations. Groups have been known to outperform individuals under a wide

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\(^1\) See Breunig and Jones (2010) for a review on the use of distributional analysis in political science.
variety of circumstances. Although financial markets occasionally produce speculative bubbles, they are highly efficient. Short-term returns on traded assets follow a random walk, meaning simply that they are unpredictable because prices already incorporate all of the information relevant to buying or selling. It is therefore almost impossible for individual investors to consistently outperform average market returns over short periods of time (Bachelier, 1900; Fama, 1970; Graham & Dodd, 1965; Malkiel, 1973; Samuelson, 1965). When it comes to politics, mass publics appear more politically sophisticated than most individuals in that they display systematic tendencies, while most individuals have inconsistent and idiosyncratic attitudes. So it is plausible that when it comes to public policy, judgments rendered by groups will be less prone to instabilities than those resulting from organizational processes.

**Group efficiency hypothesis:** groups are more informationally efficient than organizations and distributions of changes in collective outputs will therefore show lower levels of kurtosis.

Finally, the third possibility is simply that there are no meaningful differences between the informational efficiency of organizations and groups. Public sector goals are notoriously hard to evaluate, so it is possible that the problem space in which governmental organizations operate makes policy instability inevitable. That is, the complexity and ambiguity of policymaking might guarantee the disjointed processing of information, regardless of the decision-making process that is employed.

**Equally efficient hypothesis:** groups and organizations are similarly efficient at processing information and there should be no meaningful differences in the kurtosis of change distributions drawn from these systems.

Subsequent analyses will attempt to distinguish between these competing hypotheses. If distributions of group outputs show higher kurtosis than distributions drawn from organizations, then this would support the organizational efficiency hypothesis, the opposite result would support the group efficiency hypothesis, and if distributions show similar levels of kurtosis then the equally efficient hypothesis will be favored. An important caveat is that the analysis is concerned with only informational efficiency. Groups and organizations may distinguish themselves in other meaningful ways, such as their ability to address negative externalities, deliver goods and services in a timely manner, coordinate behavior across many decentralized participants, or establish long-term goals. The results should not be interpreted to mean that one decision-making process is better or more useful than the other, rather they speak only to the responsiveness of these processes to their environments.

5. Results

Analysis proceeds in two parts. First, I conduct a review of existing scholarship that uses distributional analysis to test models of government information processing, allowing me to establish a baseline level of kurtosis that is typically associated with these processes. I then draw distributions of changes from the monthly closing values of eight of the largest stock exchanges in the world. Comparison reveals that every market distribution is associated with a lower level of kurtosis than every organizational distribution. Second, I assemble longitudinal data on the foreign exchange rate values for 31 countries, some of which allow their currency to fluctuate freely on international markets and others which enact policies to hold their currency at some pre-determined level. I find that changes in currency values from countries using markets are much less punctuated, further evidence that organizational decision making is less informationally efficient than group processes.

5.1. Comparing organizations and markets

Table 1 reviews nine studies that use distributional analysis to assess levels of punctuation in organizational outputs. This meta-analysis is far from comprehensive, but it nicely illustrates the breadth of focus in recent scholarship on the subject. A variety of organizations are represented, including many Western governments, private firms, and media outlets. In each study, the data is longitudinal and changes are calculated on an annual basis. So, for example, Boydstun (2013) looks at the number of front page stories in The New York Times on various topics, drawing a distribution from annual percentage changes in topical coverage. A common focus is on changes in government spending, but a few studies look at other governmental outputs such as legislative hearings or bill passages.

Every distribution is leptokurtic (that is, they are characterized by excessive kurtosis relative to the Gaussian distribution), evidence that strongly supports Jones and Baumgartner’s theory of disproportionate information processing. Rather than updating smoothly in response to new information, organizations lurch unevenly from one temporary equilibrium to the next. While the theory

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2 Kurtosis is the fourth moment of a distribution and measures the degree to which probability mass is located in a distribution’s tails and central peak, with higher kurtosis placing more mass in these areas. The estimation of kurtosis is sensitive to extreme values and thus the literature has gravitated to l-kurtosis, a standardized measure based on l-moments that is robust to outlying observations. Distributions can have l-kurtosis values between 0 and 1, with higher values indicating more kurtosis; the Gaussian distribution has an l-kurtosis of 0.123. Expectations are that systems that process information comprehensively should produce normally distributed changes, with a corresponding l-kurtosis of 0.123 (this was Pagett’s 1980 finding). However, as information processing becomes more intermittent l-kurtosis should increase, indicating a tendency toward both greater stasis and punctuation.
was originally concerned with governmental processes, it travels equally well to the private sector: firms are also limited by bounded rationality and prone to instabilities, a finding that calls into question the commonplace appeals to privatize government services (Epp, 2015). The average l-kurtosis across every organization in the table is 0.391, substantially higher than the 0.123 associated with the Gaussian distribution. Note, however, that of the governmental activities that have been studied, budgeting is associated with the highest kurtosis. (The mean l-kurtosis for national budgets is 0.487 compared to 0.293 for the other series.) This is consistent with the idea that layers of institutional structure accumulate moving from early to latter stages of the policy process and thus the earlier stages (such as holding a congressional hearing) should be more readily adaptable to new information (Jones & Baumgartner, 2005; Baumgartner et al., 2009).

Organizations are associated with leptokurtic change distributions, which can be taken as evidence for the pervasive effects of bounded rationality on human decision making. What about group systems? Do they show higher, lower, or similar levels of instability? I use the Wharton School’s Compustat database to collect monthly closing values for eight major stock exchanges: the French CAC, the Japanese Nikkei, the British FTSE 100, the Spanish IBEX, the Mexican IPC, the German DAX, and the American Dow-Jones and S&P 500. Stock exchanges are the quintessential collective enterprise, although, as discussed, there are concerns about the degree to which investors behave independently. So, although markets are thought to be highly efficient, there is no guaranteed that they will be less prone to instabilities than organizational judgments. Closing values are available from 1962 to 2014, although some indices have data for shorter periods. I then calculate monthly percentage changes and pool these observations into eight distributions, shown in Fig. 1.

The l-kurtosis associated with each distribution is shown in the upper-left of the figure, and these values range from 0.176 for the S&P 500 to 0.233 for the FTSE 100. Overall, average l-kurtosis is 0.191. These results suggest that even markets experience occasional disruptions, where closing values shift dramatically from month-to-month. The implication is that markets are not perfectly efficient at processing information. If that were the case, then the l-kurtosis associated with each distribution should be closer to 0.123, the value associated with the Gaussian distribution. This is not unexpected. Large financial markets have an incredibly diverse pool of participants, but mimicry across investors can undermine collective intelligence, leading to over or underinvestment in assets relative to their fundamental values.

Crucially, however, the market distributions all come much closer to the Gaussian than the distributions associated with organizational processes. This lends strong support to the group efficiency hypothesis; when it comes to processing information, markets appear more responsive to environmental stimuli than organizations. In part, this adaptability is due to the structural nature of markets, which are continuously operated and allow investors to make trades on an almost continual basis. This stands in
stark contrast to the US Congress, which operates in session only part of the year. Information relevant to policy-making (or buying and selling assets) continues uninterrupted, so the on-going nature of markets puts them in a much better position to act on new information than governmental organizations.

5.2. Exchange rate politics

What then is the role for collective decision-making in the policy process? At first glance, policymaking appears to be an enterprise dominated by organizations, the national and state legislatures chief among them. Certainly this is the impression given by reviewing existing scholarship, which focuses almost exclusively on organizational processes. But there are substantively important areas of policymaking where collective decision-making plays an important role. Monetary policy stands out as a clear example; an area that has profound economic repercussions and where government policymakers work hand-in-hand with market systems. To test my hypotheses within a policymaking framework, I therefore turn to exchange rates, an important component of monetary policy.

Exchange rates describe the relative values of different currencies, relationships with widespread economic consequences. Generally speaking, countries with more valuable currencies have greater buying power, but may have trouble selling their own manufactured goods as there are fewer countries that can afford them. Countries with weaker currencies may find many buyers for their goods, but consumers within those countries may have fewer purchasing options.

Policymakers therefore have good reasons to worry about the value of their country’s currency and there are many monetary steps by which currency values can be manipulated so that they fall within some pre-determined range. China, for example, has an exchange rate arrangement known as the “hard peg,” by which the central government takes steps to make sure that the Chinese currency (the yuan) is always worth less than the US dollar, but that their relative values rise and fall in tandem. This allows Chinese manufactures to sell their goods to US consumers at competitive prices.

While China is an outlier as one of the few large economies to engage so directly in currency manipulation, many countries take some steps to artificially affect the value of their currency on international marketplaces. In a 2004 article, Ilzetzki, Reinhart, and Rogoff propose six types of currency regimes, moving from the most to the least restrictive. On one side of the scale are countries with hard peg arrangements and on the other are countries with “free floating” currencies, where prevailing market demand is the major driving force behind currency values. This framework provides an excellent opportunity to evaluate...
the relative efficiency of groups and organizations within the policymaking process. In countries with hard pegs and other highly manipulative arrangements, currency values are a function of organizational deliberations. Members of a legislature, central bank, or politburo determine a currency value that is seen as appropriate and monetary policy is crafted to maintain the currency at this predetermined level. This is in sharp contrast to free floating currencies, whose values are determined through group interactions on international finance markets. If the group efficiency hypothesis is correct, then changes in the values of free floating currencies should be less punctuated than those associated with more manipulative regimes.

Fig. 2. Distributions of changes in exchange rates according to currency regime. Note: the distribution for Hard Pegs excludes 2,003 observations of 0% change, the distribution for Soft Pegs excludes 1,342, and Moving Band excludes 1,192. Excluding these values makes the centers of the distributions more clearly visible, however, l-kurtosis values and the number of observations are based on the full dataset of observations.

Historical data on exchange rate values are available from the International Monetary Fund (IMF) on a monthly basis for 31 countries from January, 1957 to December, 2010. Rates are the closing value at the end of the month.

3 Currencies are predominately traded on the foreign exchange market (FOREX). Daily trading volume exceeds $5 trillion, making it the largest assets market in the world. Furthermore, because it is currency that is being traded, it is also the most liquid market in the world. This means that FOREX is unusually adaptive, even compared to other financial markets, as there are a large number of buyers and sellers, completing trades in high volume. When markets lack liquidity there is more likely to be asymmetric trading, as there may not be enough buyers or sellers to satisfy demand.
of each month and are presented as the number of US dollars that equal one “local currency unit.” Ilzetzki, Reinhart, and Rogoff (2004) code countries by currency regime on a monthly basis from 1946 to 2010 and thus it is possible to cross reference the two datasets, matching exchange rate arrangements to historical currency values. I proceed by calculating monthly percentage changes in the values of every currency and then pooling those changes into distributions according to the Ilzetzki, Reinhart, and Rogoff classifications. This treatment groups together currencies from different countries, so that if between 1995 and 2000 a country had a hard peg arrangement, change values from that period would be pooled with changes from other countries that had a similarly manipulative strategy. Although Ilzetzki and his coauthors identify six categories of currency regime, only four categories are sufficiently common across the 31 countries to form statistically meaningful distributions. Fig. 2 shows all four distributions, moving from hard pegs (the most manipulative), to soft pegs, moving bands, and finally free floating arrangements.4

The l-kurtosis values for each distribution are shown in the upper-right and these range from 0.539 for the hard peg regimes, to 0.389 for soft pegs, 0.355 for moving bands, and 0.181 for free floating currencies.5 Moving from organizational to market control is associated with a clear reduction in l-kurtosis; further evidence in favor of the group efficiency hypothesis. When currency values are left to governmental organizations, there is a strong tendency to favor the status quo, keeping currency rates the same regardless of shifting external pressures, thus the extremely pronounced central peaks in the associated distributions. Eventually, however, as rates become increasingly out of step with economic realities, policymaking will be forced to push through dramatic rate changes. When it comes to monetary policy, collective decision-making appears more adaptive and so in the distribution for free-floating currencies the dichotomy between stasis and punctuation is greatly reduced. Moreover, the distribution of free-floating currencies is much less punctuated than those associated with government budgets and even less punctuated than distributions for other government activities that occur early in the policy process (see Table 1). Instead, the l-kurtosis of the free-floating currency distribution is similar in magnitude to the values associated with the stock indices from Fig. 1. Conversely, the l-kurtosis associated with the hard-peg distribution is more in line with what is typically observed of national budgets. To summarize, exchange rates are a final policy outcome that when set by collective decision-making show less evidence of punctuated equilibrium dynamics than any other policy activity, but when set by organizational decision-making show levels of punctuation consistent with other end-products of the policy process.

Monetary policy gives legislators a choice between two decision-making structures: they can exert organizational controls to hold rates to some pre-determined level, or they can allow rates to fluctuate on international markets. The choice has major consequences. Using an organizational process imbues rates with the punctuated equilibrium pattern of change that researchers have long associated with policymaking. Collective decision-making offers a more stable alternative.

6. Conclusion

Distributional evidence suggests that groups are more informationally efficient than organizations. Stock indices produce change distributions that are less punctuated than those typically associated with organizations and the same pattern emerges when looking at policies where there is a choice between using collective and organizational decision structures. These findings take a further step toward incorporating the wisdom-of-crowds phenomenon into theories of politics. Research on public opinion reinforces Galton’s early intuition: aggregation gain and the wisdom of crowds makes democratic governance possible, imbuing collective opinions with a structure that is largely absent on the individual level. This study demonstrates that there is also a role for collective intelligence in policymaking, with monetary policy standing out as a substantively important area where groups can be used to set policy levels.

An important caveat is that while the findings here show an informational advantage for group processes, this does not imply that organizations should simply be replaced by markets (or other collective systems) wherever possible. For one, groups can certainly produce some very irrational outcomes. The purview of the current study is relatively limited, so it is entirely plausible that certain group processes are much less efficient than organizations, for example, when a group is large but lacking diversity. Moreover, as Simon noted, organizations dominate both the private and public sectors, even in capitalist systems. This suggests that there is a social utility to hierarchical organizations and that they may offer advantages over collective decision-making in areas besides information processing. For example, by helping societies to account for costs associated with negative externalities, which unregulated markets are poorly equipped to internalize, or on questions of social justice.

Furthermore, the findings presented here point to the ubiquity of bounded rationality and its effects on human decision making. Although the group systems examined here were more informationally efficient than organizations, their associated change distributions were distinctly leptokurtic, evidence suggesting that even hugely diverse markets are not perfectly adaptive. These findings are

4 This analysis builds on Epp (2015) by using IMF data and currency regime classifications from Ilzetzki, Reinhart, and Rogoff.

5 L-kurtosis is estimated using Hosking’s formula (1990), which does not require the analyst to establish bin widths (the size of the columns in the histogram). So, although the bin widths in the figure are clearly different across distributions, this does not affect the associated l-kurtosis values.
therefore in concert with economic scholarship that attributes speculative market bubbles and other disruptions to irrational exuberance on the part of investors.

Going forward, policy scholars might look to further expositor the ways that collective decision-making affects governance. Much attention in this literature has been paid to documenting how different organizational structures affect information processing. This article shows that focusing on the organization-group divide is another fruitful approach to understanding policy instabilities. In areas where collective decision-making structures are available, policymakers have the opportunity to harness the wisdom of the crowd and in doing so create policies that more smoothly adapt to external stimuli.

References


