Tides of Disagreement: How Reality Facilitates (and Inhibits) Partisan Public Opinion

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Research on American mass behavior finds that party identifiers discount policy-relevant facts and interpret the same facts differently. Both findings imply enduring differences in the opinions that direct policy change. What this research does not consider, however, is that partisans confront the burden of evidence when they interpret facts about policy conditions. And thus, because policy-relevant evidence is always changing, the information environment could facilitate or *inhibit partisan-directed rationalization. Employing national survey data and a Bayesian multilevel model, this study tests whether the distribution of economic facts moderates partisan disagreement about the U.S. economy. The results indicate that, when economic facts move in the positive and negative direction simultaneously, disagreement about the economy grows. When these facts move in one direction, however, disagreement recedes. In general, this study contributes theory and evidence on the* tides of disagreement *in partisan public opinion.*

Motivated party identifiers are familiar figures in public opinion research. But like an elected official caught up in scandal, these partisans get attention for all the wrong reasons. They seek out like-minded sources of political information (Stroud 2008; Taber and Lodge 2006) and interpret political-economic news selectively (Jerit and Barabas 2012; Lebo and Cassino 2007). They also fail to update opinions about policy conditions in the direction of relevant facts (Bartels 2002; Gaines et al. 2007). For these reasons and more, scholars have labeled motivated partisans a "challenge to democratic competence" (Shapiro and Bloch-Elkon 2008, 115).[1]

At its core, the challenge is that partisan-motivated behavior produces enduring differences in the opinions that direct policy change. In some cases, party identifiers appear to reject policy-relevant facts out of hand (Bartels 2002; Nyhan and Reifler 2010), while in others, they interpret these facts differently (Gaines et al. 2007; Gerber and Huber 2009). For example, after learning about a 1% increase in the unemployment rate, Republican identifiers could interpret this change as "large" while Democrats interpret it as "small." As a result, these groups will disagree about the state of the larger macroeconomy.

At the same time, however, people confront the burden of evidence when they interpret facts about policy conditions. In Kunda's words, partisans "draw the desired conclusion only if they can muster up the evidence necessary to support it"(1990, 483). This idea does not feature prominently in mass behavior research, but it is important for understanding the nature of public opinion. Interpretations of policy-relevant facts occur within a larger information environment, and for multifaceted political conditions, the relevant evidence is always changing.

Different distributions of facts create different evidence burdens. Sometimes facts push in opposite directions—say, when there is simultaneously good and bad economic news. In this context, people can justify an interpretation in the positive *or* the negative direction. At other times, facts all push in one direction—say, when the economy experiences unprecedented growth. And in this context, it becomes difficult to justify factual interpretations in both directions. The implication is that information distributions could determine the plausibility of partisans'

[1]An online appendix for this article is available at http://evanparkerstephen.com/research/tides/. Data and code necessary to replicate the analyses in this article will be made available no later than the date of publication at http://evanparkerstephen.com/research/tides/replication.

The Journal of Politics, Vol. 75, No. 4, October 2013, Pp. 1077–1088 doi:10.1017/S0022381613000789

ISSN 0022-3816

factual rationalizations. If so, then an environment with facts moving in opposite directions will *facilitate* partisan disagreement and an environment with facts moving in a single direction will *inhibit* disagreement.

In the pages that follow, I examine whether the distribution of relevant facts conditions differences in party identifiers' evaluations of the U.S. economy. Drawing on data from over 200 national opinion surveys, the analysis uses a Bayesian multilevel model to estimate partisan evaluations and disagreement across economic circumstances that are "glorious, or abysmal, or merely ordinary" (Kinder, Adams and Gronke 1989, 492). The results show how the state of the macroeconomy moderates partisan interpretations of facts. The key finding is that disagreement grows in an ordinary economy and recedes in abysmal and glorious ones.

In general, this study contributes theory and evidence about tides of disagreement in public opinion. It explains how the information environment can facilitate or inhibit partisan rationalization. Previous research does not observe the tides because it examines public opinion in a typical setting—that is, one in which relevant facts move simultaneously in two directions. To see the ebb and flow requires contrasting opinion differences in a typical setting with differences that exist when facts move in a single direction. The economic domain suits this comparison because the national economy is a multifaceted political object. Also, there is broad agreement about what constitutes "good" and "bad" economic news, and across ordinary, abysmal, and glorious economic contexts, the balance of good versus bad economic facts is different.

The remainder of this study is organized as follows: In the first section, I develop a theory about partisan interpretations of economic facts in three types of economies. The next two sections describe the data and statistical model, respectively. In the fourth section, I examine partisans' economic evaluations and disagreement across the state of the macroeconomy. The next section reconciles the findings with prevailing scholarly wisdom. In the final section, I consider future directions for the study of partisan tides in public opinion.

Theory and Hypotheses

It is worth emphasizing at the outset that this study is not about the accuracy of factual beliefs. It is about how partisan-directed factual interpretations affect policy evaluations downstream. From a normative perspective, we expect people to interpret policy facts in a way that promotes competent political behavior. The problem is that party identifiers often fail to meet this ideal, instead perceiving and interpreting facts in the direction of their "preferred world"—that is, the world-state that benefits their party politically.

In a clear example, Gaines et al. (2007, 967) found that Republicans and Democrats provided different interpretations about U.S. troop casualties in Iraq. The difference centered on whether the number was "small," "moderate," "large," or "very large." Because they identified with the party of the president, George W. Bush, Republican "in-partisans" were far more likely than Democrats to interpret the fact as a moderate loss. Democrat "out-partisans," however, were far more likely to interpret it as very large. Both partisan groups rationalized the numerical fact in the direction that helped their party politically. Consequently, neither needed to square the casualty information with preexisting opinions, and group-level disagreement about Iraq endured.

Studies that show partisan differences in factual beliefs and interpretations are important for understanding the quality of mass opinion. In general, they highlight a paramount challenge of partisan-motivated reasoning: lasting public disagreement about conditions that clarify political problems (Bartels 2008; Shapiro and Bloch-Elkon 2008). But in this work, scholars have given little attention to the fact that people interpret political facts within a larger information environment. This omission seems important once one recognizes partisans both confront and work to overcome the burden of evidence.

Before discussing how this burden is set by the information environment, it is necessary to discuss what it means to have a distribution of economic facts. To convey the central idea, this study divides the macroeconomy into three conceptual types: ordinary, abysmal, or glorious. In an ordinary economy, the directional meaning in the relevant indicators is mixed. For example, one might observe a rising stock market and relatively low inflation, on the one hand, and declines in national employment and personal disposable income, on the other. In abysmal and glorious economies, in contrast, meaning in the indicators is consistent. An abysmal economy could include a sinking stock market and decreases in employment and domestic production. In a glorious economy these same facts move in concert but in the positive direction. Most important, different economies give rise to different information distributions. These distributions matter because they affect the plausibility of partisan-directed interpretations.

To illustrate the point about plausibility, Table 1 reports four U.S. economic indicators—the national employment rate and the annual changes in real disposable income, the Gross Domestic Product, and the Consumer Price Index—for three illustrative months. All values are standardized, and consumer prices are scaled so that a positively signed change is a favorable outcome. The question is how these different distributions of economic facts establish the burden of evidence. For the sake of consistency with this study's empirical analysis, I develop the answer from the perspective of presidential in-party and out-party identifiers.

The second column in Table 1 reports economic indicators from July 2006, during President George W. Bush's second term. At the time, the level of employment and the annual change in disposable income both moved in the positive direction. Consumer prices increased, however, and there was a modest decline in domestic production. This distribution exemplifies an ordinary macroeconomy because the economic indicators are moving simultaneously in two directions. So, in July of 2006, in-party Republicans could use the evidence about rising employment and personal income to discount the changes in consumer prices and domestic production. Out-party Democrats could use the evidence about prices and production to discount the changes in employment and income.

In general, two-sided interpretations are *plausible* in an ordinary economy. People can access facts that are either positive or negative. As long as economic indicators move in two directions, in- and out-partisans can rationalize information that contradicts their preferred-world states. At the group level, these different interpretations produce different economic beliefs. This expectation forms the basis of this study's first hypothesis:

> *H1*: Partisan disagreement will be relatively large in an ordinary macroeconomy because the facts are moving in two directions.

Table 1 also reports distributions of facts for an abysmal and a glorious economy. In June of 1991 the economy was emerging from recession, and economic indicators all moved in the negative direction. And in February 1998, the economy was exceptional, producing only positive economic trends. How do partisans interpret facts when the macroeconomy reaches these negative and positive *boundary conditions*?

One answer is that party identifiers find a way to interpret facts to their party's advantage using extraneous information. In particular, these "motivated skeptics" discount or counterargue disagreeable information (Taber and Lodge 2006). Under this account, group-level evaluations remain far apart irrespective of actual conditions. And thus, the opinion differences that challenge democratic competence are persistent.

Yet partisan-directed interpretations hinge on mustering *convincing* evidence. Even strong motivated reasoners "construct a justification of their conclusion that would persuade a dispassionate observer" (Kunda 1990, 482). Abysmal and glorious macroeconomies do not support two-sided interpretations: facts in the abysmal setting are overwhelmingly negative, and facts in the glorious economy are overwhelmingly positive. Thus, in-partisans in an abysmal economy and out-partisans in a glorious economy are hard-pressed to rationalize unwelcome news. That such macroeconomic conditions create a high evidence burden implies a second hypothesis:

> *H2*: Partisan disagreement about the economy will be relatively small in abysmal and glorious economies because the facts are moving in one direction.

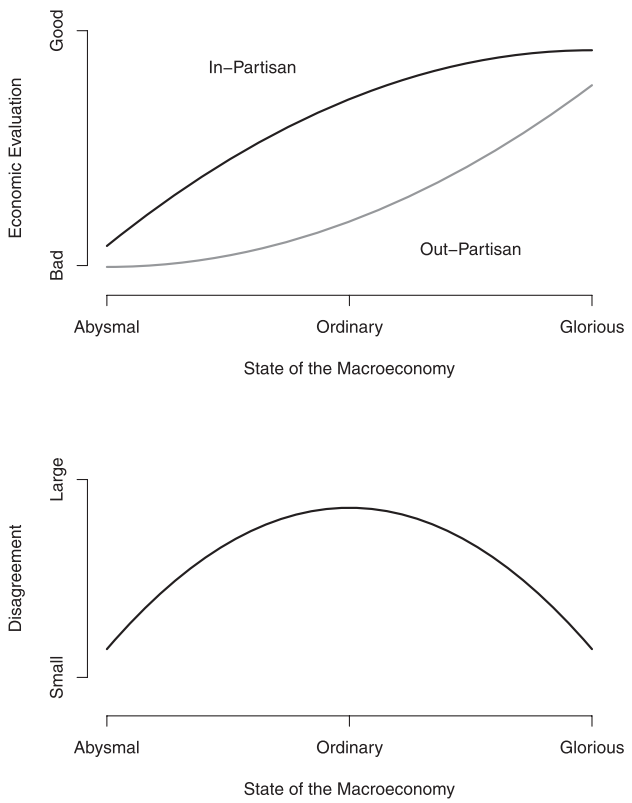
Figure 1 illustrates expectations about economic evaluations and disagreement under a theory of contextual partisan-motivated reasoning. In both panels, the x-axis represents changes in the state of the macroeconomy: facts all move in the negative direction at left, in two directions in the middle, and all in the positive direction at right. The y-axis represents either the level of optimism in partisans' economic evaluations (top

TABLE 1 Three Economy Types Represented by Three Months of U.S. Economic Data

	State of the Macroeconomy		
	Ordinary (July 2006)	**Abysmal (March 1991)**	**Glorious (February 1998)**
Employment rate	0.46	−0.21	0.46
Δ Real disposable income	0.21	−0.59	0.85
Δ Gross Domestic Product	−0.11	−0.93	0.49
Δ Consumer Price Index	−0.47	−0.74	0.55

Note: All indicators have been standardized by subtracting their October 1986–March 2011 mean and dividing by two standard deviations. The Consumer Price Index values are reversed in order to establish consistent meaning in the signed values.

FIGURE 1 Expected Evaluations and Disagreement under a Theory of Contextual Motivated Reasoning



Note: The top panel illustrates the expected nonlinearity in economic evaluations across the scale of the macroeconomy. The bottom panel captures the resulting disagreement, which is calculated by subtracting the out-partisan evaluation from the in-partisan evaluation.

panel) or the size of in- minus out-partisan disagreement (bottom panel).

At Figure 1's abysmal and glorious boundaries, in-partisans and out-partisans confront consistent economic evidence. This increases the chance of similar directional interpretations, and thus, at the negative and positive endpoints in the top panel of Figure 1, one expects each group to report a similar evaluation—perceiving a "bad" and a "good" economy, respectively. In the ordinary economy, however, in-partisans use positive news to discount negative facts. For their part, out-partisans ground an evaluation in the available negative evidence. Across the entire macroeconomy scale, partisans' economic evaluations diverge and converge. The result is the tides of disagreement appearing in the bottom panel of Figure 1.

A theory that anticipates tides of disagreement—that is, disagreement that is different at different times, grows and recedes—is new to research on public opinion. It rests on two fundamental claims about how party identifiers interpret facts in real-world settings. First, as Table 1 makes clear, the distribution of economic facts is not static. Second, interpretations must be plausible, and plausibility is determined by the information available in the environment. Across time, economic conditions will be more or less ordinary, or abysmal, or even glorious. Because partisans have more or less interpretive leeway across these different contexts, the macroeconomy is likely to moderate partisan opinion differences. Toward a test of this expectation, I now describe this study's data and methods.

Data

Beliefs about the economy have normative importance for elections and democratic accountability (e.g., Hibbs 2006; Lewis-Beck and Stegmaier 2000). In the study of partisan differences, the focus on economic judgments has several advantages. First, there is a standard for contrasting evaluations with reality because economic conditions are factual conditions. Second, at different points in time, the central tendency and distribution of economic facts are different. Finally, people who pay more and less attention to political news have similar beliefs about the economy's standing (Haller and Norpoth 1997). For this reason, differences in political interest are unlikely to affect economic information processing.

To obtain individual-level data on *economic evaluations*, I use every available CBS News/*New York Times* poll from the Roper Center, beginning in October 1986 through March 2011.[2] Evaluations are measured using a four-category ordinal scale, where a value of 1 represents the belief that economic performance is "Very Bad" and a 4 that such performance is "Very Good." As a measure of *partisan motivation*, I draw on the CBS News/*New York Times* measure of stable party identification. I focus on opinion differences between presidential in-partisans (value = 1) and out-partisans (value = 0) to maximize macroeconomic variation within a single statistical model. People who identify as independents and "leaners" are excluded from the analysis. The focus on committed partisans makes for a stringent test of the argument about information-based boundary conditions.

The remaining data need is a measure of the *state of the macroeconomy*. Although Table 1 details the

[2]The polling data are obtained from the Roper Center's *iPoll* archive (http://www.ropercenter.uconn.edu). In total there are 202 surveys, and the exact dates are not reported but available on request. Question wording and descriptive statistics are presented in the online appendix.

distributions of economic facts for three exemplar economies, what this analysis requires is not separate indicators, but a reading of economic facts on balance: generally speaking, is the economy moving in both directions, overwhelmingly in the negative direction, or overwhelmingly in the positive direction? The measurement strategy employed in this study, which builds on a procedure discussed in Gelman and Hill (2007, 295), proceeds in four steps. First, I draw on the four economic indicators presented in Table 1: the level of employment (one-month lag), and the annual percent changes in the Real Disposable Income (RDI), Gross Domestic Product (GDP), and the Consumer Price Index (CPI). The CPI scale is reversed so that positive changes represent a favorable event. Next, the four indicators are standardized by subtracting their means and dividing by two standard deviations. Third, I estimate a weight for each indicator, which allows for their differential importance in the mass public's economic reasoning. Finally, I produce a weighted-average macroeconomy score for each month in the 1986–2011 period.[3]

This four-step procedure produces a macroeconomy measure that ranges between –2.92 and 1.61. Constructed from four indicators, each score summarizes the distribution of economic facts in a given month. Because an ordinary economy contains negative and positive directional facts, its score is close to zero. For example, consider that the summary score for the ordinary economy in Table 1 is 0.28. Along the same lines, Table 1's sample abysmal macroeconomy scores a value of –1.87, and the glorious macroeconomy scores a 1.42. Although averaging over four indicators discards information, the upside is a means to study how the distribution of factual information moderates partisan effects on economic evaluations.[4]

[3]For economic indicator j, the percent change for month t is $(\frac{j_t}{j_{t-12}} - 1) \times 100$. For i months over the October 1986–March 2011 period, and j indicators, the calculation for the macroeconomy is $Ec\bar{o}n\bar{o}my_i = \frac{1}{4}\Sigma_{j=1}^{4}\omega_j X_{ij}$. The weights, ω_j, are the coefficients from a dynamic regression of the four indicators on the Index of Consumer Sentiment, 1986–2011. The regression results are reported in the online appendix.

[4]The online appendix provides additional information about the development of the macroeconomy scale, including validation checks. Here I note that the correlation between the macroeconomy scale and the Index of Consumer Sentiment is .77. To be sure, there are shortcomings in using a summary measure: For one, percentage change scores are equivalent if an indicator increases from 3 to 4% or from 0 to 1%. I have sought to address this anchoring problem by including the *level* of employment in the summary measure. Also, change scores are the gold standard in the study of public opinion about the economy. As a second shortcoming, the score obscures the nuances existing below the overall average. For sample, a large negative value could arise from four slighly negative events *or* from a single, anomalously negative event. Standardizing and weighting the indicators prior to averaging helps to overcome this problem.

Statistical Model

This study asks whether the partisan motivation-evaluation relationship depends on the state of the macroeconomy. Producing an answer requires a statistical model that allows the distribution of economic facts to moderate partisan-motivated economic reasoning. Standard regression-based techniques are less helpful here. These would return a fixed estimate of the interaction between partisanship and the macroeconomy.

The multilevel model provides a natural framework for testing contextual variation in economic reasoning. In this study, individual partisans i are nested within particular surveys j. And importantly, people in a particular survey context experience a particular macroeconomy. In addition to being congruent with the contextual theory, the multilevel framework is advantageous from a statistical standpoint. In modeling the hierarchical data structure, one can account for the unit effects and serial correlation that afflict analyses based on pooled cross-sections of data.[5]

The analysis employs the fully Bayesian multilevel ordered logistic regression in Equations (1a–1c). The $k = 4$ response categories are connected to a latent evaluation, $\text{Evaluation}_{ij}^{*}$, using the cumulative logistic link. The varying intercepts in Equation (1a), β_{j1}, allow for variation in the influence of out-party identification. The varying slopes, β_{j2}, account for the distinctiveness of in-party identifiers' evaluations relative to the out-partisan baseline.

$$\text{Evaluation}_{ij}^{*} = \beta_{j1} + \beta_{j2}\text{In} - \text{Partisan}_{ij} + \beta_Z X_{iz} \quad (1a)$$

$$\begin{bmatrix}\beta_{j1}\\ \beta_{j2}\end{bmatrix} \sim N\left(\begin{bmatrix}\gamma_{10} + \gamma_{11}\text{Macroeconomy}_j + \gamma_{12}\text{Macroeconomy}_j^2\\ \gamma_{20} + \gamma_{21}\text{Macroeconomy}_j + \gamma_{22}\text{Macroeconomy}_j^2\end{bmatrix}, \Omega\right) \quad (1b)$$

$$\Omega = \begin{bmatrix}\omega_{11}^2 & \omega_{12}\\ \omega_{21} & \omega_{22}^2\end{bmatrix} \quad (1c)$$

An advantage of the multilevel model is that it allows the macroeconomy (Economy_j) to act as a "level two" predictor of the intercepts and slopes. And by including first-order and second-order terms for the state of the macroeconomy (Equation 1b), it is further possible to test the nonlinear expectation about disagreement, which is illustrated in Figure 1.

[5]Survey-level random effects in this study's statistical model account for the unit effects. To address potential serial correlation, I "double cleanse" the macroeconomy predictor using the technique outlined in Lebo and Weber (2011). Details of this procedure appear in the online appendix.

The macroeconomy variable has negative and positive values. Thus, generating the curves in Figure 1 requires an out-partisan equation with positive first-order and second-order macroeconomy coefficients and an in-partisan equation with a positive first-order and a negative second-order coefficient.[6] Regarding what remains in Equation (1), β_Z represents a vector of unmodeled coefficients multiplied by individual-level predictors.[7] Following Jackman (2009, 368–76), I employ vague multivariate normal priors over the level-two coefficients (γ) and the inverse-Wishart prior over the covariance matrix, Ω. The specification is completed by placing a multivariate normal prior over the vector of unmodeled coefficients (β_Z) and independent exponential priors over the thresholds (τ_{k-1}).[8] The online appendix reports additional information about the priors along with the convergence diagnostics.

To reiterate, the level-two equations provide a test congruent with the theory of contextual motivated reasoning. The equations define a particular intercept and slope, $\hat{\beta}_1$ and $\hat{\beta}_2$, for a particular macroeconomy. After calculating these intercepts and slopes, one can obtain out- and in-party probabilities for each response category. To maintain consistency with Figure 1's hypothesized pattern, I transform the probabilities for the categorical outcomes into continuous *latent economic evaluations*. All inferences are based on these latent evaluations, which are calculated by weighting the four ordered categories (i.e., values 1 through 4) by their respective predicted probabilities.[9]

It is straightforward to produce estimates of out- and in-partisans' economic evaluations, and thus partisan disagreement, at each level of the model hierarchy. This analysis first examines economic evaluations and disagreement for the months in Table 1's sample economies. Then, using the level-two equations, I study the consequences of variation in the intercepts and slopes across the macroeconomy scale. Throughout, estimation uncertainty is assessed using sampled standard deviations and 90% Highest Posterior Density (HPD) regions.

Support for the study hypotheses rests on finding that the economic context moderates party effects on economic evaluations. The central questions center on how well the statistical model's predictions match the patterns in Figure 1. Do in- and out-party identifers report relatively similar evaluations in abysmal and glorious circumstances but different evaluations during ordinary circumstances? Across the scale of the macroeconomy, does partisan disagreement rise and fall?

Results

To provide an initial look at the answers, Table 2 reports the survey-level estimates of economic evaluations and disagreement in July 2006, March 1991, and February 1998—that is, Table 1's three sample economies. First, in July 2006's ordinary setting (macroeconomy score = 0.28), in-partisan Republicans' latent evaluation is about 2.87—close to "Fairly Good" (3) on the categorical scale. In contrast, out-partisan Democrats' evaluation is about 2.22, which is close to "Fairly Bad" (2). In this ordinary economy, then, in-party versus out-party disagreement is approximately 0.66. This large and statistically certain difference supports this study's first hypothesis. In July 2006, employment and incomes trended upward at the same time prices and domestic production moved in the negative direction. The macroeconomic context

TABLE 2 Partisan Economic Evaluations and Disagreement in Three Sample Macroeconomies

	State of the Macroeconomy		
	Ordinary (July 2006)	**Abysmal (March 1991)**	**Glorious (February 1998)**
In-partisan evaluation	2.87*	2.57*	3.22*
	(0.03)	(0.03)	(0.03)
Out-partisan evaluation	2.22*	2.36*	3.17*
	(0.04)	(0.04)	(0.04)
Disagreement	0.66*	0.22*	0.05
	(0.03)	(0.03)	(0.03)

Note: *90% Highest Posterior Density region does not contain zero. Numerical summaries are the modes of the posterior density using survey-specific random effects. Sampled standard deviations are in parentheses.

[6]The curves in Figure 1 are simulated over a macroeconomy score that ranges between −0.5 and 0.5 as follows: out − partisan $= x + x^2 + 0.25$; in − partisan $= x - x^2 + 0.85$.

[7]The matrix $X_Z =$ includes predictors for education, age, income, sex (female = 1, male = 0), and race (black = 1, nonblack = 0).

[8]Exponential priors insure the threshold values are positive, which is necessary because the first (τ_1) is set equal to zero to identify the model.

[9]For example, given $k = 4$ response categories and predicted probabilities p_k, latent economic evaluations for each survey are calculated as: $\text{Evaluation}^*_{ij} = 1 \cdot p_{1j} + 2 \cdot p_{2j} + 3 \cdot p_{3j} + 4 \cdot p_{4j}$. The equations for all quantities of interest are reported in the online appendix.

thus gave in- *and* out-partisans evidence to support a preferred-world interpretation. Both groups could rationalize the facts because the evidence burden was low. Consequently, partisan disagreement in July 2006 is pronounced.

Opinion differences like this are the standard expectation in research on partisan-motivated reasoning. But disagreement in the remaining sample economies contrasts with this standard understanding. In March 1991's abysmal economy, all four economic indicators moved in a negative direction (hence an overall score of –1.87). In this context, the difference between in- and out-partisans' economic evaluations is relatively small. In-partisans' and out-partisans' estimated evaluations are 2.57 and 2.36, respectively. This means the size of disagreement falls to 0.22. To be sure, partisan differences persist in a stark information context. The *size* of the difference, however, is significantly lower than in July 2006. In March 1991, out-partisan Democrats had no difficulty finding facts to justify a negative evaluation. But in-party Republicans found it difficult to construct a *plausible* positive interpretation. In this way, the preponderance of negative facts acts like a reality constraint. Although disagreement is large in an ordinary economy, it recedes when negative economic signals are overwhelming.

Finally, consider partisan disagreement in February 1998. At the time, the four economic indicators all moved in the positive direction (macroeconomy = 1.42). This glorious setting likely exposed people to news about the economy's positive standing. For out-party Republicans, the distribution of facts created a high burden of evidence. As a result, the latent evaluations for both in-party Democrats and out-party Republicans are above 3—that is, both groups perceive a relatively high-performing economy. The estimated difference is 0.05, and the uncertainty region contains zero. And so, the distribution of economic facts in February of 1998 produced statistically equivalent group-level economic evaluations.

Evidence that partisan evaluations converge in a glorious economy supports this study's hypothesis about boundary conditions. There is added evidence in the finding that disagreement is substantially reduced in an abysmal economy. To address the generalizability of this result, however, it is necessary to move beyond three sample months.

The results from the multilevel regression are reported in Table 3, which reports the parameter estimates as posterior modes and uncertainty as standard deviations and 90% HPD regions. General support for the contextual motivated-reasoning account rests on the coefficients for the intercept and slope equations.[10] In the former, the out-partisan effect is 1.42 in an average macroeconomy.[11] The increase in optimism for in-party identifiers is approximately 1.21 (γ_{20}) units. Finally, in an ordinary economic context, the

TABLE 3 Multilevel Ordered Logistic Regression Model for Individual Evaluations of the National Economy

	Posterior Summaries		
Predictor	Mode	Standard Deviation	90% Highest Posterior Density
Out-partisan equation, β_{j1}			
Intercept, γ_{10}	1.42	0.07	[1.31, 1.55]
Macroeconomy, γ_{11}	1.12	0.08	[0.98, 1.25]
Macroeconomy Squared, γ_{12}	0.28	0.05	[0.21, 0.37]
In-partisan equation, β_{j2}			
Intercept, γ_{20}	1.21	0.06	[1.12, 1.31]
Macroeconomy, γ_{21}	0.11	0.07	[−0.01, 0.21]
Macroeconomy Squared, γ_{22}	−0.07	0.04	[−0.14, 0.01]
Unmodeled predictors, βz			
Education	0.11	0.01	[0.09, 0.13]
Age	0.25	0.01	[0.23, 0.27]
Income	0.11	0.01	[0.09, 0.13]
Female	−0.34	0.01	[−0.36, −0.32]
Black	−0.13	0.02	[−0.16, −0.09]
Thresholds			
τ_2	2.04	0.01	[2.02, 2.05]
τ_3	5.62	0.02	[5.59, 5.65]
Variance components			
Intercept, ω_{11}	0.84	0.04	[0.78, 0.92]
Slope, ω_{22}	0.68	0.04	[0.62, 0.74]
Correlation, ρ	−0.59	0.05	[−0.67, −0.51]

N = 136,877 (Evaluations)
J = 202 (Surveys)
Deviance = 275770
Note: Estimates for all quantities are summaries calculated by combining two samples of 5,000 from the posterior density. $\tau_1 = 0$ to identify the model.

[10]Although the unmodeled effects are interesting in and of themselves, their utility here is to establish the statistical profile for inference: a nonblack male of average education, income, and age.

[11]This direct interpretation of the coefficients is possible because the macroeconomy variable is mean-centered at 0.

population average in- minus out-party difference is about 0.46.

The coefficients for the out-partisan equation suggest the macroeconomy moderates out-party effects. The first-order coefficient is positive and statistically certain, and the same can be said about the second-order coefficient. Two positive coefficients imply the out-partisan curve in Figure 1. For a one standard deviation difference in the macroeconomy (0.86), the out-partisan effect (i.e., $\hat{\beta}_1$) in the more favorable context will be larger by about 1.21. Using the latent evaluations metric, this produces an evaluation difference of about 0.45. At about half of the distance between two ordered responses, this difference is like one person seeing a fairly bad economy and another seeing an economy that is between fairly bad and fairly good.

The coefficients for the in-partisan equation display relatively more uncertainty. Even so, the positive first-order term and negative second-order term are consistent with the expectation for nonlinear changes in economic evaluations. Comparing two in-partisans who experience a macroeconomy differing by one standard deviation, the slope ($\hat{\beta}_2$) for the more favorable economic circumstance is larger by 0.03. Thus, an in-partisan experiencing the more favorable context is expected to display more economic optimism by roughly 0.36 units.

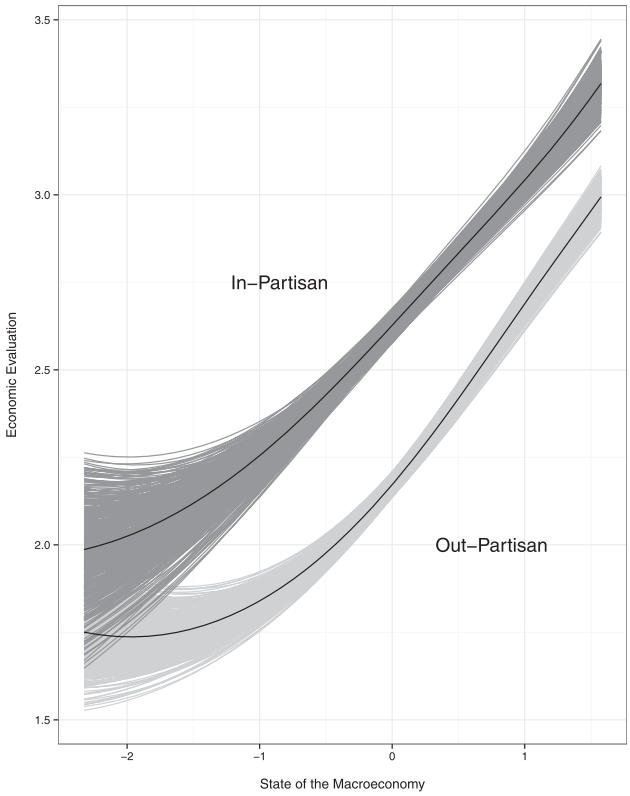
To provide a better sense of how the results in Table 3 connect to the study hypotheses, Figure 2 simulates partisans' economic evaluations across the macroeconomy scale. The solid black lines illustrate estimated partisan-group economic evaluations based on the modes of the sampled parameters. The gray lines represent 500 random draws of the level-two coefficients from the posterior.[12] At the macroeconomy's abysmal boundary, out- and in-partisans' predicted economic evaluations are in close proximity at about 1.75 and 1.98, respectively. Both groups thus act as though they form economic beliefs using the available negative information.

As facts move increasingly in two directions, however, in- and out-partisans' evaluations diverge. At the middle range of the macroeconomy scale, out-partisans emphasize the negative evidence, while in-partisans emphasize the positive news. The expected evaluation for out-party members when the macroeconomy is at its mean is 2.16, but for in-party members, the expected evaluation is 2.62. Because the actual-world evidence is mixed, out-partisans can plausibly evaluate the economy as being fairly bad, and in-partisans can evaluate the economy as being fairly good.

Finally, when economic facts consistently signal positive change, the two groups' evaluations begin to converge. In this environment, partisans on both sides respond to the positive economic trends. In-partisans have already acknowledged the favorable economy, perceiving it well above fairly good. Out-partisans lack access to negative evidence, and the end result is a heightened burden of proof and a relatively favorable evaluation in turn. Estimated at approximately "3," this group now believes the economy is performing fairly well.

Figure 3 illustrates the ebb and flow in partisan disagreement. The lines represent the differences between in- and out-group evaluations charted in Figure 2, where the black line is produced using the sampled modes. The overall trajectory is consistent with Figure 1's prediction about contextual motivated

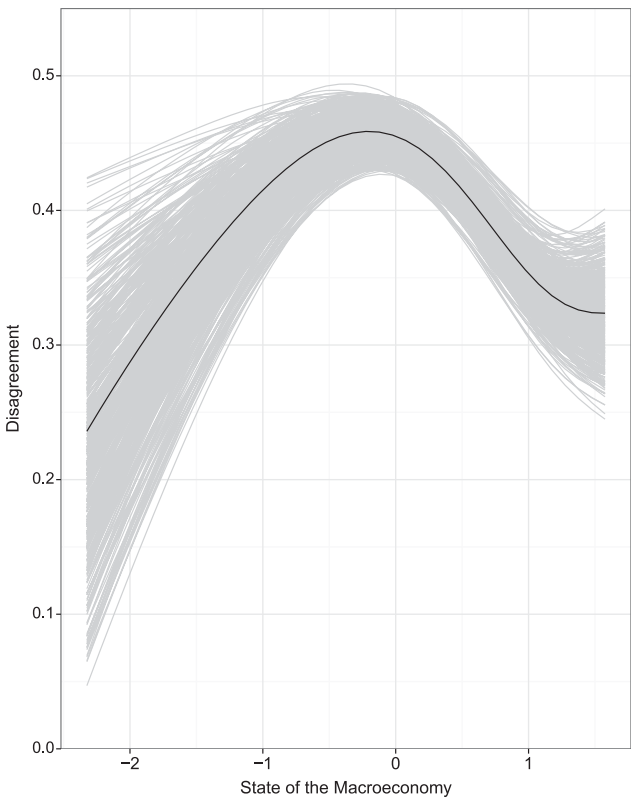
FIGURE 2 Economic Evaluations for Presidential In-Party and Out-Party Identifiers across the State of the Macroeconomy



Note: The black line is the expected evaluation using the modes of the sampled parameters. Simulations are based on 500 draws from the posterior density produced by the Markov chain Monte Carlo (MCMC) algorithm.

[12]Samples are drawn from the 80% HPD regions, which allows uncertainty to propagate without obscuring the critical pattern.

FIGURE 3 Disagreement about the Macroeconomy between Presidential In-Party and Out-Party Identifiers



Note: The black line is the expected disagreement for in-and out-partisans based on the sampled modes in Figure 2. The gray lines are based on the 500 simulated values from the posterior density used to produce the estimates in Figure 2.

reasoning. The distance between in- and out-partisans' evaluations is smaller at the boundaries and larger in the middle.[13] The point estimates of disagreement at the abysmal and glorious boundaries are 0.24 and 0.32, respectively. In contrast, in the ordinary context, disagreement is 0.46. The population-average results thus provide general evidence that partisan disagreement is nonmonotonic. There is also suggestive evidence that partisan differences are smaller when circumstances are abysmal than when they are glorious. This is consistent with research that finds negative economies have disproportionate effects on partisan opinion about the economy (Stanig 2013).

[13]To demonstrate that the squared term is not responsible for generating the rise-and-fall pattern artificially, I estimated an alternative statistical model of the macroeconomy 's moderating influence. In this model, partisans are grouped within particular macroeconomic environments. The results, which are reported in the online appendix, reveal the same non-linear pattern of partisan disagreement about the macroeconomy.

Most important, Figure 3 reveals there are tides of disagreement in public opinion. Considered alongside evidence regarding the three sample economies, we arrive at strong support for the study hypotheses. Although partisan motivation directs economic reasoning, the extent of partisan rationalization changes as the macroeconomy changes.[14] This is because the availability of facts sets the plausibility of partisan-motivated interpretations. In economic contexts at the boundaries, it is difficult for both groups of identifiers to rationalize evidence in a preferred direction. Generally speaking, the information environment facilitates *and* inhibits motivated partisan reasoning.

Discussion

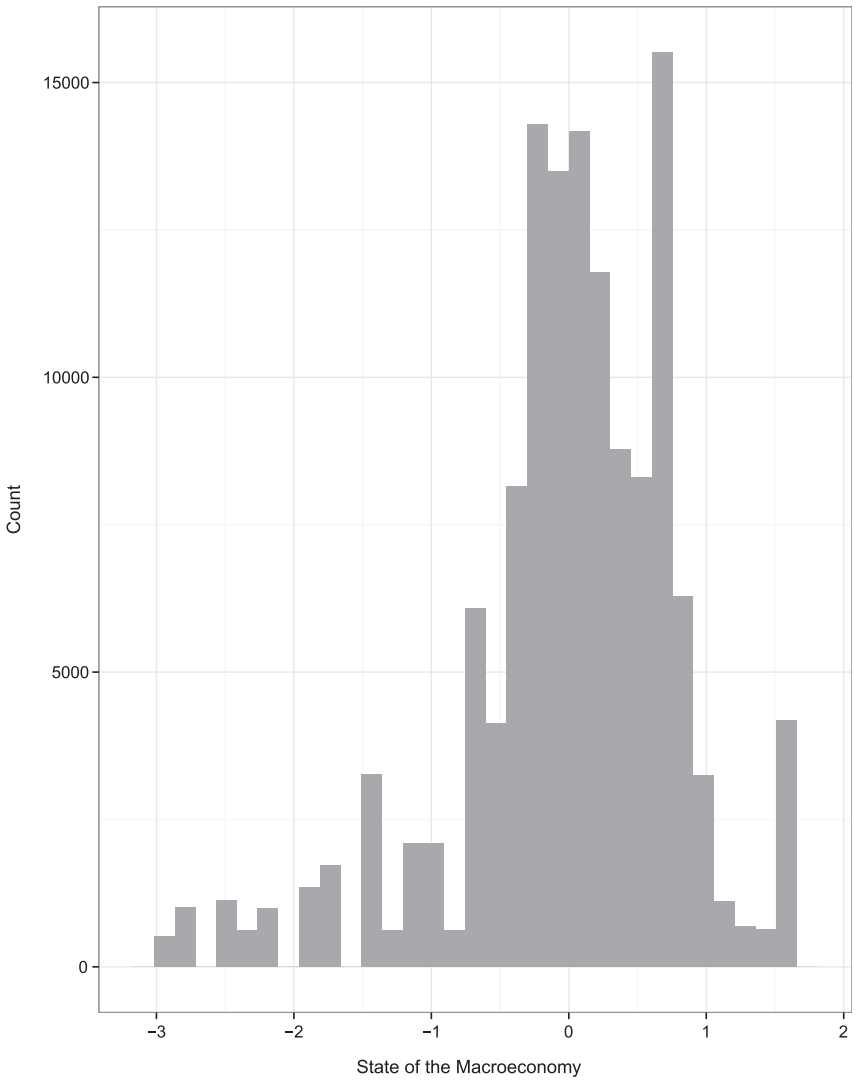
That partisan disagreement grows and recedes runs contrary to prevailing scholarly wisdom. In most studies, scholars see partisan bias as a persistent challenge to competent mass governance. The disconnect raises a question: why does the empirical evidence so often suggest partisans disagree about policy outcomes?

Figure 4 provides one look at an answer: it characterizes the distribution of partisans experiencing different macroeconomies in the 1986–2011 data. A large majority are binned at or near the ordinary middle. Connecting this observation to the disagreement finding in Figure 3, this study's evidence of partisan tides makes sense alongside long-standing scholarly evidence. *Most of the time* people experience ordinary economies. If researchers were to draw randomly from the bins in Figure 4, they would be far more likely to pull a partisan who can access facts moving in two directions. Therefore, scholarly observation typically occurs when the information environment facilitates preferred-world interpretations.

A number of studies conclude partisan disagreement exists because people reject facts out of hand (e.g.., Nyhan and Reifler 2010; Shapiro and Bloch-Elkon 2008). But recent evidence on public opinion about war (Gaines et al. 2007) and the economy (Ansolabehere, Meredith and Snowberg 2013) suggests party identifiers often perceive policy-relevant facts accurately. Furthermore, partisans' economic beliefs and their consumption behavior are consistent—they act on their opinions in spite of disagreement

[14]There is a chart illustrating the across-time relationship between macroeconomic conditions and partisan disagreement in the online appendix.

FIGURE 4 Distribution of Party Identifiers across the Scale of the Macroeconomy, 1986–2011



Note: The distribution of economic information environments as reflected by binned values of the macroeconomy variable in the individual-level data. The large majority of values cluster toward the ordinary economic context.

(Gerber and Huber 2009). These two findings are difficult to square with the wisdom that people constantly reject disagreeable facts. Both fit comfortably, however, within a theory of contextual motivated reasoning.

As long as facts move in both directions, people can meet the burden of evidence. As Figure 4 makes clear, most of the time, this facilitating environment is the one people experience. This analysis also accounts for contexts in which the relevant information moves overwhelmingly in one direction. And when the direction of political-economic trends is cogent, Republicans or Democrats have difficulty justifying a preferred factual interpretation. In a larger sense, partisans' policy evaluations are regularly shaped by the facts (though not necessarily the same facts). One implication is that partisan groups can disagree about policy conditions *even though* their evaluations are shaped by information (e.g., Gerber and Green 1999). Viewed in this light, the consensus case for partisan disagreement as a challenge to democratic competence is too strong.

The link between information distributions and motivated interpretations is broadly relevant for public opinion in a democracy. To date, the only real-world evidence related to this idea focuses, not on the balance of facts, but on these facts' relative volume (Jerit and Barabas 2012). In analyzing how information contexts affect political behavior, accounting for this balance seems equally important. Understanding what conditions must be like before partisan information

processes reach a "tipping point" (Redlawsk, Civettini and Emmerson 2010, 563) needs further attention. A useful step forward in this effort would be to explore how the distribution of relevant facts affects disagreement across multiple issue domains.

In terms of the evidence about economic beliefs, this study addresses the large literature on the importance of economic evaluations in a democracy. Although several studies show mass publics reward and punish elected officials for economic performance (Duch and Stevenson 2008; Hibbs 2006; Powell and Whitten 1993), evaluations influenced by partisan motivation complicate economic accountability (Evans and Andersen 2006; Stanig 2013). This study gives reason to believe economic information often finds its way into partisans' economic evaluations. For one thing, disagreement about the economy could reflect mixed facts as much as it reflects resistance to information. What is more, macroeconomic conditions at the boundaries generate highly similar in- and out-party evaluations.

Conclusion

This study began by noting troubling patterns in research on public opinion: party identifiers appear to reject policy-relevant facts and also interpret the meaning of these facts differently. The findings are troubling because they predict lasting group disagreement in the opinions that drive policy change. The interpretation process was this study's point of departure, and it sought to examine whether the information environment plays a part in partisan interpretation.

The information environment is central because people who are motivated to rationalize must overcome the burden of evidence. To investigate the conditioning role of the information environment, this study produced a critical test: the status of partisan differences when macroeconomic conditions create a low versus a high burden of evidence. The findings suggest the balance of facts matters, and partisan disagreement rises and falls. That these tides of disagreement occur suggests, at least at the boundaries, that people with competing prior beliefs draw similar inferences from policy information. Partisan beliefs diverge when economic signals move in both directions simultaneously because both sides overcome the burden of evidence. And these beliefs converge when economic signals move in one direction because the burden of evidence is pronounced. Without a doubt, partisans are motivated to see policy conditions in a way that benefits their party politically. At the same time, their interpretations of facts are themselves conditional and subject to a reality constraint.

In general, the pattern of disagreement supports the theory of contextual motivated reasoning. To provide additional support, one direction for future research is to study the influence of different distributions of facts in the laboratory setting. Knowing whether partisans interpret a 1% unemployment spike differently when this distribution resembles an ordinary or an abysmal economy would speak directly to this study's account of partisan opinion tides.

A second possibility for future research is to allow for the influence of elite rhetoric. After all, elites might seek to spin economic reality to gain a performance advantage. If so, then their rhetoric would provide a steady supply of supportive two-sided evidence. Of course, this would make the tides of partisan disagreement observed in this study all the more impressive. It would suggest people not only acknowledge stark economic realities but also deflect elite spin.

A final future direction is suggested by the potential sources of heterogeneity this study ignores. Excluding these sources was necessary to establish whether partisan disagreement varies at all. With the evidence in place, at least two additional topics deserve attention. First, it is possible that different partisan groups are attentive to specific facets of the economy. Knowing this would enhance understanding about when party identifiers are more and less likely to see similar a similar macroeconomy. Second, it is possible the moderating role of the factual environment itself is not constant. Given the ongoing transformation of political media (e.g., Prior 2007), it is possible the information environment's moderating influence is changing.

This study's theory of contextual motivated reasoning was inspired by a question left open in Gaines et al.: "[W]hen, precisely, are partisans likely to engage in rationalization and opinion maintenance, and when not?" (2007, 971). The evidence in this study shows partisan rationalization and its consequences are not fixed. Disagreement depends on the distribution of economic facts. The shifting balance of positive and negative signals means disagreement will rise and fall. Although this is not the optimal result from a normative perspective, this finding does add an optimistic note to the literature on motivated partisan reasoning. When the directional meaning of policy facts is unavoidable, party identifiers draw highly similar factual interpretations. Thus, when a democracy most needs it, party identifiers appear not to challenge competent governance. They form the sort of opinions policy advocates hope for and democratic theorists expect.

Acknowledgments

I thank Jennifer Jerit, Paul Kellstedt, Matt Lebo, Cory Smidt, Marco Steenbergen, Randy Stevenson, Guy Whitten, and members of the American Politics Research Group at the University of North Carolina for helpful comments and Grant Ferguson and Carlie Fogleman for research assistance. I am grateful to the editors and three anonymous reviewers for providing valuable feedback and suggestions. The Roper Center for Public Opinion Research provided the survey data used in these analyses.

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