A Spatial Valence Model of Political Participation in China

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Abstract

In spatial models of political competition in democracies, citizens vote for the party or candidate that is the closest to their own ideological position, while in valence models, voters decide on the basis of non-policy factors, such as competence. What remains unclear, however, is whether citizens in authoritarian regimes use spatial or valence considerations to guide their participation decisions. This study uses data from the 2015 Chinese Urban Governance Survey to measure the ideology of Chinese citizens, and estimates an empirical stochastic model to explore how Chinese citizens use ideological distance and valence to make participation decisions.

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Introduction

How do people make political choices under authoritarian rule? Spatial theories of political behavior in democracies model voting using the ideological distance between individuals and political parties, while valence theories argue that non-policy evaluations of a political actor are also important. Whether citizens in autocracies primarily participate in politics because of ideological or valence motivations is an open question. In this paper I use a survey of Chinese citizens and an empirical stochastic model which incorporates both spatial distance and valence to venture an answer to this question. I find that while the spatial model does explain a significant part of the decision to consider protesting or the decision to join the Communist party, valence, and in particular evaluations of the government's competence, is a more important factor for explaining political participation in China.

The logic of the spatial model also predicts that political actors should locate themselves at a particular point in the ideological space to maximize their popular support. In the classic spatial model, which considers ideology along one dimension and models individual choice in a deterministic fashion, that point is the median voter (Downs 1957; Riker and Ordeshook 1973). In stochastic spatial models, parties are expected to converge on the electoral mean (McKelvey and Patty 2006). These results are at odds with cases such as the US, where political parties fail to converge on the median voter. To reconcile this divide between theory and outcomes, Schofield (2007) incorporates asymmetries in valence into the model. In the Schofield model, political parties do not necessarily converge on the electoral mean in equilibrium. Lower-valence political actors may be forced to move to the fringe of the ideological space to maximize their support.

Although the spatial model was designed to explain electoral politics, a similar spatial logic guides political contestation in authoritarian regimes. High valence political actors, such as the government, attempt to occupy the center of the ideological space and paint the potential opposition as the ideological fringe (Schofield and Levinson

2008). In my analysis, I find however that because ideological distances between Communist party members and members of the potential opposition are relatively small, the Communist party, the potential opposition, and other groups in Chinese society should converge on the ideology of the average citizen in equilibrium. This result suggests that both the Communist party and the potential opposition would be best served by making appeals on valence issues, rather than ideological ones, in future political struggles.

In the next section of this paper, I review previous research on the spatial model and generate our theoretical expectations for how ideology and valence operate in China. Then, after sketching Schofield's spatial valence model, I explain how I constructed my measures of ideology, estimate the model, and present the equilibrium analysis. The conclusion explores some of the implications of the findings for political contestation in China in the future.

Spatial and Valence Explanations of Political Behavior

In the classic spatial model popularized by Hotelling (1929) and Downs (1957), political parties are motivated by holding office and choose a policy position in the ideological space to maximize their share of the vote. Citizens vote for the party that has the policy position that is closest to their own views. Under this framework, political parties converge on the median voter, which leaves voters indifferent between their electoral choices.

One of the early objections to this line of reasoning was that not all issues lent themselves to variation along an ideological space. While public opinion is divided in its support for some policies, such as the proper level of state involvement in the economy, for certain *valence* issues, such as the need for honest leaders, or the need for competent administration, there is broad consensus among the public. When politicians

campaign on valence issues, instead of taking specific policy positions, they attempt to associate themselves with some sort of positive symbol or goal, such as honesty or competence (Stokes 1963, 1992). If they succeed in drawing some type of valence distinction between themselves and their opponents, then they may not need to converge to the same ideological position.

In recent years, scholars of mass-elite linkages have sought to formally combine spatial models of political competition with valence issues (Ansolabehere and Snyder 2000; Groseclose 2001). Empirical work in this literature has modeled vote choice probabilistically, using a mixed logit statistical model (Adams et al. 2005; Adams and Merrill 1999; Micozzi and Saiegh 2015; Schofield and Sened 2005). By combining spatial and valence considerations, these models can help explain why parties fail to converge on the mean voter in some cases. In majoritarian or winner-take-all electoral systems, these models find that centripetal electoral forces tend to encourage political parties to converge on the center (Schofield et al. 2011a; Schofield et al. 2011b), but in proportional electoral systems, these models expect parties to diverge in equilibrium (Schofield and Sened 2005; Schofield et al. 2011c; Kurella and Pappi 2015).

Studies of hybrid regimes or electoral autocracies in this framework find that valence is an especially important factor in political behavior. In Russia, for instance, while ideological distance was a significant factor in the 2007 Duma elections, a voter's opinion of Vladimir Putin was the most important factor for vote choice (Schofield and Zakharov 2009). Valence differences also explain why political parties in electoral autocracies fail to converge on the mean voter. One common result is that lower-valence opposition parties are forced to the fringe of the ideological space, while the higher-valence ruling party occupies the center of the distribution (Schofield et al. 2011c; Schofield et al. 2012). Because the government maintains control over the media in these states, opposition parties are often forced to use protests to express their discontent with government policy. This tends to make it difficult for the opposition to raise its valence in the eyes of the general population.

Since the empirical study of ideology under authoritarian rule is still in its early

stages,[1] what remains unclear is whether a spatial logic guides the political behavior of citizens in personalist, military, or single-party authoritarian regimes. If citizens decide to support the regime or rebel because of the spatial distance between them and the government, then autocrats may feel the constraints of the public's policy preferences even in the absence of free and fair elections. However, if valence issues predominate, then an autocrat may be able to select an ideal point that is far from the average citizen and stay in power, so long as the regime maintains a valence advantage over the potential opposition.

Schofield and Levinson (2008) argue that political contestation in authoritarian regimes can be understood according to the logic of the spatial valence model. The autocrat generally attempts to capitalize on his high valence by occupying the center of the ideological space. This way, he has the option of co-opting potential opposition by offering policy compromises. Dictators often lose power when they lose their valence advantage or allow the potential opposition to occupy the center of the ideological space.

Theoretical Expectations

The leaders of the Chinese Communist Party have often argued that incorrect ideological positioning undermines its control over society. One theme of official doctrine is the need to avoid veering too far to the "Left" or the "Right."

In a 1955 speech at a national Communist Party conference, Mao explained that "to move far ahead of the times, to outpace current developments, to be rash in action and in matters of principle and policy and to hit out indiscriminately in struggles and controversies - these are "Left" deviations and are no good. To fall behind the times, to fail to keep pace with current developments and to be lacking in militancy - these are Right deviations and are no good either" (Mao 1977, 167).

As Mao grew frustrated with the bureaucracy's resistance to his efforts to transform Chinese society, more and more officials began to find themselves accused of ideological

[1] See Lu et al. (2016); Pan and Xu (2015); Wu and Meng (2016) for new work in this area.

deviancy. During the purges of the Anti-Rightist Movement and the Cultural Revolution, the range of acceptable ideological views converged to Mao's purported positions (MacFarquhar and Schoenhals 2006; Nathan and Shi 1996).

After Mao's death, the party concluded that the Cultural Revolution had been a grave "Left" error which was both the product of Mao's mistakes and an aberration inconsistent with Mao Zedong Thought (CCP Central Committee 1981).[2] After ascending to power, Deng Xiaoping cautioned that the party needed to return to the center. In his speech "Uphold the Four Cardinal Principles," he argued "both the ultra-Left and Right currents of thought run counter to Marxism-Leninism and Mao Zedong Thought and obstruct our advance towards modernization" (Deng 1984, 173).

This rhetorical tradition leads us to a theoretical expectation for the Communist Party, which is that it will attempt to locate itself in the center of the ideological spectrum. If this is the case, then we might also expect that the individuals who choose to join the party are relatively centrist in their ideological views, and that they become party members for valence reasons. This expectation is in keeping with the party's strategy of preferentially enrolling the elite segments of Chinese society (Dickson and Rublee 2000), and with the fact that many party members join the party to advance their career prospects and enjoy access to particularistic benefits (Dickson 2014).

The motivations of the potential opposition are necessarily more opaque. One class of political economy models conceives of the decision to protest in material terms. The poor in authoritarian states with high levels of inequality are expected to support regime change because they stand to gain from additional taxes and redistribution under democratic rule (Acemoglu and Robinson 2001, 2006; Boix 2003). If this is the case, then income should best predict willingness to protest.

Another possibility is that dissatisfaction with the political system is the driving force behind the collective action. In China, some members of the potential opposition,

[2]In this account, the political mistakes of other CCP leaders were also essentially ideological ones. Chen Duxiu's "Right capitulationism" had led to the CCP's misfortune in the 1927 Shanghai massacre, while Wang Ming's "Left" adventurism produced defeat to the KMT during the civil war. After Mao's death, Hua Guofeng had been guilty of Left errors with his "Two Whatevers" policy.

such as the dissidents and activists who supported the Charter 08 movement, do have a clear ideological agenda which revolves around political and legal reform (Potter 2011).

But for many others, the impetus to collective action is a combination of diverse and localized grievances about poor governance (Chen 2012; Lorentzen 2013). If dissatisfaction with corrupt or inept administration is the key predictor of protest, then citizens who take part in collective action are making a valence-driven decision which is predicated on their perceptions of government competence. They may consider protesting even if their ideological preferences are largely the same as the policy positions put forward by the party.

An Empirical Stochastic Model

In this study I use Schofield's stochastic valence model to assess the motivations that drive political participation in China. Formally, the model $M(\lambda, \beta)$ has individual utility which is determined by the expression

$$u_{ij}(x_i, z_j) = \lambda_j - \sum_{k=1}^{\omega} \beta_k ||x_{ik} - z_{jk}||^2 + \epsilon_{ij}.$$

Here λ_j is the exogenous valence of party j, and β_k is a vector of positive ideological distances with length ω, where ω is the number of dimensions in the ideological space. x_{ik} is individual i's ideal point for the ideology dimension k, z_{jk} is group j's ideological position on dimension k, and $||x_{ik} - z_{jk}||$ is the Euclidean distance between the respondent x_{ik} and the group z_{jk} on dimension k. ϵ_{ij} is the error term, which is assumed to follow the Type I extreme value or Gumbel distribution. This allows us to estimate the model in a multinomial logit (MNL) framework.

$M(\lambda, \beta)$ is a *pure spatial* model which only incorporates terms for spatial distance and valence. It is also possible to specify a *joint* model $M(\lambda, \theta, \alpha, \beta)$ if we model individual decisions with additional terms for socio-demographic variables and attitudes towards the government. If we model individuals this way, then utility for individual i

is governed by the equation

$$u_{ij}(x_i, z_j) = \lambda_j - (\theta_j \cdot \nu_i) + (\alpha_j \cdot \tau_i) - \sum_{k=1}^{\omega} \beta_k ||x_{ik} - z_{jk}||^2 + \epsilon_{ij}.$$

Here, θ_j is a vector that contains the effect of each sociodemographic variable (age, education, gender, and family income) on the choice to join group j, while ν_i is the vector of sociodemographic characteristics for individual i. The $(\theta_j \cdot \nu_i)$ terms are scalar products which we call the *sociodemographic valences* for group j.

α_j is a vector that contains the effect of an attitudinal variable (the perception of government competence) on the choice of group j, while τ_i is individual i's score on the competence measure. We call the scalar product $(\alpha_j \cdot \tau_i)$ the *institutional valence* for our model.

For both of our models, if we specify each group's ideological position with $\boldsymbol{z}$, the probability that individual i chooses group j is

$$\rho_{ij}(\boldsymbol{z}) = Pr[[u_{ij}(x_i, z_j) > u_{il}(x_i, z_l)], \text{ for all } l \neq j].$$

Schofield (2007) provides the necessary and sufficient conditions under which the origin of the ideological space, $\boldsymbol{z_0} = (0, 0)$, is a *local Nash equilibrium (LNE)*. A necessary condition for convergence to an equilibrium is that a convergence coefficient c, which is defined in terms of the valence and policy distance terms, is less than the number of dimensions of the ideological space, ω.

If $\boldsymbol{z_0}$ is an LNE, then each group will maximize its share of the population by adopting the mean ideology of the population. If the necessary conditions are not reached, however, then the groups will adopt divergent ideological positions in equilibrium. The group with the lowest valence will have the strongest incentive to situate itself away from the mean individual, and the other groups will locate themselves along an axis where the variance in the individual ideal points is maximized. A divergent equilibrium is more likely when the variance of the ideology distribution is greater and when the policy distances and valence differences between groups are relatively large. On the

other hand, the mean individual's ideology z_0 is only an equilibrium when the spatial coefficient β is sufficiently small (Schofield 2007).

Empirical Analysis

Data and Measurement

The data for this study come from the Chinese Urban Governance Survey (CUGS), which was administered in the summer of 2015 in 50 cities from 24 different provinces. This survey used GPS-assisted area sampling (Landry and Shen 2005) to generate a nationally representative urban sample of 3513 respondents. Respondents answered a series of questions about political issues and the state's capabilities in a variety of areas, ranging from its ability to maintain social stability to its ability to provide social welfare. Table 1 reports the essential descriptive statistics, as well as an index for perceived government competence, which is calculated as the mean of the seven measures of government capabilities.

Table 1: Summary Statistics

Statistic	N	Mean	St. Dev.	Min	Max
Ideology (Left-Right)	3,513	0.00	1.00	−3.81	4.01
Ideology (Authoritarian-Democratic)	3,513	0.00	1.00	−4.08	4.06
CCP Member	3,494	0.12	0.32	0	1
Age	3,513	43.20	15.04	18	70
Education	3,243	10.59	4.22	0	25
Gender	3,513	0.50	0.50	0	1
Family Income	1,112	72,848	78,025	2,500	800,000
Willingness to Protest	2,343	0.11	0.31	0	1
Propaganda Capacity	3,132	2.84	0.70	1	4
Stability Capacity	3,227	2.96	0.67	1	4
Price Control Capacity	3,034	2.81	0.73	1	4
Tax Collection Capacity	2,939	3.07	0.76	1	4
Representation Capacity	3,075	2.39	0.79	1	4
Social Welfare Capacity	3,138	2.37	0.77	1	4
Control Cadres Capacity	3,064	2.37	0.83	1	4
Competence	2,662	2.70	0.53	1	4

Each respondent's ideological position was estimated using Bayesian item response

theory (IRT) and a set of twelve ideology questions, which were selected to cover the most salient set of political, economic, and cultural issues in China. I used an ordinal model to take advantage of the full variation in the responses, which were on a four point scale (Quinn 2004).

A two-dimensional model best fits the ideology data from the survey. The first dimension, which I call Left-Right, captures a divide between pro-market and anti-market sentiments. For the Left-Right dimension, the most discriminating questions ask respondents whether they believe private ownership of property disadvantages working class people, whether privatization of state-owned enterprises should be outlawed, and whether state-owned enterprises should control the key sectors of the economy.[3] Respondents who agreed with these statements received negative scores on the first dimension, which would put them on the left, while those who generally disagreed had positive scores, which are associated with the right.

The second dimension of ideology is associated with political and cultural divisions. The items that load most heavily on this dimension include questions about whether Western multiparty democracy is suitable for China, whether freedom of speech will lead to chaos, and whether Confucianism is suitable for modern Chinese society. Individuals who tended to agree with these statements received a negative score on the second dimension, which put them closer to the more authoritarian end of the spectrum; individuals who supported multiparty democracy and freedom of speech received positive scores on the second dimension.

Table 2 presents the difficulty and discrimination parameters for each ideology question. In general, the questions that load most heavily on a given dimension have discrimination parameters with high absolute values. For more details on how the model was specified and identified, see Wu and Meng (2016).

To estimate the spatial model, respondents were divided into four mutually exclusive groups based on whether they were members of the Communist Party and on

[3]Note that this is a narrower definition than the one used by Mao and other leaders of the CCP, which concerns the pace of societal change. For the purposes of this paper, the Left-Right axis captures a policy debate over the role of the state in the economy.

Table 2: Difficulty and Discrimination Parameters

	Difficulty Parameter	Left-Right Discrimination Parameter	Auth.-Dem. Discrimination Parameter
Private ownership of property disadvantages working class people 发展私有制经济会导致劳动人民沦为弱势群体	2.38	−1.09	0.20
Privatizing the assets of state-owned enterprises should not be allowed 不能允许民间资本兼并国有企业	1.75	−0.80	0.17
Attempting to control real estate prices will undermine economic development 试图控制房地产价格的行为会破坏经济发展	1.71	−0.71	0.13
Sectors important to people's livelihoods must be controlled by state-owned enterprises 关系到国计民生的领域, 必须全部由国有企业掌控	1.51	−0.68	0.00
Marketization exacerbates economic inequality 市场化必然加剧贫富两极分化	2.07	−0.65	−0.01
Western Multiparty systems are unsuitable for China in its current state 西方的多党制不适合中国国情	2.81	−0.62	−1.05
Media should be allowed to represent the voice of specific social strata or interest groups 应当允许媒体代表特定阶层或利益集团发言	1.55	−0.53	−0.16
Indiscriminately imitating western-style freedom of speech will lead to social disorder 照搬西方式的言论自由, 社会就乱了	2.34	−0.51	−0.76
The modern Chinese society needs Confucianism 现代中国社会需要儒家思想	2.49	−0.46	−0.71
The minimum wage should be set by the state 最低工资应由国家规定	2.20	−0.44	−0.40
China's current political system is the one that is best suited for China's circumstances 我国目前的政治制度是最适合中国国情的	2.38	−0.35	−0.54
Individuals should be able to own land 个人应当可以拥有土地	1.88	−0.16	−0.14

Table 3: Group Proportions

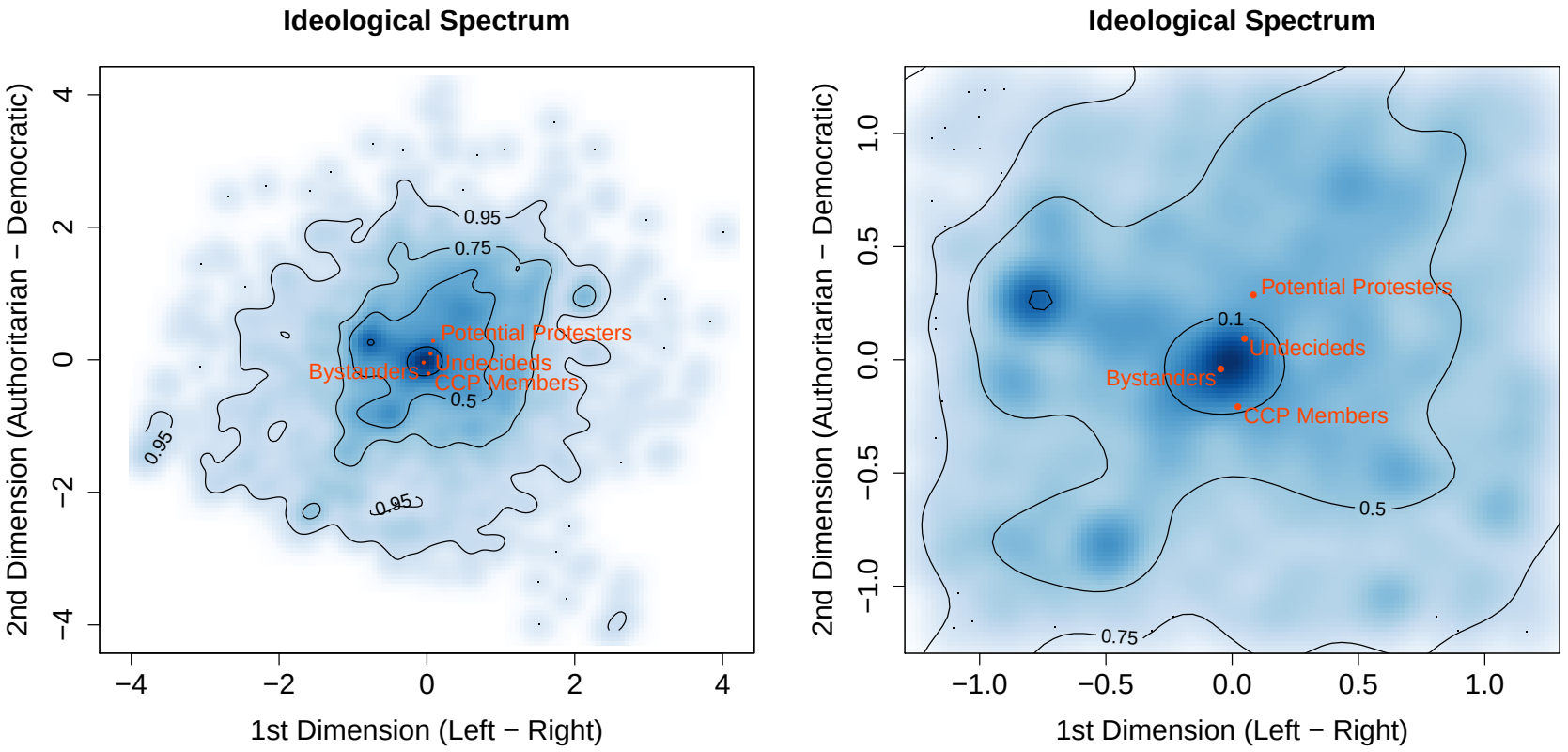
Group	Respondents	Percent of Sample	Mean Left-Right Ideology	Mean Authoritarian-Democratic Ideology
Bystanders	1821	52.1%	-0.045	-0.040
Undecideds	1049	30.0%	0.049	0.094
Potential Protesters	215	6.2%	0.084	0.287
CCP Members	409	11.7%	0.023	-0.207

whether they would be willing to consider protesting in the future. All respondents who were members of the party are coded as *CCP Members*, regardless of whether they said they would consider protesting. For the respondents who were not party members, those who said they would never protest were coded as *Bystanders*, those who were unsure as *Undecideds*, and those who would consider protesting in the future as *Potential Protesters*.[4] A total of 19 respondents did not answer the survey question about membership in the Communist Party and were dropped from the analysis, leaving us with a total of 3494 observations.

Following previous research using the empirical stochastic model, the ideal point of each group is taken as the mean of the ideal points of the members of that group. Table 3 gives the proportion of our sample which fell into each group, as well as the mean ideal points for each group on both the Left-Right and the Authoritarian-Democratic dimensions of ideology. The left panel of figure 1 presents the distribution of ideology estimates for the survey as a whole, while the right panel shows a close-up of the center of our distribution.

[4]These groups are analytic constructions and with the exception of the CCP Members, they are unable to coordinate on an ideological message. They also are not vote-maximizing entities. However, the logic of the spatial valence model still applies, insofar as individuals choose how they participate in politics (either by joining the party or contemplating protest) based at least in part on the ideological distance between them and other people engaging in the same activities.

Figure 1: The Ideological Distribution of Protesters and Party Members in China



(a) The overall distribution of ideology in the sample

(b) A close-up view of the center of the ideology distribution

Results

The results of our mixed logit model show that while both valence and ideological distance shape political participation decisions in China, valence is the more powerful factor. Institutional valence, or the perception of government competence, is the key factor that encourages individuals to consider protesting in the future, while sociodemographic valences, such as education, age, and income, are key factors that shape the decision to join the Communist Party.

Table 4 presents the results from the pure spatial model, $\boldsymbol{M(\lambda, \beta)}$. In this model, the spatial coefficients for both the left-right and authoritarian-democratic dimensions of ideology are significant. The valence terms are calculated with respect to the Bystanders, who are the highest valence group.

Table 4: Pure Spatial Model Results (base Bystanders)

Variable	Coefficient (Std. err.)
Spatial distance	
Left-Right Ideology ($\boldsymbol{\beta_1}$)	0.380** (0.181)
Auth.-Dem. Ideology ($\boldsymbol{\beta_2}$)	0.492*** (0.075)
Valence terms	
Potential Protesters	−2.137*** (0.073)
Undecideds	−0.552*** (0.039)
CCP Members	−1.492*** (0.055)
Observations	3,494
Log Likelihood	−3,899.469
Note:	*p<0.1; **p<0.05; ***p<0.01

I also estimate a joint model, $\boldsymbol{M(\lambda, \theta, \alpha, \beta)}$, which includes sociodemographic terms and a measure of one key component of valence, the perceived competence of the government. To alleviate missing data concerns, I conducted the multinomial logit analysis after multiple imputation. Table 5 presents the results of the joint model after imputation, while Table A.1 in the appendix presents the results of the model if listwise deletion is used to deal with missing observations.

The results show that spatial distances on the authoritarian-democratic dimension of ideology explain how individuals choose to protest or join the party in China. Individuals do not, however, choose how they participate based on the left-right dimension of ideology, which concerns the proper role of the state in the economy. This result is robust to imputation and runs counter to our intuitions formed from similar analyses of democracies, where economic ideology is typically a strong factor that shapes vote choice (Schofield et al. 2011b; Schofield et al. 2011c).

Table 5: Joint Model Results after Imputation (base Bystanders)

Group	Variables	Coefficients (Std. err.)
	Left-Right Ideology ($\boldsymbol{\beta_1}$)	0.044 (0.189)
	Auth.-Dem. Ideology ($\boldsymbol{\beta_2}$)	0.294*** (0.079)
Potential Protesters		
	Valence	−2.448 (1.722)
	Competence	−0.724*** (0.160)
	Age	−0.043*** (0.007)
	Education	0.015 (0.025)
	Gender	−0.588*** (0.154)
	Log Income	0.363** (0.157)
Undecideds		
	Valence	1.857* (1.072)
	Competence	−0.037 (0.094)
	Age	−0.029*** (0.003)
	Education	−0.046*** (0.013)
	Gender	−0.167** (0.080)
	Log Income	−0.049 (0.096)
CCP Members		
	Valence	−9.737*** (1.166)
	Competence	−0.075 (0.119)
	Age	0.048*** (0.005)
	Education	0.214*** (0.021)
	Gender	−0.591*** (0.119)
	Log Income	0.368*** (0.092)
Observations	3494	
Log Likelihood	−3620.16	
Note:	*p<0.1; **p<0.05; ***p<0.01	

The pre- and post-imputation models also come to the same conclusions when it comes to the issues of competence and valence. Individuals who do not perceive the government to be competent become significantly more likely to say they would consider protesting in the future. Perceptions of government competence do not however determine whether individuals decide to join the Communist party, or explain why some respondents are unsure when asked if they would protest in the future.

Once sociodemographic characteristics and perceptions of competence are taken into account, in both models the CCP Members have a significantly lower valence as a group than the Bystanders, or the other groups. This suggests that something other than ideological distance or the perceived competence of the government explains why a relatively small share of the urban population opts to join the Communist party. One possible explanation is simply that the Communist Party is not seeking to maximize its membership in the same way that parties in democracies seek to maximize votes, since it preferentially admits individuals from the more elite segments of Chinese society.

The model tries to account for this possibility by estimating the effect of sociodemographic valences on political participation. In the imputed sample, respondents are more likely to consider protesting in the future, instead of saying they would never protest, if they are younger, male, and, notably, more affluent, which disconfirms the hypothesis that the poor are the key potential opposition group.

Younger, male, and less educated respondents are more likely to say they are unsure about protesting in the future, again in comparison to the people who would never protest. On the other hand, respondents are more likely to be members of the Communist party if they are older, male, more educated, and come from a higher-income family. The importance of sociodemographic valences for membership in the Communist party is consistent with the argument that in the reform era, the party has strategically recruited elites and intellectuals with less attention to their ideological bona fides.

Not all of these relationships are apparent in the pre-imputation sample. While the relationships between age and political participation are the same for all groups, the effects of gender, education, and family income on participation are only significant for

Communist party members.

Equilibrium Analysis

Should the CCP and the potential opposition converge on the mean individual in equilibrium? To find out, we proceed by assessing the convergence diagnostics of our spatial model. In the pure spatial model $\boldsymbol{M(\lambda, \beta)}$, the Potential Protesters have the lowest valence, with $\boldsymbol{\lambda_{PP}} = -2.137$, $\boldsymbol{\lambda_{Und}} = -0.552$, $\boldsymbol{\lambda_{CCP}} = -1.492$, and $\boldsymbol{\lambda_{Bys}} = 0$. The probability that an individual chooses to protest, if every group is located at the mean ideology $\boldsymbol{z_0}$ is

$$\begin{aligned}
\boldsymbol{\rho_{PP}} &= \left[1 + \sum_{k \neq PP} [exp(\lambda_k - \lambda_{PP})]\right]^{-1} \\
&= \frac{1}{1 + e^{2.137 - 0.552} + e^{2.137 - 1.492} + e^{2.137}} \\
&= \mathbf{0.0615.}
\end{aligned}$$

Repeating this calculation for each of our groups shows us that each group's expected share of the population if it converges to the mean ideal point at $\boldsymbol{z_0}$ is nearly identical to its actual share of the population, as shown in Table 3, which we denote below as $\boldsymbol{s}$:

$$\begin{aligned}
\boldsymbol{\rho^{z_0}} &= (\rho^{z_0}_{Bys}, \rho^{z_0}_{Und}, \rho^{z_0}_{PP}, \rho^{z_0}_{CCP}) \\
&= \mathbf{(0.521, 0.300, 0.061, 0.117)} \\
\boldsymbol{s} &= (s_{Bys}, s_{Und}, s_{PP}, s_{CCP}) \\
&= \mathbf{(0.521, 0.300, 0.062, 0.117)}
\end{aligned}$$

To test whether $\boldsymbol{z_0}$ is an LNE, we need to calculate the convergence coefficient $\boldsymbol{c(\lambda, \beta)}$ and assess the properties of what Schofield (2007) calls the *characteristic matrix*

$\boldsymbol{C_1}$ for the lowest valence group. In our case, we have

$$\boldsymbol{C_{PP} = 2(1 - 2\rho_{PP})\beta\nabla_0\beta - \beta},$$

and

$$\boldsymbol{c(\lambda, \beta) = \frac{2(1 - 2\rho_{PP})trace(\beta\nabla_0\beta)}{\frac{1}{2}(\beta_1 + \beta_2)}}$$

where $\boldsymbol{\beta}$ is the diagonal matrix for $\boldsymbol{\beta_1}$ and $\boldsymbol{\beta_2}$ and $\boldsymbol{\nabla_0}$ is the variance-covariance matrix of the individual ideal points with respect to the two ideology dimensions. We first calculate

$$\boldsymbol{\nabla_0 = \begin{bmatrix} 1.00 & 0.18 \\ 0.18 & 1.00 \end{bmatrix}},$$

which allows us to determine that

$$\boldsymbol{C_{PP} = \begin{bmatrix} -0.13 & 0.06 \\ 0.06 & -0.07 \end{bmatrix}}$$

with the trace of $\boldsymbol{C_{PP} = -0.19}$. Following the formula laid about above, we also have convergence coefficient $\boldsymbol{c(\lambda, \beta) = 1.56}$. The mean voter theorem from Schofield (2007) tells us that for a two-dimensional model, a necessary condition for $\boldsymbol{z_0}$ to be an LNE is for $\boldsymbol{c(\lambda, \beta) < 2}$. Moreover, the eigenvalues of the characteristic matrix $\boldsymbol{C_{PP}}$, are both negative $\boldsymbol{(-0.03, -0.16)}$, which is a sufficient condition for convergence. Simulation confirms that the joint origin is a local Nash equilibrium, which means that none of the groups would increase its share of the population if it deviated from the ideology of the mean individual.

Discussion

This paper has shown that the spatial model can help explain political participation even when it is applied in a non-democratic context. Chinese citizens are more likely

to consider protesting or joining the Communist party if their ideological beliefs are consistent with the preferences of other people engaging in the same types of behavior. However, only the second, Authoritarian-Democratic dimension of ideology produces this effect. Individuals in China do not choose to participate based on the Left-Right dimension, which captures their beliefs about the state's role in the economy.

Valence explains more of the political participation decision than ideology. Individuals are willing to consider protesting if they take a dim view of the government's competence, while sociodemographic characteristics, like education, income, gender, or age explain the decision to become a member of the Communist party.

Of particular interest is the finding that, by the standards of a wide variety of democratic electoral systems, the ideological differences between the Communist party and the members of the potential opposition are relatively small. This suggests that repressing ideological debates among elites and the media can forestall political polarization. In fact, the ideological differences between groups are sufficiently small in China to encourage all groups to converge on the ideology of the mean citizen in equilibrium. This means that in the future, neither the Communist party nor the potential opposition can improve its share of the Chinese population by deviating from the policy preferences of the average citizen.

The implications of this finding are two-fold. First, the leaders of the CCP will be ideologically constrained going forward, and unable to change the ideal point of the party without making the party as a whole less attractive to new members. The second implication is that potential opponents of the regime would also be best served by adopting the policy views of the average citizen, rather than by articulating a different set of ideological preferences. Their best hope of gaining support is to improve their valence vis-à-vis the CCP. If the party's performance suffers, the latent opposition could be well placed, ideologically, to expand its support.

One of the biggest unanswered questions is whether this state of affairs is tenable if the party loses control over political association. A well-known result in the political psychology literature is that members of deliberating groups tend to move towards a

more extreme view than the pre-deliberation preferences of those individuals (Sunstein 2002). This suggests that the narrow ideological distances between groups in Chinese society would not survive the onset of open political debate and freedom of association.[5] If this comes to pass, then political competition in China may turn on ideological differences after all.

[5]Though an alternative possibility is that open discussion over political issues reveals differences in opinion within the public, which discourages individuals from engaging in collective action. See Chen and Xu (N.d.).

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Appendix

2015 CUGS Survey Measures

1. Interviewer, please record the sex of the respondent:

   1. Male 2. Female

2. In what year were you born?

3. How many years of education have you received?

4. How much was your total family income last year? (Including all pay from work, bonuses, earnings from a second job, gifts from friends and relatives, profits from each kind of investment, other gains, payments in kind, such as grain, cotton, or vegetables, converted to cash, hobby earnings, and wages earned elsewhere, etc.)

5. Are you a Communist Party member?

6. Regardless of whether you have participated in the activities listed, in the future would it be possible for you to engage in these activities?

   a) Participate in a protest/demonstration/mass incident

7. From time to time society faces certain issues, and government must have certain capabilities to deal with these issues. In the issues below, do you think the government's capabilities are very strong, somewhat strong, somewhat weak, or very weak?

   a) Capacity to maintain a system of values and education

   b) Capacity to maintain social stability

   c) Capacity to influence market prices

   d) Capacity to monitor tax receipts

   e) Capacity to reflect mass opinion

   f) Capacity to redistribute goods

   g) Capacity to restrain the behavior of officials and government offices

Table A.1: Joint Model Results before Imputation (base Bystanders)

Group	Variables	Coefficients (Std. err.)
	Left-Right Ideology ($\boldsymbol{\beta_1}$)	0.312 (0.368)
	Auth.-Dem. Ideology ($\boldsymbol{\beta_2}$)	0.402*** (0.150)
Potential Protesters		
	Valence	−2.168 (2.689)
	Competence	−1.135*** (0.254)
	Age	−0.037*** (0.013)
	Education	−0.015 (0.049)
	Gender	−0.381 (0.287)
	Log Income	0.433* (0.229)
Undecideds		
	Valence	0.757 (1.730)
	Competence	0.096 (0.168)
	Age	−0.027*** (0.008)
	Education	−0.048 (0.030)
	Gender	0.121 (0.185)
	Log Income	−0.046 (0.145)
CCP Members		
	Valence	−9.934*** (2.019)
	Competence	0.156 (0.207)
	Age	0.054*** (0.009)
	Education	0.188*** (0.036)
	Gender	−0.542** (0.219)
	Log Income	0.329** (0.163)
Observations	831	
Log Likelihood	−850.391	
Note:	*p<0.1; **p<0.05; ***p<0.01	