REPORT DOCUMENTATION PAGE			2		Form Approved OMB NO. 0704-0188	
<p>The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA, 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.</p> <p>PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.</p>						
1. REPORT DATE (DD-MM-YYYY) 02-09-2014		2. REPORT TYPE Related Material		3. DATES COVERED (From - To) -		
4. TITLE AND SUBTITLE Circulation of the élite in the Chinese Communist Party				5a. CONTRACT NUMBER W911NF-12-1-0389		
				5b. GRANT NUMBER		
				5c. PROGRAM ELEMENT NUMBER 611103		
6. AUTHORS David A. Meyer, Megha Ram, Laura Wilke				5d. PROJECT NUMBER		
				5e. TASK NUMBER		
				5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAMES AND ADDRESSES University of California - San Diego 9500 Gilman Drive MC 0934 La Jolla, CA 92093 -0934				8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS (ES) U.S. Army Research Office P.O. Box 12211 Research Triangle Park, NC 27709-2211				10. SPONSOR/MONITOR'S ACRONYM(S) ARO		
				11. SPONSOR/MONITOR'S REPORT NUMBER(S) 61884-MA-MRI.2		
12. DISTRIBUTION AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.						
13. SUPPLEMENTARY NOTES The views, opinions and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other documentation.						
14. ABSTRACT The history of leadership change in the Chinese Communist Party (CCP) exemplifies Pareto's notion of circulation of the élite. We have compiled a partially ranked dataset of members and alternates of the Politburo Standing Committee, Politburo, and Central Committee for the 1st through 18th National Party Congresses. Quantitative studies of leadership change in the CCP have typically focused on the fraction of new members in each political body from one Party Congress to the next, but the existence of partially ranked data calls for a more						
15. SUBJECT TERMS China, Chinese, elite, Communist Party						
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UU	15. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON David Meyer	
a. REPORT UU	b. ABSTRACT UU	c. THIS PAGE UU			19b. TELEPHONE NUMBER 858-534-5524	

Report Title

Circulation of the élite in the Chinese Communist Party

ABSTRACT

The history of leadership change in the Chinese Communist Party (CCP) exemplifies Pareto's notion of circulation of the élite. We have compiled a partially ranked dataset of members and alternates of the Politburo Standing Committee, Politburo, and Central Committee for the 1st through 18th National Party Congresses. Quantitative studies of leadership change in the CCP have typically focused on the fraction of new members in each political body from one Party Congress to the next, but the existence of partially ranked data calls for a more subtle quantification of leadership change. Thus, we define a new family of metrics which consider change within each political body, the magnitude of such change, and the importance of each change to CCP structure and policy. We use two of these metrics to compute the distances between each set of successive, partially-ranked leadership lists in our dataset. Our results capture important political developments from the irregular leadership change of the early years to the subsequent transformation of the CCP into a more institutionalized polity. This metric-based analysis also supplements our understanding of anomalous leadership transitions, intra-Party dynamics, and systemic change in the CCP.

Circulation of the élite in the Chinese Communist Party^{*}

David Meyer^{1,2}, Megha Ram², and Laura Wilke¹

¹*Department of Mathematics, UC San Diego*

²*UC Institute on Global Conflict and Cooperation*

Abstract

The history of leadership change in the Chinese Communist Party (CCP) exemplifies Pareto’s notion of *circulation* of the élite. We have compiled a partially ranked dataset of members and alternates of the Politburo Standing Committee, Politburo, and Central Committee for the 1st through 18th National Party Congresses. Quantitative studies of leadership change in the CCP have typically focused on the fraction of new members in each political body from one Party Congress to the next, but the existence of partially ranked data calls for a more subtle quantification of leadership change. Thus, we define a new family of metrics which consider change within each political body, the magnitude of such change, and the importance of each change to CCP structure and policy. We use two of these metrics to compute the distances between each set of successive, partially-ranked leadership lists in our dataset. Our results capture important political developments from the irregular leadership change of the early years to the subsequent transformation of the CCP into a more institutionalized polity. This metric-based analysis also supplements our understanding of anomalous leadership transitions, intra-Party dynamics, and systemic change in the CCP.

1 Introduction

The transformation of the Chinese Communist Party (CCP) from a small group of intellectuals to an immensely powerful ruling party is reflected in changing norms of succession within the Party. For much of CCP history, political advancement was the product of shifting alliances, Comintern involvement, arrests, and even violent action. More recently, the implementation of rules and regulations governing power transfer has led to greater political stability and norm-based mobility. Careful qualitative work has framed our understanding of the changes in individual political trajectories, power transfers, and factional ties brought on by this shift, but systematic studies are needed to better understand larger patterns and structural changes in the Party.

We shed light on such trends by developing and applying a methodology for quantifying changes in the composition of the Party leadership from one time to another. Underlying each application of

^{*}This work was partially supported by the U.S. Department of Defense’s Minerva Research Initiative under ARO grant number W911NF-12-1-0389. Greg Shaw started us on this project and provided invaluable guidance. We are grateful to Daniel Kwan, Yuxin Ma, Andrea McElderry, and Anthony Saich for providing details about specific CCP leaders and sources. We are also grateful to Nan Zou for research on stroke order rules, and Eleanor Meyer for helping with stroke order decisions. Additionally, we wish to thank Victor Shih, ... for helpful comments on the text.

our method is a choice of metric on ranked lists. When applied to ranked lists of political leaders, these metrics capture important political developments from the irregular leadership change of the early years to the subsequent transformation of the CCP into a more institutionalized polity. They supplement our understanding of anomalous leadership transitions, intra-Party dynamics, and systemic change in the CCP. In order to formulate informed policies toward China, international political actors must be aware of these developments and their implications for political stability and policy direction in the CCP. Given the role leaders play in producing policy and the reciprocal impact of divisive policy issues on political relationships, understanding patterns of élite movement contextualizes current policy positions and helps predict future policy change.¹

Political institutionalization is an important piece of this puzzle, but the development of an increasingly regulated political order has not obviated the role of informal mechanisms in transformations of the élite. Although our methodology is applied within the formal substructures of the CCP, with appropriate data it could also provide insight into the informal workings of the Party. Consequently, our methodology has the potential to provide unique, quantitative, commentary on factional politics and general patterns of political mobility in the CCP from its founding in 1921 to the most recent leadership transition in 2012.

In a broader context, our methodology can also be used to analyze the political élite of other regimes. We do not extend our analysis past the Communist Chinese élite in this paper, but applying our methods to leaderships as diverse as the Communist Party of the Soviet Union and the United States Senate is a straightforward process, contingent on data availability. Thus, our methods add a novel quantitative dimension to the study of élite transformation.

2 Political development of the Chinese Communist Party

In recent decades, the CCP has implemented rules that regulate intra-Party succession and privilege formal power over informal influence.² This process of institutionalization has important implications for political stability, regime legitimacy, and factional politics in China.

In his 2003 analysis of the authoritarian resilience of the CCP, Andrew Nathan conceptualizes four major aspects of institutionalization in the Party. First, political succession has become increasingly subject to rules and regulations. Second, the influence of personal ties on promotion has fallen while that of merit has risen. Third, departments are now staffed with specialists and given greater autonomy. Finally, the population is now given more, albeit limited, opportunity to participate in local affairs. Describing the 2002 succession at the 16th Party Congress, Nathan explains how these four aspects of institutionalization have increased stability: “It is the most orderly, peaceful, deliberate, and rule-bound succession in the history of modern China . . .” (Nathan 2003, 7).

Xiaowei Zang (2004) agrees that political stability is grounded in institutional development: weak institutions produce a political system in constant flux, as leaders use extra-legal means to secure and maintain power. On the other hand, strong institutions characterized by functional differentiation and term limits lead to a system in which political ascent is gradual and the political system

¹Gottlieb 1977; Oksenberg 1982; Ross 1989; Shirk 1993, 70-91.

²Bo 2007; Cho 2008; Dittmer 2001; Fewsmith 2002; Holbig 2009; Kollner 2013; Kou and Zang 2014; Lee 2010; Lin 2004; Miller 2010; Nathan 2003; Yue 2008; Zang 2004; Zhang 2011.

is stable.

Political stability reinforces regime legitimacy, so by regulating elite change and setting the foundation for inner-Party democracy, the CCP is authenticating its rule without giving up its prodigious political power.³ Although Deng Xiaoping initiated reforms to govern political processes and succession in the Party, the stabilizing effects of such rules did not emerge until the Jiang era.⁴ Indeed, the Mao and Deng eras, characterized by tumultuous paths to power, contrast dramatically with the subsequent Jiang, Hu, and Xi generations, whose members “ascended by rising through the bureaucracies and by not offending people” (Fewsmith 2002, 23).

Informal activity and factional politics were significant determinants of political order during the CCP’s early years and remain important in Chinese politics today.⁵ In 1973, Nathan proposed a comprehensive model of factionalism to explain the informal nature of elite conflict in the CCP. He defines a faction as a political structure “based upon personal exchange ties rather than authority relations” (Nathan 1973, 42) and posits that no faction can maintain a permanent position of singular power (Nathan 1973, 46).

Tang Tsou, while generally agreeing with Nathan’s conception of a faction, disagrees with his assessment that factions coexist. Tsou (1976; 1995) puts forward an opposing “winner-takes-all” model in which one faction wins complete power. Despite this disagreement, there is consensus that informal ties have historically played a large role in Chinese elite politics by catapulting some to power and leading to the inexorable purging of others. In recent decades, institutionalization has constrained factional politics and transformed elite relations, although there are differing opinions regarding the extent to which formal position supersedes informal power, or *vice versa*, and the scope of powerful factional interests in determining promotions and demotions.⁶

In the following sections we describe and apply a new approach to understanding elite change as a product of institutional development and informal activity, based on quantification of such change. We go on to show that our results are consistent with the historical record. Lastly, we demonstrate the potential for further quantitative analysis of elite change in the CCP and in other political systems.

3 Quantifying elite change

3.1 Prior work

Vilfredo Pareto’s seminal conception of elite circulation asserts that “the governing elite is always in a state of slow and continuous transformation” with the occasional “sudden and violent disturbances” (Pareto 1935, 2056). Elite circulation in the CCP has primarily been explored through

³Chen 2005; Chen et al. 1997; Guo 2003; Holbig 2009; Holbig and Gilley 2010; Hsu 2001; Lee 2010; Li 2013b; Schubert 2007; Zheng 2003.

⁴Dittmer 2001, 58; Yue 2008, 82-83.

⁵Bo 2007; Cho 2008; Dittmer 2001; Fewsmith 2003; Kou and Zang 2014; Li 1994; Li 2012; Lin 2004; Nathan 1973; Shih 2008; Shih et al. 2010; Shih et al. 2012; Tsou and Nathan 1976.

⁶Bo 2007; Cho 2008; Dittmer 2001; Fewsmith 2003; Kou and Zang 2014; Li 2012; Lin 2004.

qualitative analyses. These focused studies delve into specific instances, mechanisms, and consequences of change. There have been only a relatively small number of studies that contribute to a systematic understanding of larger trends in elite circulation.

In one such analysis, Zhiyue Bo (2002) conducts a detailed, yet wide-ranging, empirical study of provincial leadership in China. In this work he formulates five quantitative measures of mobility for provincial leaders. Mobility is defined as the movement of a political leader from one post to another and is calculated by measuring the proportion of provincial leaders promoted (upward mobility) and demoted (downward mobility). Stability is calculated according to the proportion of provincial leaders remaining in their positions and horizontal mobility is calculated according to the proportion of provincial leaders transferred to comparable positions in different localities. Lastly, a measure of retirement is calculated. Bo then uses these five measures to sketch a picture of political mobility over time.

Cheng Li and Lynn White also take a systematic approach in their broad analysis of demographic change in the national leadership. In their 2003 study they calculate the proportion of new members in each congress to identify trends in elite change. Jang-Hwan Joo (2013) similarly uses the proportion of members replaced in each Central Committee to better understand elite circulation. In fact, measures of *turnover*—the proportion of new or returning leaders—are the usual quantitative tools used to better understand political development, mobility, and demographic change in the CCP.⁷

These studies demonstrate the potential of applying quantitative methods to these complex political phenomena and lay the framework for further quantitative analysis. While turnover is an important marker of change, however, it cannot in itself capture the complexity of change in the Chinese political elite. It fails to address several highly relevant aspects of leadership change in the CCP—change within each political body, the magnitude of such change, and the importance of each change to Party structure and policy. The metrics upon which our method is based incorporate each of these features and thus offer a more comprehensive picture of elite change.

3.2 Metrics on ranked lists

Power in the CCP is consolidated in the Central Committee (CC), where each member is ranked hierarchically. The Politburo Standing Committee (PSC) is the most powerful political body within the CC and its members are the highest-ranked political leaders in China. Politburo members, Politburo alternates, CC members, and CC alternates comprise the rest of the CC and are ranked in that order. The ranked list changes at each Party Congress, and oftentimes at plenary sessions between Party Congresses, as members are promoted, demoted, retire, or pass away.

As an example, Table 1 shows the ranks of PSC members immediately before and after the 8th National Party Congress. Mao stayed at the top rank, and Chen at the bottom, but the other three

⁷Chen et al. 2005; Li 2012; Li and Zhou 2005; Miller 2010; Shambaugh 2008.

members changed ranks.

rank	before 8 th PC	after 8 th PC
1	Mao Zedong	Mao Zedong
2	Zhu De	Liu Shaoqi
3	Liu Shaoqi	Zhou Enlai
4	Zhou Enlai	Zhu De
5	Chen Yun	Chen Yun

Table 1. Ranks of PSC members before and after the 8th National Party Congress

More generally, of course, the set of PSC members (or Politburo members or CC members) changes from one National Party Congress to the next. In this case, the PSC after the 7th National Party Congress included Ren Bishi, but not Chen Yun, who was only promoted to the PSC after Ren died. As we noted in the previous section, it has been common to quantify the change from one PSC (or Politburo or CC) to the next by counting the number of individuals included in one but not the other, and in some cases comparing the ratios of this number to the size of the whole list.⁸ Our goal is a more refined measure of change, one that depends on all the changes in ranks of individuals, not just their changes in group membership. Such a measure would, for example, assign a non-zero difference to the two ranked lists in Table 1, even though the turnover is 0.

The difference between two ranked lists of the same N items can be quantified by a *metric*, or *distance function*, on the set S_N of such lists. Perhaps the most common in statistics is Kendall's tau,⁹ but we find the ℓ^p metrics, defined by

$$\ell^p(\sigma_1, \sigma_2) := \left(\sum_{i=1}^n |\sigma_1(i) - \sigma_2(i)|^p \right)^{1/p}, \quad (1)$$

for $\sigma_k \in S_N$ (and $\sigma_k(i)$ denoting the rank of i in the list σ_k) to be more useful. Using $p = 1$, for example, the difference (ℓ^1 distance) between the two ranked lists in Table 1 is $0 + 2 + 1 + 1 + 0 = 4$, while the ℓ^2 distance is $\sqrt{0^2 + 2^2 + 1^2 + 1^2 + 0^2} = \sqrt{6}$.

Thus, our ideal data set would include ranked lists of the leadership at each Party Congress and each intermediate plenary session. In reality, however, only less complete data are available. *People's Daily Online*, a state-owned media outlet, publishes Party documents for each Party Congress, which include membership lists, and scholars have pieced together others.¹⁰ We draw on these sources to construct a set of ranked lists for the 1st Party Congress in 1921 to the 18th Party Congress in 2012 (see Appendix). For some Party Congresses, we have fully ranked lists in which each member of the CC is given a distinct rank. For the remaining congresses, we have partially ranked lists in which some members are given distinct ranks and others are tied at a given rank. For example, if we know the 15 members that comprise the part of the Politburo not in the PSC,

⁸Chen et al. 2005; Li 2012; Li and Zhou 2005; Miller 2010; Shambaugh 2008.

⁹Kendall 1938.

¹⁰*People's Daily Online*: <http://cpc.people.com.cn/> and <http://english.cpc.people.com.cn/>. For a full list of sources see the Appendix.

but we do not know how they rank in relation to each other, we assign them a tied rank that places them below the PSC and above the rest of the CC.

This means that we must generalize metrics on S_N to deal with the case of tied ranks; this will also suffice to handle the situation in which two top elite lists don't include the same members—we take them to provide only partial information, with unlisted people assumed to be ranked equally, but below listed ones. A partially ranked list is *consistent* with any totally ranked list that breaks the ties, but doesn't change any other ranks. Thus, each partially ranked list is equivalent to a subset of S_N consisting of all the totally ranked lists with which it is consistent. The *Hausdorff distance* is a good definition of the difference between subsets $A, B \subset S_N$:¹¹

$$d_H(A, B) := \max\left\{\max_{a \in A} \min_{b \in B} d(a, b), \max_{b \in B} \min_{a \in A} d(a, b)\right\}, \quad (2)$$

where d is any metric on S_N . To apply this to define the distance between two partial rankings π_1 and π_2 , let $A \subset S_N$ consist of all total rankings consistent with π_1 , and similarly for B and π_2 . Computing $d(\pi_1, \pi_2) := d_H(A, B)$ using equation (2) requires optimizing over possibly large sets of total rankings consistent with π_k ; nevertheless there is a (relatively) simple formula for the result once we introduce some notation: Following Fagin *et al.*,¹² for any partial ranking π on N items, let its reverse, $\bar{\pi}$, be defined by $\bar{\pi}(i) = N + 1 - \pi(i)$; and for any two partial rankings π and ρ on N items, define the ρ -refinement of π , $\rho * \pi$, to be the partial ranking with ties in π broken by ρ . That is, if $\pi(i) < \pi(j)$, then $(\rho * \pi)(i) < (\rho * \pi)(j)$; and if $\pi(i) = \pi(j)$, then $(\rho * \pi)(i)$ and $(\rho * \pi)(j)$ have the same order as $\rho(i)$ and $\rho(j)$. Notice that if ρ is a total ranking, then so is $\rho * \pi$. In this notation equation (1) simplifies to give:

$$\ell^p(\pi_1, \pi_2) = \max\{\ell^p(\kappa_1, \mu_2), \ell^p(\mu_1, \kappa_2)\}, \quad (3)$$

where $\kappa_1 := \rho * \bar{\pi}_2 * \pi_1$, $\mu_2 := \rho * \pi_1 * \pi_2$, κ_2 and μ_1 are defined by interchanging 1 and 2 in the previous definitions, and ρ is an arbitrary complete ranking.¹³

The definition (2) and the formula (3) for calculating the difference between two partial rankings provide almost all the tools we need. They fail to capture, however, a crucial feature of changes in political rankings—namely that a change in rank from 2 to 1 is more important than a change in rank from 102 to 101—since both changes would contribute equally to the ℓ^p distance between two rankings. To include this aspect of political reality into our formalism, we introduce a *rank transform function* $f : \mathbb{R} \rightarrow \mathbb{R}$ which is monotonic increasing, $f' > 0$, and concave, $f'' < 0$; for the calculations in this paper we use the *harmonic transform*, $f(r) = -1/r$.¹⁴ Concavity ensures that changes in high (small) ranks are more significant than changes in low (large) ranks, when we define the *rank-transformed metrics* $\ell_f^p(\sigma_1, \sigma_2) := \ell^p(f \circ \sigma_1, f \circ \sigma_2)$. We have shown that (3) also holds for these rank-transformed metrics, and can be simplified further when π_k partially ranks the top elite in $D_k \subset X$, where $|X| = N$.¹⁵ Let $D = D_1 \cap D_2$; let $L_1 = D_1 \setminus D_2$ and $L_2 = D_2 \setminus D_1$. Consider the

¹¹Hausdorff 1927.

¹²Fagin, Kumar, Mahdian, Sivakumar and Vee 2006.

¹³Equation (3) was derived by Critchlow (1980) and by Fagin, *et al.* (2006) in the case $p = 1$; for the general case see Meyer and Wilke (2014).

¹⁴There are, of course, many choices for f . We use this harmonic transform because it is the limit in the set of functions of the form $-1/r^\alpha$, $\alpha > 0$ of those whose sum over all ranks converges. That is, it gives larger relative weights to large (low) ranks than any whose sum over all ranks does converge, while just barely diverging as $N \rightarrow \infty$.

¹⁵Meyer and Wilke 2014.

first distance $\ell^p(\kappa_1, \mu_2)$ in equation (3). Notice that $\kappa_1(L_1) = \{1 \leq r_1 < \dots < r_{|L_1|} \leq |D_1|\}$ and $\mu_2(L_2) = \{1 \leq s_1 < \dots < s_{|L_2|} \leq |D_2|\}$. Then

$$\ell^p(\kappa_1, \mu_2) = \left(\sum_{i \in D} |f(\kappa_1(i)) - f(\mu_2(i))|^p + \sum_{j=1}^{|L_1|} |f(|D_2| + j) - f(r_j)|^p + \sum_{j=1}^{|L_2|} |f(N + 1 - j) - f(s_j)|^p + \sum_{r=1}^{N-|D_1|-|L_2|} |f(|D_2| + |L_1| + r) - f(|D_1| + r)|^p \right)^{1/p}, \quad (4)$$

and similarly for $\ell^p(\mu_1, \kappa_2)$. These formulae capture both aspects of changes in rank within the élite hierarchy: the magnitude of each change—a move from rank 15 to rank 1 contributes more to the distance than a move from rank 15 to rank 10. And the location of each change—change at the top of the list is weighted more heavily than change lower on the list. As we noted above, a change in rank from 2 to 1 contributes more to the harmonic ℓ^1 distance, for example, than a change from 102 to 101. Although both scenarios represent a rank change of 1, change in the top echelons of power has a greater impact on policy and stability than a similar change lower in the hierarchy, and thus the former contributes much more, $1/1 - 1/2 = 0.5$, than does the latter, $1/101 - 1/102 \approx 0.0001$, to the distance.

Separate measures of change can be calculated for the entire list of CC members, just for those comprising the Politburo, and finally just for the exclusive PSC. In this way we isolate change in particular political bodies and study the ways in which leadership change varies between them. Empirically, each of these three bodies draws from a different sized top set of the entire Party membership. Although we might set N to be the total number of Party members¹⁶, this would imply unrealistic promotion possibilities! Rather, for the PSC we use $N = 236$, the largest number of members in a CC (the 12th), since no one has ever been promoted to the PSC at a National Party Congress without having been a member of the prior CC.¹⁷ In the same vein, for the Politburo we use $N = 376$, the largest number of members and alternates in a CC (the 18th).¹⁸ Finally, for the CC we use $N = 2270$, the largest number of delegates to a National Party Congress (the 18th). In fact, the formula (4) depends only weakly on N , so any numbers close to these would give essentially the same results.

For fixed N we can, and do, normalize the distances by dividing by the largest possible distance between two ranked lists of length N , namely $d(\sigma, \bar{\sigma})$ for any $\sigma \in S_N$. Thus, in the following plots the distances are less than or equal to 1.

The choice of p in the ℓ^p metric can help distinguish the nature of leadership change at each transition. Our standard choice will be $p = 1$ which weights each change in (transformed) rank equally; we also compute distances with $p = 2$, which weights large changes in (transformed) rank more heavily than small changes. To understand the practical implications of this difference, consider the following scenarios: in the first scenario one person's rank changes by 20 and in the

¹⁶There were over 85 million Party members at the end of 2012 ("China's Communist Party membership exceeds 85 million" 2013).

¹⁷Usually PSC members have been Politburo members previously, but Xiang Zhongfa was promoted to the 6th PSC from the prior CC, and more recently Hu Jintao was promoted to the 14th PSC from the prior CC.

¹⁸We include the CC alternates because Chen Liangyu, a CC alternate at the 15th National Party Congress, was promoted to the 16th Politburo.

second scenario 20 people’s ranks each change by 1. The (untransformed) ℓ^1 metric, by weighting each change equally, gives the same distance for each scenario. The (untransformed) ℓ^2 metric, however, gives a larger distance for the former: using $p = 2$ maximizes distance when leaders are given especially large promotions or demotions and minimizes distance when leadership change is more uniformly distributed across leaders. Thus, by comparing the ℓ^1 and ℓ^2 distances, we identify total change as well as the distribution of change at each leadership transition.

The metric can be disaggregated to analyze patterns of upward and downward mobility separately. To do this, the metric is applied selectively to those promoted or demoted at each leadership transition, and thereby computes separate measures of distance for upward and downward movement. Applying the metric in this way can help us isolate variation in patterns of political entry and promotion from patterns of demotion and political exit.

4 Large scale patterns

4.1 Stability and transition

Deng Xiaoping implemented age and term limits for certain leadership positions, a system of regular meetings, and multi-candidate elections in an effort to institutionalize succession.¹⁹ Figure 1 illustrates how these reforms, which were extended and strengthened by subsequent leaders, led to more predictable patterns of elite mobility during the Jiang, Hu, and Xi eras.²⁰ These later decades follow an episodic pattern of change that did not exist earlier: the CC plot shows that major leadership change occurred at the 14th, 16th, and 18th Party Congresses ($\ell^1 = 0.68, 0.77, 0.74$)²¹ when new generations of leadership came to power as the previous generations retired *en masse*, and significantly less change occurred at the intermediate 15th and 17th Party Congresses ($\ell^1 = 0.51, 0.48$). This pattern is also pronounced when looking only at the Politburo ($\ell^1 = 0.52, 0.59, 0.59$ *versus* $\ell^1 = 0.31, 0.21$) and PSC ($\ell^1 = 0.37, 0.56, 0.49$ *versus* $\ell^1 = 0.11, 0.13$). Thus, our plots confirm the prevailing view that the development of regulations governing promotion and retirement contributes greatly to order and stability in the political system.²²

Before norms of power transfer were established, leaders captured and maintained political power through informal mechanisms and shrewd political scheming. During this time factional ties were paramount and sweeping purges were common. Take, for example, Deng’s political trajectory. Purged and rehabilitated three times in the course of his political career,²³ he emerged in 1978 with significant informal influence, which he used to defeat formal holders of power and become supreme leader.²⁴ Successive generations of leadership, led by Jiang, Hu, and Xi, have followed a strikingly different pattern. The transition to each of these regimes was relatively smooth, peaceful,

¹⁹Kou and Zang 2014, 7; Constitution of the PRC, Articles 66, 79, 87; Dittmer 2000, 123; Li 2012, 26.

²⁰For age limit reforms, see Kollner 2013, 16; Kou and Zang 2014, 7; Nathan 2003, 8. For democratic recommendation reforms, see Fewsmith 2010, 2–3, 9 and Kou and Zang 2014, 9. For other reforms and norms concerning the selection of cadres, see Brodsgaard 2002, 146 and Li 2012, 27.

²¹Here and subsequently, distances represent change from the previous Party Congress. For example, the distance value for the 18th Party Congress quantifies the change from the 17th to the 18th Party Congress.

²²Cho 2008; Fewsmith 2002; Nathan 2003; Yue 2008; Zang 2004; Zhang 2011.

²³Shambaugh 1993, 464–467.

²⁴Dittmer 2001, 54.

and occurred while the predecessor was still alive. This shift is illustrated in Figure 1, which clearly shows the development (post-Deng) of regular intervals that delimit each generation’s time in power and help us predict when large-scale change will occur. Predicting such change was impossible when it was highly volatile and brought on by informal activity.

Figure 1: An episodic pattern of change emerges at the 14th Party Congress.

4.2 Step-by-step promotion

A stable political system is characterized by the gradual promotion of individuals within the system, as “promotions given too often or too quickly, or promotions involving a disproportionate increase in rewards, threaten the legitimacy of the entire system” (Zang 2004, 107). Due to the progressive institutionalization of the CCP, we would expect to see later generations of leadership generally experience more measured ascent through the ranks and earlier generations experience larger and relatively unanticipated promotions and demotions. We test this expectation by comparing ℓ^1 and ℓ^2 distances.

In the CC, the periodicity of the ℓ^1 distances for the last five congresses is magnified in the ℓ^2 distances: the high points are higher and the low points are lower (Figure 2). Separately, each metric highlights the emerging norm of time-dependent generational change, but together the two metrics reveal the nature of promotion practices at each transition. We see that the ℓ^2 values are significantly lower than the ℓ^1 values at the 15th and 17th Party Congresses ($\ell^2 = 0.36, 0.30$ versus $\ell^1 = 0.51, 0.48$), indicating that not only is there little leadership change at these transitions, but the change that does occur is distributed relatively equally throughout the leadership. In contrast, ℓ^2 values are much higher than ℓ^1 values at the 14th, 16th, and 18th Party Congresses ($\ell^2 = 0.85, 0.89, 0.90$ versus $\ell^1 = 0.68, 0.77, 0.74$). This indicates that leadership change at each of these transitions is distributed *unequally* across the leadership: some leaders experience large rank

change while others experience little to no rank change. This suggests that political movement is gradual for all but top leaders and future top leaders, who experience significant political movement at pre-determined moments of transition.

Figure 2: The periodicity of the ℓ^1 distances for the last five congresses is magnified in the ℓ^2 distances.

Indeed, we can confirm that leaders at the highest levels are those experiencing large rank change by comparing the ℓ^1 and ℓ^2 distances for the Politburo and the PSC (Figures 3 and 4, respectively). As with the CC, we see ℓ^2 distances are significantly higher than ℓ^1 distances at the 14th, 16th, and 18th Party Congresses for both the Politburo ($\ell^2 = 0.79, 0.86, 0.86$ *versus* $\ell^1 = 0.52, 0.59, 0.59$) and PSC ($\ell^2 = 0.78, 0.84, 0.81$ *versus* $\ell^1 = 0.37, 0.56, 0.49$). In fact, this pattern not only holds for the Politburo and PSC, but is actually magnified as the difference between the ℓ^1 and ℓ^2 distance at each of these congresses is greater for the Politburo and PSC than it is for the CC. Thus, we can confirm that change in the top leadership, caused by strict retirement rules and rapid promotion for select leaders, is especially large when compared to the rest of the leadership.

Figure 3: Politburo ℓ^2 distances are significantly higher than ℓ^1 distances at moments of great transition.

Figure 4: PSC ℓ^2 distances are significantly higher than ℓ^1 distances at moments of great transition.

Analyzing the political bodies of the CCP separately and together reveals some of the large scale patterns in the circulation of the CCP elite. Further insight into promotion practices in the Party can be obtained by separating out the effect of retirements or removals from our measures of

distance. The metrics we are using aggregate both upward and downward political movement. Figure 5, however, shows distance computed only with upward movement and therefore depicts promotion practices as opposed to overall change. This plot of upward mobility shows how the erratic promotion practices of the early years have transformed into a clear cyclical pattern during the last five congresses. Although we cannot be sure that future transitions will continue to follow this pattern,²⁵ the metric shows the development of an unpredictable political system into one with increasingly regulated leader entry and promotion.

Figure 5: Upward mobility follows a clear cyclical pattern during the last five congresses.

Our metrics thus provide insight into the outcomes of political development in the CCP. By disaggregating them we empirically verify the development of step-by-step promotion as a political norm, with two important caveats. The first is that promotion practices are time-dependent: they are gradual, relatively equal, and follow a step-by-step pattern during intermediate congresses, but vary significantly during moments of generational change. The second is that top leaders, and future top leaders, experience more substantial movement than the rest of the leadership at select Party Congresses.

5 Tracing history

These metrics characterize elite circulation at various points in CCP history, and in doing so, trace leadership change over time. They show large scale patterns of leadership change and reveal the nature of such change, but are not designed to incorporate the details and motivations of specific changes. The metrics are therefore most useful in assessing the impact of major internal

²⁵Li 2013a.

developments and external events on the magnitude and scope of leadership change in the CCP. In the following sections we use our metrics in conjunction with the historical record to better understand these broad changes in the political élite over time.

5.1 The early years

The survival of the CCP was far from certain at the time of its founding and during the first several congresses. The Party was very small and its leadership did not exceed 15 members until the 5th Party Congress, when it increased threefold. Consequently, the leadership change between the 5th and 6th Congresses is a defining transition in the early history of the CCP.

The ℓ^1 metric characterizes this transition as one of moderate change. The ℓ^2 distances, however, register much higher values for change in the CC ($\ell^2 = 0.85$ *versus* $\ell^1 = 0.43$), Politburo ($\ell^2 = 0.87$ *versus* $\ell^1 = 0.48$), and PSC ($\ell^2 = 0.89$ *versus* $\ell^1 = 0.53$) as shown in Figures 2–4, respectively. This means that some leaders experienced very dramatic change during this transition. Indeed, events in 1927 led to a reshuffling of top Party personnel. Perhaps most importantly, Chen Duxiu, co-founder of the CCP and its highest-ranking leader at the time, was blamed for the failed CCP-KMT (Kuomintang) alliance and was forced to resign by the Comintern.²⁶ At the 6th Party Congress a member of the CC, Xiang Zhongfa, replaced him.²⁷

5.2 Mao’s ascent

The metrics successfully capture the substantial change in leadership that occurred between the 6th and 7th Party Congresses (Figure 6). The ℓ^2 distances are much larger than the ℓ^1 distances at the 7th Party Congress and indicate that some leaders experienced more dramatic harmonic rank change than others ($\ell^2 = 0.92$ *versus* $\ell^1 = 0.64$ for the CC, $\ell^2 = 0.90$ *versus* $\ell^1 = 0.57$ for the Politburo, and $\ell^2 = 0.83$ *versus* $\ell^1 = 0.43$ for the PSC). We know, of course, that the 17-year-long 6th Congress was a time of great turmoil and rapid leadership change due to KMT-CCP conflict, factional struggles, and Comintern involvement.²⁸ Every position of power was vulnerable to changing circumstances during this tumultuous time. It is in this context that Mao ascended to unparalleled power: he was appointed to the five-person Secretariat in 1935, endorsed by the Comintern in 1938, and made chair of the Secretariat and Politburo in 1943.²⁹

²⁶Saich 1996, 117–118.

²⁷Saich 1996, 282.

²⁸Those killed by the KMT include, among others, He Mengxiong, Lin Yunan, Xiang Zhongfa, Qu Qiubai and Xiang Ying (see Saich 1996, *xxv*, *xxvi*, 287, 862). Note that He Mengxiong (Shanghai Party leader) and Lin Yunan (head of the Propaganda Bureau) were provincial rather than national leaders (Stranahan 1998, 81). Factional struggle and Comintern involvement are exemplified by Li Lisan’s fall from power: “Li Lisan’s strongest opponents were Wang Ming and the ‘returned students’ group. They had as their principal supporter Pavel Mif, the Comintern representative in China . . . There were substantial changes in the Politburo with Wang Ming becoming a full member. Wang had not even been a CC member previously. Qu Qiubai, Li Weiham, and Li Lisan were dismissed from their Politburo positions, while, in addition to Wang Ming, Ren Bishi, Liu Shaoqi, and Wang Kequan were elected” (Saich 1996, 286–287). Note that Wang Ming’s birth name was Chen Shaoyu, under which he is listed in our data set. Although he was promoted to the Politburo during the 6th Congress, he had run afoul of Mao by the time of the 7th Party Congress, immediately after which he was only a member of the CC (see Dillon 238–239 and the 6th Congress sources listed in the appendix).

²⁹Saich 1996, 524, 671, 986.

The subsequent shift between the 7th and 8th Party Congresses, in marked contrast, registers a very small amount of change in all three political bodies using both the ℓ^1 and ℓ^2 metrics ($\ell^2 = 0.26$ and $\ell^1 = 0.29$ for the CC, $\ell^2 = 0.27$ and $\ell^1 = 0.24$ for the Politburo, and $\ell^2 = 0.23$ and $\ell^1 = 0.13$ for the PSC); see Figure 6. In fact, there was very little change leadership change between these two congresses, especially in the top leadership. As we saw in Table 1, the same six men (with the exception of Ren Bishi, who died) are at the top of both the 7th and 8th Party Congress lists.³⁰

Figure 6: Significant leadership change at the 7th Party Congress contrasts dramatically with limited change at the 8th Party Congress.

The reason for such little change becomes clear as we study the leadership dynamics of this period. Most importantly, none of the leaders had consolidated overriding power and the top leadership held a diversity of perspectives. Although all were guided by socialist ideals, Mao and his opponents, including Liu Shaoqi, Zhou Enlai, and Deng Xiaoping, disagreed about the mechanisms of change and the rate of progress necessary to realize those ideals.³¹ Mao, however, was not powerful enough at this time to remove his opponents from power, as exemplified by events at the 8th Party Congress. Liu Shaoqi, Zhou Enlai, and Deng Xiaoping were given highly significant roles during this Party Congress, and perhaps more indicative of Mao's limited power, delegates to the Party Congress adopted a resolution that changed the guiding principle of the CCP from Mao Zedong Thought to Marxism-Leninism.³² Thus, Mao did not have the political power to change the top leaders around him and they remained essentially unchanged between the 7th and 8th Party Congresses.

³⁰“In his [Deng’s] view, the first generational leadership group of the CCP was formed after the Zunyi Conference in 1935 and included Mao Zedong, Liu Shaoqi, Zhou Enlai, and Zhu De with Ren Bishi, who joined it later. Chen Yun was included after the death of Ren (in the early 1950s)” (Lee 2000, 172). For more information see the Appendix.

³¹Pantsov and Levine 2012, 390–423.

³²Pantsov and Levine 2012, 432–433.

5.3 The Cultural Revolution

The next two transitions occurred in the midst of the Cultural Revolution and the metrics reflect the turbulence of this period (Figure 7). Mao’s hold on power was much stronger by this time and he was able to orchestrate significant leadership change. He initiated the Cultural Revolution in an attempt both to regain dominance of the Party and to put the country on a path of proletarian revolution.³³ The ramifications for CCP leadership were significant as Mao restructured political bodies and supplanted top leaders with his allies. The most visible changes in the top leadership were, undoubtedly, the removal of Liu Shaoqi and Deng Xiaoping from power and the designation of Lin Biao as Mao’s new successor.³⁴ The ℓ^1 metric, however, shows greater change in the Politburo ($\ell^1 = 0.42$) and the CC ($\ell^1 = 0.61$). In fact, the violence and anarchy of the Cultural Revolution led to the death or demotion of party members at all levels of leadership.³⁵ Moreover, Mao himself initiated considerable change in the CC at the 9th Party Congress by promoting members of the military, leaders of the Cultural Revolution, and other leaders loyal to him.³⁶

Figure 7: Leadership change during the Cultural Revolution is especially large in the CC.

The “Lin Biao Affair” and the expansion of the PSC between the 9th and 10th Party Congresses led to moderate change at the highest levels of the party ($\ell^1 = 0.29$). There is again more substantial change in the CC ($\ell^1 = 0.54$), however, where the “Lin Biao Affair” had significant repercussions: “the key aspect of the new CC was that the number of military cadres on the CC dropped by almost half, the majority of those who disappeared having some form of association with the disgraced Lin Biao” (MacFarquhar and Schoenhals 2006, 363). Moreover, this was the first major transition

³³ Wu 2013; Pantsov and Levine 2012, 491–521.

³⁴ Ahn 1974, 258; Pantsov and Levine 2012, 491–521.

³⁵ Pantsov and Levine 2012, 507–521.

³⁶ Ahn 1974, 273–274; Shirk 1993, 85; Pantsov and Levine 2012, 534–535.

following the end of the Cultural Revolution and a number of former CC members were thus rehabilitated at this time.³⁷

5.4 The Deng era

The significant leadership change that took place between the 10th and 11th Party Congresses is reflected in Figures 8–10. Although the 10th Congress was only four years long, from the Cultural Revolution and purge of the Gang of Four to Mao’s death and pre-mortem promotion of Hua Guofeng to rank 1, it was a time of remarkable change. In fact, only one member from the PSC of the 10th Congress was included in the subsequent PSC.³⁸ Moreover, such dramatic change characterized each leadership transition from the 11th Party Congress to the 14th Party Congress: the difference between the ℓ^2 and ℓ^1 distances at each of these transitions, for the PSC ($\ell^2 = 0.83, 0.76, 0.77, 0.78$ versus $\ell^1 = 0.44, 0.30, 0.43, 0.37$) and the Politburo ($\ell^2 = 0.89, 0.82, 0.86, 0.79$ versus $\ell^1 = 0.57, 0.46, 0.59, 0.52$), underscores the significance and unevenness of leadership change during this time (Figures 8 and 9, respectively).

Figure 8: PSC ℓ^2 distances are consistently higher than ℓ^1 distances during the Deng era.

³⁷ Ahn 1974, 277; MacFarquhar and Schoenhals 2006, 363.

³⁸ Mao Zedong (rank 1), Zhou Enlai (rank 2), Kang Sheng (rank 4), Zhu De (rank 7), and Dong Biwu (rank 7) all died before the 11th Party Congress. Gang of Four members Wang Hongwen (rank 3) and Zhang Chunqiao (rank 7) were expelled from the party before the 11th Party Congress. Li Disheng (rank 6) made it to the 11th Congress, but as a Politburo member, and not as a PSC member. Only Ye Jianying (rank 5) made it to the 11th PSC.

Figure 9: Politburo ℓ^2 distances are consistently higher than ℓ^1 distances during the Deng era.

Although Deng maintained a stronghold on political power during this time, he was not officially rank 1. Rather, he chose top leaders and exercised power through them. Before the 12th Party Congress, Deng demoted his political rival Hua Guofeng and in his place promoted Hu Yaobang, with whom he had a personal tie, to Party Chief.³⁹ Under Deng’s direction, Hu Yaobang continued to reorganize the leadership and oversaw the large-scale retirement of older leaders and the subsequent promotion of younger, more reform-minded leaders.⁴⁰ In fact, Barnett (1986) finds that “of the 348 regular and alternate members of the CC chosen at the 12th Party Congress in 1982, 210—three-fifths of the total—were new members, and seven new members replaced an equal number of super-annuated leaders in the new 22-member Politburo (20 regulars and two alternates).”⁴¹ This massive transition was part of Deng’s effort to regulate succession and create a strong central leadership.⁴² Deng continued to organize large-scale change and both the ℓ^1 and ℓ^2 distances show the extent of this change at each of the Party Congresses he presided over ($\ell^1 = 0.73, 0.76, 0.62, 0.68$ and $\ell^2 = 0.91, 0.82, 0.63, 0.85$).

³⁹Lee 2000, 173–174.

⁴⁰Barnett 1986, 48; Goodman 1986, 124; Lee 2000, 175; Miller 2004, 1; Shirk 1993, 85.

⁴¹Our data reveal higher figures: 255 regular or alternate members of the 347-member CC and 12 regular or alternate members of the 22-member Politburo were new at the 12th Party Congress. The discrepancy between our data and Barnett’s data may be due to a difference in accounting for members added during intermediate plenums - we only list members in a particular Congress list if they were included in the first plenum of the Congress.

⁴²Lee 2000, 173; Miller 2004, 1.

Figure 10: CC ℓ^2 distances are consistently higher than ℓ^1 distances during the Deng era.

Although Deng sought to institute succession mechanisms and norms, he does not appear to have disavowed informal politics himself. At the end of the 12th Congress in 1987, Deng agreed to “half-retirement”, retiring from the PSC but keeping his position at the Central Military Commission.⁴³ Despite this relinquishment of significant formal power, Deng continued to influence the direction of the Party. For example, Hu Yaobang lost his position after losing Deng’s support and was replaced by Zhao Ziyang.⁴⁴ Even though Deng did not adhere fully to the regulations he himself instituted, he clearly used his power to institute procedural norms (as discussed in Section 4) and to make far-reaching changes to the composition of the Party. The massive leadership change he directed is reflected in the distances computed with our metrics and testifies to the ambition of his reform programs.

We stop our historical analysis here, at the 14th Party Congress, as the post-Deng trend of increasing institutionalization was discussed in Section 4.

6 Discussion

We have compiled a substantially complete set of partially-ranked lists for the 1st through 18th Chinese Communist Party Central Committees. To analyze changes from one Party Congress to the next, we have introduced a novel family of metrics on partially ranked lists that assign greater significance to changes at the top of the ranking than to changes lower down. Applying these metrics to the data we observe large scale patterns consistent with the usual understanding of

⁴³Lee 2000, 178.

⁴⁴Lee 2000, 173.

increasing institutionalization of Chinese Communist Party politics, as well as detailed analyses of the history of individual Party Congresses.

Should partially ranked lists from intermediate plenary sessions become available, the metrics will be able to reveal change that occurred during Congresses in addition to between them. Similarly, applying the metric to ranked leadership lists tagged with demographic and factional information would enhance quantitative analyses of elite prediction, informal activity, and broader elite theory.

More sophisticated measures of change not only contribute to a better understanding of past trends, but have the potential also to improve predictive capabilities. Hsin-hao Huang’s 2014 study is a good example of this type of application. Huang uses “Qualitative Comparative Analysis” to develop a set of conditions that are either required or merely favorable for promotion into the Politburo from the CC for the 15th to 17th Congresses. In his work he explains, “Projection of CCP Politburo appointments is based on understanding its turnover scale” (Huang 2014, 26). In this regard, the nuanced measures of change we have constructed should be even more instructive than a simple calculation of turnover. Our metrics can be applied separately to leaders with particular demographic characteristics (education, age, military experience, *etc.*) and to the leadership as a whole. A comparison of the results would then identify factors correlated with promotion and demotion.

Our measures of leadership change have the potential to complement quantitative analysis of informal power as articulated by Victor Shih, Christopher Adolph, and Mingxing Liu (2012). Shih *et al.* assign factional ties between top leaders and CC members in the 12th to 16th Congresses based on shared birth, education, and work experiences. They then use a Bayesian model to estimate the impact of factional ties on the rank of CC members. They find “considerable evidence that factional affiliation played a large role in political advancement” (Shih *et al.* 2012, 175), as officials connected to top leaders in power were ranked significantly higher than comparable officials without connections. The metrics we develop in this paper can be selectively applied to specific factions. We can then see how upward and downward mobility patterns for each faction compare to mobility patterns for the rest of the leadership. This approach would analyze rank change as a result of factional ties, whereas Shih *et al.* conduct a more static analysis of factional ties on rank at a given point in time.

Broadly speaking, our metrics can be applied to any leadership lists that are officially or informally ranked. Thus, they enable quantitative analysis of elite circulation in a number of individual states and establish a strong foundation for the quantitative study of elite change in diverse political systems around the world.

7 References

- Ahn, Byung-joon. 1974. “The Cultural Revolution and China’s search for political order”. *The China Quarterly* 58: 249–285.
- Barnett, A. Doak. 1986. “Ten years after Mao”. *Foreign Affairs* 65 (1): 37–65.

- Bo, Zhiyue. 2002. *Chinese Provincial Leaders: Economic Performance and Political Mobility Since 1949*. Armonk, New York: East Gate Book.
- Bo, Zhiyue. 2007. *China's Elite Politics: Political Transition and Power Balancing*. Hackensack, NJ: World Scientific Publishing Co. Pte. Ltd.
- Brodsgaard, Kjeld Erik. 2002. "The 16th Party Congress in China: A note on personnel changes". *Copenhagen Journal of Asian Studies* 16: 138–149.
- Chen, Cheng. 2005. "Institutional legitimacy of an authoritarian state: China in the mirror of Eastern Europe". *Problems of Post-Communism* 52 (4): 3–13.
- Chen, Jie, Yang Zhong, Jan Hillard and John Scheb. 1997. "Assessing political support in China: Citizen's evaluations of governmental effectiveness and legitimacy". *Journal of Contemporary China* 6 (16): 551–566.
- Chen, Ye, Hongbin Li, and Li-An Zhou. 2005. "Relative performance evaluation and the turnover of provincial leaders in China". *Economics Letters* 88 (3): 421–425.
- Cho, Young Nam. 2008. "Elite politics and the 17th Party Congress in China: Changing norms amid continuing questions". *The Korean Journal of Defense Analysis* 20 (2): 155–168.
- Critchlow, Douglas E. 1980. *Metric Methods for Analyzing Partially Ranked Data, Lecture Notes in Statistics* 34. New York: Springer.
- Dittmer, Lowell. 2000. "Informal politics among the Chinese Communist Party elite". *Informal Politics in East Asia*. 1st ed. Cambridge: Cambridge University Press, 106–140.
- Dittmer, Lowell. 2001. "The changing shape of elite power politics". *The China Journal* 45: 53–67.
- Fagin, Ronald, Ravi Kumar, Mohammad Mahdian, D. Sivakumar and Erik Vee. 2006. "Comparing partial rankings". *SIAM Journal of Discrete Mathematics* 20 (3): 628–648.
- Fewsmith, Joseph. 2002. "Generational transition in China". *The Washington Quarterly* 25 (4): 23–35.
- Fewsmith, Joseph. 2003. "The Sixteenth National Party Congress: The succession that didn't happen". *The China Quarterly* 173: 1–16.
- Fewsmith, Joseph. 2010. "Inner-Party democracy: Development and limitations". *China Leadership Monitor* 31: 1–11.
- Goodman, David S. G. 1986. "The National CCP Conference of September 1985 and China's leadership changes". *The China Quarterly* 105: 123–130.
- Gottlieb, Thomas M. 1977. *Chinese Foreign Policy Factionalism and the Origins of the Strategic Triangle*. Retrieved from the RAND Corporation website: <http://www.rand.org/content/dam/rand/pubs/reports/2006/R1902.pdf>.
- Guo, Baogang. 2003. "Political legitimacy and China's transition". *Journal of Chinese Political Science* 8: 1–25.
- Hausdorff, Felix. 1927. *Mengenlehre*. 3rd ed. Berlin: W. de Gruyter.

- Holbig, Heike. 2009. "Remaking the CCP's ideology: Determinants, progress, and limits under Hu Jintao". *Journal of Current Chinese Affairs* 38 (3): 35–61.
- Holbig, Heike and Bruce Gilley. 2010. "Reclaiming legitimacy in China". *Politics & Policy* 38 (3): 395–422.
- Hsu, Carolyn. 2001. "Political narratives and the production of legitimacy: The case of corruption in post-Mao China". *Qualitative Sociology* 24 (1): 25–54.
- Huang, Hsin-hao. 2014. "Entry into the Politburo of the CCP". *Choosing China's Leaders*. Ed. Chien-wen Kou and Xiaowei Zang. New York: Routledge, 22–41.
- Joo, Jang-Hwan. 2013. "A typology of political elites and its transformation in China: From 'ideology-oriented/replacement' elites to 'fragmented/reproductive' elites". *Asian Perspective* 37: 255–279.
- Kendall, Maurice. 1938. "A new measure of rank correlation". *Biometrika* 30: 81–89.
- Kou, Chien-wen and Xiaowei Zang. 2014. "Informal politics embedded in institutional contexts". *Choosing China's Leaders*. Eds. Chien-wen Kou and Xiaowei Zang. New York: Routledge, 1–21.
- Köllner, Patrick. August 2013. "Informal institutions in autocracies: Analytical perspectives and the case of the Chinese Communist Party". Working Paper No. 232. Retrieved from German Institute of Global and Area Studies: <http://www.giga-hamburg.de/en/publications/working-papers>.
- Lee, Hochul. 2010. "Political institutionalization as political development in China". *Journal of Contemporary China* 19 (65): 559–571.
- Lee, Peter N. S. 2000. "The informal politics of leadership succession in post-Mao China". *Informal Politics in East Asia*. Eds. Lowell Dittmer, Haruhiro Fukui and Peter N. S. Lee. New York: Cambridge University Press, 165–183.
- Li, Cheng. 1994. "University networks and the rise of Qinghua graduates in China's leadership". *The Australian Journal of Chinese Affairs* 32: 1–30.
- Li, Cheng, ed. 2008. *China's Changing Political Landscape: Prospects for Democracy*. Washington D.C.: Brookings Institution Press.
- Li, Cheng. 2012. "Leadership transition in the CPC: Promising progress and potential problems". *China: An International Journal* 10 (2): 23–33.
- Li, Cheng. 2013. "A biographical and factional analysis of the post-2012 Politburo". *China Leadership Monitor* 41: 1–17.
- Li, Cheng. 2013. "Top-level reform or bottom-up revolution?". *Journal of Democracy* 24 (1): 41–48.
- Li, Cheng and Lynn White. 2003. "The sixteenth Central Committee of the Chinese Communist Party: Hu Gets What?". *Asian Survey* 43 (4): 553–597.

- Li, Hongbin and Li-an Zhou. 2005. "Political turnover and economic performance: The incentive role of personnel control in China". *Journal of Public Economics* 89: 1743–1762.
- Lin, Gang. 2004. "Leadership transition, intra-Party democracy, and institution building in China". *Asian Survey* 44 (2): 255–275.
- MacFarquhar, Roderick and Michael Schoenhals. 2006. *Mao's Last Revolution*. Cambridge: The Belknap Press of Harvard University Press.
- Meyer, David A. and Laura Wilke. 2014. "Rank-dependent metrics for partial rankings". UCSD preprint.
- Miller, Alice. 2010. "The 18th Central Committee Politburo: A quixotic, foolhardy, rashly speculative, but nonetheless ruthlessly reasoned projection". *China Leadership Monitor* 33: 1–10.
- Miller, H. Lyman. 2004. "Where have all the elders gone?". *China Leadership Monitor* 10: 1–7.
- Nathan, Andrew J. 1973. "A factionalism model for CCP Politics". *The China Quarterly* 53: 34–66.
- Nathan, Andrew J. 2003. "Authoritarian resilience". *Journal of Democracy* 14 (1): 6–17.
- Oksenberg, Michel. 1982. "A decade of Sino-American relations". *Foreign Affairs* 61 (1): 175–195.
- Pantsov, Alexander and Steven Levine. *Mao: The Real Story*. New York: Simon & Schuster Paperbacks.
- Pareto, Vilfredo. 1935. *Trattato di Sociologia generale*. Ed. Arthur Livingston, transl. Andrew Bongiorno and Arthur Livingston, with James Harvey Rogers, as *The Mind and Society*, Vol. III. *Sentiment in Thinking (Theory of Derivations)*. London: Jonathan Cape.
- Ross, Robert S. 1989. "From Lin Biao to Deng Xiaoping: Elite instability and China's U.S. policy". *The China Quarterly* 118: 265–299.
- Saich, Tony. 1996. *The Rise to Power of the Chinese Communist Party: Documents and Analysis*. New York: M. E. Sharpe.
- Schubert, Gunter. 2007. "One-party rule and the question of legitimacy in contemporary China: Preliminary thoughts on setting up a new research agenda". *Journal of Contemporary China* 17 (54): 191–204.
- Shambaugh, David. 1993. "Deng Xiaoping: The politician". *The China Quarterly* 135: 457–490.
- Shambaugh, David. 2008. *China's Communist Party: Atrophy and Adaptation*. Washington D.C.: Woodrow Wilson Center Press.
- Shih, Victor. 2008. "'Nauseating' displays of loyalty: Monitoring the factional bargain through ideological campaigns in China". *The Journal of Politics* 70 (4): 1–16.
- Shih, Victor, Wei Shan and Mingxing Liu. 2010. "The Central Committee past and present: A method of quantifying elite biographies". *Chinese Politics: New Methods, Sources and Field*

- Strategies*. Eds. Mary Gallagher, Melanie Manion and Alan Carlson. New York: Cambridge University Press.
- Shih, Victor, Christopher Adolph and Mingxing Liu. 2012. "Getting ahead in the Communist Party: Explaining the advancement of Central Committee members in China". *American Political Science Review* 106 (1): 166–187.
- Shirk, Susan L. 1993. *The Political Logic of Economic Reform in China*. Berkeley: University of California Press.
- Sullivan, Lawrence R. 2012. *Historical Dictionary of the Chinese Communist Party*. Lanham, Maryland: Scarecrow Press, Inc.
- Stranahan, Patricia. 1998. *Underground: The Shanghai Communist Party and the Politics of Survival, 1927–1937*. Rowman & Littlefield.
- Tsou, Tang. 1995. "Chinese politics at the top: Factionalism or informal politics? Balance-of-power politics or a game to win all?". *The China Journal* 34: 95–156.
- Tsou, Tang and Andrew J. Nathan. 1976. "Prolegomenon to the study of informal groups in CCP politics". *The China Quarterly* 65: 98–117.
- Van de Ven, Hans J. 1991. *From Friend to Comrade: The Founding of the Chinese Communist Party, 1920–1927*. Berkeley: University of California Press.
- Wu, Lili. 2013. "Cultural Revolution (China)". *The Wiley-Blackwell Encyclopedia of Social and Political Movements*. Eds. David A. Snow, Donatella Della Porta, Bert Klandermans and Doug McAdam. Malden, MA: Wiley-Blackwell.
- Yue, Xie. 2008. "Party adaptation and the prospects for democratization in authoritarian China". *Issues and Studies* 44 (2): 79–102.
- Zhang, Qian and Chun Yao, eds. 2013. "China's Communist Party membership exceeds 85 million." *Xinhua*, 1 July 2013, retrieved from <http://english.cpc.people.com.cn/206972/206974/8305636.html>.
- Zang, Xiaowei. 2004. *Elite Dualism and Leadership Selection in China*. New York, NY: RoutledgeCurzon.
- Zhang, Yongjing. 2011. "The successor's dilemma in China's single party political system". *European Journal of Political Economy* 27: 674–680.
- Zheng, Shiping. 2003. "Leadership change, legitimacy, and Party transition in China". *Journal of Chinese Political Science* 8: 47–63.

8 Appendix: Compiling the data

In this appendix we provide a detailed description of how we compiled the partially ranked data on members and alternates of the Politburo Standing Committee, Politburo, and Central Committee for the 1st through 18th National Party Congresses of the CCP. The dataset can be found on the Minerva Dataverse.

Our primary sources include documents at *People's Daily Online* and Wolfgang Bartke's *Biographical Dictionary and Analysis of China's Party Leadership 1922–1988*.

People's Daily Online, a state-owned media outlet, publishes news as well as a number of official documents detailing party history and the composition of top political bodies in the CCP. In some cases these lists are ordered by rank; in others they are not, in which case we record the members of that body as tied. The 7th and 8th Central Committee members and the 7th, 8th and 12th–18th Central Committee alternates are listed in ballot order with tied members and alternates listed in “stroke order”. As the documents do not include the numbers of votes, nor indicate which of the members are tied, we apply the following procedure to create partially ranked lists in these cases:

1. When a leader's name comes after, in stroke order, the following leader's name on the list, we know they cannot be listed in stroke order and must be listed in ballot order, so we rank the former above the latter. Conversely, when a leader's name comes before, in stroke order, the following leader's name, we cannot know if they did or did not receive the same number of ballots, so we assign them the same rank.
2. In making these decisions, we use the following rules regarding stroke order:⁴⁵
 - Order by the number of strokes of the first character of the family name;
 - If numbers of strokes are the same, then order by the type of first stroke, from horizontal (横, *héng*), vertical (竖/竖, *shù*), left-falling (撇, *piě*), right-falling (捺, *nà*), to turning (折, *zhé*) strokes. The dot (點/点, *diǎn*) stroke is considered a sort of right-falling stroke, so it is ranked ahead of turning strokes. This rule is from *The Manual of Elections of Communist Party of China*, which can be downloaded for a fee at <http://www.docin.com/p-224635986.html>;
 - If both the numbers of strokes and types of the first strokes are the same, then order by the structure of the character, from left-right structure (左右结构), top-bottom structure (上下结构) to unitary structure (整体字);
 - If the first characters of the family names are the same, then order by the next characters of family name;
 - If the family names are the same, order by the characters of first name.
 - *The Manual of Elections of Communist Party of China* orders (almost all) last names, even those with same number/type of strokes and the same structure, but does not explain the criteria beyond structure. We use this ordering.

Bartke provides membership lists for each political body, but does not rank leaders within these political bodies. Thus, we often use his lists to confirm the membership of a particular political body rather than a specific ranking within that political body. It is important to note that Bartke does not provide specific sources for his leadership data, but indicates when “some sources”, “youngest sources”, or “Chinese sources” disagree with his placement of specific leaders.

⁴⁵See, for example, those published by the Department of Education in Jiangsu Province, China: http://www.jsjyt.gov.cn/art/2014/1/14/art_10042_142341.html.

In some cases our primary sources disagree about a leader's position in the party apparatus. In these cases we use biographies or other detailed sources to supplement our understanding of the history and to make a final decision regarding the leader's placement in our dataset. In the following, when possible we mention the original source of the data, but we cannot always verify independence of sources. A full list of sources is provided at the end of this appendix.

Finally, this dataset reflects the leadership at the beginning of each Congress. Thus, leaders added to a particular political body after the first Plenum of each Congress will not be included and leaders promoted from one political body to another after the first Plenum will be listed in their original position. In the future we hope to create a more detailed dataset of leaders that includes leadership change at intermediate Plenums.

We use the following abbreviations as we refer to specific documents downloaded from *People's Daily Online* and listed at the end of the discussion of each Congress in the following: Politburo Standing Committee (PSC), Politburo (P), Central Committee (CC), Central Bureau (CB), Central Executive Committee (CEC); English (En), Chinese (Ch).

1st Congress

Central Bureau

People's Daily Online provides consistent lists of the Central Bureau leadership.

1.CB.En: "The 1st National Congress", retrieved from <http://english.cpc.people.com.cn/206972/206981/8188307.html>.

1.CB.Ch.1: "*Di yi jie zhongyangweiyuanhui (1921nian 7yue – 1922nian 7yue)*", retrieved from <http://cpc.people.com.cn/GB/64162/139962/8437288.html>.

1.CB.Ch.2: "*Zhongguo gongchandang shezhi zhongyang ju*", retrieved from <http://cpc.people.com.cn/GB/64162/64168/64553/4427944.html>.

2nd Congress

Central Executive Committee

People's Daily Online provides consistent membership lists for the CEC, but the rankings differ. Moreover, Bartke includes two leaders, Li Dazhao and Xiang Jingyu, not included in any of the *People's Daily Online* sources (Bartke 1990, 470). We review the placement of each disputed leader below.

- Deng Zhongxia: 2.CEC.En and 2.CEC.Ch.1 list Deng Zhongxia at rank 5 while 2.CEC.Ch.2 lists him at rank 2. We place Deng at rank 5 because Bartke lists Deng as an alternate member, which would place Deng at the bottom of the list and is therefore consistent with two of the three *People's Daily Online* sources (Bartke 1990, 470).
- Xiang Jingyu: Bartke (1990, 470) lists Xiang Jingyu as a CEC alternate while none of the *People's Daily Online* documents include her as a CEC member or alternate. Although it is clear that Xiang was influential and involved with the highest levels of the party, we do not include her in our dataset, as prejudice against women likely precluded her official placement as a member or alternate (McElderry 1986, 110–111; Gilmartin 1995, 40–45).

- Li Dazhao: None of the *People's Daily Online* documents list Li Dazhao as a CEC member. Bartke lists Li Dazhao as a member while acknowledging that he is not listed as such in some sources (Bartke 1990, 470). Although Li Dazhao is widely extolled as a founding member of the Party, we do not include him in the 1st or 2nd Congress. He is not officially ranked in the 1st Congress leadership because he was not physically present there and instead had Zhang Guotao serve as his representative (Lew and Pak-wah Leung 2013, 117; Sullivan 2012, 102). He may not be officially ranked in many sources discussing the 2nd Congress leadership because of his work for the KMT during the emerging CCP-KMT alliance of the time (Pantsov and Levine 2007, 119; Alexander 1991, 204).

2.CEC.En: “The 2nd National Congress”, retrieved from <http://english.cpc.people.com.cn/206972/206981/8188344.html>.

2.CEC.Ch.1: “*Dier jie zhongyangweiyuanhui (1922nian 7yue – 1923nian 6yue)*”, retrieved from <http://cpc.people.com.cn/GB/64162/139962/8437287.html>.

2.CEC.Ch.2: “*Zhongguo gongchandang dierci quanguo daibiao dahui jianjie*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64554/4428161.html>.

3rd Congress

General notes

Institutional changes were made to the structure of the CCP during the 3rd Congress. Specifically, the Central Executive Committee (CEC) was established as the official policy-making body and the Central Bureau, to be elected by the CEC, was given the authority to act for the CEC and issue announcements in its name (Saich 1996, 9; Van de Ven 1991, 136–138).

Central Bureau

People's Daily Online documents rank CB members inconsistently (3.All.Ch.1 and 3.All.Ch.2 differ from 3.CB.En). We take the Chinese language sources to be more authoritative and thus use their ranking.

Central Executive Committee

3.All.Ch.1 and 3.All.Ch.2 list one member, Zhu Shaolian, and two alternates, Zhang Lianguang and Li Hanjun, not included in Bartke (1990, 470). Conversely, Bartke (1990, 470) lists one member, Qu Qiubai, and two alternates, Xiang Jingyu and Zhang Tailei, not included in either *People's Daily Online* source. We use the *People's Daily Online* list because a letter from Dutch Comintern Executive Committee (ECCI) member Henk Sneevliet, writing under the pseudonym Maring to the ECCI, Profintern, and the Vladivostock Bureau (dated 25 June 1923 and available in the Sneevliet Archives) confirms its list of members and alternates (Saich 1996, 94n24).

3.CB.En: “The 3rd National Congress”, retrieved from <http://english.cpc.people.com.cn/206972/206981/8188346.html>.

3.All.Ch.1: “*Disan jie zhongyangweiyuanhui (1923nian 6yue – 1925nian 1yue)*”, retrieved from <http://cpc.people.com.cn/GB/64162/139962/8437285.html>.

3.All.Ch.2: “*Zhongguo gongchandang disanci quanguo daibiao dahui jianjie*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64555/4428209.html>.

4th Congress

Central Bureau

People's Daily Online documents rank CB members inconsistently (4.All.Ch.1 and 4.All.Ch.2 differ from 4.CB.En). We take the Chinese language sources to be more authoritative and thus use their ranking.

Central Executive Committee

Bartke (1990, 470) lists one member, Li Lisan, and one alternate, Deng Zhongxia, not included in the Chinese language *People's Daily Online* documents. Moreover, Bartke acknowledges that some sources do not list these two leaders in the 4th Congress. We confirm this with Saich (1996, 267n13), who cites Wang Jianying's *Zhongguo Gongchandang Zuzhishi Zilao Huibian*.

4.CB.En: "The 4th National Congress", retrieved from <http://english.cpc.people.com.cn/206972/206981/8188347.html>.

4.All.Ch.1: "*Disi jie zhongyangweiyuanhui (1925nian 1yue – 1927nian 5yue)*", retrieved from <http://cpc.people.com.cn/GB/64162/139962/8437283.html>.

4.All.Ch.2: "*Zhongguo gongchandang disi ci quanguo daibiao dahui jianjie*", retrieved from <http://cpc.people.com.cn/GB/64162/64168/64556/4428254.html>.

5th Congress

General Notes

The 5th Congress altered the organizational structure of the CCP. The new leadership structure included a Central Committee (formerly the Central Executive Committee), which elected the Politburo (formerly the Central Bureau), which in turn elected the Politburo Standing Committee (Saich 1996, 116; Sullivan 2012, 101; Van de Ven 1991, 224).

Politburo Standing Committee

People's Daily Online documents rank PSC members Chen Duxiu, Zhang Guotao, and Cai Hesen consistently. Other sources include these three as well as two more leaders, Qu Qiubai and Li Weiha, on their PSC lists (Saich 1996, 117, 269n42; Sullivan 2012, 101). We use the lists from the *People's Daily Online* documents as the PSC of the 5th Congress originally had three members and was only later expanded to five members (Wang Jianying, ed., *Zhongguo Gongchandang Zuzhishi Zilao Huibian*, 30, cited in Van de Ven 1991, 224).

Politburo

People's Daily Online provides consistent membership lists for the Politburo, with the exception of Zhou Enlai. The three Chinese *People's Daily Online* documents disagree, however, with the English *People's Daily Online* document in ranking Politburo members. We take the Chinese language sources to be more authoritative and thus use their ranking of Politburo members.

- Zhou Enlai: 5.All.Ch lists Zhou Enlai as both a Politburo member and an alternate. Bartke (1990, 337) and the other two *Chinese People's Daily Online* documents list Zhou Enlai as a full Politburo member. Sullivan's *Historical Dictionary of the Chinese Communist Party* confirms Zhou's position as a member (Sullivan 2012, 590).

The *People's Daily Online* documents and Bartke provide inconsistent lists of Politburo alternates; we review the placement of each disputed leader below.

- Zhou Enlai: See above.
- Mao Zedong: Bartke lists Mao Zedong as a Politburo alternate while acknowledging that some of the youngest sources do not include him in this position (Bartke 1990, 337). Moreover, none of the *People's Daily Online* documents include Mao in this position. *Mao: The Real Story*, a detailed biography on Mao's life, also does not include Mao as an alternate member of the Politburo, but instead includes him as an alternate member of the CC at Rank 32 (Pantsov and Levine 2007, 180–181). This ranking is consistent with 5.All.Ch so we include Mao as a CC alternate and not as a Politburo alternate.
- Zhang Tailei: Bartke (1990, 337, 470) includes Zhang Tailei as a CC member, but all three Chinese *People's Daily Online* documents include him as a Politburo alternate. Saich confirms his position as a Politburo alternate (Saich 1996, 269n42).

Central Committee

5.All.Ch and Bartke (1990, 470) provide slightly different membership lists for the CC. 5.All.Ch lists one CC alternate, Lin Yunan, not included in Bartke. Bartke lists five CC members, Hui Daiying, Luo Dengxiang, Ruan Xiaoxian, Wang Ruofei, and Wang Yifei, not included in 5.All.Ch. Bartke acknowledges that four of the five (Hui Daiying, Ruan Xiaoxian, Wang Ruofei, and Wang Yifei) are not included in the CC in some sources. Moreover, 5.All.Ch indicates that the fifth inconsistent leader (Luo Dengxiang) was added during an intermediate Plenum. We thus use the *People's Daily Online* list.

5.P.En: “The 5th National Congress”, retrieved from <http://english.cpc.people.com.cn/206972/206981/8188349.html>.

5.All.Ch: “*Diwu jie zhongyangweiyuanhui (1927nian 5yue – 1928nian 7yue)*”, retrieved from <http://cpc.people.com.cn/GB/64162/139962/8437282.html>.

5.PSC+P.Ch.1: “*Zhongguo gongchandang diwu jie zhongyang lingdao jigou*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64557/4428292.html>.

5.PSC+P.Ch.2: “*Zhongguo gongchandang diwu ci quanguo daibiao dahui jianjie*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64557/4428291.html>.

6th Congress

Politburo Standing Committee

The *People's Daily Online* documents do not rank the PSC members consistently. We focus here on the Chinese documents as we take the Chinese language sources to be more authoritative. 6.PSC+P.Ch.1 and 6.PSC+P.Ch.2 provide the same ranking of PSC members and alternates. 6.All.Ch, however, provides a different ranking. Saich's *The Rise to Power of the Chinese Communist Party* confirms the ranking of PSC members and alternates in 6.All.Ch (Zhao Pu, “*Zhongguo gongchandang diliuci daibiao dahui*”, *Dangshi Yanjiu*, 70, cited in Saich 1996, 282).

Politburo

The *People's Daily Online* documents rank the Politburo members and alternates consistently.

Bartke (1990, 339) lists the same leaders as Politburo members or alternates but also includes Gu Zhunzhang, Mao Zedong, and Wang Kequan, while acknowledging that some Chinese sources do not include these three. Saich's *The Rise to Power of the Chinese Communist Party* confirms the lists of Politburo members and alternates in the *People's Daily Online* documents (Zhao Pu, "Zhongguo gongchandang diliuci daibiao dahui", *Dangshi Yanjiu*, 70, cited in Saich 1996, 282).

Central Committee

6.All.Ch and Bartke (1990, 470–71) provide somewhat different lists of CC members and alternates. 6.All.Ch lists one CC member, Wang Zaowen, not listed in Bartke. Bartke lists eight CC members, Cai Chang, Chen Tanqiu, Dong Biwu, Fang Zhimin, Li Weiham, Liu Shaoqi, Wang Zaohuo, and Xia Xi, and one CC alternate, He Mengxiong, not included in 6.All.Ch.

According to 6.All.Ch, six of the eight contested CC members listed in Bartke (all but Cai Chang and Wang Zaohuo) were added during an intermediate Plenum. Song's *Biographical Dictionary of the People's Republic of China* confirms that Cai Chang was not a CC member at the 6th Congress (Song 2013, 23). So we list Wang Zaowen and not Wang Zaohuo as a CC member for three reasons: First, we were unable to find historical commentary regarding Wang Zaohuo in Song's *Biographical Dictionary of the People's Republic of China* or in any other source. Second, it is possible Wang Zaohuo was not on the list at the time of the first Plenum, as has been confirmed for six of the eight anomalous cases. Third, Bartke may have mistakenly transliterated Wang Zaowen as Wang Zaohuo (it is possible that the Chinese character 文 (*wen*) was confused with the character 火 (*huo*)). Nevertheless, we keep Wang Zaohuo in our codebook and may revise if additional information comes to light.

The final inconsistency concerns He Mengxiong, who is listed as a CC alternate by Bartke, but is not included in 6.All.Ch. He Mengxiong was a powerful CCP member who was an important leader of the Jiangsu Provincial Committee and the Shanghai District Committees, but not a member or alternate of the CC (Sullivan 1985, 80; Stranahan 1998, 72).

6.PSC.En: "The 6th National Congress", retrieved from <http://english.cpc.people.com.cn/206972/206981/8188357.html>.

6.All.Ch: "*Diliu jie zhongyangweiyuanhui (1928nian 7yue – 1945nian 6yue)*", retrieved from <http://cpc.people.com.cn/GB/64162/139962/8437281.html>.

6.PSC+P.Ch.1: "*Zhongguo gongchandang diliu jie zhongyang lingdao jigou*", retrieved from <http://cpc.people.com.cn/GB/64162/64168/64558/4428361.html>.

6.PSC+P.Ch.2: "*Zhongguo gongchandang diliu ci quanguo daibiao dahui jianjie*", retrieved from <http://cpc.people.com.cn/GB/64162/64168/64558/4428360.html>.

7th Congress

Politburo Standing Committee

The *People's Daily Online* documents rank the PSC members consistently.

Politburo

The *People's Daily Online* documents rank the Politburo members consistently, and Bartke's list is consistent (Bartke 1990, 341).

Central Committee

7.All.Ch provides a list of CC members and alternates in ballot order with ties listed in stroke order. As described at the beginning of this appendix, we use this list to create a partially ranked list of CC members and alternates. Bartke provides a consistent list of CC members and alternates (Bartke 1990, 471).

7.PSC+P.En: “The 7th National Congress”, retrieved from <http://english.cpc.people.com.cn/206972/206981/8188358.html>.

7.All.Ch: “*Diqi jie zhongyangweiyuanhui (1945nian 6yue – 1956nian 9yue)*”, retrieved from <http://cpc.people.com.cn/GB/64162/139962/8437280.html>.

7.PSC+P.Ch.1: “*Zhongguo gongchandang diqi jie zhongyang lingdao jigou*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64559/4442094.html>.

7.PSC+P.Ch.2: “*Zhongguo gongchandang diqi ci quanguo daibiao dahui jianjie*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64559/4612416.html>.

8th Congress

Politburo Standing Committee

The *People’s Daily Online* documents rank the PSC members consistently. Bartke’s list is consistent (Bartke 1990, 360).

Politburo

8.All.Ch, 8.PSC+P.Ch and Bartke (1990, 343) provide consistent membership lists for the Politburo. The two *People’s Daily Online* documents, however, rank the members differently. We use the ranking in 8.PSC+P.Ch, as it lists Politburo members according to election results, while 8.All.Ch does not explain the order of its Politburo list. Bartke’s list is consistent (Bartke 1990, 343).

These *People’s Daily Online* sources rank the Politburo alternates consistently. Bartke’s list is consistent (Bartke 1990, 343).

Central Committee

8.All.Ch provides a list of CC members and alternates in ballot order with ties listed in stroke order. As described at the beginning of this appendix, we use this list to create a partially ranked list of CC members and alternates. Bartke provides a consistent list of CC members and alternates (Bartke 1990, 471–472).

8.PSC.En: “The 8th National Congress”, retrieved from <http://english.cpc.people.com.cn/206972/206981/8188361.html>.

8.All.Ch: “*Diba jie zhongyangweiyuanhui (1956nian 9yue – 1969nian 4yue)*”, retrieved from <http://cpc.people.com.cn/GB/64162/139962/8437279.html>.

8.PSC+P.Ch: “*Zhonggong ba jie yi zhong quanwei xuan chu xin di zhongyang jigou*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64560/65343/4442029.html>.

8.PSC.Ch: “*Zhongguo gongchandang diba ci quanguo daibiao dahui jianjie*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64560/65452/4441997.html>.

9th Congress

Politburo Standing Committee

People's Daily Online documents provide consistent membership lists for the PSC. 9.All.Ch and 9.PSC+P.Ch rank Mao Zedong and Lin Biao as the top two PSC members and then go on to list the remaining PSC members in stroke order. Thus, we place Mao and Lin at rank 1 and rank 2, respectively, and assign rank 3 to the other three PSC members. Bartke's list is consistent (Bartke 1990, 360).

Politburo

9.All.Ch, 9.PSC+P.Ch, and Bartke (1990, 345) provide consistent lists of Politburo members and alternates.

Central Committee

9.All.Ch and Bartke (1990, 472-473) provide consistent lists of CC members and alternates.

9.PSC.En: "The 9th National Congress", retrieved from <http://english.cpc.people.com.cn/206972/206981/8188364.html>.

9.All.Ch: "*Dijiu jie zhongyangweiyuanhui (1969nian 4yue – 1973nian 8yue)*", retrieved from <http://cpc.people.com.cn/GB/64162/139962/8437276.html>.

9.CC.Ch: "*Zhongguo gongchandang dijiu jie zhongyangweiyuanhui weiyuan he houbu weiyuan mingdan*", retrieved from <http://cpc.people.com.cn/GB/64162/64168/64561/4429448.html>.

9.PSC+P.Ch: "*Zhongguo gongchandang dijiu zhongyangweiyuanhui diyici quanti huiyi gongbao*", retrieved from <http://cpc.people.com.cn/GB/64162/64168/64561/65363/4429469.html>.

10th Congress

Politburo Standing Committee

The *People's Daily Online* documents list the chairman and the five vice-chairmen consistently. The five vice-chairmen comprise the top level of leadership, after Chairman Mao, and Wich confirms their order in the *People's Daily Online* documents to be rank order (Wich 1974, 235). 10.PSC.En, 10.All.Ch, 10.PSC+P.Ch, and Wich (1974, 235) then list the three remaining members of the PSC. Thus we place Mao at rank 1, the five vice-chairman at ranks 2-6, and the remaining PSC members at rank 7. Bartke provides a consistent list of PSC members, but does not distinguish vice-chairmen from regular members (Bartke 1990, 360).

Politburo

10.All.Ch, 10.PSC+P.Ch, and Bartke (1990, 347) provide consistent lists of Politburo members and alternates.

Central Committee

10.All.Ch and Bartke (1990, 474-475) provide consistent lists of CC members and alternates.

10.PSC.En: "The 10th National Congress", retrieved from <http://english.cpc.people.com.cn/206972/206981/8188369.html>.

10.All.Ch: "*Dishi jie zhongyangweiyuanhui (1973nian 8yue – 1977nian 8yue)*", retrieved from

<http://cpc.people.com.cn/GB/64162/139962/8437273.html>.

10.PSC.Ch: “*Zhongguo gongchandang dishi ci quanguo daibiao dahui jianjie*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64562/65450/4429426.html>.

10.PSC+P.Ch: “*Zhongguo gongchandang dishi zhongyangweiyuanhui diyici quanti huiyi gongbao*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64562/65366/4429435.html>.

11th Congress

Politburo Standing Committee

The *People’s Daily Online* documents rank the PSC members consistently. Bartke provides a consistent list of PSC members (Bartke 1990, 360).

Politburo

11.All.Ch, 11.PSC+P.Ch, and Bartke (1990, 349) provide consistent lists of Politburo members and alternates.

Central Committee

11.All.Ch and Bartke (1990, 475-477) provide consistent lists of CC members and alternates.

11.PSC.En: “The 11th National Congress”, retrieved from <http://english.cpc.people.com.cn/206972/206981/8188373.html>.

11.All.Ch: “*Dishiye jie zhongyangweiyuanhui (1977nian 8yue – 1982nian 9yue)*”, retrieved from <http://cpc.people.com.cn/GB/64162/139962/8437272.html>.

11.PSC.Ch: “*Zhongguo gongchandang dishiye ci quanguo daibiao dahui jianjie*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64563/65449/4441879.html>.

11.PSC+P.Ch: “*Zhongguo gongchandang dishiye zhongyangweiyuanhui diyici quanti huiyi xinwen gongbao*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64563/65369/4441892.html>.

12th Congress

Politburo Standing Committee

The *People’s Daily Online* documents rank the PSC members consistently. Bartke provides a consistent list of PSC members (Bartke 1990, 360).

Politburo

12.All.Ch, 12.PSC+P.Ch, and Bartke (1990, 351) provide consistent lists of Politburo members.

12.All.Ch and 12.PSC+P.Ch provide consistent, ranked lists of Politburo alternates. Bartke provides a consistent list of Politburo alternates (Bartke 1990, 351).

Central Committee

Bartke (1990, 477–478) and 12.All.Ch provide consistent lists of CC members with one exception: Bartke lists Li Dongye as a CC member while 12.All.Ch does not. We exclude Li Dongye from the CC under the hypothesis that he was not on the list at the time of the Party Congress, but

may have been added later. Nevertheless, we keep his name in the codebook and may revise if additional information comes to light.

12.All.Ch provides a list of CC alternates in ballot order with ties listed in stroke order. As described at the beginning of this appendix, we use this list to create a partially ranked list of CC alternates. Bartke provides a consistent list of CC alternates (Bartke 1990, 479).

12.PSC.En: “The 12th National Congress”, retrieved from <http://english.cpc.people.com.cn/206972/206981/8188374.html>.

12.All.Ch: “*Dishier jie zhongyangweiyuanhui (1982nian 9yue – 1987nian 11yue)*”, retrieved from <http://cpc.people.com.cn/GB/64162/139962/8437271.html>.

12.PSC+P.Ch: “*Dishier jie zhongyangweiyuanhui diyici quanti huiyi gongbao (diyi hao)*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64565/65376/4429537.html>.

13th Congress

Politburo Standing Committee

The *People’s Daily Online* documents rank the PSC members consistently. Bartke provides a consistent list of PSC members (Bartke 1990, 360).

Politburo

13.All.Ch, 13.PSC+P.Ch, and Bartke (1990, 353) provide consistent lists of Politburo members. Each of these sources lists only one Politburo alternate, Ding Guangen, who is thus ranked below Politburo members and above CC members.

Central Committee

13.CC.Ch.1 and Bartke (1990, 480) provide consistent lists of CC members.

13.CC.Ch.2 provides a list of CC alternates in ballot order with ties listed in stroke order. As described at the beginning of this appendix, we use this list to create a partially ranked list of CC alternates. Bartke provides a consistent list of CC alternates (Bartke 1990, 481).

13.PSC.En: “The 13th National Congress”, retrieved from <http://english.cpc.people.com.cn/206972/206981/8188377.html>.

13.All.Ch: “*Dishisan jie zhongyangweiyuanhui (1987nian 11yue – 1992nian 10yue)*”, retrieved from <http://cpc.people.com.cn/GB/64162/139962/8437270.html>.

13.CC.Ch.1: “*Shisan jie zhongyangweiyuanhui weiyuan mingdan (175 ren)*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64566/65447/4441806.html>.

13.CC.Ch.2: “*Shisan jie zhongyangweiyuanhui houbu weiyuan mingdan (110 ren)*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64566/65447/4441807.html>.

13.PSC+P.Ch: “*Dishisam jie zhongyangweiyuanhui diyici quanti huiyi gongbao*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64566/65383/4441834.html>.

14th Congress

Politburo Standing Committee

The *People’s Daily Online* documents rank the PSC members consistently. MacFarquhar confirms

this ranking (MacFarquhar 2011, 603).

Politburo

14.PSC+P.Ch.1 and 14.PSC+P.Ch.2 list Politburo members in stroke order and Politburo alternates in ballot order. MacFarquhar confirms the list of Politburo members and the ranking of Politburo alternates (MacFarquhar 2011, 603).

Central Committee

14.CC.Ch provides a list of CC members in stroke order. It also provides a list of CC alternates in ballot order with ties listed in stroke order. As described at the beginning of this appendix, we use this list to create a partially ranked list of CC alternates.

14.PSC.En: “The 14th National Congress”, retrieved from <http://english.cpc.people.com.cn/206972/206981/8188380.html>.

14.CC.Ch: “*Shisi jie zhongyangweiyuanhui zhongyang weiyuan mingdan*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64567/65446/4441684.html>.

14.PSC+P.Ch.1: “*Dang de shishi jie yi zhong quanwei chansheng zhongyang lingdao jigou*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64567/65393/4441736.html>.

14.PSC+P.Ch.2: “*Zhongguo gongchandang dishi si jie zhongyangweiyuanhui diyici quanti huiyi gongbao*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64567/65393/4441737.html>.

15th Congress

Politburo Standing Committee

The *People’s Daily Online* documents rank the PSC members consistently. MacFarquhar confirms this ranking (MacFarquhar 2011, 603).

Politburo

15.PSC+P.Ch lists Politburo members in stroke order and Politburo alternates in ballot order. MacFarquhar confirms the list of Politburo members and the ranking of Politburo alternates (MacFarquhar 2011, 604).

Central Committee

15.CC.Ch provides a list of CC members in stroke order. It also provides a list of CC alternates in ballot order with ties listed in stroke order. As described at the beginning of this appendix, we use this list to create a partially ranked list of CC alternates.

15.PSC.En: “The 15th National Congress”, retrieved from <http://english.cpc.people.com.cn/206972/206981/8188382.html>.

15.CC.Ch: “*Shiwu jie zhongyangweiyuanhui weiyuan, houbu weiyuan mingdan*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64568/65445/4429246.html>.

15.PSC+P.Ch: “*Zhongguo gongchandang dishiwu jie zhongyangweiyuanhui diyici quanti huiyi gongbao*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64568/65400/4429281.html>.

16th Congress

Politburo Standing Committee

The *People's Daily Online* documents rank PSC members consistently. MacFarquhar confirms this ranking (MacFarquhar 2011, 604).

Politburo

16.PSC.Ch lists Politburo members in stroke order and lists one Politburo alternate. MacFarquhar confirms the list of Politburo members and the Politburo alternate (MacFarquhar 2011, 604).

Central Committee

16.CC.Ch.1 provides a list of CC members in stroke order. 16.CC.Ch.2 and 16.CC.En provide a list of CC alternates in ballot order with ties listed in stroke order. As described at the beginning of this appendix, we use this list to create a partially ranked list of CC alternates.

16.PSC.En: “The 16th National Congress”, retrieved from <http://english.cpc.people.com.cn/206972/206981/8188385.html>.

16.CC.Ch.1: “*Shiliu daxuan chu ming zhongyang weiyuan (fu mingdan)*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64569/65444/4429139.html>.

16.CC.Ch.2: “*Shiliu daxuan chu ming zhongyangweiyuanhui houbu weiyuan (fu mingdan)*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64569/65444/4429137.html>.

16.CC.En: “List of alternate members of 16th CPC Central Committee”, retrieved from http://news.xinhuanet.com/english/2002-11/14/content_630188.htm.

16.PSC+P.Ch: “*Zhongguo gongchandang dishiliu jie zhongyangweiyuanhui diyici quanti huiyi gongbao*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/64569/65409/4519016.html>.

17th Congress

Politburo Standing Committee

17.PSC.En and 17.PSC+P.Ch rank PSC members consistently. MacFarquhar confirms this ranking (MacFarquhar 2011, 604).

Politburo

17.P.En and 17.PSC+P.Ch provide consistent lists of Politburo members. MacFarquhar confirms this list (MacFarquhar 2011, 605).

Central Committee

17.CC.Ch.1 lists CC members in stroke order. 17.CC.Ch.2 and 17.CC.En provide a list of CC alternates in ballot order with ties listed in stroke order. As described at the beginning of this appendix, we use this list to create a partially ranked list of CC alternates.

17.PSC.En: “List of members of Standing Committee of Political Bureau of CPC Central Committee”, retrieved from <http://english.people.com.cn/90002/92169/92187/6288260.html>.

17.P.En: “List of Political Bureau members of 17th CPC Central Committee”, retrieved from <http://english.people.com.cn/90002/92169/92187/6288257.html>.

- 17.CC.Ch.1: “*Zhongguo gongchandang dishiqi jie zhongyangweiyuanhui weiyuan mingdan*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/106155/106156/6426830.html>.
- 17.CC.Ch.2: “*Zhongguo gongchandang dishiqi jie zhongyangweiyuanhui houbu weiyuan mingdan*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/106155/106156/6426827.html>.
- 17.CC.En: “List of alternate members of 17th CPC Central Committee”, retrieved from http://news.xinhuanet.com/english/2007-10/21/content_6917679.htm.
- 17.PSC+P.Ch: “*Zhonggong dishiqi jie zhongyangweiyuanhui diyici quanti huiyi gongbao*”, retrieved from <http://cpc.people.com.cn/GB/64162/64168/106155/106157/6426791.html>.

18th Congress

Politburo Standing Committee

18.PSC.En and 18.PSC+P.Ch rank the PSC members consistently.

Politburo

18.P.En and 18.PSC+P.Ch provide consistent lists of Politburo members.

Central Committee

18.CC.Ch.1 and 18.CC.En.1 provide a list of CC members in stroke order. 18.CC.Ch.2 and 18.CC.En also provide a list of CC alternates in ballot order with ties listed in stroke order. As described at the beginning of this appendix, we use this list to create a partially ranked list of CC alternates.

18.PSC.En: “List of members of Standing Committee of Political Bureau of 18th CPC Central Committee”, retrieved from <http://english.people.com.cn/90785/8021037.html>.

18.P.En: “List of Political Bureau members of 18th CPC Central Committee”, retrieved from <http://english.people.com.cn/90785/8021028.html>.

18.CC.Ch.1: “*Zhongguo gongchandang dishiba jie zhongyangweiyuanhui weiyuan mingdan*”, retrieved from <http://cpc.people.com.cn/18/n/2012/1115/c350823-19583622.html>.

18.CC.Ch.2: “*Zhongguo gongchandang dishiba jie zhongyangweiyuanhui houbu weiyuan mingdan*”, retrieved from <http://cpc.people.com.cn/18/n/2012/1115/c350823-19583623.html>.

18.CC.En.1: “List of members of the 18th CPC Central Committee”, retrieved from http://news.xinhuanet.com/english/special/18cpcnc/2012-11/14/c_131974817.htm.

18.CC.En.2: “List of alternate members of 18th CPC Central Committee”, retrieved from http://news.xinhuanet.com/english/special/18cpcnc/2012-11/14/c_131974821.htm.

18.PSC+P.Ch: “*Zhongguo gongchandang dishiba jie zhongyangweiyuanhui diyici quanti huiyi gongbao*”, retrieved from <http://cpc.people.com.cn/18/n/2012/1115/c350824-19590700.html>.

Primary sources

People’s Daily Online: <http://english.peopledaily.com.cn/> and <http://www.people.com.cn/> (for congress-specific and document-specific links, see listings for each Congress above).

Bartke, Wolfgang. 1990. *Biographical Dictionary and Analysis of China’s Party Leadership 1922–1988*. Munchen: Institute of Asian Affairs.

Supplementary sources

- Alexander, Robert Jackson. 1991. *International Trotskyism, 1929–1985: A Documented Analysis of the Movement*. Durham, NC: Duke University Press.
- Bartke, Wolfgang. 1997. *Who Was Who in the People's Republic of China: With More Than 3100 Portraits*. Hamburg: Institute of Asian Affairs.
- Gilmartin, Christina. 1995. "The politics of gender in the making of the party". *New Perspectives on the Chinese Communist Revolution*. Eds. Tony Saich and Hans J. van de Ven. Armonk, New York: M. E. Sharpe, Inc., 33–55.
- Lew, Christopher R. and Edwin Pak-wah Leung. 2013. *Historical Dictionary of the Chinese Civil War*. Lanham, Maryland: Scarecrow Press, Inc.
- MacFarquhar, Roderick. 2011. *The Politics of China: Sixty Years of the People's Republic of China*. Cambridge: Cambridge University Press.
- McElderry, Andrea. 1986. "Woman revolutionary: Xiang Jingyu". *The China Quarterly* 105: 95–122.
- Pantsov, Alexander V. and Steven I. Levine. 2007. *Mao: The Real Story*. New York: Simon and Schuster.
- Saich, Tony. 1996. *The Rise to Power of the Chinese Communist Party*. Armonk, New York: M.E. Sharpe.
- Shambaugh, David. 1993. "Deng Xiaoping: The politician". *The China Quarterly*. 135: 457–490.
- Song, Yuwu. 2013. *Biographical Dictionary of the People's Republic of China*. Jefferson, North Carolina: McFarland & Company, Inc., Publishers.
- Stranaham, Patricia. *Underground: The Shanghai Communist Party and the Politics of Survival, 1927–1937*. Lanham: Rowman & Littlefield Publishers, Inc.
- Sullivan, Lawrence R. 1985. "Reconstruction and rectification of the Communist Party in the Shanghai Underground: 1931–34." *The China Quarterly*. 101: 78–97.
- Sullivan, Lawrence R. 2012. *Historical Dictionary of the Chinese Communist Party*. Lanham, Maryland: Scarecrow Press, Inc.
- Van de Ven, Hans J. 1991. *From Friend to Comrade: The Founding of the Chinese Communist Party, 1920–1927*. Berkeley: University of California Press.
- Wich, Richard. 1974. "The Tenth Party Congress: The power structure and the succession question". *The China Quarterly*. 58: 231–248.