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John F. Padgett

University of Chicago, jpadgett@uchicago.edu

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The Politics of Communist Economic Reform: Soviet Union and China

John F. Padgett

University of Chicago and Università di Trento

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Introduction

In 1983, two years before Mikhail Gorbachev came to power, Joseph Berliner, that doyen of Western research on Soviet industrial relations, wrote a remarkably prescient article,¹ which outlined the constrained options for reforming the Soviet economy, and then evaluated the likelihood of political success for each strategy. Berliner foresaw four realistic approaches to communist economic reform: the “conservative model,” which tinkered ‘scientifically’ with new techniques of central planning; the “reactionary model,” which restored the alleged discipline and top-down control of the Stalinist period; the “radical model,” which decentralized central planning to allow for Hungarian-style enterprise autonomy; and the “liberal model,” which authorized a laissez-faire market for small private firms, surrounding an untouched central planned core of state-owned enterprises.² He ranked the likelihood of political success for each alternative in inverse proportion to their threat to entrenched ministerial power. Berliner’s analysis was astute enough to predict the categories through which Gorbachev’s reform program moved:³ from Andropov-style discipline in 1985-6, to the Hungarian-like Law on State Enterprises in 1987, to the liberal Law on Cooperatives in 1988. He did not omnisciently foresee Gorbachev’s final revolutionary choice of political democratization in 1989. No one foresaw the wild whirligig of reforms through which Gorbachev rapidly escalated, much less the fall of the Soviet Union. But at least Berliner understood the structure of the economic-cum-political reform problem that Gorbachev faced.

In sharp contrast to Gorbachev’s radical reforms, which led to the cataclysmic collapse of the Soviet Union, Deng Xiaoping famously introduced gradual economic

¹ Joseph S. Berliner, “Planning and Management,” pp. 350-90 in Bergson and Levine (1983). Reprinted in Berliner (1988).

² This had been the NEP (New Economic Program) approach of Lenin and Bukharin in the mid 1920s, before Stalin eliminated that in 1929 with his forced collectivization of agriculture and his wildly ambitious first five year plan.

³ Brezhnev-style tinkering with central planning was the only one of Berliner’s reform options that Gorbachev rejected out of hand, because of his commitment not to be Brezhnev.

reforms with no political change. This led to the most vibrant capitalist economy on earth today. Based on this sample of two and 20/20 hindsight, it is now conventional wisdom that gradual economic reform is superior to radical political change for inducing efficient economic markets. This lazy interpretation of communist-transition events in the 1980s is superficial in part because it is based on a shallow and teleological historical vision. Change one's temporal focus to the 1950s and 1960s, and the Soviet Union becomes the one with the incremental economic reform and no political reform, and China the one with cataclysmic economic and political changes. Few would consider either of these cases successful, economically or politically. Change one's temporal focus again to the 1930s, and the Soviet Union regains its status of radical economic and political change coupled together. No one can defend Stalin's deliberate policy of murdering and imprisoning untold millions of his own people. But measured either on Stalin's personal yardstick of his drive to power or on the institutional yardstick of regime stability, Stalin's "political reforms" have to be judged a success. And on the unforgiving yardstick of ghastly world war with Hitler, Stalin's "economic reforms" have to be judged an astonishing success as well.⁴ Expanding the sample and the historical vision makes the "best" strategy for communist economic reform not a simple matter to decide.

In this chapter I lay out a framework for analyzing the co-evolution of economics and politics in communist systems, consistent theoretically with other chapters in this volume. Success for such an analysis is to be measured not by the vainglorious standard of predicting the future, even in hindsight.⁵ It is to be measured instead, like the work of Berliner, on the yardstick of whether it can identify finite trajectories of evolutionary economic development, reachable through realistic politics of regimes of the time. Whether the innumerable details of the complex cases to be analyzed below are all predicted is less important on this standard than whether the structure of the theoretical logic produces a tractable way of understanding the co-evolution of states and markets.

Just to be formulaic about my search strategy for such a co-evolutionary schema:

⁴ I return to this contestable statement below.

⁵ The experience of intelligent but foolish Western economic advisors to Gorbachev and Yeltsin should be enough to cure us all of the disease of unbounded (and dangerous) self-confidence. Interestingly, the impressive success of economic reform under Deng Xiaoping was achieved without any "helpful" advice from western academics.

1. First, array political and economic systems or networks on top of each other (or side by side), something like figure 1 in the introductory chapter.

2. Second, pay careful attention to organizational linkages between systems, since these are likely to be loci for dynamic evolutionary feedback and the emergence of new actors. In the context of this chapter, this means looking for the politics induced by economic reforms, and for the economics induced by political reforms.

3. Third, trace historically how intentional change in one system, either in economics or in politics, spilled over (positively or negatively) into often unintentional change in the coupled system. Multiple feedbacks induce multiple, possibly contradictory, chain reactions.

4. Fourth, induce from these macro histories the micro autocatalytic networks that caused politics or economics to take off (or not) into observed self-reinforcing feedback loops of new political alliances and/or economic markets. At their base, these network micro-foundations are reproducing flows of biographies and resources.

5. Fifth, find social-network data to verify or disconfirm the hypothesized autocatalytic mechanism that induced the observed evolutionary transformation. In my previous research on Renaissance Florence, I had such data (as does Powell for biotech), but in this chapter on communist transitions I do not. This chapter, therefore, will proceed only through the first four of these research stages – namely, learning and interpretation, but not proof.⁶

To put this theoretical search in didactic terms: to think about economic reform without thinking about the politics that it provokes is not to think very deeply about economic reform. To move from a vision to a reality, economic reform has to induce the interests that can carry it through. Triggered politics in support of a reform or in deflection of it, moreover, always emerges on a lattice of previously co-evolved economic and political networks, which have been laid down in previous iterations. This was the fatal flaw of western economic advice to Soviet leaders in the 1980s and 1990s: to assume that communism could be transformed by decree. Organic network systems are never designs; they are transformations, often turbulent and unintended, of older network

⁶ This is not to apologize. Without the first four research stages, one does not know what to count or where to look for confirmatory data.

systems that have tipped into the new. Whatever the fantasies of utopian reformers, blank slates do not exist in real history. All understanding of innovation must begin with a deep analysis of what was there before.

Dual Hierarchy

I will start with a simplification. The Soviet Union, China, and Eastern European states differed in many important respects,⁷ but they all shared the dual-hierarchy skeleton sketched in figure 1. All communist systems were dual hierarchies in this sense: an economic pillar of centrally planned state-owned enterprises was paralleled by a political pillar of communist party branches and cells, which interpenetrated, monitored, and attempted to control the economic pillar. One pillar was economics, the other was politics, but they both linked organizationally to each other at multiple levels, like a ladder.

-- figure 1 about here ---

Communist economies, at least at their cores, were central-command economies. The leader (party secretary in the Soviet Union, chairman in China), in consultation with his politburo and council of ministries,⁸ established priorities for economic development. Under Stalin and most of his Soviet successors, the economic development of heavy industry and defense was top priority, sometimes almost exclusively so. Central economic ministries developed annual production targets for state-owned enterprises that implemented the leader's priorities, both within high-priority industries and between high and lower-priority industries. Lower priority sectors fed into higher through supply flows. "Central ministries" included both central planning departments (e.g., Gosplan), charged with designing control figures for input-output material flows by industry, and industry-level ministries charged with disaggregating the industry control figures into specific production orders for state enterprises. The percentage of the overall economy covered by the plan varied across time and across communist country – with the Soviet Union being

⁷ In particular, the secret police under Stalin, the people's liberation army under Mao and Deng, and the military under Gorbachev loom large as extra third pillars in the histories of those regimes. Schurmann (1968) was the first western academic, to my knowledge, who analyzed communism explicitly in terms of the concept of dual hierarchy.

⁸ In the Soviet Union, the politburo was sometimes called the presidium; the council of ministries before World War II was called the council of commissars.

almost completely planned, Hungary over half planned, and China fluctuating over time. The detailed content of production orders also varied over time – sometimes with few, sometimes with many aspects or indicators of production conveyed – but the core command was usually a physical output (e.g., “make x tons of steel this year”). Positive salary and promotion incentives and negative sanctions, sometimes extreme, were attached to the fulfillment of an enterprise’s annual production orders.

The second hierarchy was the communist party apparatus that paralleled all levels of the central-command economy, monitoring and enforcing fulfillment of the plan. At the very top, the politburo and the council of ministers overlapped through shared members. The Central Committee formally was the governing body of the communist party, in charge of appointing the leader and politburo (albeit usually in a rubber-stamp manner⁹). Meeting only occasionally, it was composed of high-level officials from both of the pillars: provincial secretaries, economic ministers and the like. The secretariat or bureaucracy of the Central Committee was structured into departments that monitored the work of the Moscow-based economic ministries. Lower down at the provincial level,¹⁰ provincial secretaries were held responsible for the overall economic performance of enterprises in their region. They, jointly with the industrial ministers, appointed and fired enterprise managers in their region through the *nomenklatura* system. At the bottom of the dual hierarchy system, communist subsets of enterprise workers and managers formed party cells within each plant, to report the plant’s performance to the party hierarchy as well as to the factory hierarchy. Inspection and reporting, to check on laxity and corruption, was called *kontrol*.

Needless to say, things rarely worked as smoothly as this organization chart implies. In subsequent sections, I shall outline actual operations and compare those across regimes. But the basic organizational ideas were not complicated. From the perspective of the economic pillar, dual hierarchy operated to send commands down one hierarchy

⁹ Leadership control over the Central Committee was achieved through the “circular flow of power,” discussed below: namely, leaders appointed provincial secretaries and ministers who joined the Central Committee, which voted on the succession and renewal of the leaders. See Daniels (1971), Hough (1987, 1997).

¹⁰ In the Soviet Union, “provincial level” organizationally was a bit complicated: among the ethnic republics of the Baltics, Caucuses and Central Asia, “provincial level” meant “republic.” Within the larger and more populous republics of Russia, Ukraine and Belarus, “provincial level” usually meant “oblast,” a large subdivision of those republics.

and to monitor performance through information feedback up the other hierarchy. The two hierarchies were separated to inhibit lying. From the perspective of the political pillar, dual hierarchy operated to instill communist values (e.g., “the Soviet man” or “the thought of Mao”) into the productive personnel of the economy. Economics under communism was not just economics; the ideological side was mass mobilization of the nation for the future.¹¹

No matter how simplified this sketch of dual hierarchy, it is still useful enough to define constrained trajectories for the politics of communist economic reform, were such a thing to become desired. First of all, it is obvious but worth saying that all reform must come top-down from the leader. The basic dual-hierarchy organizational system had too many cross-checking veto points for political initiative to have been possible from any other quarter. In addition, the “circular flow of power” (footnote nine) gave to any communist leader a secure base from which to launch initiatives. But leadership initiative alone was never enough to accomplish reform. Leadership initiative had to be taken up by others in the system, and then achieve self-sustaining autocatalysis among those interests, for it to become anything more than a decree. The basic dual-hierarchy skeleton defined the constrained alternative set of potential political allies that communist leaders looked to in order to carry their initiative, whatever that might happen to be. The basic options within the system were four: to reach down to provincial secretaries, to reach down to local party cadres, to reach down to economic ministries, and to reach down to state enterprises. A leadership initiative that appealed to none of these constituencies was greeted only by silence, knowing nods and obstruction. But if it appealed to at least one, then a sequence of conflictual events might ensue, tipping into reform or not.

As a first cut, the various reform drives observed in communist Soviet and Chinese history can be classified according to the primary constituency the leader reached out to. The most tumultuous of such reform drives – Mao’s Cultural Revolution and Stalin’s Great Purges – involved the leader reaching around provincial party leaders directly down to local party cadres. Such extraordinary mass-mobilization events were not outside of ‘normal’ communist history; they were simply the most dramatic of the inbuilt modalities of reform available to communist leaders. Indeed seen from the internal

¹¹ Kotkin (1995).

perspective of communist reform history, not from the perspective of the west, Gorbachev's revolutionary call for political democracy in 1989 was similar in strategic style to the charismatic demagogues Stalin and Mao.¹² Namely, Gorbachev like them tried to mass mobilize political activists against his own communist party hierarchy.

A second, less threatening way to mobilize the political pillar for economic reform was for the leader to work through the party hierarchy, not against it. Mao's Great Leap Forward and Stalin's first Five-Year Plan were examples of this.¹³ Khrushchev's regional economic councils and Deng Xiaoping's fiscal decentralization were also examples of mobilizing provincial first party secretaries for reform. These cases differed in important details that were consequential for their subsequent evolution, but the point here is simply that in their constituency politics they are members of a family.

The third political option that dual hierarchy presents to communist leaders interested in reform is mobilization through economic ministries. This modality of reform includes Berliner's categories of Brezhnev-style "conservative" or Andropov-style "reactionary". Which is to say, incremental not radical reform. One should not forget, however, that this was the modality that Stalin shifted into, after his Great Purge, in order rapidly to build the economy for war against Hitler. World War II itself shifted Stalin's heavy-industry-defense approach into hyperdrive. Thus economic mobilization through ministries should not be considered only an anti-reform approach.¹⁴

Finally there is the fourth "Hungarian style" of economic reform, which involves leaders reaching around ministries directly down to state enterprises, by loosening ministerial control and increasing enterprise autonomy. Typically this involved not privatization but reorienting central planning away from material flows and toward socially regulated prices and profits. Ministries essentially become state banks in such a transformation. In addition to Hungary as a successful example of this approach to

¹² People forget that an important part of Stalin's Great Purge campaign of 1937-38, which murdered over six hundred thousand party members, was his new constitution, which granted considerable electoral freedom (including the secret ballot) to the lower echelons of the communist party. These elections reinforced and fueled denunciations from below.

¹³ It is interesting that Mao's Cultural Revolution followed soon after his Great Leap Forward, just as Stalin's Great Purge followed soon after his First Five Year Plan. The logic of this sequence will be explored below.

¹⁴ The developmental states of Japan and South Korea, while not communist, are additional apt counter-examples.

economic reform, the Kosygin reforms of 1965 and the Gorbachev reforms of 1987 stand as unsuccessful examples of this approach.

I do not list western-style private property as politically viable route to reform under communism, because a constituency for that did not exist under dual hierarchy. There was non-communist constituency for such a reform. Around the consumer margins of the economy – handicrafts, small consumer goods, small private plots in agriculture – a private market might become tolerated.¹⁵ But this would always be marginalized, because private property amounts to a dismantlement of dual hierarchy. Any communist leader proposing this would be overthrown.

Deng Xiaoping superficially seems to be the miraculous exception to this political constraint – a communist leader who successfully transformed his central-command economy into a western-style market. But actually I show below that Deng employed traditional political strategy number two: the mobilization of provincial and local government cadres to lead his reform.¹⁶ As I explain below, it was the peculiarly decentralized structure of state ownership in China, bequeathed to Deng by Mao’s Great Leap Forward and Cultural Revolution, that induced Chinese party cadres to behave as precocious entrepreneurs, without private ownership. While it is fair to hold Deng responsible in the short run for successfully managing China’s economic transformation,¹⁷ it is less appreciated that Mao was responsible over the longer run for rewiring the Soviet version of dual hierarchy into a party-dominated decentralized version that was tippable into quasi-markets.

On the Soviet side, Gorbachev saw himself as an economic reformer of communism, something like a Deng. But in dynamic reality the reform process turned him into a political revolutionary, more like Mao. There are many sides to the dynamics of communist economic reform. One is the politics of reform – how leaders’ proposals self-organize alliances to support and oppose them. Another is economic feedback – how alliances and policies spill over into the interaction of economic enterprises. Finally there

¹⁵ NEP in the 1920s under Lenin was an example, considered by Lenin however only as transitional.

¹⁶ Once the pillar of the PLA army is taken into consideration, a more complete description of Deng’s strategy will become “robust action.” Cf. Padgett and Ansell (1993).

¹⁷ By this language I do not mean to imply that a great man “did it”. All any reform leader can do is to perturb autocatalytic processes into self-reorganization. The complexity of changing a country is beyond anyone’s intelligence and foresight.

is biographical feedback – how reaction from dual hierarchy reconstructs the leader over time. Below I highlight these three interlinked dynamics in the communist-reform cases of Joseph Stalin, Nikita Khrushchev, Mao Zedong, Deng Xiaoping, and Mikhail Gorbachev.¹⁸

Stalin

To gather data about the co-evolution of reform politics and economics under communism, the empirical cases that I shall survey in the rest of this chapter are as follows: (1) Stalin, meaning his first Five-Year Plan, his Great Purge, and his world war defeat of Hitler. The invention of this remarkable sequence was massively centralized dual hierarchy dominated by ministries. (2) A short interlude on Khrushchev's failed decentralization. (3) Mao, meaning his Great Leap Forward and his Cultural Revolution. The outcome of this equally remarkable sequence was party dominance over a decentralized planned economy. (4) Deng Xiaoping's 'incremental' economic reforms. And (5) Gorbachev's escalation from economic to political reform. The historiography on all of these events of course is vast. I can only hope to sketch what I see as the primary causal feedback loops linking economy and politics during these episodes, and leave it to others to extend, to modify or to disprove my observations, which are grounded only in secondary sources. My main objective in this perhaps overly ambitious comparison is more to get the co-evolutionary topic onto our collective research agenda than it is to provide the impossible last word.

I begin with Stalin because he invented dual hierarchy. Lenin made the Bolshevik Party, but Stalin added central command economy to the Party. All other communist reformers, even Mao, worked in Stalin's shadow, because they permuted and modified the basic framework that he built.

As is well known, Stalin's monomaniacal economic priority was heavy industry and defense: to build gigantic modern steel factories like Magnitogorsk and all that

¹⁸ In the section on Gorbachev, the Hungarian case of János Kádár is also discussed en passant. It goes without saying that I cannot possibly cover everything in the vast historiographies on these very well documented leaders. (The historiography on Gorbachev, Khrushchev and Kádár, while adequate, is not as high quality as it is for the others, I must say.)

supported them.¹⁹ In Stalin's opinion, "we are fifty or a hundred years behind the advanced countries. We must make good this distance in ten years. Either we do it or we shall go under."²⁰ There was nothing innovative technologically about this; Stalin imported advanced factory designs from the west. What was innovative was the economic organization into which this technology was inserted. In terms of our mechanisms of organizational genesis, this was purge and mass mobilization. Stalin's economy was built on the model of the Bolshevik Party, but then he destroyed the party that Lenin and Trotsky had built. What this meant was demagogic centralization combined with mass mobilization. The driver behind everything was war. Under Lenin, this had meant class war, World War I, and civil war. Under Stalin, this meant class war, war against imagined "enemies of the people," and World War II. Science and modernity were important ideological addendums, but at its core the Soviet economy was built for war.

The focus in this chapter is more on cross-network feedback between economics and politics than it is on organizational genesis, but a short synopsis of the mechanics of the origins of the central command system in Stalin's first Five-Year Plan might be in order as prelude. The central-command system had its precursor in the War Communism of the civil war period, designed and managed by Trotsky. "Design" is a misnomer for this improvisation of nationalization and brutal extraction by the Red Army. Stalin was not part of this charismatic army system; during this period he was only a high-level party secretary or 'organization man' tending to the assignment and transfer of party personnel for Lenin. Through this unglamorous organization work in party headquarters, however, Stalin built a political machine of loyal supporters, mostly fellow provincials living outside of Moscow and St Petersburg, grateful to Stalin for their jobs.

The central-command system in the first Five-Year Plan of 1928 was a merger of Trotsky's civil war policies with Stalin's organization and political machine. Since the cosmopolitan and charismatic Trotsky was the primary competitor to Stalin to become Lenin's successor, pulling off this merger required some tricky elite politics after Lenin's protracted death in 1924. But Stalin successfully oscillated first to the economic right

¹⁹ Kotkin (1995).

²⁰ Quoted in Harris (1999), p. 131.

(i.e., NEP policies) to eliminate Trotsky and his supporters soon after Lenin's death, and then oscillated to the economic left (i.e., Trotsky's policies) to eliminate Bukharin and other advocates of the milder economic development that Lenin himself had supported.²¹ The result was a war-like mobilization of the economy, but built on the organizational back not of the army sympathetic to Trotsky but of Stalin's political machine. This machine was composed first and foremost of provincial secretaries.

Hence the core political constituency of the first Five-Year Plan, eager to respond to their leader's initiative, at first was the provincial secretaries. Stalin's massive industrialization drive promised huge factories and economic development for their regions. Project proposals flooded into Moscow, with optimistic even outlandish promises, as provincial competition for central investment intensified.²² To Stalin, industrial gigantism was necessary to win the inevitable future war with enemy unknown. To urban party cadres, this was modernity and the future. To Stalin's loyal provincial secretaries, this was also pork. With central money, jobs and investment like this, they could become their own little Stalins.

Of course there was the slight detail of where all the money was going to come from. The well known answer to this question was forced collectivization of the peasants. In other words, brute extraction of grain – both literally as material taxes/tribute and monetarily as administered prices extremely unfavorable to peasants. Some of that grain was then sold overseas to generate foreign exchange, crucial for technology imports. Elimination of private ownership of land and agricultural free markets through collectives were essential for this extraction to work. Stalin achieved collectivization by declaring class war on the kulaks – 'rich peasants', operationally defined as employing others or owning livestock. Stalin promised the substitution of collective tractors for private horses, thereby potentially making everyone better off. But peasants were not fooled. Massive resistance to grain extraction and widespread slaughter of livestock led to famine in 1931-32. Resistance was crushed by the Gulag. Kulaks who avoided the Gulag fled to the cities, where they tried to blend in as immigrant and mostly illiterate labor, to work in the new plants. Soviet collective farms grew to be very large in acreage.

²¹ Daniels (1988).

²² Harris (1999).

None of this happened just because of Stalin's decree. Party cadres in his machine were motivated to do the dirty work. The Bolshevik proletarian party self-consciously recruited from the urban minority of the Russian population. Hence party cadres socially were surrounded by a sea of 'backward' almost foreigners, perceived to be impeding progress and modernity. Resistance from them threatened starvation for cities and the army, and thus justified in cadres' minds labeling them as class enemy. The consequence was shipping them off to the Gulag. Indeed with the right perspective, collectivization of peasants could be seen by urban cadres as good for them.²³ Enthusiastic fulfillment, indeed overfulfillment, of Stalin's commands implied rapid promotion within the party. After centuries, Russian peasants were used to brutalization.

Tightly coupling politics to economics through dual hierarchy, therefore, created political micro-motivations for cadres to mass mobilize economic production, both on the favored side of industry and on the exploited side of agriculture. Judged only from the developmental-state perspective of mobilizing investments for mass-production factories, Stalin's organizational strategy of coupling economic development to party development must be viewed as a success,²⁴ notwithstanding the fact that absurdly inflated production targets in the Plan were not literally achieved.

But positive feedback between politics and economics was only stage one in Soviet pre-war development. Production is one thing, supply is another. Autocatalysis in economic production requires material production to be reproduced by other productions with which it is linked through inputs and outputs. In figure 2, I reproduce from Harrison (1985) a nicely simplified diagram of industrial inputs and outputs for the Soviet heavy industry sector, to give the basic idea and ideal. Without knitting together Stalin's shining new factories into even more detailed plant-specific, self-reinforcing supply cycles like these, the entire heavy-industry investment plan threatened to, and often did, turn into a production bubble, as supply bottlenecks choked off inputs and made factories idle. Central planning was all about arranging material supply cycles like these.

– figure 2 about here –

²³ [*can I find that quote about this?*]

²⁴ This is the way Gershenkron (1962) saw it. Zaleski (1980) provides specific numbers on Stalinist Plan performances.

Given imperfect planning, however, economic supply problems generated second-order spillover into Stalinist politics. Cyclic retrenchments of overheated production, due to bottlenecks, were experienced in 1931 and in 1937.²⁵ To the driven Stalin, these sorts of retreats in production were utterly unacceptable. To Stalin, moreover, economic setbacks required a political explanation. If politics was the cause of the boom, then politics must be the cause of the decline. “Economic balance” was the counter-argument of NEP reactionary wimps like Bukharin. Hence was born the dangerous political diagnosis of “wrecking.” Class enemies like capitalists and nobility, and then like NEP tradesmen and kulaks, were already well established outside of the central command system. But what if there were class enemies who had escaped extermination and who were now hidden inside the system, looking to sabotage? Economic downturn thereby became a matter of war.

This has struck many observers as paranoia,²⁶ but in fact unreliable liars, slackers and troublemakers, working in industrial production, can easily be found if one is looking for them. This may not be paranoia so much as a highly politicized perspective on economics. The first of Stalin’s targets as wreckers were engineering experts left over from the tsarist days. Industrial modernization needed these people desperately, so much so that they often were the second highest administrators in Stalin’s factories. But they were politically unreliable. Early on, just as the first Five-Year Plan was getting underway, Stalin launched his first show trial, the so-called Stakhty trial, designed to prove to the country that many of these tsarist engineers were traitorous characters. In response to his worry about political unreliability, Stalin launched a large engineering education program for proletarian and party youngsters, to create new cadres who were technically able.²⁷ Because of the political cloud over experts, purely technical objections to the speed of Stalin’s industrialization drive were de-legitimated. The management emphasis instead was on political mobilization, which essentially meant sheer effort and force of will.

The more serious problem of economic ‘sabotage’, however, came from political “family circles” developed by Stalin’s own provincial henchmen, in defensive response

²⁵ Harrison (1985), p. 6.

²⁶ Tucker (1990) is the most knowledgeable writer who explains events as the result of Stalin’s psychology.

²⁷ Bailes (1978), Fitzpatrick (1979a, 1979b).

to the impossible production targets they received and volunteered.²⁸ The inflated targets were ridiculous to begin with, but once supply problems percolated around the heavy-industry core, factory directors and provincial secretaries were missing their difficult targets not by a little but by a lot. When Stalin saw this, he saw wreckers, with purge and Gulag not far behind. Family circles emerged to protect the underlings, as well as to empower little Stalins. These emerged both at the provincial and at the factory levels.

At the factory level, dual hierarchy meant on the one hand “one-man management,” namely almost dictatorial control over internal factory operations (but not goals) by the director.²⁹ And it meant on the other hand interpenetration of all level of the factories by party cells, who legally spied on and reported factory behavior (so-called *kontrol*) to party superiors. Factory directors were held responsible to ministries for production performance, and party cells were held responsible to party superiors for production performance. If factory directors and party cells were at loggerheads, this official spy system might have worked. But when times were tough, both sides had an incentive to collude, in order to present consistently rosy performance reports to their respective superiors.³⁰ The worse the trouble, the greater the need to collude. Once informal family circles developed at the factory level, then implementation information flowing back up to central planning headquarters became lies, thereby rendering central planning for next year deeply flawed.

At the provincial level, provincial secretaries shared with the ministries the right to appoint factory directors, and hence they should have fired them if they didn’t perform. Provincial secretaries at least were closer to the scene, more capable of observing directly than were the ministries in Moscow. But when an entire region’s production on average was unsatisfactory, then provincial secretaries and their factory directors also needed to stick together. ‘Stick together’ likewise meant to report overly rosy production up the hierarchies, so that no one in the center knew the truth of what was going on.³¹ It also

²⁸ Here is Stalin’s own description of these defensive alliances: “We understand that instead of a leadership group of top workers, we had a small family of close friends, the members of which were careful to live in peace... not to air their dirty linen, to sing the praises of one another, and from time to time, to send to the center nauseating and contentless reports of ‘successes’.” Quoted in Harris (1999), p. 187. The classic historian’s description of family circles is Fainsod (1958).

²⁹ Kuromiya (1988).

³⁰ Berliner (1957), Fainsod (1958).

³¹ Harris (1999).

meant shifting to appointments that were deeply personalistic (patron-client) in order to keep collusion safe from extreme penalties.

These structural problems of informal networks and collusion persisted, at both the factory and the provincial levels, throughout the Soviet era. At just those junctures that bridged the dual pillars, strong vertical chains of formal authority were undermined by horizontal networks of informal collusion and protection. The stronger the top-down pressure, the stronger the informal response. It was primarily in this sense that Stalin's concern about industrial sabotage was not delusional – even though ultimately of course provoked by himself.

At this point (mid 1930s), Stalin switched leadership strategies, effectively declaring war on family circles. Instead of continuing to work through the Bolshevik party, inherited from Lenin, Stalin reached around both dual hierarchies directly down to their economic and political mass bases. On the economic side, he unleashed the Stakhanovite movement³² in 1935. Stakhanov was a rate-busting worker, who produced far in excess of his peers. Naturally, this frenetic overachievement did not endear him to his colleagues, but Stalin made an ideological spectacle of him, celebrating his achievements and sponsoring Stakhanovite clubs of honored and privileged “Soviet men” all over the country. A generational wedge was thereby driven between overachieving and normal factory workers, the former being young, the latter often older. A constituency of fanatics was cultivated with links directly to the leader, and collusion among cadres was combated by conflict among workers.

Even more ominously, on the political side, Stalin developed his secret police: a third pillar, outside of dual hierarchy, that gave to him a new set of eyes and of punishment. Torture and fabricated show trials were the methods of choice to get the accused to confess and to denounce their connections “for the good of the party.” The literature on the Great Purges is contested, with much new evidence for the conventional view of this being a top-down operation by Stalin,³³ and for the revisionist view which emphasizes enthusiastic bottom-up support from those who did the original denouncing.³⁴ I see no reason for why both views cannot be correct. As always in communist systems,

³² Siegelbaum (1988).

³³ Khlevniuk (2009).

³⁴ Getty (1985), Getty and Manning (1993), Harris (1999).

leadership initiatives need to reverberate through constituencies to move from decree to “reform.” In the case of the Great Purges of 1937-38, revisionists have documented the passion with which oppressed folks at the bottom rose up to denounce their local “little Stalins”, who had been subjecting them to so much pressure. This did not happen automatically, out of fear of retaliation from family circles, but it did so once the secret police arrived credibly to “clean house.” After the waves of initial denunciations hit the police system, police methods were sufficient to unravel family circles, link by friendship link, in part because ‘friends’ then competed to denounce each other first. The family circles of all provincial secretaries were rolled up.³⁵

In light of the Gorbachev sequel, it is worth adding that Stalin’s new electoral constitution, offering free democratic elections with secret ballot, was offered at the height of the Great Purge. Stalin thereby made bottom-up challenges easier, and he positioned himself as the classic good king who cleans out local corruption and oppression to help his people. Hidden “enemies of the people” turned out to be everywhere, as they themselves corroborated publicly.

The literature and I have tried to make Stalinist Terror comprehensible, but one is always brought up short by the figure of 681,692 people murdered by Stalin in 1937-38.³⁶ This bacchanalia of blood reached to the very top of the system: 70% of Stalin’s own Central Committee were murdered.³⁷ 71% of the surviving members of Lenin’s old Central Committees were murdered.³⁸ Of the twelve surviving members of Lenin’s first council of ministers/commissars, only Stalin himself was not executed in 1937-40.³⁹ These numbers seem excessive, to say the least, if the only purpose was to discipline the system. Instead of disciplining his lying underlings, Stalin (with enthusiastic bottom-up help) wiped them out. This only makes any sense at all if war, internal as well as external, is seen as the heart of the system.

Because of course now there was the problem of who’s going to do the work? The answer turned out to be “the generation of ’38.” All those youngsters who had been avid

³⁵ Harris (1999).

³⁶ Khlevniuk (2009), p. 184. According to internal NKVD records, now open to scholars, the NKVD in 1937 and 1938 arrested 1,575,259 people, convicted 1,344,923, and sentenced to be shot 681,692 of them.

³⁷ According to Khrushchev’s secret speech, 98 out of 139 were murdered: Khrushchev (1970), p. 572.

³⁸ 44 out of 62 murdered: Mawdsley and White (2000), p. 12.

³⁹ http://en.wikipedia.org/wiki/Council_of_People%27s_Commissars.

Stalinists – the engineering school trainees, the Stakhanovites, the Komsomol youth groups – benefited from astronomical rates of upward mobility, as virtually all dual-hierarchy jobs opened up at once. Inexperienced thirty-year-olds, straight out of technical school, were promoted immediately to factory directors and central planners. By witnessing the fates of their elders, far from losing the faith, these enthusiastic youngsters were told to go out and make a brave new world. Which they did.⁴⁰ Discipline and enthusiasm all were reported high in the years after the Great Purge.⁴¹ It was then that Stalin’s cult of personality reached its peak. Khrushchev, Brezhnev, Kosygin and all of the post-Stalin Soviet leaders up until Gorbachev were members of the generation of ’38: youthful Stalinists with some technical training who had the scary world as their oyster.

Given the Great Purge and all these eager youngsters, Stalin did not redo dual hierarchy from scratch, he just repopulated it with folks who mostly were both red and expert simultaneously, regardless of which pillar they worked in.⁴² In 1938, Hitler, the real enemy, loomed over the very near horizon. The Soviet economy had always been mobilizing for war under Stalin. Now it redoubled its efforts, with less slacking. The percentage of the Soviet GNP devoted directly to military expenditures rose from 7% in 1937 to 15% in 1940.⁴³ That was still a far cry from the 55% it attained at the height of the war in 1942, but it was a significant escalation in the direction that already had been prepared.⁴⁴

Organizationally, this economic mobilization was manifest in an explosion in the number of central economic ministries, from nineteen in 1937 to forty-three in 1941.⁴⁵ Heavy industry and defense were the main sectors subdivided and expanded.⁴⁶ Young Stalinists poured in to replenish the party ranks, but they poured in even more to replenish the ministerial and factory administration ranks. During the war, this similarity

⁴⁰ This method reminds me of the Ottoman Empire: Lybyer (1913), Findley (1980). Balkan slaves were fed into the Ottoman bureaucracy and army and promoted at very high rates, on the basis of meritocratic performance. Slave loyalty and Sultan control was strong as long as “wheel of fortune” rates of upward mobility were high, because slaves had nowhere to go but up toward the Sultan. But as soon as rates of upward mobility slowed, coups by Janissaries (slave armies) happened

⁴¹ [*can I find that quote?*]

⁴² Bailer (1978).

⁴³ Davies and Harrison (2000), p. 90.

⁴⁴ Harrison (1998), p. 21; Siminov (2000), p. 220.

⁴⁵ Zaleski (1980), pp. 703-5. The number of State Committees also grew from seventeen to twenty-seven.

⁴⁶ Siminov (2000).

in biographical backgrounds facilitated cooperation and coordination between the dual-hierarchy pillars. After the war, however, as the generation of '38 aged, it could also facilitate renewed collusion.

I need not review the incredible events of World War II, except to emphasize how much that locked in the system of economic ministries. With Hitler's blitzkrieg into Ukraine, the Baltics and the Caucuses, about half of the Soviet industrial economy was destroyed.⁴⁷ Some crucial machines, technology and skilled workers were rescued through heroic evacuation from west to east just ahead of the tanks. To say that the regime hung by a thread at Stalingrad, both militarily and economically, is no exaggeration. Even the government was evacuated from Moscow. Thus eventual military victory is an interesting puzzle.

In my reading, the English economist Mark Harrison has looked most deeply into this issue of the surprisingly resilient nature of the Soviet military economy. Though factories in the protected Urals always cranked out armaments, Harrison has shown that, in 1941 and 1942, Soviet economic planning mostly collapsed. State officials of all types instead scrambled through crisis management to extract every resource in the country and send it to the front, to the point of starvation. From late 1942 onwards, however, the augmented heavy-industry system in the east roared on line, producing planes, tanks and other armaments at rates that exceeded the Germans.⁴⁸ What accounts for this eventual superiority in Soviet military production? Harrison's answer is mass production. The numbers of (gigantic) factories and of armament lines, and their quality, were all much lower than the Germans.⁴⁹ But the Soviets produced those homogeneous and lower quality weapons at massive volumes, whereas the German's more advanced engineering culture emphasized quality and diversity over quantity. In the short run, quality dominated, but in the end quantity won out.

Ever since Kornai, and even before, it has been fashionable to denigrate the efficiency of the Soviet planned economy: supply bottlenecks, hoarding, and lack of technical innovation were chronic. Without in any way denying that reality, it is too easy

⁴⁷ Harrison (1985), p. 64.

⁴⁸ Harrison (1998), pp. 14-17.

⁴⁹ Harrison (2001), p. 15-16. For the entire war effort, 47% of Soviet aircraft and 78% of Soviet tanks were manufactured in only four factories each. This is super concentration, the exact opposite military logic of Mao's.

thereby to overlook the power and efficiency of the military-industrial complex at the core of the Soviet economy. Part of the economic trouble in the Soviet Union was due to informational problems and collusion, inherent in central planning. But part of the trouble was due simply to the intentional diversion of so many resources to war. In a highly concentrated domain like that, without too many factory nodes, central planning can work quite well.⁵⁰ The autocatalytic production and supply feedbacks sketched in figure 2 are matters of supply-chain topologies and of balanced input-output volumes, not matters of capitalism. In principle they can be attained either by central command or by private markets. In the Soviet Union, I claim, central command did indeed attain self-reproducing autocatalysis in the military-heavy-industrial core of its economy.

The political lock-ins for autocatalysis in heavy industry were the central economic ministries. Heavy-industry economic autocatalysis reinforced the political power of central ministries, and the political power of central ministries reinforced the centrality of heavy industry in the Soviet economy. It is true that the rest of the economy was exploited to serve that core, but agriculture had already laid the infrastructural foundation for that infusion of energy. Whatever the Soviet citizen thought as a consumer, as a patriotic soldier, he or she could be proud.

Hence the emergence of dual hierarchy under Stalin. Despite its Bolshevik roots, the Soviet Union emerged from the second world war with the weight more on the ministerial central-command pillar than on the party hierarchy. Fundamentally this orientation was due to the Great Purge, although the war injected a powerful stimulus and co-evolutionary lock-in to the political-cum-economic organizational structures that emerged from that Terror.

Khrushchev

My treatment of the other communist cases will not be as extensive as that of Stalin, because Stalin in my and others' judgments remains the 'genetic' secret to subsequent Soviet regimes, and even to Chinese communist regimes. Dual hierarchy was pushed in many different directions by other leaders, with various results. But it was dual

⁵⁰ Sort of Chandler's (1977) visible hand writ large.

hierarchy to begin with because of Stalin. That founding template shaped and channeled subsequent co-evolutionary trajectories.

After the second world war, the Soviet Union became an empire as Soviet rule expanded to cover Eastern Europe and its influence to cover China. At home, Stalin ruled as a personalistic dictator through ministries and ad hoc committees, with the Politburo and the Central Committee effectively ceasing to meet. Upon his death in 1953, his elite henchmen – Molotov, Malenkov, Khrushchev, Bulganin, Mikoyan and others – united to eliminate Beria, the head of the secret police. With that, the Gulag and the Terror ended, and also the rapid social mobility that had produced them. Family circles started to flourish again.

A succession struggle pitted the power of Malenkov and Molotov, rooted in the ministries, with that of the earthy Khrushchev – former agricultural cadre and party boss of the Ukraine and Moscow – rooted in the weakened party. Khrushchev imitated the early Stalin by cultivating a party machine of provincial-secretary appointments. After thus consolidating his base, in 1956 he launched his dramatic factional attack on his colleagues by his secret speech to the revived Party Congress. This aggressive and emotional four-hour speech at midnight documented Stalin's crimes and denounced him.⁵¹ World-wide, it shook Hungary into revolt and deeply alienated Mao. Back home, it pushed the deeply implicated Molotov and Malenkov into retreat, while eliding Khrushchev's own guilt.

The reason to classify this succession struggle as “the politics of economic reform” is because of *sovnarhkozy*. This decentralizing economic reform by Khrushchev, implemented a few months after his speech, abolished central ministries and transferred their planning functions and personnel to newly formed regional economic councils, under the authority of provincial party secretaries. The political purpose of this reform presumably was transparent to all: namely, to dissolve the power base of his rivals and to increase that of his supporters. His opponents responded in June 1957 with an attempted putsch: the majority of members in the Presidium (Politburo's name then) voted to depose Khrushchev. He stood them down, however, by stalling and insisting on

⁵¹ Khrushchev did not mention collectivization and the Gulag, of which he approved, but rather focused on the 1937-38 Terror against the party, his audience. The speech was ‘secret’ in that it was not known ahead of time by his colleagues, but it was soon published and widely circulated by Khrushchev.

confirmation by the full Central Committee, whose provincial members his supporters frantically flew in from all over the country. This hardly could have been a more dramatic political victory, not only for Khrushchev but also for the party over the central ministries. Malenkov et al were exiled (but not killed). The decentralizing economics of *sovnarhkozy* was important to the politics of Khrushchev's victory.

If co-evolution were as simple as politics-in-command, then that would have been the end of the economic-structure story and Stalinism, more or less, could have been forgotten. What is interesting from the perspective of multiple-network feedback, however, is that soon after Khrushchev's and his provincial secretaries' rousing victory, he began to backtrack incrementally toward economic centralization. With no more central economic ministries, the economy went down, as factory supply problems increased. The economic idea of the reform had been that regional economies could develop, with local light industry developing to feed the factory behemoths and provincial parties coordinating it all. Not markets exactly but regional autocatalysis could ensue, and central planning could become more a matter of arranging inter-provincial resource transfers.

The problem was not that provincial secretaries did not like this. They behaved just as enthusiastically as did their predecessors under Stalin's first Five-Year Plan, with local economic wheeling and dealing coming to substitute for material negotiations with Moscow.⁵² The problem was the tendency to 'localism' (*mestnichestvo*) or economic regional autarchy. Provincial secretaries resisted giving prized resources to each other, and perhaps even more importantly Stalinist factory behemoths were too large and specialized to find requisite supplies from within their nearby regions. The other behemoth plants to which they needed to link were in other geographical locations.⁵³ As a result, supply bottlenecks were worse than ever, no matter how creative the wheeling and dealing by local party officials. Stalin in his grave defeated the henchman who denounced him through the vehicle of intense industrial concentration.

There is more to the Khrushchev story, as slow economic recentralization eventually alienated the provincial secretaries who were the base of his political power.

⁵² Hough (1969) is an acclaimed study of the economic activity of party secretaries during the Khrushchev era. He emphasizes their active search for economic supplies for factories in their regions.

⁵³ I have not seen this analysis in the literature, but it seems obvious from the point of view of autocatalysis.

For this reason, Khrushchev was overthrown in 1964, and his successor Brezhnev reassembled in Moscow the economic ministries that Khrushchev had dismantled and sent to the countryside. But that is enough to demonstrate the resilience of the Stalinist system, which could absorb an apparently huge reform perturbation with no long-term effect. Stalinist politics and Stalinist economics reinforced one another, even with the cessation of the Terror and the social mobility so crucial to their births. War of course remained crucial to the heavy-industry equilibrium, but over time administrative routinization gradually led to technocracy⁵⁴ replacing ideological mass mobilization as the management method of choice. I will come back to family circles and to Soviet economics under Brezhnev when I discuss Gorbachev.

Mao

Mao, to say the least, was just as complicated a fellow as Stalin. I will tell only the minimum of the Mao story necessary (a) to show how Mao's choices were also structured by dual hierarchy, and (b) to establish the Mao structural legacy that later tipped into so-called 'capitalism', under the leadership of Deng Xiaoping. Maoist economic decentralization similar to *sovnarhkozy*, I will argue, was a crucial prerequisite to the political success of this later transition under Deng.

China's industrial system was set up by Soviet advisors in the early 1950s, so the central-command economy, an emphasis on heavy industry, and dual hierarchy came with the package. Even though China inherited a heavy-industry base from the Japanese in Manchuria, China in the 1950s was as overwhelmingly agrarian as Russia had been in the 1920s. The Soviet economy, though a very high priority for Mao then, would take a while to grow in Chinese soil. Following Soviet advice, existing Chinese capitalist enterprises (without the deposed capitalists of course), mostly on the coast, were agglomerated in a drive toward business concentration. The emphasis in the first Chinese Five-Year Plan (1953-58) was overwhelmingly on heavy industry: 48% of the investment budget was devoted to heavy industry, compared to the very high 42% in the analogous

⁵⁴ Khrushchev and Brezhnev both strongly supported technical education for cadres, in part because they themselves had been trained as engineers (Brezhnev more thoroughly than Khrushchev).

Soviet first Five-Year Plan.⁵⁵ Central-planning ministries in Beijing were established to direct the construction of these large factories and to coordinate their supplies. Soviet-style one-man management and statistical accounting, both rather foreign to Chinese traditions (and literacy rates), were implemented to run these large factories internally.

Given this imported Soviet framework, it is not altogether surprising that political and economic co-evolution in Chinese communism was roughly similar to that in the Soviet Union, in spite of their obvious differences.⁵⁶ The politics and economics of Mao's Great Leap Forward in 1958-60 bears resemblance to the politics and economics of Stalin's collectivization and first Five-Year Plan in 1928-32. And the politics⁵⁷ of Mao's Cultural Revolution in 1966-69 bears resemblance to the politics of Stalin's Great Purge in 1937-38. Even the temporal gap between their two respective stages is similar. The differences are obvious enough: the Chinese communist party was rooted in the peasantry, whereas the Soviet communist party was rooted in the urban proletariat. And Stalin murdered his opponents, whereas Mao merely "rectified" them. But in my search for general principles, I will focus as much on the similarities as on the differences.

The budding planned Chinese industrial economy was subject to the same macroeconomic cycles as the Soviet economy had been: namely, sharp bursts of investment-driven growth, mostly in heavy industry, followed by retrenchments due to subsequent supply imbalances. 1956 was the first year of such retrenchment and economic confusion in China as new heavy-industry construction and socialist transformation of previously capitalist enterprises ran considerably ahead of the ability of primitive central planning to manage all of that. Plus 1956 and 1957 were bad harvest years in China as the first round of collectivization had just recently been completed. These economic events were ultimately the stimulus to the Great Leap Forward, launched in 1958. But how the dual-hierarchy system linked that cause with that particular effect

⁵⁵ Lieberthal (1997), p. 92-3. MacFarquhar (1983), p. 327, reported the 1st FYP average annual heavy-industry investment figure to be 46.5%, which was to grow to 55.3%-57.0% during the years of the Great Leap Forward.

⁵⁶ What is more surprising to me is that fact that I have not read in the literature any previous discussion of this comparison. (Not that I have read everything, but I have read a lot, indeed more than appears in the bibliography.) The two literatures are vast, but a side-by-side comparison of Soviet and Chinese communist histories is less common. Bernstein (1967, 1984) did this most, for topics more specific than I cover.

⁵⁷ I do not say "and economics" here because the impact of the Cultural Revolution on Chinese economics, while very substantial as I show below, was entirely collateral and unintentional. Whether this was equally true for Stalin is not so clear.

was through the medium of politics. While the Great Leap Forward represented a rejection, or at least a substantial modification, of the mature post-WWII Soviet model, it also represented a reprise of the politics of development that Stalin had pursued early in his career in 1928-32.

On the side of agricultural collectivization, the experience of China was less violent than that of the Soviet Union. Ultimately that has to do of course with the fact that the Chinese communists were a peasant party, not a proletarian party like the Bolsheviks. Most Chinese cadres were rural; they had been living with peasants and leading peasant villages since land reform. Local Chinese cadres were extremely enthusiastic about the collectivization of their neighbors, in part because it increased their local power. Class war on kulaks was mild,⁵⁸ nothing like the Gulag in the background. In spite all this, agricultural production suffered with collectivization. Chinese peasants, no more than Russian peasants, liked having their newly granted private plots taken away. Despite economic hiccups, the political ease of collectivization up to that point encouraged Chinese leaders to think about going further. Certainly they could expect an enthusiastic response from local rural cadres were they to decide to do this.

On the side of industrialization, poor harvests represented a double whammy, along with cyclic retrenchment, because extraction from agriculture in China, like in the Soviet Union, represented the ultimate source of resources for investment. In response to these 'normal' roadblocks to rapid economic development,⁵⁹ Mao and the Chinese leadership did the same as what Stalin had done in the late 1920s: they turned to the Party to mass mobilize. Not only did this mean local cadres at the base, but this also meant provincial secretaries anxious for investment, development and pork for their regions.

The Great Leap Forward escalated, I will argue, because of enthusiastic response from this constituency, but the initial incremental steps in 1956 and 1957 toward mobilizing the Party for economic reform were initiated by the leadership. These empowered the party to engage more deeply in economic management. The first step in August 1956 was reform at the factory level: a backing away from Soviet-style

⁵⁸ Which is not to say that the original land reform against landlords in 1950 was mild.

⁵⁹ Some, including Zhou Enlai and Chen Yun at the time, would accuse Stalin and Mao of having economic-development goals that were excessively ambitious, but that is what both of those transformative leaders were all about.

‘dictatorial’ management by factory directors toward leadership by factory party committees.⁶⁰ The international context of this was Khrushchev’s secret speech, which denounced Stalin’s personality cult in favor of collective leadership. The second step in November 1957 was reform at the ‘ownership’ level: factories other than large-scale enterprises in heavy industry would henceforth be administered by governmental planning authorities at the province level and below.⁶¹ The international context for this was Khrushchev’s *sovnrhkozy* reforms, which dismantled central ministries and sent their personnel to the provinces. Mao did not go so far as to abolish all central ministries – he preserved them for large-scale factories in heavy industry – but he did move 80% of the central governments’ enterprises down to lower governmental levels.⁶² The third step in September 1958 was at the level of central planning: an emphasis on local authorities taking priority over central ministries in factories’ dual-hierarchy subordination.⁶³ When all was said and done, the communist state still legally owned every enterprise in China, but ‘ownership’ was now stratified by territorial level, rather than overwhelmingly concentrated in the center, as in the Soviet Union. Figure 3 provides a visualization of Chinese communist state ‘ownership’ of enterprises.

– figure 3 about here –

All of these industrial reforms directly increased the power of provincial secretaries and local Party cadres, at the expense of ministerial and professional bureaucrats. Thus while the mature Soviet Union had dual hierarchy with the emphasis on ministries, communist China had dual hierarchy with the emphasis on the party. These reforms were as popular among the party constituencies in China as they had been in the Soviet Union under early Stalin and Khrushchev.

It is worth a pause in the developmental story of the Great Leap Forward to explain why territorial decentralization, so crucial to the future trajectory of the Chinese economy, was embraced by China, whereas Khrushchev’s experimental *sovnrhkozy* was quickly rejected. The answer has already been adumbrated above: by the time of

⁶⁰ Andors (1977), p. 59. Connected with this, “hands off” functionally-based accounting was also deemphasized, since face-to-face touring, local inspections, and direct consultations were emphasized instead. The quality of statistics about enterprise performance reported back to the center thereby declined.

⁶¹ Andors (1977), p. 61.

⁶² MacFarquhar (1983), p. 59.

⁶³ Donnithorne (1967), p. 461.

Khrushchev, the Soviet industrial economy was vastly more concentrated than the Chinese economy. The Chinese economy was perhaps on the road to Soviet-style hyper-concentration, but that was still far into the future. The Chinese economy for centuries had been regionally decentralized.⁶⁴ Administrative decentralization both fit with these traditional ‘natural’ trading patterns in China, and pushed toward regional economic autarky. Local planners gave priority to intra-regional supply networks and resisted inter-regional transfers. The Soviet economy by the 1950s was too specialized for that to work any more. Conversely, Soviet centralized planning in a de-concentrated economy like China was a nightmare, if not an impossibility. Central ministries in China protested at the loss of their power, but not too vigorously.

I emphasize these organizational precursors, because they empowered the party in the economy. But the real Great Leap Forward was launched in 1958 with the commune movement. This Chinese communist innovation agglomerated village-sized collectives into much larger production units of 10-30,000 people. Curiously enough, the innovative idea of the commune did not emerge full blown from Mao’s brow. It percolated up from provincial secretaries,⁶⁵ whom Mao met on his numerous tours of the country. His own speeches at the time emphasized production speed-up, both in agriculture and in heavy industry, not any particular means for doing so. But communes emerged as the magic bullet in a series of three party mobilization meetings in the first half of 1958 that Mao held outside of Moscow in the provinces, in Hangchow, in Nanning, and in Chengtu. By the end of these almost revivalist meetings between Mao and “his people”, the official decisions of the National Party Conference in May 1958 had been predetermined.

The purposes of the commune were multiple:

1. to break through the bottleneck in agriculture, through intensified manual labor more than through mechanization;⁶⁶
2. to mobilize millions of peasants in the winter for large-scale agricultural infrastructure projects, like dams and irrigation;

⁶⁴ Skinner (1964-65).

⁶⁵ Especially Li Ching-ch’uan of Szechwan, Wang Jen-chung of Hupeh, and K’o Ch’ing-shih of Shanghai. (MacFarquhar 1983, p. 21)

⁶⁶ This included double-cropping and working through the night.

3. to mobilize peasants also for rural industrial work, both in light industry and in small-scale versions of heavy industry, like ‘backyard steel smelting’ and local electricity generation;
4. to communalize private life through common mess halls, day care, and ‘happiness homes’ for the elderly;
5. thereby to put females to work in traditionally male jobs outside of the home;
6. thereby to free up males to move to cities to work in large-scale heavy industry (with occasional commuting privileges home).
7. And without saying it of course, to give party cadres more power, indeed monopoly control, over peasants’ lives.

For believers, this was a passionate rural drive towards the future. For nonbelievers, this was like a Gulag. On the ground, some worked too hard, some not enough. Given the catastrophe in agriculture, it is often forgotten that the Great Leap Forward was actually a success at industrialization. The numbers of workers in advanced heavy-industry factories rose from 4.5 million in 1957 to 17.5 million in 1958. Including small backyard furnaces, industrial workers rose from 5.57 million in 1957 to 35.5 million in 1958. This extra effort translated into an increase in steel production from 5.35 million tons in 1957 to 18 million tons at the end of the leap in 1960. Of course paying for this was a drop in agricultural laborers from 192 million in 1957 to 151 million in 1958. Agricultural production held steady in 1958, but then plummeted from 200 million tons in 1958 to 170 million tons in 1959 to 143.5 million tons in 1960.⁶⁷ An enormous famine ensued. The “Great Leap Famine” claimed approximately 20 million lives.

In 1961, the Great Leap Forward/Famine was ended. Urban immigrant males belatedly were ordered back to the farms, along with every available cadre, to try to fix the catastrophe. Mao sulked and withdrew from active leadership to let others, like Liu Shaoqi and Deng Xiaoping (both of whom originally had supported the idea) and Chen Yun (who had not), take charge of repairing the imbalanced economy.⁶⁸ The communes were not abolished, but they were hollowed out: with common mess halls ended, with

⁶⁷ All figures from MacFarquhar (1983), pp. 327-28. The official statistics, given in Statistical Yearbook of China (1984), p. 23, paint a rosier picture than this, especially in agriculture.

⁶⁸ Curiously Zhao Enlai, who originally was skeptical about the Leap, was so politically humiliated during the provincial meetings that thenceforth he supported everything Mao desired.

grain production targets decentralized to the smaller 10-20 household level of the production team, and with 5% of land given over to private household plots. Controversy ensued over whether or not to approve an even further decentralization that emerged spontaneously in response to the famine in many provinces: namely, individual households contracting with their teams for their share of the target, with excess production beyond their contracts to be kept by them.⁶⁹ Later called the “household responsibility system,” the Liu-Deng-Chen side of the leadership approved of this spontaneous delegation of team targets down to households, because that increased production. Mao at first equivocated because of the emergency, but then in 1962 attacked this extension as right deviationism, capitalism in disguise.

On the industrial side, ownership decentralization of medium and small enterprises to the provincial and lower levels was not undone, but administrative planning at all levels and statistical infrastructures within enterprises were tightened up, with the consummate bureaucrat Chen Yun in charge. Most importantly, excessive production targets were eased. The economy slowly recovered through these ameliorative steps.

I spent more time on the Great Leap Forward than I will on the Cultural Revolution both because economic issues were more centrally involved in the first event, and because I believe that both the Cultural Revolution and Deng’s later transformation into ‘capitalism’ were contained in the residues of that earlier event. Take the outcome of the Great Leap Forward/Famine, in other words, polarize it, and you get both the Cultural Revolution and its opposite, Chinese-style ‘capitalism’. Let me explain what I mean.

In the political domain, the main thing to focus on, from the network perspective, is the growth of personal networks (*quanxi*) within communism. I start with the comparative puzzle that (a) the literature on Soviet communism mostly emphasizes horizontal “family circles,” which emerged to defend provinces and factories from excessive pressure from the center,⁷⁰ whereas (b) the literature on Chinese communism mostly emphasizes vertical patron-client relations, which spread from the center downward.⁷¹ Walder made the further interesting observation that Chinese communist clientage was “principled particularism,” by which he meant that personal loyalties grew

⁶⁹ Yang (1996), pp. 71-97, discusses these developments in detail.

⁷⁰ Fainsod (1958), Berliner (1957), Harris (1999)

⁷¹ Whitson (1969, 1973), Nathan (1973), Pye (1981), Huang (2000), Friedman et al. (2005).

up vertically among those who exhibited communist zeal.⁷² In other words, in China ideology and personalism were not contradictory, unlike the case in the Soviet Union.

Assuming these impressions are correct,⁷³ I do not think it is necessary to resort to cultural essentialism to explain them. When vertical pressure coming down from central ministries is stiff, as it was in the Soviet Union, then (dictatorial) factory directors need to reach out laterally to provincial party cadres not only to collude to subvert those pressures, but also to find supply help in achieving them. But when ministries were decentralized, as they were in China, all the pressure is coming down the party pillar. When that pressure is consistent with increasing the local power of local cadres, then it is welcome. But even when it is not, effective defense, if there is any, is more to be found through powerful patrons in the center than it is to be found with impotent factory directors in the regional locale. Formal and informal networks cross-cut in both places, but because the formal was different, so was the counterbalancing informal. Horizontal informal networks of personal assistance cross-cut the vertical chains of economic authority in the Soviet Union. Vertical informal networks of political sponsorship cross-cut the decentralized layers of economic ownership in China.

Two other structural comments are also helpful to understand the Chinese and Soviet co-evolutions. Degree of elite unity shapes how the respective informal networks behave politically. A unified elite, like the Chinese before the Great Leap Forward, gives tremendous mobilization potential to trees of vertical clientage ties. But a fragmented elite, like the Chinese after the Great Leap Forward, induces vertical clientage trees to break apart into factions. Conversely, a unified elite facing nested layers of family circles, like the Soviet Union, has no vertical faction within the system for a central leader to use to break through horizontal layers of passive informal resistance. The main reform option the system offers to such a leader is the dramatic one of reaching outside the system, to blast horizontal layers from below. Stalin did this through the secret police; Gorbachev did this through democracy.

⁷² Walder (1986), pp. 123-61, studied Chinese communist factories, but Oi (1989) made similar observations about the rural communes she observed.

⁷³ I do not question the extremely valuable observations of astute qualitative researchers, but it certainly would be nice to have a few quantitative network studies to confirm and to make more precise these comparative impressions.

And finally, in the economic domain, the regionally autarchic tendencies of the Chinese economy, compared to the Soviet one, cannot be emphasized enough.⁷⁴ Regional specialization and enterprise hyper-concentration in the Soviet case meant that economic autocatalysis could be generated (with enough energy throughput) at the national level of gigantic plants in heavy industries. Relative regional autonomy and enterprise de-concentration in China meant that economic autocatalysis more likely could be found region by region, by connecting the inputs and outputs of local light industries with those of local heavy industries.

The fascinating and painful story of the Chinese Cultural Revolution I will tell only schematically through the terms of this analysis. Instead of the usual “Mao did it,” I emphasize that vertical informal ties in China after the Great Leap Forward fragmented ‘naturally’ into factions as the elite lost its unity. Mao’s personal charisma as founder of the country survived, but his leftist economic policies were de-legitimated in the eyes of many: in the eyes of planners and bureaucrats, in eyes of the mass peasantry, and most of all in the eyes of his own provincial secretaries, who all saw their strenuous efforts blow up in their faces. If Mao had been content just to let the country taxidermy him into big smiling pictures on the walls, Liu, Deng and Chen could have carried on with the policies and networks they already had in place, many of which Deng revived after Mao’s death. But the Red Army, the PLA, outside of the dual hierarchy, gave to Mao the political option of avoiding this fate and of continuing to fight for his utopian dreams.⁷⁵ It is true that the Red Guards were Mao’s shock troops, like the Stakhanovites under Stalin, but the Red Army was Mao’s analogue to Stalin’s secret police – namely, a third pillar the leader could use to bludgeon a dual hierarchy that had tried to walk away from him. The main difference was that Stalin’s secret police articulated with and effectively controlled the raging generation of ’38, whereas Mao’s Red Army did not effectively control his raging

⁷⁴ Donnithorne (1967, 1972); Lyons (1985, 1986, 1987).

⁷⁵ At Lushan in 1959, just as Mao was starting to accept the error of his GLF ways, his defense secretary Peng Dehuai (who had ‘won’ the Korean war) attacked Mao with an honesty that struck too close to Mao’s bone, appearing almost to threaten a coup. Mao reacted passionately not only with a disastrous acceleration of misguided GLF policies but also with a purge of Peng in favor of Lin Biao, a fanatic Maoist, as new leader of the PLA. A completely unintended consequence of the Great Leap Forward, therefore, was Mao’s personal and ideological control of the army through Lin Biao. One of Lin’s first acts as new army commander was to assemble Mao’s sayings into the famous Little Red Book, to help indoctrinate soldiers.

Red Guards.⁷⁶ Like Stalin, Mao defeated his newly discovered enemies and destroyed his own party,⁷⁷ but unlike Stalin, Mao did not control his new friends. Perhaps murder is enough to account for this difference.⁷⁸ Eventually one of Mao's friends, the Red Army, had to be called in to crush the other of Mao's friends, the Red Guards. The PLA also had to run the economy at the end in the absence of the purged party. The Cultural Revolution, therefore, started out as a cleansing of the spirit but ended up virtually as a military state.

The Cultural Revolution was not primarily about the economy, but economic consequences were serious nonetheless. Liu Shiaoqi, Deng Xiaoping and Chen Yun (and of course thousands of others) were all removed from their posts. Economic ministries and central planning collapsed, so even the modest economic recentralization of Chen Yun was rolled back. The Chinese economy, however, did not collapse as badly as did the polity.⁷⁹ Regional economic autocatalysis and modularity provided China a more resilient buffer against political chaos than efficient regional specialization and inter-provincial trade would have. Too much party governance under the Great Leap Forward destroyed the Chinese economy, but too little party governance under the Cultural Revolution did not. The main thing the Cultural Revolution destroyed was not the economy but popular political support for further mass mobilizations, either by the party or against it. Economic decentralization was reinforced, albeit this time not by design.

Deng Xiaoping

By Western standards, there can be no doubt that Deng Xiaoping was the most successful communist economic reformer ever.⁸⁰ Measured solely by economic criteria, the transformation of China he pulled off was little less than miraculous. The attributional tendency post hoc is to anoint him a genius. But unlike Mao, Deng had no utopian vision.

⁷⁶ A second issue, emphasized in the Stalin case, was co-optation of the generation of '38 into massive social mobility. This did not happen with the Red Guards, who eventually were crushed by the Red Army.

⁷⁷ In 1967 and 1968, twenty-six out of twenty-nine provincial party secretaries were purged. I counted these from the directories of Goodman (1986).

⁷⁸ No matter how serious and life-changing were rectification, public humiliation, and years lost working on farms, they were still not the same as a bullet in the head. Compared to the Terror (or to the Great Leap Famine), not many people in the Cultural Revolution lost their lives.

⁷⁹ Statistical Yearbook of China (1984), p. 23.

⁸⁰ Of course, by non-western standards, Stalin still gets the prize.

His famous declaration of pragmatism was: “I don’t care whether the cat is black or white, as long as it catches mice.” While there can be no doubt about Deng’s shrewdness, the nature of that shrewdness was not a brilliant plan, skillfully implemented. Chinese economists interviewed by Shirk seem to have captured his and his allies’ leadership style best when they reported, “When they found loose stones, they pushed through; when stones would not move, they did not waste energy pushing.”⁸¹ Deng, in other words, adapted to what he encountered, and to what he inherited. He was a leader but an autocatalytic leader, part of the dynamic system he inhabited.⁸²

Figure 4 presents a simplified overview of the politics underlying Deng’s reforms. The columns labeled “leftist faction” and “reform faction” map onto dual hierarchy, as the latter was rooted in the provincial parties that Mao had destroyed, and the former’s last redoubt was the central ministries after Mao and his Gang of Four had left the scene. The column on the left is the third pillar of the army, which Mao had mobilized politically for the Cultural Revolution against his dual hierarchy, and which then effectively ran the country at the end. Most westerners saw and remember Deng the economic reformer, who orchestrated the market, but the other face of Deng was the army, as Tiananmen Square reminded us. Deng toggled between these two political legs in his struggle against the leftists who previously had exiled him. Deng himself, after Mao’s death and his own ascent to power, did not occupy any of the powerful official positions in China – party secretary, economic premier, or Chairman – preferring to operate informally behind the scenes through agents. This governing structure is similar to the “robust action” of Cosimo de’ Medici in Renaissance Florence, analyzed by Padgett and Ansell.⁸³

– figure 4 about here –

How did this politics emerge, and what were its economic consequences? Most commentators stress the economic reform policies in the late 1970s and early 1980s of the household responsibility system, fiscal decentralization, and special international-trading zones, giving to casual readers the superficial impression of intentional design. These consequential economic reforms will emerge in my account as well. But these

⁸¹ Shirk (1993), p. 6.

⁸² Actually all leaders are like this, whether they recognize it or not. Deng, however, accepted this role.

⁸³ Padgett and Ansell (1993).

reforms need to be understood causally from the perspective of communism, not teleologically from the perspective of post-communism. Even systems that are new are rewirings of pieces that are old.

So let me begin my survey of co-evolutionary dynamics under Deng not with economics but with the army, where Mao left off. Two years before he died in 1976, Mao recalled Deng from exile because of the politics of the army. With the PLA both administratively⁸⁴ and politically⁸⁵ as powerful as it was, and with disorder still rampant, the potential for military coup was high. Indeed in 1971 Lin Biao – that PLA head, fanatic ally and chosen successor to Mao – tried but failed to assassinate Mao and to pull a military coup, before dying in a plane crash in flight from the country. All of Lin’s leftist supporters in the military were immediately purged. This purge actually weakened Mao’s control over the remaining more professional army, because that red faction had been the instrument of Mao’s personal control. Instead of an overpowering leader capable of mobilizing millions, Mao at the enfeebled end of his life was reduced to playing off elite factions against each other, in a politics of courtly intrigue.

In October 1974, with Zhou Enlai suffering a terminal illness, Mao recalled Deng from exile for two reasons: (a) to substitute for Zhou in running the economy, and (b) to enable the simultaneous rotation of eight commanding officers of PLA military regions, to weaken their power bases and their collective potential for a new coup. “The elements of the bargain were clear. In return for giving up political power, the generals were promised that it would be put into the responsible hands of a trusted old comrade.”⁸⁶ Deng only lasted a year before Mao fired him a second time, because of Mao’s distrust of Deng and of his brusque, no-nonsense approach to his new job.⁸⁷ But the incident revealed the popularity of Deng in the purged army. Their deep sympathy for Deng (not

⁸⁴ In 1968, 17 out of 23 chairmen (and 19 out of 23 first vice-chairmen) of the provincial revolutionary committees were military personnel. Harding (1997), p. 223.

⁸⁵ In 1969, 13 out of 25 members of the Politburo were military personnel. (5 out of 25 were “Gang of Four” Cultural Revolution Group.) 45% of the Central Committee was military. MacFarquhar (1997), pp. 250-51.

⁸⁶ MacFarquhar (1997), p. 291.

⁸⁷ The mechanics of this firing was the first Tiananmen Square incident: An enormous mass swell of emotional mourning for Zhou, at his death, was interpreted by Mao and the Gang of Four as reactionary political support for Deng, who was seen as stepping into Zhou’s vacated shoes. The army was ordered to clear out the thousands of milling people and funeral wreaths with political-insinuation notes attached, and to repress the spontaneous upsurge in sentiment.

necessarily anti-Maoist) dated back to the civil war and Long March days, when Deng himself had been a young general. Struggle for the allegiance of the military was the inflection-point politics in the interregnum period between the death of Mao in 1976 and Deng's return to power in 1978.

The most rabid Maoist faction, the Gang of Four, was arrested a mere month after Mao's death. No one, especially not the army, wanted them anymore. Deng Xiaoping was recalled again in mid 1977, but not as leader, and many leftist provincial secretaries were purged.⁸⁸ But Deng Xiaoping and his old friends still had to contend with Mao's appointed successor, new Chairman Hua Guofeng and the remaining leftists at the center who supported him. Susan Shirk, in her insightful 1993 study of "the political logic of economic reform in China," makes this succession struggle and the subsequent one into the main political drivers behind Deng's successful post-Mao economic reforms. I do not disagree with her analysis, indeed I build on it, but a political contest between Deng and Hua seems imbalanced from the start. Old Guard Deng had deep and wide informal connections to all parts of the apparatus, whereas newcomer Hua had only the resources of formal state office. Too exclusive a focus on post-Mao events risks missing the deeper historical trajectories upon which those contemporary events sat.⁸⁹

Hua Guofeng, Mao's latest chosen successor, behaved as one would expect from someone whose power base was the central ministries. He tried to revive Stalinist heavy-industry growth strategies, this time paid for not by grain extraction but by petroleum exports. Unfortunately they did not find as much oil as they needed to find, so Hua's ambitious Five-Year central plan was a bust virtually from the start. The incident reveals, however, that Stalinism was still alive and well in China, even at this late date.

The other, more visible half of Deng's first challenging, then ruling coalition was his famous sequence of marketization economic reforms. These emerged through very standard communist leadership behavior – namely, to reach out and mobilize local and provincial party cadres. The main reasons, besides lack of historical perspective, that observers often do not recognize Deng's reform strategy as standard communist behavior

⁸⁸ Eleven of twenty-nine provincial secretaries were replaced in 1977 and eight more in 1978: my count of directory data in Goodman (1986).

⁸⁹ I do not want to be critical of Shirk, whose analysis I admire a lot. But she like most observers does not couple Deng's economic politics with his military politics. Because of this common elision, most observers (MacFarquhar is an exception) miss the organizational foundations of Deng's robust action.

are two twists. The first tactical twist was that usually communist leaders initiated and constituencies responded (or not), whereas with Deng first the constituency responded and then the leader initiated. As a matter of leadership style, this tactical difference is significant: Deng and his personal vision were more inscrutable this way. But as a matter of structural feedback, the positive reinforcement that political leaders and party constituencies gave to each other was the same, whoever initiated the feedback cycle.

The second, deeply consequential twist, of course, is that usually leader-provincial-secretary feedback in communist dual hierarchies led to centralization (the so-called circular flow of power), both in the political and in the economic domains. In the case of Deng, however, it led to centralization (or more accurately to re-centralization) in the political domain, but to market-style decentralization in the economic domain. Explaining this unexpected divergence in economic outcome from standard communist dynamics is the heart of the Deng puzzle.

My fundamental *longue durée* solution to this puzzle will be that these political dynamics played out in China, but not in the Soviet Union, on the administrative lattice of figure 3. In the short run, moreover, the barriers between central planning at the top of that tree and provincial planning lower down in that tree were strengthened by the factional overlay of figure 4. Other than through taxes and financial subsidies, the top and the bottoms of the territorial tree were thereby decoupled – the center to remain in central planning, and the provinces to diverge into local-governments-as-entrepreneurs,⁹⁰ free to transact in quasi-markets. The vertical informal ties that pervaded the Chinese communist system carried through the decoupling to create multivocal⁹¹ enterprises, which were as much clients of their local government sponsors as they were enterprises in markets transacting with similar enterprises.⁹²

The first step in these political-cum-economic developments was the household responsibility system in agriculture. This gave to individual peasant households the right to contract with their production teams to deliver grain or produce targets to the state, but then to sell any excess production above targets at revived agricultural private markets

⁹⁰ Walder (1995), Oi (1999).

⁹¹ Padgett and Ansell (1993).

⁹² Stark (1996) makes a similar point for Hungary.

(i.e., village fairs).⁹³ This was officially authorized in 1980, but in 1978 the Third Plenum authorized a variety of agricultural experiments that were essentially half-way steps there. These official legislative actions did not initiate peasant innovation but legitimated post hoc rapidly diffusing peasant practices on the ground. These diverse privatizing practices indeed were revivals of informal peasant institutions that first appeared sub rosa at the end of the Great Leap Forward. Yang has documented that the household responsibility system spread fastest and widest in those provinces – like Anhui and Deng’s home province of Sichuan – which had experienced the worst devastation in the Great Leap, and which were the most physically distant from Beijing.⁹⁴ The elder Deng’s agricultural “innovation” in 1980, therefore, was actually a revival of 1962, back in the days when the middle-aged Deng Xiaoping and Chen Yun were practically in charge.

What was the politics of this first reform? The popularity of the household responsibility among peasants seems straightforward, because they got greater productivity and personal profit out of it. But communist regimes are not known for doing things just because peasants like it. Peasant diffusion after Mao’s death occurred at precisely the same time as Deng’s succession maneuverings to overthrow Hua. As was his wont, Deng did not come out with anything as blunt as “I want this.” Rather the centerpiece of his interregnum politics was the epistemological slogan “Practice is the sole criterion of truth.”⁹⁵ This slogan opposed Hua’s “Whatever Mao said is right.” Consistent with this slogan, in agricultural policy Hua argued strenuously for the revival of the commune, specifically the Dazhai-style production brigade. Deng did not oppose this with the household responsibility system; he merely argued for experimentation.

Despite (or because of) this vagueness, powerful political feedback loops within the party kicked in. Local cadres who had suffered in the Great Leap and who worked far from Beijing rallied to Deng, because his slogan gave them political cover and encouragement to do what they wanted. Local cadres nearer to Beijing were not directly threatened, because they could continue with communes if that worked for them.

⁹³ Tsou et al. (1982), Burns (1986), Oi (1989), Shirk (1993). Informally this was known as “dividing the land” in management, even though legally collective ownership of land, tractors and livestock remained.

⁹⁴ Yang (1996), pp. 134-42. Yang also presents the most thorough description and discussion of these agricultural reforms in the literature.

⁹⁵ Actually the original author of this slogan was Hu Yaobang, in a newspaper article that Deng liked. Hu was soon rewarded by Deng with lightening promotion to general secretary of the party, with Deng formally remaining behind the scenes.

Provincial secretaries were more cagy, waiting to see how the political winds blew, but in general their sympathies were correlated with those of their local cadres. While not as hysterically engaged in mass mobilization as his communist predecessors, in fact with his truth criterion Deng subtly was engaging in mass mobilization. It is unlikely that the household responsibility system would have diffused as fast as it did without the political cover provided by Deng.

The second and probably most consequential step in this sequence of post-Mao reforms was fiscal decentralization. This was the policy reform most smoothly enabled by the previous communist administrative decentralization of figure 3. And this is what got most of the provincial secretaries fully behind Deng's ruling coalition.

Fiscal decentralization was something like the household responsibility system applied to national state finance.⁹⁶ All provincial governments would negotiate fiscal contracts with the central ministry of finance about what level of tax resources to remit to the center, with provincial governments then free to keep any excess that they collected for their own investment decisions. Before this reform, theoretically all provincial taxes and enterprise profits would flow to the center, some of which was then reallocated back down to the provinces through the central state budget. A growing loophole was that provinces sometimes were authorized to keep "extra-budgetary funds," in order to fund territorially dispersed initiatives by Mao. A problem with this loophole, from the perspective of the center, was that provinces often managed to squirrel away as much local money as possible into this off-budget line item, thereby underpaying the center.⁹⁷

The political story of how the reform of fiscal decentralization to the provinces developed is similar to the story of household responsibility. In 1977 and 1978, Jiangsu and Sichuan⁹⁸ provinces petitioned and received approval from the ministry of finance to try out a variety of new fiscal management and revenue-sharing proposals, on an experimental basis. The ministry, which normally resisted decentralization, approved of these fiscal experiments and others as a way to gain greater predictability and security on its own central portion of the take. These revenue-sharing experiments were judged by

⁹⁶ This can also be analogized to tax farming.

⁹⁷ Wang (1995).

⁹⁸ Zhao Ziyang was the provincial secretary from Sichuan behind these ideas. Later he was rewarded by Deng by promotion first to economic premier and then, after Hu Yaobang, to general secretary.

both sides to be a success, and fiscal decentralization was officially approved for the country as a whole in 1980. Shirk emphasizes that different provinces received different treatment in the contractual details of these fiscal revenue-sharing arrangements – territorial discrimination she calls “particularistic contracting.”⁹⁹ The coastal provinces of Guangdong and Fujian and the original provincial innovators of Jiangsu and Sichuan received the best deals, while the metropolises of Beijing, Tianjin and Shanghai, which provided the lion’s share of central revenues, received the most restrictive plans. Not surprisingly provincial secretaries were enthusiastic about Deng in proportion to the generosity of their deals, but on average provincial secretaries were ecstatic.

Walder on the urban side and Oi on the rural side have documented the profusion of entrepreneurial businesses that exploded from fiscal decentralization.¹⁰⁰ Just like peasants rushed to plant more crops and to work their fields harder when they were allowed to reap the gains (even without private ownership of the means of production), so provincial and local governments invested their discretionary revenues in their ‘own’ local enterprises and managed them better when they were allowed to reap the gains for their governments. Purely private profit, called corruption, no doubt existed. But field reports show that group profit was enough to turn local-governments-as-extractors into local-governments-as-entrepreneurs. Local and provincial governments even developed competition among themselves, Tiebout or local-boosterism style, about who could develop their clientage enterprises faster.

Given the abject failure of Gorbachev to achieve anything like this in the Soviet Union, it is worth re-emphasizing the structural precondition for this economic takeoff in China. Administrative decentralization under Mao made the politics of fiscal decentralization smooth under Deng. It also reinforced regional autocatalysis and even autarky in the various territorial economies of China. Given this setup, local governments could stimulate and guide their enterprises to work harder, and provincial governments could arrange input-output synergies within these regional clusters,¹⁰¹ without much

⁹⁹ Shirk (1993), chapter 9, is the primary source for my discussion of fiscal decentralization. The MOF central perspective on decentralization was similar to that of Chandler’s multidivisional firms (1962): namely, to delegate operational control downward in exchange for tighter fiscal discipline and responsibility.

¹⁰⁰ Walder (1995, 1998), Oi (1999). See also Kueh (1983), Wong (1987).

¹⁰¹ Cf. Powell, Packalen and Whittington, chapter 13 in this volume.

confounding interference from central ministries. In contrast, administrative and fiscal decentralization in the Soviet Union would only turn matters over to family circles of defensive collusion, who could find not enough supplies for their hyper-specialized plants in their local neighborhood. Because of this different governmental structure, Chinese economic takeoff was led by light industry not by heavy industry. Heavy industry in China remained mired in the central plan, just like it did in the Soviet Union.

Over the period from 1979 to 1985, a third liberalization reform was also implemented: Special Economic Zones in coastal ports to develop international trade connections, in a geographically buffered way.¹⁰² The importance of this for the economic modernization and development of China hardly needs mention. But the politics of coastal provincial support for this reform, and therefore for its sponsor Deng, was identical to that for fiscal decentralization, so I won't repeat that story here. In the cases of all three reforms, what from the perspective of economics looks like markets, from the perspective of politics looks like clientage.

Let me close my analysis of China by returning to the political coalition of Deng Xiaoping, which anchored all of this economics. Narrating economic reforms, as I have just done, makes Deng appear to be a reformer, which he was even though through all of this he was building a political faction for himself. Appealing to local and provincial cadres was something that Stalin, Khrushchev and Mao also had done before him, in different circumstances. Deng's particular circumstances were the decentralization ("politics in command") administrative modifications of the Soviet system, implemented by Mao intentionally during the Great Leap Forward and unintentionally during the Cultural Revolution. Deng's provincial cadres were in substantial part those who had been persecuted during the Cultural Revolution.

But Deng's reform faction was only half of his political coalition, as I tried to make clear in figure 4. His original political base actually was the army, so who one interprets as "the real Deng" depends upon which allies one sees him in the context of. Oddly enough, one can even occasionally see him as representing the central ministries, after his rival Hua Guofeng was deposed from that power base in 1980, and his good and

¹⁰² This reminds one of the localized zones for trading under colonialism, except for the difference in who controlled these zones.

old friend Chen Yun installed in his stead. Like Cosimo de' Medici in Florence, Deng Xiaoping could plausibly be seen as having multiple identities and interests, because of the heterogeneous support structure that he supervised. Because of this structurally induced multivocality, which Deng did not puncture by uttering words or policies too clearly, he could be seen as “a friend to all” (except the Maoists), and hence he floated above the political system, not beholden to any part, as I tried to diagram in figure 3.

Administratively, Deng's robust action was implemented, like Cosimo's robust action before him, through not holding public office himself but by operating instead through agents. Deng abolished the title of Chairman, which Mao had held. He installed his lieutenant Hu Yaobang as general secretary of the party (the supreme position in the Soviet Union), in charge of the political half of the dual hierarchy, and he installed another lieutenant Zhao Ziyang as premier, in charge of the other economic half.¹⁰³ These lieutenants were hardly lackeys; they along with old pal Chen Yun were the sources, or the messengers, of many of Deng's reform ideas. Indeed Deng's withdrawal to “the second line” behind the scenes, away from day-to-day battles, followed in the footsteps of Mao Zedong, who did the same thing in 1958 without giving up his title as Chairman. Policies, vision and personality aside, the structure of Deng's political control at its peak reproduced that of Mao at his peak.

Informally Deng's position was cemented by the Long March elders, survivors from the founding generation of the communist revolution. Chen Yun, Li Xiannian, Ye Jianying, Peng Zhen, Bo Yibo and other octogenarians had cycled through numerous positions over their long and tumultuous careers. In 1982, Deng assembled them into an ad hoc Central Advisory Commission, which technically was off-line and only advisory, but actually was considered to be “the power behind the throne” in the 1980s.¹⁰⁴ The second line, in other words, was not only Deng himself but also included his old friends and battle-tested allies. This was an informal glue that knitted together the peaks of all three pillars after the Maoists had been purged in three successive waves.¹⁰⁵

¹⁰³ Chair of the Military Affairs Committee – that is, civilian head of the military – was the only official post that Deng never relinquished himself.

¹⁰⁴ Shirk (1993), pp. 72-75; Baum (1997), pp. 342-43.

¹⁰⁵ The three waves were first Lin Biao, then Gang of Four, and finally Hua Guofeng.

Robust action and its structural foundations had dynamic consequences for the management of the developing Chinese economy during the 1980s. Without going into the details,¹⁰⁶ rapid economic growth produced by the reforms and by political stability also created problems of inflation and corruption. Robust action by Deng and his old friends politically allowed them to oscillate in their 1980s economic policies, to accelerate or to dampen depending upon the current mix of transitional problems. I think of this oscillatory style of organizational management as like annealing in chemistry: namely, letting explosive components find their own hybrid alloy through raising and lowering the mixing temperature.

I give only a list of examples:

1. Large inefficient central plants, which normally would have been the institutional foundation for resistance, were not themselves reformed, but rather were bailed out by budgetary subsidies coming from provincial profits. These central-planning plants were never shut down; just gradually employees drifted into more lucrative alternatives.
2. Local communist cadres, who normally might become jealous of the economic success of their enterprise underlings, were bought off by becoming entrepreneurs themselves and by kickbacks.¹⁰⁷
3. Restive provincial secretaries who got worse revenue-sharing and export-zone deals than did the Deng clients cooled off as these deals slowly were extended nation-wide.
4. Taxes on state enterprises flip-flopped in form from particularistic negotiation of profit sharing in 1982-83 to uniform tax rates in 1983-84 back to particularistic profit sharing in 1985-88.
5. Austerity measures to combat inflation, built around the recommendations of ministry fiscal conservatives like Chen Yun and Li Peng, were imposed in 1988.
6. Most poignantly of all, in reaction to political demands for democracy by students in Tiananmen Square, Deng called in the army in 1989.
7. Anti-corruption drives were launched after Tiananmen, as central-planning conservatives launched a comeback.

¹⁰⁶ See Shirk (1993), Naughton (1995), and Yang (2004) for this.

¹⁰⁷ In Chicago, Mayor Daley junior is alleged to have said: "We don't call them bribes anymore, we call them consultant fees."

8. But then finally Deng reversed the drift of his elderly colleagues toward economic and political retrenchment in his end-of-life southern tour in 1992.

Obviously more could be said about economic and political development in China during the 1980s and 1990s. But the late 1970s and early 1980s was the inflection point, which established the oscillating Chinese communist trajectory after Mao. Despite his shrewd maneuvering among Maoist residues, Deng Xiaoping was not the only or the inevitable trajectory of co-evolution out of what Mao had built. If the People's Liberation Army and the faction of the Gang of Four had been able to coordinate better – as had Stalin's secret police and the generation of '38 – we would have seen a different Chinese history.

Gorbachev

Finally, to complete this comparative survey of reform dynamics within communism, there is Gorbachev and the collapse of the Soviet Union. The original motivation for this chapter was a desire to understand that.

To situate Gorbachev among other communist reformers, not in outcome but in strategic style, it is helpful to return to the simple representation of dual hierarchy in figure 1. Dual hierarchy offered four possible constituencies to any communist leader interested in reform. Within the economic pillar of the central-command economy, he could try to appeal to central ministries at the top or to state enterprises at the bottom. Within the political pillar of the communist party, he could try to appeal to upper cadres at the regional and provincial levels or to lower cadres in local governments and enterprises. Combinations were possible, but those were the four basic channels for reform within the system. Given the virtual invulnerability of the communist leader, there was always also the null alternative of appealing to no constituency and ruling only by decree. But that was like talking to oneself in a vacuum: much gesticulation and meaningless nods of assent, but no action. At the end, after alienating everyone, Gorbachev wound up like that, but he had struggled strenuously to avoid his fate.

Examples of the first reform strategy of mobilizing central ministries include the technocratic fiddling of Brezhnev and the stern discipline of Andropov.¹⁰⁸ Examples of

¹⁰⁸ Although I do not discuss him here, Putin is a young version of Andropov. Both had careers in the KGB.

the second reform strategy of direct mobilization of state enterprises, which end ran the ministries, are Kosygin under early Brezhnev and Kádár in Hungary. Both of those administrative reforms tried to loosen the stranglehold of ministries over enterprises to create enterprise autonomy – in the first case unsuccessfully, in the second case successfully. Examples of the third strategy of mobilizing upper party cadres include Deng Xiaoping, Khrushchev, and Stalin early in his career. The radical fourth strategy of mobilizing lower party cadres against upper party cadres is epitomized by Mao, although the first Five-Year plan and the brutal collectivization drive of mid-career Stalin were also like this. Most radically of all, Stalin after his great purges mass mobilized the bottoms of both the economic and the political pillars against their upper echelons, to repopulate both ministries and the party through the massive social mobility and the cooptation of an entire generation of the country. All of these leaders were intelligent actors, but they operated within the skein of reform strategies offered to them by dual hierarchy.

In the first year of his term, Gorbachev was not only like Andropov, he was the continuation of Andropov, both in economic reform policies and in top-down strategic style. I shall argue in this section, however, that his Andropov-motivated struggles with the Brezhnev system progressively turned him into a Stalin, not in policy objectives but in strategic style. That is, Gorbachev came to rely heavily on purges and on mass mobilization of both bottoms in order to try to create a demagogic alliance of himself with the very bottom, against his own apparatus. Failing to achieve this within the communist system, he turned in desperation to plebiscitary democracy outside the system, only to destroy the Soviet Union and to pave the way for his rival Yeltsin. Throughout the analysis, I refuse to explain the regime transition in the Soviet Union through “reading history backwards” teleology. His own retrospective myth making notwithstanding, Gorbachev was not a westerner like us, he was a Communist.

More programmatically, the two linguistically ambiguous words *perestroika* on the economic side, and *glasnost* on the political side, expanded dramatically in their application under Gorbachev. In just five years, *perestroika* (‘restructuring’) changed its practical economic meaning from Andropov-style worker discipline to Kosygin-style administrative reforms to Hungarian-style market socialism to market liberalization.

Glasnost ('transparency', 'publicity', 'openness') similarly migrated in its practical meaning from inspections, to freedom of the press and artistic expression, to communist elections, to public elections. Gorbachev always claimed that the reform tracks of *perestroika* and *glasnost* were complementary; indeed that *glasnost* was the prerequisite for *perestroika*. I show below, however, that failure in one track always led to escalation in the other track, back and forth in zig-zag dynamics. Feedback was contradictory, not symbiotic as Gorbachev and western self-conception would claim, leading to ever increasing conflict. The common driver behind both policy escalations was Gorbachev's vain and futile search for new constituencies, as old ones disappeared. Because of this *danse macabre* with dual hierarchy, Gorbachev became just what he did not want to be – not only a Stalin, but a failed Stalin.

Gorbachev emerged out of the Andropov faction. This is crucial to understand from the outset, in order to disabuse us of the myth, fostered by Gorbachev himself, that he was a westerner in disguise. Andropov – the first elderly successor to Brezhnev,¹⁰⁹ who lasted only a couple of years (1982-84) before he died – spent most of his career in the KGB. His main claims to fame had been on-the-scene suppression of the Hungarian revolution in 1956, and campaigner for repression of Prague spring in 1968. Together with Marshall Ustinov, head of the Soviet military, upon succession Andropov spearheaded a modernization drive to try to reverse the slow and inexorable decline of the Soviet economy, especially in technologically advanced sectors of interest to the military, which had occurred under Brezhnev. Gorbachev was a dynamic young man who had risen through party ranks from an agricultural and resort district,¹¹⁰ with no direct experience in industry or the military. Gorbachev became the protégé, even the golden boy, of Andropov and Ustinov. Although he was only Politburo secretary for agriculture, Andropov treated Gorbachev as his trusted number-two man, in charge of centralized policy teams to develop proposals for economic reform. Kosygin's earlier (1965) failed reforms were revisited and mulled over in this venue. Even more consequentially, Andropov placed Gorbachev in charge of appointments of upper-level cadres, as Lenin

¹⁰⁹ A second elderly successor, who lasted as leader even less (1984-85) before he died, was Chernenko. Chernenko was a brief revival of the Brezhnev regime, whereas Andropov had represented reform.

¹¹⁰ The resort aspect was important because that was what enabled young Gorbachev to meet, to schmooze with, and to impress high-ranking Soviet officials on an informal basis.

had done Stalin. In this powerful infrastructural role, assisted by Ligachev, his later rival, Gorbachev began the extended process, initiated by Andropov and continued in his own regime, of replacing provincial first secretaries and others.¹¹¹

Andropov himself died before accomplishing anything. But he ‘made’ Gorbachev, both in the sense of giving to him his original political base and in the sense of giving to him his original economic ideas. Gorbachev was a more youthful temporal extension of Andropov, and at the beginning of his term behaved accordingly.

On the political front, new and younger provincial secretaries (like Boris Yeltsin) appointed by Andropov/Gorbachev turned out to be critical for Gorbachev’s own succession,¹¹² as was the blessing of the foreign-policy-oriented segment of the old guard (like Andrei Gromyko), who saw Gorbachev as committed to strengthening their legacy of Soviet military domination. This alliance combination of provincial secretaries and KGB-military reminds one of the provinces-plus-PLA alliance structure of Deng.¹¹³ Once in power, Gorbachev revealed himself to be a master of the “circular flow of power,” invented by Stalin and routinized by Brezhnev. While this did not happen all at once, by August 1987 Gorbachev had replaced 70% of the Politburo (14 out of 20), 72% of the provincial first secretaries (108 out of 150), 95% of commanders of military groups (19 out of 20), 45% of the Central Committee (138 out of 307), and 54% of republican central committees (1134 out of 2089).¹¹⁴ Part of this was accelerated generational turnover, long deferred under Brezhnev.¹¹⁵ But no general secretary since Stalin had operated with such ferocious velocity in forcing cadre turnover. Purge was a Stalinist tool that Gorbachev knew well how to use. In the upper ranks of the party, Brezhnev’s old men were decimated. The continued voting support that the communist apparatus gave to Gorbachev’s proposals, even the later suicidal ones, is incomprehensible without

¹¹¹ Hough (1997: 86-102) points out that Andropov himself had inherited much of the political machine of provincial first secretaries established by Kirilenko. This was the Andropov party base that Gorbachev gradually remolded into his own.

¹¹² Yeltsin (1990), p. ; Ligachev (1993), pp. 72-75; Boldin (1994), pp. 60-61.

¹¹³ The difference in outcomes between Deng and Gorbachev had more to do with the systems they were struggling against than it did with the content of their initial reform alliances.

¹¹⁴ Hough (1987), pp. 36, 34, 34, 33 and 38, respectively. Rutland (1993, p. 194) adds that 39% of new provincial first secretaries in Russia were imported from central jobs in Moscow, rather than being promotions of locals, as had been Brezhnev’s approach. (Only 11% in non-Russian provinces, however.)

¹¹⁵ In particular, Stalin’s famous generation of ’38 turned over, of which Brezhnev and his elderly cronies had been members.

understanding this lock that he had over appointing the upper echelons of the party. When the party hierarchy belatedly swung against Gorbachev, those for the most part were his own people.

Glasnost at this beginning was an Andropov-style anti-corruption campaign.¹¹⁶ As such, it was intimately linked to Gorbachev's anti-Brezhnev purges. At the upper echelons of the party, general secretaries pretty much could just fire people as they pleased, as long as they proceeded tactfully. The lower down one went in the party, however, the informational problem became knowing whom to fire, since everyone mouthed the right words, and superiors of derelict clients usually vouched for their own appointees. The issue was family circles, which as everything goes back to Stalin.¹¹⁷ People theoretically were supposed to check on each other and report to the center, but to defend themselves against unbearable top-down heat, they often formed collusive cocoons of silences and lies. Central leaders required extra-party informational channels to combat this. For Stalin, this was his secret police. For Andropov, this was the KGB. For Gorbachev, this was investigative reporting by newspapers.¹¹⁸ Gorbachev early in 1986 instituted freedom of the press, not because of the American bill of rights, but because of his need for exposés, to intensify and justify his purges.¹¹⁹

On the economic policy front as well, Gorbachev at first just continued Andropov. In 1985 and early 1986, Gorbachev was more involved in consolidating his power than anything else, but nonetheless he did launch a number of economic initiatives: extension of Andropov's large-scale experiments on enterprise autonomy; acceleration in production in a new Five-Year plan; increased investments in high technology; prohibition of alcohol to combat laxity at work; a centralized quality-inspection program, modeled on military production; and finally a crackdown on 'unearned incomes' (like

¹¹⁶ Indeed the word first appeared in 1983 in party newspapers discussing Andropov's policies, not Gorbachev's. Gorbachev himself started discussing *glasnost* in this sense in speeches in 1984, even before he came to power. Gibbs (1999), pp. 12, 22.

¹¹⁷ Oliver (1973), Rigby (1981).

¹¹⁸ "I placed particular value on glasnost when I realized that the initiatives coming from the top were more and more obstructed in the vertical structures of the Party apparatus and administrative organs. Freedom of speech made it possible to go over the heads of the apparatchiks and turn directly to the people, to give them the incentive to act and to win their support." Gorbachev (1995), p. 203. For Stalin parallel, see Harris (1999), pp. 177-83.

¹¹⁹ Gibbs (1999), pp. 21-31.

corruption, embezzlement, and private enterprise).¹²⁰ These measures were ad hoc, but they reflected the stern-discipline vision of Gorbachev's mentor from the KGB. Even central ministries could approve of old-school disciplinary ideas like these. Russian workers, however, seethed at having their bonuses and their booze cut.¹²¹

In the background, however, policy reform teams of Soviet academics – first established by Andropov (and chaired by Gorbachev) and then continued by Gorbachev (and chaired by Ryzkhov, another Andropov protégé) – laid the seeds for a more comprehensive next step in *perestroika*: namely, revisiting and updating the Kosygin reforms, which had sought greater autonomy and initiative for enterprise directors outside the 'petty tutelage' of ministries.¹²² Mostly these administrative reforms involved changing economic performance indicators of firms: away from physical production targets, mandated by ministries, and toward financial indicators like profits, calculated on the basis of administered prices. Hungary under Kádár had successfully made this transition in 1968 with his New Economic Mechanism (NEM), whereas Kosygin's own Soviet attempt in 1965 had been foiled by the ministries, whose decision-making monopoly this attacked.¹²³ These enterprise-autonomy ideas were more threatening to central ministries than the first round of disciplinary policies had been. Kosygin had lost because Brezhnev and the party hierarchy ultimately backed the ministries over him. But now times were propitious for revisiting this Hungarian-style reform: the party was controlled by someone who wanted it. And indeed this reformist track after much internal politicking eventually led to the *perestroika* flagship Law on State Enterprises in 1987, which destroyed the Soviet economy in 1989.

Starting in earnest in 1986 and carrying through 1987, purges, *glasnost*, and the second round of *perestroika* were serious body blows to the core of the Soviet apparatus. Purges and *glasnost* attacked the declining Brezhnev guts of the party; the second round

¹²⁰ For overviews of all of Gorbachev's economic reforms, early and late, see Aslund (1991) and especially Ellman and Kontorovich (1998), whose unusual book is a compilation of testimonies from participants.

¹²¹ The anti-alcohol campaign provoked a crisis in sugar production, as official supplies disappeared into bootleg. It also induced fiscal distress, as the central government lost one of its important tax revenues.

¹²² A number of Gorbachev's academic advisers, like Aganbegyan (1988), had been personally involved as youngsters in the earlier Kosygin reforms.

¹²³ The mechanics of blocking in the 1960s had been the compromise that firms would be evaluated both on physical targets and on profits, instead of on profits alone. Soviet ministries implemented this 'reform' by insisting that the old physical targets take priority, thereby emasculating profits. In a shortage economy, dependence of enterprises on ministries for supplies was too strong for effective resistance.

of *perestroika* attacked central ministries and those underperforming enterprises that had no hope of innovation. It is hardly surprising that these constituencies congealed to resist Gorbachev. Gorbachev counted on the reform constituencies of a new generation in the party, the urban intelligentsia, and better performing enterprises in the economy (which included the military) to carry the day. Weighed strictly as voting blocs, the contest was closer than one might think, knowing the outcome. Gorbachev faced powerful opponents, but he was not without resources. It was cross-domain feedbacks in dual hierarchy, I argue, more than raw political resources, that defeated Gorbachev.

It is worth a moment's detour at this point to reflect on why Gorbachev did not go down the reform trajectory of China, especially since that success was known to him at the time. Historically, the Soviet Union went down the economic trajectory of Hungary, with all the political consequences of war on ministries that entailed, because of momentum from Andropov and the military interests he represented. But counterfactually, could Gorbachev have made a different choice? First and foremost, the Chinese approach to economic reform would have been to start with agriculture, rather than with large state enterprises. Gorbachev approved wholeheartedly of what the Chinese had done. Gorbachev's own background after all had been agriculture, not industry. He repeatedly urged household leasing for Soviet agricultural cooperatives, pointing explicitly to the Chinese success. In hindsight, it was consequential that he did not push agricultural reform more vigorously. Gorbachev's problem in my view was political. Gorbachev's primary power base was the new provincial first secretaries. All provincial secretaries' power bases, in turn, were the collective farms. Unlike Mao, Stalin had taken heavy and light industry mostly out of their jurisdiction, leaving them only with control over agriculture.¹²⁴ In this structural inheritance, attacking the collective farms for Gorbachev meant attacking his strongest supporters. There was no offsetting plum like light industry to hand to them in exchange, as Deng had done. Ultimately, therefore, it was the decentralized state-ownership system of figure 3 (triggered by the historical legacy of Mao) that caused mobilizing upper cadres in China to lead to agricultural reform. And it was the more centralized state-ownership system of the Soviet

¹²⁴ Khrushchev temporarily reversed this jurisdictional division of labor between provincial secretaries and central ministries, but *sovnarhkozy* had been overturned by Brezhnev.

Union (triggered by the historical legacy of Stalin), that caused mobilizing upper cadres in the Soviet Union to block the possibility of agricultural reform.

At the deeper level of informal political networks, the difference between the Soviet Union and China was that reform politics under Gorbachev was a war between a mainly unified party center and fragmented but deeply rooted family circles below. In contrast, reform politics under Deng was a war between vertical factions, both of which extended from the top of the party to the bottom. Because of network integuments, Deng's supporters were arrayed in personal factions, loyal to him.¹²⁵ Gorbachev never did develop a personal faction within the communist party, loyal to him personally.

The reason for this was structural. *Nomenklatura* appointments meant essentially that superiors appointed their subordinates, from centrally approved lists. This meant that Gorbachev had complete control over his own high-level appointments, but that they (not he) had control over their own appointments, the next level down. From this perspective, the whole party system can be seen as nested family circles. The behavioral result of this hierarchy of clienteles was obsequious subservience when provincial secretaries faced upward toward their leader, but autocratic tyranny when they faced downward toward their underlings. It was not difficult to say one thing in the Central Committee and do another thing back home. Whether this amounted to centralization or to fragmentation depended upon something else, like rates of social mobility and turnover.¹²⁶ Gorbachev (like Khrushchev and Kosygin before him) was faced with the challenge of reforming the central-command system through a recalcitrant party structure, upon which his own power was based. Stalin had already showed the ways out: high rates of cadre turnover, and mass mobilization of the bottom.

The first counter-attack by the forces arrayed against Gorbachev was not really an attack at all. It was paralysis and sandbagging, the simple refusal to obey. "Beginning in 1985 I flew to Moscow three years in a row, immersing myself in the atmosphere of the capital, and met politicians, journalists, artists and writers. What were my impressions? *Perestroika* was going at full speed – a real tidal wave! Then I travelled from the capital

¹²⁵ The micro foundations of this were well analyzed in Walder (1986), who described the 'principled particularism' structure of Chinese communist loyalties. See also Pye (1981).

¹²⁶ For a similar analysis of the dynamics of hierarchical clientele in the Ottoman Empire, see Findley (1980). In the nested households of the Sultan's patrimonial entourage, the Ottoman bureaucracy was centralized or fragmented depended upon its volume of "wheel of fortune mobility."

into the countryside. Go some hundred or two hundred kilometers away and things were completely different – all quiet, no change.”¹²⁷ Party newspapers were ordered by Gorbachev to report on local problems; party newspapers were ordered by local party officials to not. Enterprises were ordered by Gorbachev to increase worker discipline, to accelerate production, and to try to innovate technologically. Business as usual. Ministries were ordered to participate in planning for greater enterprise autonomy, but they did so only to subvert that objective.¹²⁸ The economic reform process increasingly became planned by a closed brain trust of centralized Gorbachev advisors, without ministerial participation.

The more relevant model for success in the reform trajectory that Gorbachev was on was Hungary. Janos Kádár in 1968 had successfully implemented the 1965 Kosygin enterprise-autonomy reforms, which Kosygin himself had not. Gorbachev was a student of the Hungarian experience: he visited there in 1986, and began talking up market socialism back home.¹²⁹ Gorbachev let his expert advisors focus on the economics of that experience; he focused on the politics.¹³⁰ Politically, Kádár’s enterprise-autonomy reforms had succeeded because they were embedded in his Alliance Policy of co-opting complaisant non-communists into the communist government.¹³¹ The administrative side of this gave the Hungarian communist party access to intelligentsia economic networks and ideas, without losing political control. The social side of this folded civic organizations into a Patriotic Popular Front. The first aspect reinforced in Gorbachev’s mind the potential long-term value of his *glasnost* policy of artistic freedom. The second

¹²⁷ The report of American researcher Ed Hewitt to Gorbachev in 1991. Gorbachev (1995), pp. 195-6.

¹²⁸ “The main opposition to our [economic] ideas came from the heads of ministries and agencies, firstly the general economic agencies – Gosplan, Gosstab, Minfin, and the government apparatus. Later the opposition joined ranks with the Party bureaucracy. Needless to say, no-one was so bold as to speak out openly against reform; everyone was ‘for’ the reform process, but many offered half-hearted, ambiguous solutions that left many loopholes and sometimes even a direct opportunity for a roll back to the past. Unfortunately I had clashes with Ryzhkov [Gorbachev’s economic ally and agent, in charge of the Council of Ministries] on a number of issues. I could see that he was under strong pressure from his former fellow industrial managers, who were continuously planting an insidious idea: ‘The government is required to ensure effective management of the economy and at the same time the dismantling of the plan system is robbing it of the means of control’.” Gorbachev (1995), p. 227.

¹²⁹ Aslund (1991), pp. 32-3.

¹³⁰ In Gorbachev’s speeches, book and memoirs, there is surprisingly little discussion of economics, in which he was never trained. There is much hortatory discussion of ‘democratization’, however, whatever that might mean.

¹³¹ Berend (1990), Róna-Tas (1997), Seleny (2006). This Alliance Policy, in turn, was Kádár’s attempt to regain some legitimacy for communist rule after the fiasco of Soviet repression of the 1956 revolution.

aspect reminded Gorbachev of Lenin's soviets, in which workers councils were used by Bolsheviks to mobilize and to control trade unions.¹³² There remained legislative soviets throughout the Soviet Union, even though Stalin had long since emasculated these into passive institutions that did nothing more than rubber stamp decisions made by the party. Breathing autonomy into both enterprises and the soviets became Gorbachev's version of Kádár's Alliance Policy. More pregnant ideologically, it became Gorbachev's version of Lenin's NEP. Thereby *glasnost* escalated in 1987 from 'publicity' to 'openness', considerably beyond anything that Andropov would have approved.

Elections of low-level communists made their first appearance in this wave of 'openness' escalation by Gorbachev. Party regulars hardly went along with this without sabotage and surreptitious manipulation, but in the summer of 1987 secret-ballot elections with multiple communist candidates were held for local-government soviets,¹³³ for the first time since Stalin's brief constitution of 1938. Elections of enterprise directors by factory worker councils were also authorized in the June 1987 law for enterprise autonomy. Why this first step down the democratic road that led eventually and unintentionally to the collapse of the Soviet Union? Realpolitik nudged Gorbachev down his personal pilgrimage toward self-anointed messiah. Communist elections were Gorbachev's way of striking at the *nomenklatura* appointment monopoly of family circles. They were also an outright bid for constituency support from worker councils and from enterprise directors, for his economic-autonomy reforms. Kádár had implemented factory-director elections in 1982 in Hungary, as part of his reform package, with positive political benefit to him and no ill economic effects.

In addition to short-term realpolitik, however, Gorbachev had a utopian side that egotistically wanted to remake history, like Lenin, Stalin, Mao and other inspirational communist leaders before him.¹³⁴ This is evident in his 1987 book on Perestroika from

¹³² Gorbachev (1987), pp. 25-6, 47-8, 110-13. The Lenin soviets Gorbachev kept alluding to are well described and analyzed in Anweiler (1974).

¹³³ Hahn (1988).

¹³⁴ "In 1986 and 1987, when Gorbachev was strongly under the influence of Lenin's writings, it was my impression that he was anxious to propose some concept that might continue Lenin's thinking and perhaps shake the world as powerfully as anything the founding father of the Soviet Union had done." Boldin (1994), p. 96.

that period.¹³⁵ Like his predecessors, Gorbachev believed that the higher purpose of the communist party was not just to manipulate economic performance indicators and incentives. It was also to change lives and to make new men. From this utopian point of view, the problem of Brezhnev stagnation was a problem in the Soviet soul. As odd as that sounds to westerners steeped in neo-classical economics, Gorbachev constantly reiterated that the key to economic progress was to reform party cadres. Perhaps this was just propaganda to himself as well as to outsiders, but Gorbachev came to believe that the Andropov panopticon was not enough to get Soviet cadres and workers to work and to care. What looked to his opponents like a drift toward western-style liberalism looked to him like true communism.

To understand what happened next, as a consequence of the *perestroika* flagship economic reform of the 1987 Law on State Enterprises, it is necessary to describe the Soviet economy in more detail. Figure 5 depicts Soviet dual hierarchy in more detail than does the generic figure 1. Ignore the third column in figure 5 labeled “Soviets” for now, since that represents Gorbachev’s last political escalation to full democracy. The dual-hierarchy system he was trying to reform was the first two columns. The figure makes it clear that if direct management by ministries of enterprises is eliminated, then the only other channel available for Gorbachev to reach down to the enterprises is the indirect road through regional and local branches of the party.¹³⁶ Of course the hope of the reform was that enterprise directors eventually would learn to cycle around autocatalytic inputs

¹³⁵Here are a few quotes from Gorbachev’s book (1987) at the time, to give a flavor of his rhetoric: The life-giving impetus of our great Revolution was too powerful for the Party and people to reconcile themselves to phenomena that were threatening to squander its gains. The works of Lenin and his ideals of socialism remained for us an inexhaustible source of dialectical creative thought, theoretical wealth and political sagacity... Lenin’s works in the last years of his life have drawn particular attention.” (p. 25). “We have come to the conclusion that unless we activate the human factor, that is, take into consideration the diverse interests of people, work collectives, public bodies, and various groups, unless we rely on them, and draw them into active, constructive endeavor, it will be impossible for us to accomplish any of the tasks set, or to change the situation in the country.” (p. 29) “We need wholesome, full-blooded functioning by all public organizations, all production teams and creative unions, new forms of activity by citizens and the revival of those which have been forgotten. In short, we need broad democratization of all aspects of society. That democratization is also the main guarantee that the current processes are irreversible... Since we see our task as unfolding and utilizing the potential of socialism through the intensification of the human factor, there can be no other way but democratization, including reform of the economic mechanism and management, a reform whose main component is promotion of the role of work collectives.” (pp. 31-2) “The essence of perestroika lies in the fact that it unites socialism with democracy and revives the Leninist concept of socialist construction both in theory and in practice.” (p. 35)

¹³⁶ As described above, that was what Khrushchev also had been trying to do.

and outputs by themselves – and thereby come to support Gorbachev – but that was in the future. In the mean time, with only obstruction from the ministries, alternative mechanisms had to be found to guide dependent state enterprises toward the alleged nirvana of economic efficiency through maximizing profits. No legal markets were yet in existence, so party was the only tool available.

-- figure 5 about here --

The primary economic side of this dual hierarchy of course was the central-command system, ruled by ministries. Ministries administratively set physical production targets for enterprises and managed the distribution of their products to other enterprises. As discussed in the section on Stalin, this did not work poorly in the heavy-industry and military sectors for which it was primarily intended. But agricultural and light industry sectors were sucked dry, with shortages there rampant. This resource-extraction explanation does not deny the other problems with central command – information and soft budget constraints¹³⁷ – which also contributed to shortages.

As is well known,¹³⁸ the central-command system was not all that there was to the Soviet economy. Informal resource flows emerged around the margins of central command, to deal with the shortages and bottlenecks produced by it. *Blat* was direct reciprocal barter between enterprises, using product inventories that they were not supposed to have had.¹³⁹ *Tolkach* were third-party intermediaries who hunted around for supplies in other enterprises, in order to arrange *blat*. Sometimes *tolkach* intermediaries were employees or private entrepreneurs, but mostly they were party cadres. Local cadres did that when needed supplies were geographically close at hand, and provincial cadres did it when these were located farther afield. Indeed most of the day-to-day time of provincial and district party secretaries was spent on the phone, trying to arrange supplies for ‘their’ enterprises, which supplies theoretically they already had but actually they did not. The hoarding necessary to engage successfully in *blat* and *tolkach* exacerbated the shortages that provoked them to begin with. In dual-hierarchy structure, therefore, Gorbachev’s political need to manage *perestroika* through the party implied increased

¹³⁷ Hayek (1944) and Kornai (1980), respectively.

¹³⁸ Berliner (1957), Hough (1969), Rutland (1993), Ellman and Kontorovich (1998).

¹³⁹ Orchestrating low targets for one year through intentional underperformance the previous year was one useful way to generate such inventories in the first place. “Theft” of course was another.

dependence of the Soviet economy on ‘corrupt’ *blat* and *tolkach*, at least in the short run. New systems always emerge from the chrysalis of old, but this implied the contradiction of economic modernization founded on family circles.

This analysis makes Gorbachev’s task seem difficult, yet Kádár in Hungary and Deng in China had pulled off the trick. How? The political precondition of his Alliance Policy has already been mentioned. This mobilized political and economic networks beyond the hermetically sealed communist party, without relinquishing party control. But in addition, Kádár did something creative with his communist enterprises, which was analogous to what Deng had done in China with party cadres. Both leaders legalized private entrepreneurial activity within the boundaries of communist organizations. Deng’s party-centered approach had been to do this through clientelism: namely, to let party cadres give out permits to other cadres in exchange for kickbacks, mostly corporate but sometimes personal. Kádár’s enterprise-centered approach – first with agricultural coops in 1968 and then with industrial enterprises in 1982 – was to let employees set up partnerships within state-owned enterprises, to use state assets for private gain after hours and on weekends.¹⁴⁰ In both of these organizational innovations, the economic and political interests of multi-functional party cadres and enterprise directors, respectively, were aligned. In both post-reform countries, one got ahead in politics through making money,¹⁴¹ and one made money by being in politics. By aligning interests across domains, powerful political constituencies emerged to support economic reforms that privatized entrepreneurship without privatizing property.

Gorbachev’s problem in adopting either of these known organizational innovations was two-fold. In the short run, he had no legal private markets, even on the edges of the plan, on which to monetize political actions. He had plenty of *blat* and *tolkach* networks, which were non-monetized markets. And he had plenty of political clans and family circles, which manipulated those markets. But how to bring these existing economic and political networks out into the open, and then have them discipline each other through feedback, as Deng and Kádár had done?

¹⁴⁰ Rupp (1983), Stark (1989, 1996), Róna-Tas (1997).

¹⁴¹ In the case of Hungary, Kádár increasingly promoted successful enterprise directors into his Central Committee. This provided him with political support to continue his economic reforms. See Comisso and Marer (1986), Róna-Tas (1977), p. 109.

Gorbachev and his advisors were well aware of this issue and, in their flagship State-Enterprise Law, they sensibly proposed wholesale markets for intermediate goods in order to legalize and monetize such markets. This good idea failed because wholesale presupposes inventories, that is, surpluses. But this was a shortage economy with no surpluses anywhere in sight. Ministries aggressively used the loophole of “state orders”, intended to permit the state to be one among many bidders, to soak up surpluses as soon as they appeared. Kickstarting wholesale markets for intermediate goods required the cooperation of ministries, which they refused to give.¹⁴²

The deeper problem, which gave ministries so much clout to begin with, was the hyper-concentration of Soviet state enterprises, another legacy of Stalin. To exaggerate only slightly, every industry was a monopoly.¹⁴³ “Market competition” has no meaning in such a setting. Releasing prices from administration would have meant astronomical price hikes everywhere. Appeals to neoclassical models of perfect competition only reveal the historical ignorance of their advocates. The best that could be hoped for was some sort of regulated contracting regime, perhaps like Japanese business groups.¹⁴⁴

In the actual event, *perestroika*’s flagship reform, the 1987 Law on State Enterprises (implemented in 1988), was an utter disaster economically. Annual growth rates in the production of producer-goods industries plummeted from 3.7% in 1987, to 3.4% in 1988, to 0.6% in 1989, to -3.2% in 1990, and even lower under Yeltsin. Household income inflated from 3.9% in 1987, to 9.2% in 1988, to 13.1% in 1989, to 16.9% in 1990, even as consumer-goods production stayed flat.¹⁴⁵ The *blat* and *tolkach* economic networks of the party were nowhere near strong enough to substitute for the loss of material-supply guidance from central ministries, no matter how frantically party cadres and enterprise directors worked their telephones. Hoarding by state enterprises

¹⁴² I repeat that had Khrushchev’s *sovnarhkozy* reform succeeded earlier, this obstacle could have been overcome, region by region, because then provincial secretaries would have been in charge.

¹⁴³ This gigantism, especially in heavy industry, derived from the Soviet engineering understanding of Henry Ford: specialization in mass production is the most efficient and ‘modern’ economy possible. Centralized state investments always were directed toward this. In reality, enterprises could not truly operate this way. Soviet factories did all sorts of ‘illegal’ things on the side, to try to push toward self-enclosed autarchy and to improve their position in *blat* and *tolkach* markets.

¹⁴⁴ Of course the latter, while more in the accessible ballpark, had international trade to discipline them, so even that model is far from apt. Compare chapters 9 and 11 below, both of which discuss business groups.

¹⁴⁵ 4.1% in 1987, to 5.4% in 1988, to 4.9% in 1989, to 4.4% in 1990. All figures from Ellman and Kontorovich (1998), p. 156.

exploded, and what little consumer goods there were disappeared from retail shelves. In other words, autocatalysis in production was disrupted, and the interdependent system suddenly collapsed.¹⁴⁶ Mainly because of industrial hyper-concentration, the Soviet economy could not be treated like Hungary or China. With his political hand, Gorbachev intentionally was attacking family circles, but with his economic hand he unintentionally was demanding that they save the day. Dissatisfaction spread from ministries and reactionary segments of the party to Gorbachev's own allies in the party. By 1988, Gorbachev was starting to be in trouble.

Overt negative reaction first was expressed publicly in late 1987 and early 1988 under the umbrella of Yegor Ligachev, Gorbachev's own number-two man, his closest partner under Andropov. Ligachev had been Gorbachev's aide in appointing provincial first secretaries, and hence drew on Gorbachev's own base of support. The opposition's demands were nailed to the door with the newspaper publication of an inflammatory letter from school teacher Nina Andreyeva in March 1988, heavily scripted by Ligachev, which called for restoration of the reputations of Stalin and nationalism.¹⁴⁷ A major grievance of party conservatives was the rough treatment they had experienced in newspaper exposés. Gorbachev aggressively beat back this challenge from Ligachev with more purges, but a gauntlet had been cast.

Perestroika in flames, his party allies starting to doubt him, Gorbachev still tried to save the day through *glasnost*. After all, the Soviet Union had endured far worse than this in the Gulag, the Great Purges, and in World War II, and in those cases the central leader's popularity with the public had soared, at the expense of sullen underlings. Secure (some might say barricaded) in the Kremlin, Gorbachev launched his final mass mobilization campaign.

On the economic side, Gorbachev escalated again, this time from his 1987 Law on State Enterprises, which focused on the reform of state enterprises, to his 1988 Law on Cooperatives, which focused on creating a new private market of small production firms.¹⁴⁸ Youth loved this; the elderly hated it.¹⁴⁹ There were both Hungarian and Chinese

¹⁴⁶ Dare I say, like my models in chapter three do, when they die?

¹⁴⁷ Hazan (1990), pp. 39-53.

¹⁴⁸ Aslund (1991), pp. 167-78.

precedents for market socialism – the coexistence of large state enterprises with small market-oriented firms – although Kádár had been careful to channel his coops into the bowels of state enterprises. Worker councils in Soviet state enterprises, however, promptly voted for factory directors that increased their wages.¹⁵⁰ Household incomes went quickly up, with not enough new to buy. Repressed inflationary pressures drove administered prices and ‘true market’ prices even more out of whack than usual, making prices meaningless as market signals of demand.

On the political side, Gorbachev also escalated dramatically by announcing at the enlarged 19th Party Conference in June 1988 his intention to restructure the national Supreme Soviet into a new, publicly elected Congress of People’s Deputies, to contain both communist and non-communist representatives (but no non-communist parties).¹⁵¹ This was Gorbachev’s maximal effort to outflank and to crush his growing party opposition by co-opting sympathetic non-communists. The coup de grace would have been Gorbachev’s additional role as president of that national legislature, without giving up his old role as general secretary of the communist party. Like Lenin’s soviets, the idea was not to give up communist control: the electoral rules were carefully jiggered by Gorbachev’s team to guarantee a communist majority.

Leading up to this large conference, the first of this size since 1941, elections were held for party conference delegates, following the procedures of the local soviet reforms of the previous year. “Gorbachev’s strategy was to outflank entrenched opposition within the party structure by using secret ballot elections to encourage those who supported reform to send sympathetic delegates to the conference.”¹⁵² But in neither this nor his enterprise-director elections was he fully successful in getting reformers elected. Family circles defensively manipulated their grass-roots networks to control the nomination processes.¹⁵³ Gorbachev was reduced to springing his dramatic Congress of People’s Deputies idea on the conference at the last minute for a snap vote, almost like a

¹⁴⁹ Public opinion polls at the time showed 87.2% of those under 45 approving of private cooperatives, whereas 81.1% of those between 61 and 75 disapproving. Aslund (1991), p. 177.

¹⁵⁰ “The explosive growth of wages was ignited by the competition on the labor market resulting from the rapid expansion of cooperatives following the adoption of the Law on Cooperation in May 1988.” Ellman and Kantorovich (1998), p. 155.

¹⁵¹ Gill (1994), pp. 63-77; McFaul (2001), pp. 48-53.

¹⁵² Gill (1994), p. 46.

¹⁵³ Gill (1994), p. 57; Ellman and Kantorovich (1998), pp. 201-3.

coup. Implementation plans soon followed in a September 1988 Central Committee plenum, in which Gorbachev also unsheathed his ‘terrible swift sword’ of purging Ligachev and his allies from the Politburo.¹⁵⁴ In all this, Gorbachev was countering failure in economics with mass mobilization in politics. Without Stalin in the background, it is hard to understand, in my opinion, what is going on here.

Yeltsin begins to move the story into the next chapter, so I will truncate my discussion of him and the last two years of Gorbachev’s reign. As is well known, Gorbachev failed to maintain control over his own left wing, thereby losing both ends of his coalition. Yeltsin was even more avid a reformer than Gorbachev, with none of Gorbachev’s leadership need to compromise occasionally with Ligachev and his ilk. Using the Moscow city government as his party base and *glasnost* as his cover, Yeltsin repeatedly lashed out at Ligachev in public forums, accusing him of covering up corruption and worse.¹⁵⁵ Famous for his intemperance, Gorbachev used Yeltsin as his attack dog, but this dog proved to be uncontrollable by his master, and had to be purged. Freedom of the press gave Yeltsin the opportunity to keep himself in the public limelight, even after his late 1987 demotion from Moscow office. I give Yeltsin no more than facilitating credit for the collapse of the Soviet Union, despite his brave rallying of the Russian people and the army at the very end, which beat back the 1991 coup of party conservatives against Gorbachev. For sure, Yeltsin put himself opportunistically in the position to catch reform-agenda pieces as the communist apparatus fell. But Gorbachev, not Yeltsin, caused the collapse of the Soviet Union.

Economic flameout doomed Gorbachev’s desperate mass mobilization strategy. Or rather: mass mobilization worked, but not in the way that Gorbachev had intended. The upswell of public support for true democratic elections was startling, after all those years of communist electoral hypocrisy, especially in economically advanced urban areas. Because of the jiggering, Gorbachev and the communists still controlled the 1989 national Congress of People’s Deputies, but they now were riding a populist tiger. Instead

¹⁵⁴ Hazen (1990), pp. 66-81. Previous Gorbachev allies under Andropov were targeted: Chebrikov was removed from control of the KGB, and Ligachev himself was demoted from control over ideology and appointments to secretary for agriculture. That last move really insured that economic reform never would touch agriculture. These 1988 purges squelched party opposition in the Politburo, but they hardly did so at deeper levels in the party.

¹⁵⁵ Covering up he may have done, but personally Ligachev was a moral puritan. It had been him that had spearheaded the Andropov-style anti-alcohol campaign against drunkenness.

of channeling populist fever into the party, soviet elections channeled populist fever against the party. In controlled volumes, of course, Gorbachev needed this for his leverage. As the loudly proclaimed sponsor of an economic disaster, however, Gorbachev did not get much credit for himself. Yeltsin stole his reform thunder instead.

A jeweler's hammer can break a diamond, but only along the lines of its internal crystal cleavages. When the reform steamroller moved to its logical next stage of republic elections in 1990, populist fever became channeled into ethnic nationalist separatism. Gorbachev truly was shocked by this unexpected development, and tried to put on the brakes, but it was too late. Baltic and Caucasus republics wanted to follow the 1989 lead of their East European brothers in Poland, Hungary and East Germany. Yeltsin wrapped himself in the Russian flag, and other entrepreneurial provincial first secretaries likewise made quick political calculations about whether they were communist or popular nationalists. Gorbachev had tried to use Stalinist tactics to browbeat a hierarchy of nested family circles into demagogic obedience to him. But with no iron fist at the top, the communist hierarchy fragmented along the lines of its natural cleavages. Some of these family circles stubbornly stuck with communism. Some of them blew with the populist wind of ethnic separatism. Some of them asset stripped their enterprises. Regardless of the heterogeneous responses of local family circles, the top-down internal ligaments of the communist party, tying them together, were no more. Skocpol said that revolutions aren't made; states fall.¹⁵⁶ I take this to mean not that states fall without agency, but that they fracture through internal contradictions, otherwise known as destructive feedback.

A final counterfactual to consider is what if Gorbachev had behaved consistently like Stalin, rather than backing in to Stalinist style almost against his own preferences. Probably this would have meant sending tanks on East Germany, rather than let ethnic separatism get started. Probably this also would have meant even higher volumes of purges, deeper down. Doing these in the name of freedom would have been quite a trick, but Stalin and Mao had shown the way – namely, to declare generational war of the young against the old. There had to be enough room in the inn to absorb youth clambering to get in. Successful market socialism – the expansion of light industry – might have created this room, if opposition had been more brutally suppressed, perhaps

¹⁵⁶ Skocpol (1979).

with overt assistance from the KGB and the military.¹⁵⁷ Deng knew how to oscillate between reform and repression, why did Gorbachev not also pull the trigger?

The problem with counterfactuals is that they are speculative, but I speculate that a consistently Stalinist approach to reform could not have worked because of the Soviet military. Dual-hierarchy pillars of economics and politics need to fit together in some sort of synergistic feedback, but the military is a shadow third pillar in the background, which regulates the interaction of these two. Hitler helped Stalin make the central command system fit together with the Bolshevik party. As one result, the Soviet military was centralized and tank centered. The Chinese military in contrast was a decentralized militia, and the Hungarian military was non-existent. Gorbachev proceeded on this military front as well, almost talking Ronald Reagan into nuclear disarmament at Reykjavik. Without radical change in foreign policy, a powerful military interested in high technology would block any major reallocation of resources to light industry, required to make market socialism a success. Invading East Germany was the best chance Gorbachev had to maintain the military's political support, but that would have drained precious economic resources away from *perestroika* and strengthened heavy industry and central command. Again we are faced with the contradiction: what makes excellent (if illiberal) sense from the political point of view, is counter-productive from the economic point of view. Finding positive synergies between economic reform and the military would have been hard, even if mass mobilization had been managed consistently the Stalinist way. Strong militaries and capitalist economies is maybe a utopian ideal, but there was no Soviet communist politics to get there.

Conclusion

¹⁵⁷ These after all had been part of Andropov's and Gorbachev's original bases of support.

[cut knot of party control over economy?]

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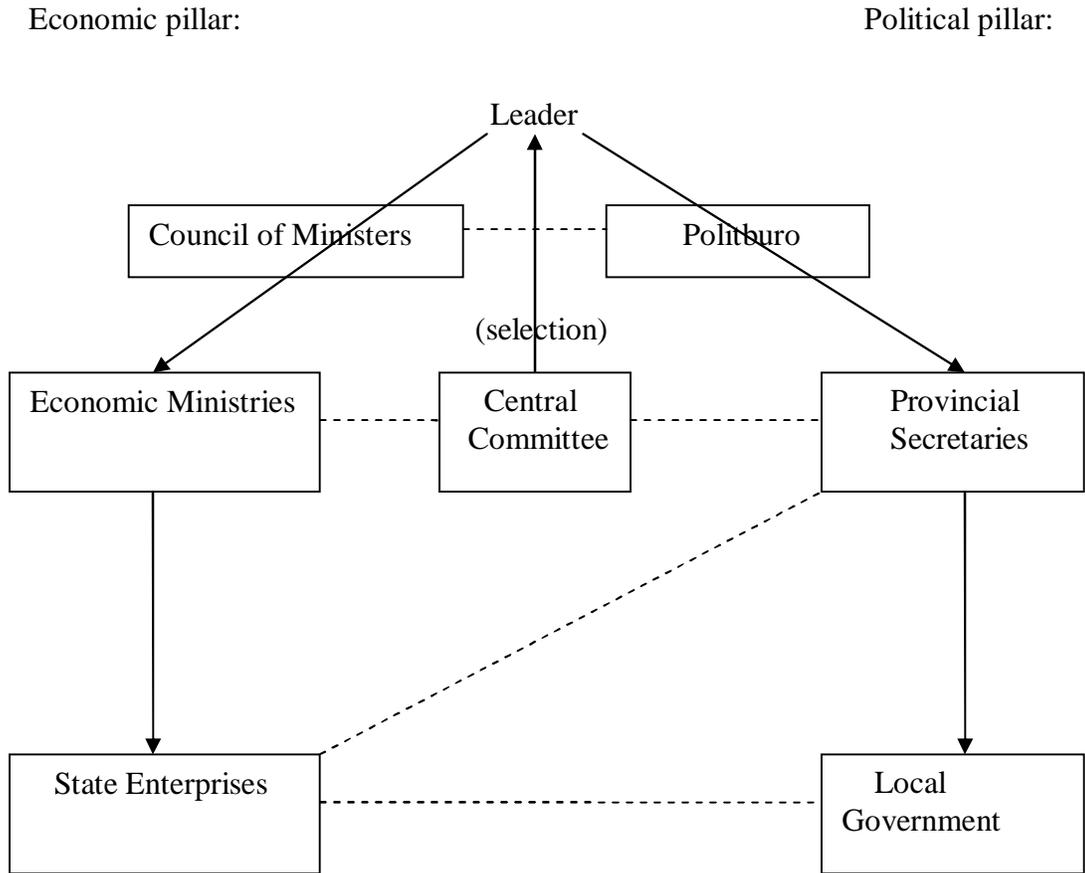
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Figure 1. Communist Dual Hierarchy

N.B. The appointment loop from Leader to Provincial Secretaries to Central Committee to Leader has been called “the circular flow of power” by Daniels () and Hough ().

Figure 2. Autocatalysis in the Soviet heavy-industry sector (Harrison, 1985, p. 123)

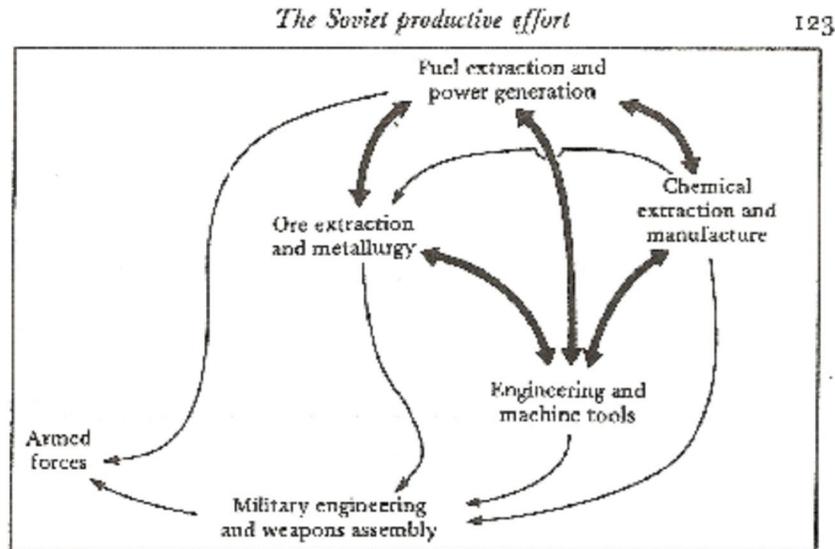


Figure 5. Input-output interaction of the arms industry and heavy industry

Key: A thin arrow pointing in a single direction \longrightarrow indicates a one-way flow of products from supplier to user. A broad arrow pointing in both directions \longleftrightarrow indicates a two-way product flow with each sector consuming part of the other's output.

Notes: In order to read the diagram, start on the left-hand side with the armed forces and follow each product flow backwards to its source. Two sectors – the transport and construction industries – are not represented explicitly but are implicitly present. Each arrow represents spatial flows requiring transport services for their realisation; to deliver its services the transport industry requires inputs of machinery and fuel. Moreover each of the supplying sectors in the diagram requires receipt of built capacity from the construction industry before it can use current inputs or supply outputs.

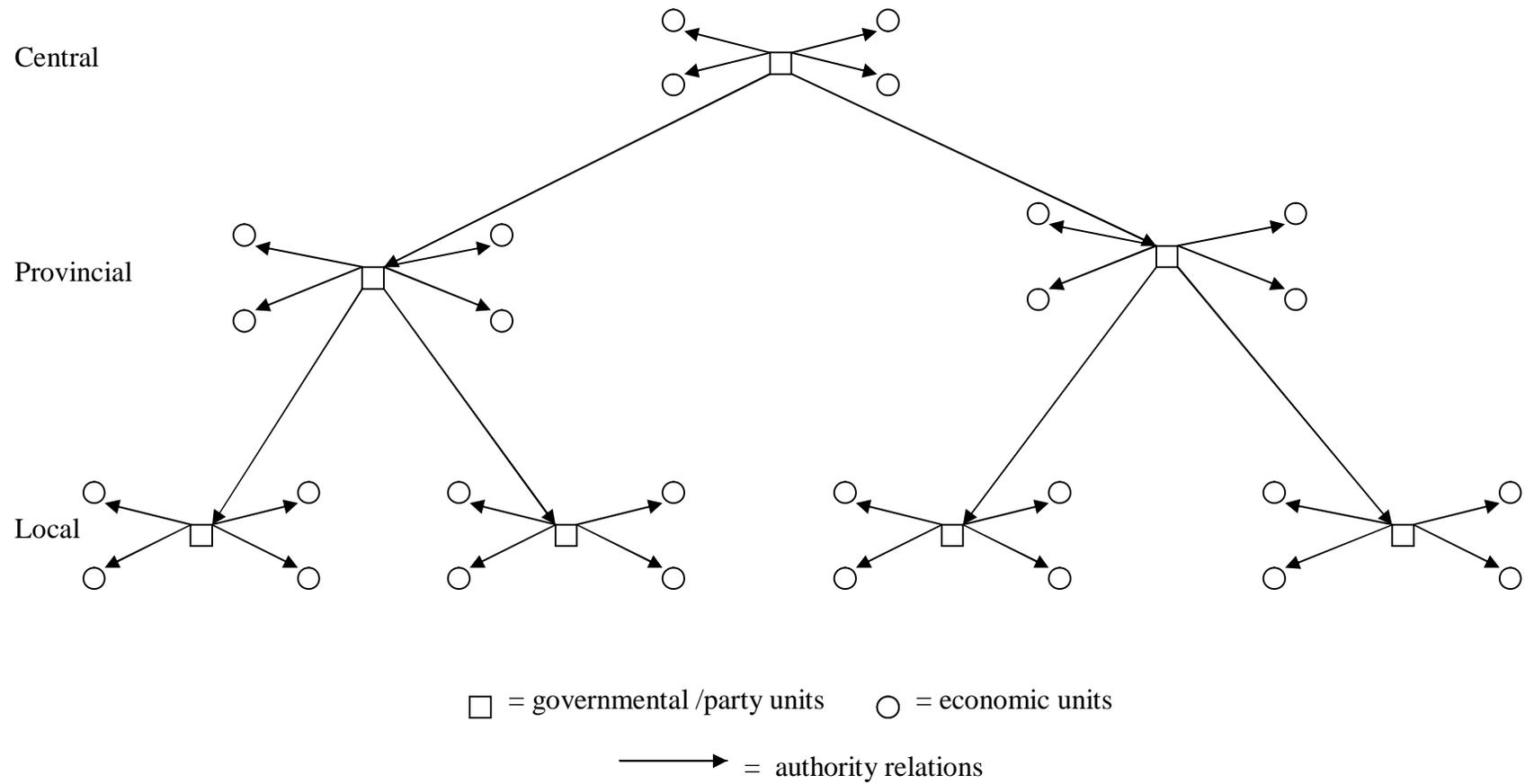
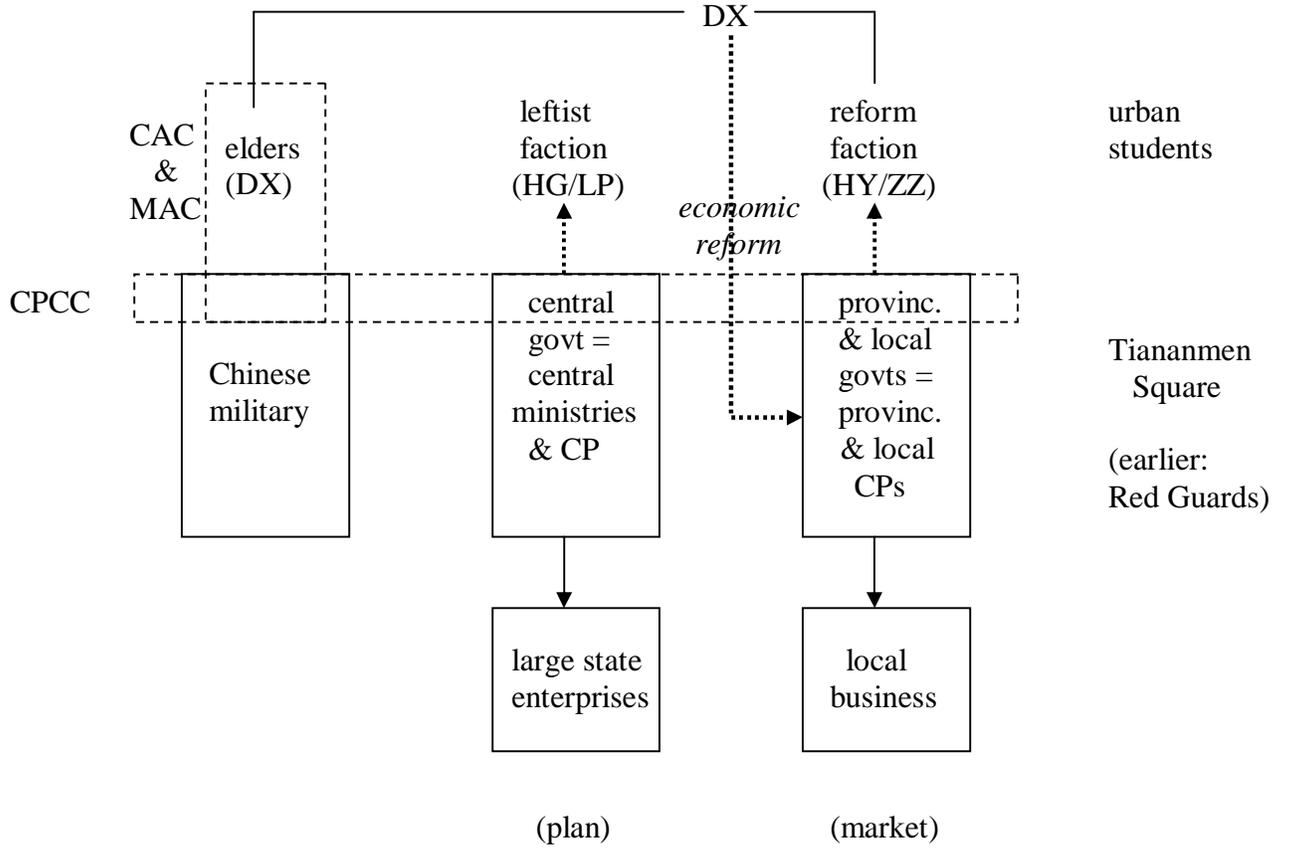
Figure 3. Chinese state-ownership of economic enterprises after Great Leap Forward

Figure 4. The politics of Deng Xiaoping's economic reform



DX = Deng Xiaoping
 HG = Hua Guofeng
 LP = Li Peng
 HY = Hu Yaobang
 ZZ = Zhao Ziyang

SOVIET UNION COMMUNIST STATE (~1975 under Brezhnev)

