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## *The Changing Dynamics Behind China's Rise as a Military Technological Power*

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### Summary

The Minerva project on “The Evolving Relationship Between Technology and National Security in China” held a two-day workshop on the “Military and Geo-Strategic Implications of China’s Rise as a Global Technological Power” in Washington, D.C., in November 2010. Presentations were given by academic experts Susan Shirk, Barry Naughton, Tai Ming Cheung and David Meyer (all from UC San Diego), Alice Miller (Stanford University), Bates Gill (Stockholm Peace Research Institute), and Thomas Mahnken (Naval War College). This brief provides a summary of the workshop findings.

### INTRODUCTION

China has turned more assertive and threatening in its foreign and security policies over the past few years. Concurrently, the country’s economic and technology poli-

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cies, in both the civilian and defense spheres, have become more nationalistic, state-centered, and inward looking. The reasons behind this change from a previously accommodating posture, why it has occurred across different policy areas, and whether it is a temporary phenomenon or the beginning of a far more ominous strategic shift are not yet well understood.

A number of important drivers have been identified that might shed light on these changes. Some of the political and policy dynamics at play include surging nationalistic sentiment, leadership competition ahead of the 18th Chinese Communist Party (CCP) Congress in 2012, and a more confident policy elite seeking to accelerate China's relative rise in the international order in the wake of the 2008 global economic crisis. More structural explanations point to weak authority at the top that allows powerful bureaucracies such as the military and science and technology (S&T) apparatus to pursue their own interests, which may not always align with national priorities.

It will take some time before the overall nature and direction of change in China's grand strategy can be determined. In the defense technological realm, the development path is clearer. China's defense economy has set its sights on catching up with the West by 2020 and is making steady progress in building up its innovation capabilities, although this is presently in the form of incremental and sustaining types of activities. More high-end, disruptive forms of innovation that would lead to major breakthroughs are likely to be beyond China's reach for another five to ten years, although there may be exceptions in high-priority areas, such as space or aviation, that enjoy access to ample funding, foreign knowledge and technologies, and leadership support.

## **THE INTERPLAY BETWEEN DOMESTIC POLITICS AND FOREIGN AND SECURITY POLICIES**

After fifteen years of pursuing a neo-Bismarckian strategy by seeking to reassure the United States and its neighbors that its intentions are benign, and thus preventing the development of a counter-

coalition, China recently has turned more assertive in its foreign policy statements to the point of making public threats. Expanding the category of "core interests" that will be defended at all costs to include Tibet and Xinjiang can be explained by the same kind of nationalistic public emotion mobilized by the Internet and commercial media towards Japan and Taiwan. Misperceptions about the relative power of China and the United States are widespread and stem from how the 2008–2009 global financial crisis affected the two countries. China has recovered, while the United States is still struggling to overcome a crisis that it was largely responsible for because of its own systemic failures. This narrative is likely to have fuelled popular demand in China for a more assertive foreign policy.

But many of China's actions and threats, such as siding with North Korea over South Korea in the attack on the Cheonan warship and the tough public line on the South China Sea and West Sea, are more puzzling and suggest the need to look for an explanation at the level of elite decision making in China. It appears that domestic Chinese political institutions are making it difficult for Beijing to sustain its "peaceful rise" strategy. Competition for power two years in advance of the next leadership transition at the 18th CCP Congress appears to be stimulating officials to take hawkish public stances. Weak authority in the collective leadership of the Politburo Standing Committee is allowing organized interests in the CCP that benefit from exaggerating foreign threats—the military, internal security, and propaganda bureaucracies—to go their own way without effective monitoring and discipline from above.

The robust responses from the United States and China's Asian neighbors are intended to encourage Beijing to recalibrate its policy and return to its "peaceful rise." This is because China's worst nightmare is the formation of a U.S.-centered coalition to check its development. If Beijing returns to its neo-Bismarckian strategy soon, we can conclude that the CCP leadership has sufficient authority to sustain the foreign policies that reduce China's domestic and international risks. If the Chinese leadership returns to its grand strategy in 2013 after the CCP Congress, we can con-

clude that China, like the United States, can now expect to have its foreign policy buffeted at home by periodic campaigns for political power. But if China does not return to the “peaceful rise” strategy after 2013, we may be forced to conclude that its domestic political system is taking it down the same dangerous path that Germany and Japan followed as rising powers.

## **LEADERSHIP DYNAMICS OVER THE NEXT FEW YEARS**

A new leadership is set to take charge within the next 2 to 3 years. Seven of nine members of the Politburo Standing Committee (PSC), the decision-making core of the leadership, will retire at the 18th Party Congress; at least 7 of the 16 regular members of the broader Politburo will step down; 5 of 10 members, including the premier, will leave the State Council Executive Committee; and 7 of 12 members of the Central Military Commission will retire. This turnover rivals the 2002–2003 generational transition at the 16th CCP Congress and 10th National People’s Congress.

As a result of this transition, leadership will also become significantly more diverse. The generational transfer of power in 2002–2003 sustained the high proportion of members of the Politburo who were technically trained (in engineering and hard sciences), from 16 of 22 appointed in 1997 to 18 of 25 in 2002. The number of technically trained Politburo members fell in the leadership changes at the 17th CCP Congress in 2007 to 11 of 25, while the number of leaders having university degrees—and for the first time, advanced degrees—in law, economics, history, political science, and other disciplines grew. In part, this trend toward diversity reflects the increasing preoccupation with dilemmas of governance while sustaining economic growth. Judging by the backgrounds of the fifth generation of leaders expected to rise to the top in 2012–2013, this trend toward a more diverse leadership will continue.

Leadership politics may become more contentious as China’s economic growth slows. The high rates of the past 30 years are likely to slow because of several factors, including the widely noted impact of demographic trends on China’s

workforce. In addition, since coming to power in 2002, the Hu-Wen leadership has made slower growth an explicit objective in its effort to redress the social, environmental, and other consequences of the Jiang era’s high-speed growth policies (referred to in political discourse as the “scientific development concept”). Commentary attending the recent 5th Plenum has stressed that lower growth rates are a purposeful target in the 12th Five-Year Plan. As growth slows, China’s economy will continue to grow absolutely, but competition among various constituencies—including the military—will intensify for state allocations. In turn, the leadership will have to balance the needs of S&T programs with those of competing constituencies, raising the prospect of stagnation in the sustained support necessary for long-term technological R&D.

As a more contentious leadership politics unfolds, China’s new structure of civil–military relations may be tested. Until the early 1990s, China’s politics were dominated for a century by leaders who were military as much as political leaders: Li Hongzhang, Yuan Shi-kai, Chiang Kai-shek, Mao Zedong, and Deng Xiaoping. As a result of deliberate efforts by Deng Xiaoping in the 1980s, a new pattern of civil–military relations emerged with the appointment of Jiang Zemin—a man without military experience—as party chief and CMC chairman, and with the emergence of successive rosters of the PSC composed entirely of civilian leaders, save the representation of the PLA by two professional military men on the full Politburo. This structure of purely civilian PSC leaderships presiding over an increasingly professionalized PLA brass has continued under the Hu-Wen leadership. It has also never been subjected to stress. How well the PLA leadership accepts this arrangement in an era of heightened political competition and contentiousness may be its first significant test.

And one storm advisory: in 2012, for the first time, Taipei, Beijing, and Washington all face leadership contests in the same year—the March ROC presidential election, the 18th CCP Congress, and the U.S. presidential election. However likely it may appear that Ma Ying-jeou and President Obama will be re-elected and however much

the Hu-Wen transition in favor of Xi Jinping and Li Keqiang is in hand, the heat generated by domestic leadership politics may be expected to rise and with it, the potential to spill over into foreign policy.

## **CHINA'S DISCONTINUOUS ECONOMIC AND TECHNOLOGY POLICIES**

China's position in the global technological order has been relatively well understood, until recently. As a low-income country, China was far behind in nearly all significant areas. But with global integration, low-cost labor, and an industrious and increasingly skilled work force, it has been catching up steadily and at a rapid rate. Within the past few years, however, there has been a significant discontinuity in policy as the Chinese government has revealed itself to be dissatisfied with the existing rate of catch-up, or at least eager to push for acceleration.

Increasingly, China has been throwing huge amounts of money at technological development. Moreover, the new components of the approach to technological development have tended to be centralizing, monopolistic, and bureaucratic. This is exemplified by the reemergence of the two state-owned aviation firms to recreate an aviation industry monopoly and in the organization of national engineering mega-projects into teams coordinated from the top. The beginnings of this approach are evident as early as 2006, but the response intensified with the global financial crisis. The failure of the U.S. system, combined with China's success in containing the crisis, greatly increased both the Chinese government's self-confidence and the funding it made available for industrial and technological policies through a large stimulus program.

The approach has substantial risks for China. It essentially assumes that the gains from marketization are now hard-wired into the Chinese economy, and so the benefits from resource mobilization will simply be added to the improved productivity produced by pervasive market orientation. This is extremely unlikely. Moreover, there are programs that overlap multiple times, meaning

that incentives are hard to disentangle, and there are no strong priorities to guide development. The history of the CCP reveals many instances of excessive mobilization of resources leading to negative outcomes. Overall economic policy has some parallels to technology policy in recent years, and it is also leading to some negative outcomes such as economic imbalances and inflation.

## **CHINA'S SHIFTING GRAND STRATEGY OF TECHNOLOGY DEVELOPMENT**

China's grand strategy of technological development over the last two decades has been a pragmatic and balanced vision that incorporates techno-nationalist (indigenous innovation) and techno-globalist elements. But China's S&T community has been steadily leaning towards a more inward-looking, protectionist, state-centered framework in the past few years.

This is evidenced by various initiatives advocating indigenous innovation, such as government technology procurement policies, and a greater willingness of the government to provide state support for key 'strategic' and 'emerging strategic' sectors. These include clean energy, environmental technology, bio-technology, pharmaceuticals, and digital manufacturing equipment. But the Chinese authorities are still sensitive to foreign reactions and have recalibrated when faced with strong objections. This suggests that the long-term nature of Chinese technological grand strategy is still being debated.

## **CONCLUSION**

Observers have noted concurrent shifts in China's economic and foreign policies toward a more inward-looking, state-centered, and nationalistic approach. These trends may be read as indicators of broader uncertainty in Beijing over how to assess and respond to the perceived shift in the global balance of power following the world economic downturn of the past two years. The sequence of major turning points in China's strategic orientation—1959–1960, 1968–1972, 1989–1991—suggests that another one is due.

Whether there really has been a shift in the global balance of power is a topic of seemingly still-unresolved debate in Beijing—as reflected in discussions in foreign policy journals. It is tempting to see Beijing’s apparent “assertiveness” on several foreign relations fronts and the undisciplined cacophony of voices among China’s foreign policy actors in that context, and to see the apparent tilt toward economic policies favoring the state-owned sector as a cautious inclination

toward an implicitly autarkic approach to an uncertain international economic environment.

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