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Abstract

Drawing on literature in China studies, strategic theory, and expert interviews, this article analyzes the possibility of "rare earths" being leveraged by the People's Republic of China (PRC) in a crisis. The evidence suggests China's position in the rare earths market could constitute a significant security liability for the United States. It also seems that even if coercion fails to materialize, China's rare earths policies have the potential to intensify security dilemmas in Sino-American relations.

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Abstract

Drawing on literature in China studies, strategic theory, and expert interviews, this article analyzes the possibility of "rare earths" being leveraged by the People's Republic of China (PRC) in a crisis. The evidence suggests China's position in the rare earths market could constitute a significant security liability for the United States. It also seems that even if coercion fails to materialize, China's rare earths policies have the potential to intensify security dilemmas in Sino-American relations.

Introduction

On October 21, 2010, the Chinese Government blocked exports to Japan of an economically vital category of minerals, rare earth elements (REE), used in high technology production.¹ The move followed Premier Wen Jiabao's demand for the release of the Chinese fishing trawler captain detained by Japan in disputed waters after the boat collided with two Japanese coast guard vessels. The same week, only hours after a top Chinese official denounced U.S. trade policy, three anonymous Chinese industry officials confirmed that some shipments of the same materials to the United States and Europe had been quietly halted as of 18 October.² At a China-European Union business meeting in Brussels, Wen denied using rare earths as a political bargaining chip in either instance.³

Whatever intentions were behind these temporary export stoppages, the events of mid-October 2010 resulted in a flood of panicked analyses and demands for supply diversification despite the timely release of a year-

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long U.S. Department of Defense study which concluded that China's dominance in rare earths production does not pose a threat to the military supply chain which requires a relatively small amount of REEs to continue operating. Not to be upstaged, Republican U.S. Representative Mike Coffman slammed the report as "shortsighted," "myopic," and "certainly not looking at the economic security of the country."⁴ Since the military supply chain is only one of several important variables in evaluating the security implications of China's rare earths policy, it comes as no surprise that the Pentagon's apparent lack of concern was greeted with skepticism in many quarters.

East Asian state actors should not concern themselves with the influence of rare earths on military electronics procurement but rather with the potential for coercive use of rare earths during a strategic stand-off. China's rare earths embargo raises further questions as to the coercive utility of Chinese market power in other resource markets, particularly energy. Is China surreptitiously tying-up international supplies of key natural resources in preparation for some future diplomatic gambit? If not, could it do so in the future? The unyielding difficulty of discerning whether China's resource acquisitions and/or trade policy should be conceptualized as geo-economic jujitsu or as legitimate products of economic growth is of further concern. Can China's intentions with respect to its resource diplomacy and trade policy be interpreted accurately? If so, what indicators might reliably differentiate development of coercive resource capabilities from run-of-the-mill economic competition?

On a theoretical level, analysis of PRC resource coercion has bearing on the concept of security dilemmas and may serve to broaden their analytical domain. Contemporary security dilemma scholarship focuses almost exclusively on hard-power variables such as weapons systems, doctrinal adjustments, and defense spending and their influence on regional military insecurity.⁵ Economic perception and misperception have yet to be evaluated as contributors to regional security spirals. In light of this conceptual gap, examination of China's resource diplomacy through lenses of perception and seems potentially fruitful.

The Modern Security Dilemma

The security dilemma is best expressed in two-stage form. The first stage of the security dilemma, the problem of interpretation, has its roots in the so-called "ambiguous symbolism" of strategic choice. The basic idea here is that any given choice can represent or symbolize a plurality of intentions on the part of the deciding actor. The history of the Cold War offers

several excellent examples of this sort of ambiguity in the international security environment, perhaps the most well defined case being U.S. missile defense. The Reagan Administration's public justifications for investing in an Anti-Ballistic Missile (ABM) umbrella emphasized the purely defensive nature of the Strategic Defense Initiative (SDI) and concordantly peaceful American intentions.⁶ Despite these reassurances, some Soviet policymakers interpreted SDI as a policy of escalation.⁷ From the Soviet perspective, the shield's true purpose could be to free-up the United States' nuclear sword arm by nullifying the logic of mutually assured destruction. In this scenario, SDI functioned as an ambiguous symbol by eliciting multiple interpretations of its intentional underpinnings to different actors.

The second stage of the security dilemma, the problem of response, drives home the significance of ambiguous symbolism in international security. Under conditions of uncertainty, states do not have the luxury of reserving judgment on ambiguous security policies. As a result, decision-makers are always in danger of attributing false intentions to their strategic competitors so long as their information is incomplete. Consider that, in the Cold War missile defense scenario, the Soviet Union could act rationally by augmenting its nuclear capabilities in response to perceived American belligerence, while still unnecessarily diminishing its own security by feeding mutual suspicion. The apparent contradiction comes in the form of a security spiral, with response and counterresponse destabilizing the strategic landscape as a result of misperception.

Generally speaking, the security dilemma is discussed almost exclusively with reference to arms races, deterrence relationships, and other traditional strategic studies issues. However, it stands to reason that given sufficient securitization of a given non-military policy or issue area, security dilemmas could originate, or at the least derive momentum from, misperception in security sectors traditionally ignored by military-strategic interpretations of international security. The ambiguity of China's resource policies could serve as a case study in this regard.

The Literature Gap

China's growing clout in international resource markets demands a systematic strategic response. Whatever its final form, the U.S. response will undoubtedly reflect some interpretation of the intentions underlying China's international economic behavior. The outcome of this process of interpretation and response will influence both the future of Sino-American relations and the wider Asian security environment.

Unfortunately, international relations and the East Asian security literatures are essentially devoid of analysis of the potential for Chinese manipulation of vital commodities as coercive devices. The literature is also virtually silent on what indicators the U.S. and its regional partners might use to establish whether or not ambiguous resource policies lie outside the norm of international economic conduct. As a result, we must turn to a synthesis of overlapping literatures in search of a way forward with respect to China's resource capabilities and potentialities.

As a starting point, exploration of China's resource diplomacy and its coercive possibilities can profitably be couched in terms of threat analysis. The severity of a threat is a function of the supposed antagonist's intentions and capabilities. In the context of Chinese resource coercion, the formulation above translates into two overarching questions that might be addressed or refined by related literature. First, under what circumstances would China utilize strategic resources as coercive instruments? Second, does China possess the objective capacity to develop such a coercive capability? Third, were it to succeed, under what circumstances would it be most effective? On the first question, recent decades have seen the publication of a vast body of research exploring China's foreign policy objectives and strategic culture. Extant literature also offers a well-developed picture of the structure and extent of China's resource diplomacy, while a relatively compact body of research in strategic studies suggests the possible uses and conditions for effective coercion in international politics. Having referenced these bodies of research, we can better proceed to unravel the riddle of Chinese resource coercion.

China's Resource Diplomacy and Coercion Theory

In recent years, China's resource diplomacy, that is the sum of its diplomatic, military, and economic efforts at gaining access to natural resources, has become a primary enabler of the coastal modernization effort at the heart of its national development strategy.⁸ The coastal strategy has proven successful as the PRC continues to expand its strategic capabilities and appears poised to do so for the foreseeable future. The China literature is laden with data on China's breakneck economic growth. Since the early 1980s, China has enjoyed an average annualized growth rate of over eight percent of GDP with recent estimates suggesting that roughly one-quarter of world economic growth will belong to China in coming years. Furthermore, China's abnormally high national savings rate of more than forty percent indicates that much of China's consumption potential has yet to be realized.⁹

Despite this relatively cheery outlook, fueling the PRC's increasing economic needs constitutes a thorny strategic problem for the Chinese Communist Party (CCP). Sustaining the PRC's impressive economic momentum and enjoying its political dividends depends to a significant degree on China securing long-term access to key resource inputs, particularly energy. As a result, China's leadership has come to view resource security both as a national strategic priority, and an economic "soft rib."¹⁰

Strategic studies coercion literature further establishes exclusivity's relevance to China's strategic intentions. Coercion is generally defined as convincing an actor to choose to comply with a given demand by imposing or threatening to impose costs on undesirable courses of action, without resorting to brute force. Expanding on the work of Thomas Schelling in *Arms and Influence*, contemporary scholarship identifies two determinants of successful coercion in the international arena: credibility, that is the degree to which the coercing actor can be expected to act on its threat, and persuasiveness, or the coercive intensity of the threat.¹¹ In international resource markets, whether or not China enjoys relative exclusivity over a vital international resource market has direct bearing on the potential persuasiveness of resource coercion. The credibility of a resource-coercive strategy depends on the degree to which China perceives a threat to its vital interests.

The literature further suggests that independently adequate credibility or persuasiveness alone is not in itself a sufficient condition for coercive success. States posing coercive threats with disproportionately low credibility and high persuasiveness, for example by threatening annexation as part of routine trade negotiations, cannot reasonably expect a positive response from their competitors.¹² The outcome is similarly determinate for highly credible but insufficiently persuasive threats. Thus, in addition to exhibiting both credibility and persuasiveness, effective coercive strategy is characterized by proportionality with what might be considered credible in light of the strategic prize.

China's Foreign Policy Objectives and Strategic Culture

With the rise of the PRC's third and fourth generation leaderships, under Jiang Zemin and Hu Jintao respectively, China's foreign policy entered a period of transformation while maintaining its fundamental continuity with Deng Xiaoping's reformist vision.¹³ Recent decades have proven transformative insofar as China's present leadership is distinctly new. Even as of the Fifteenth National People's Congress in September 1997, of

the acting twenty-four member of the Chinese Politburo, only six had served in that body before 1992. In terms of regional origin, education, career path, military service, and foreign travel, the present leadership also contrasts sharply with its predecessors.¹⁴ Despite these divergences, China's new generation of leaders maintains and carries further many characteristics of China's traditional post-Mao foreign policies with respect to market reform and international engagement.¹⁵

In light of China's market-oriented ideological consensus, and the strong association of many contemporary Chinese leaders with China's coastal region, it is safe to assume that economic liberalization and development in the coastal provinces will remain the priority in China's overall national development strategy.¹⁶ The ultimate goal of the coastal strategy is modernization. In the sense used by PRC leadership, modernization does not pursue a future in which China will have caught up with the United States in technological, economic, or military terms. Instead, Chinese policy-makers view modernization as a gradual assumption of China's rightful role as a great power.¹⁷ With this distinction in mind, it has been widely argued that China's modernization policy upholds three PRC core interests: the pursuit of "comprehensive national power," sovereignty, and regime maintenance.¹⁸

Studies of China's strategic culture suggest that PRC leadership is likely to use any means necessary to preserve the integrity of its central strategic objectives. Philosophically, China's strategic culture is a hybridization of Confucian and Realpolitik strands. Drawing from China's historically Confucian emphasis on social and economic harmony as guides for political action, Chinese elites tend to believe their strategic culture is pacifist, non-expansionistic, anti-hegemonic, and defensive in orientation.¹⁹ Still, despite clear evidence to the contrary, China's foreign policy elites unerringly cast foreign policy decisions, up to and including the use of force, as essentially defensive in nature.²⁰

Chinese commentators remain unfazed by the apparent contradiction between foreign perceptions and China's supposedly Confucian strategic culture. Mao is often cited as evidence of China's fundamentally defensive strategic mindset. In the words of China's late paramount leader: "We [China] do not desire one inch of foreign soil."²¹ Shoring up this popular sentiment, one Chinese analyst claims that: "The facts are: There are no records showing China's invasion of other countries or that China stations any soldiers abroad."²² With respect to the People's Liberation Army's (PLA) failed 1979 invasion of Vietnam and its 1962 border war with India, PRC strategists will generally invoke self-defense.

The apparent lack of correspondence between China's perception of itself as essentially defensive and the historical record can be explained by Chinese just war theory. According to a preponderance of Chinese strategic thinkers, the nature of a just war is simple: Just wars are wars of liberation waged by the oppressed against the oppressor. From the perspective of CCP policy elites, China has long been a weak state surrounded by powerful imperialists seeking to profit from China's internal problems.²³ As a result, any war fought by China is by definition just so long as it continues to cast itself as downtrodden. This would include any war fought to "restore or protect national territory or to maintain national prestige."²⁴ This conclusion is cautionary insofar as it suggests that should China perceive a threat to any of its core interests it would not abstain from the use of force, coercion, or other aggressive instruments of policy pursuant to "active defense" of its national interests.²⁵

In sum, the literature on China's foreign policy orientation and strategic culture suggests that China would resort to using natural resources as coercive instruments under limited circumstances, namely: doing so would further any one of China's three core interests at an acceptable cost to any combination of the others, or doing so might, either in isolation or in concert with other vehicles of national power, insulate any combination of these interests from perceived foreign threats. The strategic-culture literature also suggests that Chinese foreign policy elites are unlikely to view coercive action in either case as aggressive, unnecessarily escalatory, or immoral because of these actions' targeting of encroaching foreign powers.

Resource Coercion and China's Rare Earths Industry

Exclusivity is very much a feature of China's power in the market for REEs. Furthermore, REE applications could hardly be more economically vital, as they are an integral component of "anything that has a motor or battery technology in it."²⁶ With between ninety-five and ninety-seven percent of world production of these critical elements based in Chinese territory, the potential for geostrategic abuse of China's mineral wealth is very real. Coupled with the difficulty of penetrating China's decision-making logic with respect to REEs, the situation also offers fertile ground for security spirals. China's questionable REE export cut-off following the detainment of the aforementioned Chinese ship captain has given rise to the worrying perception that China's REE objectives and motivation are more sinister than its quest for economic growth would suggest.

Nevertheless, one need not doubt China's public justifications for REE export cuts. According to Keith Delaney, head of the Rare Earth Industry and Technology Association, "all the steps they've [China] taken make sense to manage their resource better."²⁷ Delaney cites several plausible justifications for this view, namely that: (1) Smuggling of REEs in South China has worsened in recent years, (2) Pollution problems stemming from mining operations undermine Chinese efforts at environmental protection, and (3) sloppy processing techniques continue to result in tremendous waste of valuable mineral resources. At the same time, China's deliberate structural transition away from primary sector exports towards value-added goods (finished, labor-intensive products) will likely see the PRC become a net importer of REEs by 2015.²⁸ It seems that many (if not most) active participants in the rare earths market share this view.²⁹ Dr. Stanley Trout, head of magnet manufacturing at the U.S. rare earths mining firm Molycorp Minerals, generally supports this perspective, arguing that China views REEs in purely economic terms, with supply tensions being driven, at least in part, by the fact that "they've [China] always been looking for value added products." Dr. Trout interprets the fact that "their export quotas have been on the raw materials but not on the downstream products" as evidence of China's fundamental concern with attracting foreign investment.³⁰ By cutting exports, China's economic planners encourage domestic production of high technology goods.

While it remains to be seen whether China's resource policies and natural resource endowment are at the point where they could constitute a significant security liability, in the opinion of several experts, China has unique and worrying advantages in the market for heavy rare earths (HREEs), particularly the magnet metals dysprosium and terbium. According to Jeff Green, owner of consultancy J.A. Green & Company and former Staff Director to the U.S. House Armed Services Subcommittee on Readiness, in the event of Chinese supply disruption "the world faces a real potential shortage of the heavy rare earths."³¹ Mr. Green, further argues that "the result is more important than the motivation" when discussing China's "ability to essentially remove these materials (REEs) from the supply chain," and "restrict Japans ability" to acquire them.³² United States Geological Survey Data, often cited by U.S. Government sources to downplay supply worries, actually supports this conclusion upon close examination, with a 2002 comparison of U.S. (Mountain Pass deposit) and south China REE deposits indicating near complete American dependence on Chinese sources of dysprosium, yttrium, and terbium.³³ Molycorp's Mountain Pass deposit, the sole source of rare earths in the United States, offers no measurable quantities of either dysprosium or terbium, and only a small

quantity of yttrium. By comparison, China's southern Lateritic ore deposits offer relatively large quantities of yttrium, as well as economically significant amounts of dysprosium and terbium.

Data pertaining to potential alternative REE sources reinforce Green's conclusion on the subject of China's REE exclusivity. There is little to no probability of getting alternative U.S. domestic REE sources, the situation with respect to HREEs is even bleaker in the event of a foreign policy crisis. According to Green, "the rough rule of thumb is that it takes ten years to get a mine permitted in the United States."³⁴ Even if extraordinary efforts were taken to expedite the permit process—whether they were to come in the form of public investment or outright nationalization—U.S. domestic REE deposits remain HREE poor and cannot be brought online without extensive and time consuming geological analysis.

The international supply situation is no more encouraging. In light of the paucity of HREE production outside of China the United States would find slim pickings in the event of a supply cut-off. As a result, with the vast majority of alternative international REE and HREE sources "already obligated to customers in Japan and around the world,"³⁵ China has a unique opportunity to exert acute economic pressure on U.S., Japanese, or European interests in the context of a strategic showdown. Furthermore, CCP decisionmakers may find occasion to leverage their advantage in REE production in the event of another Taiwan or some other regional stand-off.

Of course, it might be objected that China only controls roughly one-third of known rare earths reserves, making the prospect of coercion unrealistic.³⁶ It seems clear, however, that current production, rather than aggregate reserves, is the relevant strategic variable. Recall that untapped deposits of REEs cannot be brought online quickly; ten years is the average permitting time in the United States. It follows from this that REE importers such as the United States will have to live with a significant disadvantage in the rare earths market for the foreseeable future. As a result, the next ten years constitute a strategic window of opportunity for China to leverage its advantage in HREE production to strategic effect.

Even if the threat of Chinese natural resource coercion never materializes, the mere possibility will tend to intensify Sino-American strategic suspicion. Many U.S. and Japanese commentators have already identified their economies' vulnerability to China's rare earths exports as strategically dangerous. If demand for rare earths continues along its presently exponential trajectory, as it is likely to do, scarcity will almost certainly contribute to a more volatile security climate as actors come to view rare

earths as increasingly valuable both economically and militarily. In order to avoid the costs of such a scenario, it will be crucial for the PRC to improve the transparency of its rare earths decision-making while clarifying its intentions. In the near term, in order to mitigate risk, it would be advisable for large REE importers, such as the United States, as well as Taiwan and Japan, to consider building strategic reserves of key rare earths through foreign direct investment and the establishment of long-term contracts with potential future suppliers of rare earths. Unfortunately, this would only be possible through a sovereign wealth fund or similar institution the like of which the United States has little history operating.

About the Author

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