Strategic Priorities for the Development of Urbanized Areas in China During the 15th Five-Year Plan Period (Postprint)

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Abstract

Urbanization areas are regions whose primary function is to provide industrial and service products. During the "15th Five-Year Plan" period, China's population urbanization rate will exceed 70%, marking the entry into a stage of long-term high-level urbanization. The strategic positioning of urbanization areas will focus on county-level administrative districts that serve as high-concentration areas for scientific and technological innovation resources and key layouts for new-quality productive forces and new industrialization. In terms of strategic layout, the scope of urbanization areas should be optimized to promote the agglomeration of population and economy toward urban agglomerations, metropolitan circles, and central cities; strengthen the suburbanization of megacities and large cities and the integrated development of urban and rural areas; and advance urbanization construction with county towns as important carriers. Regarding functional enhancement, the layout of new-quality productive forces and new industrialization in different urbanization areas should be promoted according to their comparative advantages and local conditions, while strengthening the leading role of urbanization areas such as Beijing-Tianjin-Hebei, Yangtze River Delta, Pearl River Delta, and Chengdu-Chongqing. In terms of spatial quality, efforts should be made to promote the construction of urban livability, intelligence, and resilience.

Full Text

Preamble

Special Topic: Regional Coordinated Development and Optimization of Territorial Spatial Development Patterns During the 15th Five-Year Plan Period

Urbanized areas in China are increasingly participating in the international division of labor at a higher level, evolving into globally influential economic zones and nationally significant population and economic agglomeration areas.

1. Basic Characteristics of Urbanized Areas

Since the release of the *National Main Functional Zone Planning* in 2011, provincial-level main functional zone plans have been successively issued. By integrating these provincial plans under national constraints, the "China Main Functional Zone Plan" (Version 1.0) was formulated, identifying 830 districts and counties as urbanized areas—comprising national and provincial-level optimized and prioritized development zones—which collectively account for 15.08% of the nation's land area. Following the 13th Five-Year Plan period, these urbanized areas have become the primary functional zones for China's urbanization, exhibiting three key characteristics:

(1) High Population Concentration. Comparing data from the sixth and seventh national population censuses, the permanent resident population in urbanized areas grew from 700 million to 800 million between 2010 and 2020, increasing from 52% to 57% of the national total. The vast majority of urbanized areas experienced an average annual population growth rate exceeding 1%. Notably, the Yangtze River Delta (especially Shanghai, southern Jiangsu, and northern Zhejiang) and the Pearl River Delta exhibited contiguous, concentrated rapid population growth, while other urbanized areas showed single-point rapid growth in provincial capitals, autonomous region capitals, or resource-based cities [Figure 1: see original paper]. However, even within urbanized areas, population decline occurred in some districts and counties, primarily in northeastern China, central regions, and parts of the western periphery—reflecting both socioeconomic disparities and regional differences in natural population growth rates.

(2) High Urbanization Levels. Between 2010 and 2020, the overall permanent resident urbanization rate in urbanized areas increased from 65% to 76%. By 2020, most urbanized areas had achieved urbanization rates exceeding 50%, reaching the "urban majority" threshold, with many surpassing 70%. These high-level urbanization regions are mainly concentrated in the Beijing-Tianjin-Hebei region, the Yangtze River Delta, the Pearl River Delta, and some provincial capitals [9,10], broadly corresponding to areas with average annual population growth rates exceeding 1% during 2010–2020 [Figure 2: see original paper]. These areas represent China's most intensively developed regions with the highest concentration of urban populations and industrial activities, and like major global metropolises, they have entered a stage of high-level urbanization [11].

(3) High City-Size Hierarchy. The 2014 *Notice on Adjusting City Size Classification Standards* established a new hierarchy based on "urban resident population." In 2020, China had 7 mega-cities, 14 super-large cities, 14 Type

I large cities, and 70 Type II large cities, most located in urbanized areas. The seven mega-cities are distributed not only in the eastern regions of Beijing-Tianjin-Hebei, Yangtze River Delta, and Pearl River Delta, but also in the western Chengdu-Chongqing region, which hosts two mega-cities, forming a diamond-shaped framework of "Beijing-Tianjin-Hebei—Yangtze River Delta—Pearl River Delta—Chengdu-Chongqing" [Figure 3: see original paper]. In terms of urban resident population changes from 2010 to 2020, China has already seen 48 shrinking cities with declining urban populations [12]. Urbanized areas now exhibit clear regional differentiation in population growth, manifesting not only as "urban growth and rural decline" but also as differentiation between cities themselves.

2. Development Trends and Strategic Positioning of Urbanized Areas During the 15th Five-Year Plan Period

2.1 Basic Trends in Urbanized Area Development

From a scale perspective, the rate of population agglomeration in urbanized areas will slow. As early as 1965, Davis [6] proposed the S-curve theory of urbanization, which states that "when the proportion climbs above 50%, the curve begins to flatten; when it reaches about 75%, the curve stagnates or even declines." Additionally, Zelinsky's migration transition theory suggests that as urbanization enters its middle and late stages, "rural-to-urban" migration will gradually weaken while "city-to-city" migration will strengthen [13,14]. During the 15th Five-Year Plan period, China's urbanization rate will exceed 70%, entering a stage of negative total population growth and high-level urbanization. This means China's urban population agglomeration and land expansion will no longer be as rapid and intense as before. The intensity of population attraction from agricultural and ecological functional zones to urbanized areas will decline significantly, and urbanized areas will shift toward internal functional, structural, and quality optimization [15-17].

From a functional perspective, urbanized areas will lead in scientific and technological innovation. New economic geography theory emphasizes that technological innovation is crucial for urban prosperity. Innovation attracts highly skilled talent, creating a snowball effect of population agglomeration and leading regional economic development. However, not all urbanized areas will advance in lockstep; they must develop regionally collaborative models for technological innovation based on their resource endowments and comparative advantages [18]. Japanese economist Akamatsu [19] proposed the "flying geese" theory in the 1930s, emphasizing industrial transfer driven by differences in industrial levels. As the world undergoes unprecedented changes, China must particularly highlight the leading role of urbanized areas in technological innovation and strategic emerging industries during the 15th Five-Year Plan period, promoting inter-regional industrial collaboration and transfer.

From a structural and quality perspective, urbanized areas will empha-

size internal structural optimization and spatial quality improvement. Western developed countries in the middle and late stages of urbanization generally exhibited a "large concentration, small dispersion" spatial pattern—population and economy agglomerating in metropolitan areas while forming polycentric functional organization patterns of central urban areas, suburbs, and surrounding central cities within metropolitan areas [20,21]. During the 15th Five-Year Plan period, the vast majority of China's population and non-agricultural activities will be concentrated in urbanized areas. At the "large structure" level, development of urbanized areas in central and western China must be promoted to enhance coordinated regional development and strengthen the nation's socioeconomic hinterland. At the "small structure" level, internal spatial optimization must be highlighted, strengthening networked spatial organization at smaller scales such as metropolitan areas, suburbs, and medium and small cities to comprehensively improve internal spatial quality.

2.2 National Requirements for Urbanized Area Development

The 20th National Congress of the Communist Party of China identified the five years after 2022 as a critical period for building a modern socialist country, with key objectives including "achieving new breakthroughs in high-quality economic development, significantly enhancing self-reliance and strength in science and technology, and making major progress in building a new development pattern and a modern economic system." In 2023, China emphasized "guiding rational economic layout with the main functional zone strategy" and "giving full play to the comparative advantages of various regions, actively integrating into and serving the new development pattern according to their main functional positioning," as well as "optimizing the layout of major productive forces and strengthening the construction of national strategic hinterland." As regions whose main function is to provide industrial and service products, urbanized areas must lead the new round of major productive force layout. Unlike the general industrial and service products driven by the "world's factory" model in the past, the main function of urbanized areas must shift toward products with global competitiveness, taking the lead in "building a modern industrial system."

The new round of major productive force layout is primarily reflected in new quality productive forces and new-type industrialization. President Xi Jinping emphasized during the 11th collective study session of the Political Bureau of the CPC Central Committee that "developing new quality productive forces is an intrinsic requirement and key focus for promoting high-quality development." New quality productive forces emphasize higher-quality workers, more technologically advanced means of production, and broader objects of labor [22]. Compared with traditional productive forces, new quality productive forces are innovation-led and characterized by high technology, high efficiency, and high quality. New-type industrialization was initially closely associated with "knowledge, information, globalization, and ecologicalization," but now more promi-

nently features deep integration of digital and real economies, green and low-carbon development, independent innovation-driven growth, and upgrading of global value chains. Both new quality productive forces and new-type industrialization emphasize the importance of innovation in the new round of technological revolution and industrial transformation. The function of urbanized areas must urgently reflect their leading role in new quality productive forces and new-type industrialization.

2.3 Strategic Positioning of Urbanized Areas During the 15th Five-Year Plan Period

From the 13th to the 15th Five-Year Plan period, China will undergo a transformative shift from population growth to decline and from rapid to slower urbanization development [Figure 4: see original paper], with significant changes in the spatial patterns and territorial functions of urbanized areas. During the 15th Five-Year Plan period, urbanized areas will shift from focusing on "population and industry agglomeration" to emphasizing "scientific and technological innovation resource agglomeration," with functional positioning further refined from "providing industrial and service products" to "providing new quality productive forces and new-type industrialization." Overall, the strategic positioning of urbanized areas during the 15th Five-Year Plan period will be optimized as: county-level administrative districts with highly concentrated scientific and technological innovation resources and key layouts for new quality productive forces and new-type industrialization.

3. Strategic Spatial Patterns of Urbanized Areas

3.1 Optimizing the Spatial Scope of Urbanized Areas

During the 15th Five-Year Plan period, the urbanized areas providing industrial and service products will remain basically stable, with local adjustments. The main new additions to urbanized areas will be regions where urbanization levels were relatively low but have significantly improved, enhancing their function of providing industrial and service products. This includes three key types of regions:

(1) Regions with stable rural population growth. Although China's rural population is declining overall, some local areas still maintain positive rural population growth, particularly in densely populated valleys and oases in western provinces. As surrounding rural populations steadily grow and migrate to prefecture-level central cities, the incremental supply of industrial and service products in these regions has significantly increased, making them important regional nodes in China's western urban system.

(2) New growth poles with favorable natural and cultural endowments. New important energy and mineral resource development areas have emerged as new population and economic agglomeration centers providing industrial products. New cultural and tourism resource development areas have

become new population and economic agglomeration centers providing service products. These regions, leveraging their unique endowments, have developed mining economies or cultural economies, transforming traditional agricultural, pastoral, or ecological development paths.

(3) Border trade port areas. With the advancement of the Belt and Road Initiative, China's border trade port areas facing Southeast Asia, South Asia, Central Asia, North Asia, and Northeast Asia have transformed from "borderlands" to "development frontiers." These areas provide "dual-directional" industrial and service products for domestic and international markets, serving as important nodes for border prosperity and should be incorporated into the national urbanized areas scope.

The spatial scope of urbanized areas also includes regions for reduction and hierarchical adjustment. During the 15th Five-Year Plan period, urbanized areas will be adjusted to agricultural or ecological functional zones mainly in regions with weak population and industry growth. For example, former urbanized areas with severely depleted resources where the function of providing agricultural or ecological products has clearly exceeded that of providing industrial and service products. Additionally, there will be hierarchical adjustments between national and provincial-level urbanized areas—regions with global competitiveness or important national security and development strategic significance will be upgraded to national-level urbanized areas.

3.2 Optimizing the Spatial Structure of Urbanized Areas

During the 15th Five-Year Plan period, building upon the "two horizontals and three verticals" basic urbanization strategic pattern, the spatial structure of urbanized areas at different scales will be optimized. At the national level, an "agglomeration-type" structure will promote further concentration of population, economy, and scientific and technological innovation resources in urban agglomerations and metropolitan areas. At the urban agglomeration/metropolitan area level, a "network-type" structure will form spatial clusters with central cities as cores and close linkages between large, medium, and small cities. At the mega-city, super-large city, and Type I large city level, a "suburban-type" structure will promote integrated development of suburbs surrounding mega and super-large cities.

(1) National-level "agglomeration-type" structure. Building upon 19 urban agglomerations, the focus will shift to metropolitan area development [Figure 5: see original paper]. In addition to the capital metropolitan area centered on Beijing and the Shanghai metropolitan area centered on Shanghai, multiple modern metropolitan areas will be cultivated, including two types: Single-center metropolitan areas, including Shenzhen, Guangzhou, Hangzhou, Nanjing, Qingdao, Shijiazhuang, Ningbo, Fuzhou, Wuhan, Zhengzhou, Taiyuan, Hefei, Nanchang, Chongqing, Chengdu, Xi'an, Kunming, Nanning, Guiyang, Urumqi, Shenyang, Harbin, and Changchun. Multi-center metropolitan areas

with two or more central cities, such as Xiamen-Zhangzhou-Quanzhou, Suzhou-Wuxi-Changzhou, Changsha-Zhuzhou-Xiangtan, Lanzhou-Baiyin, and Xining-Haidong metropolitan areas. Simultaneously, development of other provincial capitals and autonomous region capitals will be strengthened, and county towns will be promoted as important carriers of urbanization.

(2) Urban agglomeration/metropolitan area-level "network-type" structure. Urban agglomerations and metropolitan areas will develop polycentric, multi-level, and multi-node network structures. Focusing on industrial systems for new quality productive forces and new-type industrialization, functional collaboration and division of labor between central cities and other medium/small cities and county towns will be strengthened to form close economic networks. Focusing on rapid intercity mobility, multi-level and diversified transportation corridors will be improved to form convenient transportation networks. Focusing on integrated development, public service sharing between cities and county towns at all levels will be strengthened to form parallel social networks.

(3) Mega-city, super-large city, and Type I large city-level "suburban-type" structure. Centered on mega, super-large, and Type I large cities, suburban new cities will be developed focusing on surrounding enclave urban areas, county towns, mega towns, and development zones. These satellite cities will concentrate population and industry, forming production-living network spaces with balanced jobs and housing. High-quality public services and modern infrastructure will be spatially allocated to suburbs. Meanwhile, multi-level urban-rural life circles will be created to promote diversified and composite functions in urban-rural communities, constructing "small micro-cities" with composite communities as basic units to promote equivalent governance of urban-rural spaces.

3.3 Strengthening Key Strategic Nodes

As China's population concentrates in urban agglomerations, metropolitan areas, and central cities, population decline trends in other areas will become more pronounced. It is crucial to attach great importance to the development of urbanized areas at key strategic nodes to anchor population and industry agglomeration capacity.

(1) Central cities in border areas. In border regions, a hierarchical system will be constructed with provincial capitals or autonomous region capitals as hinterland central cities, forming a depth system of "hinterland central city—border prefecture-level central city—border county town—border small town—port." Special attention should be paid to the characteristic economic development of central cities and county towns within urbanized areas to promote border prosperity actions. Focusing on new channels such as the China-Laos Railway, China-Kyrgyzstan-Uzbekistan Railway, and "Ice Silk Road," urban construction along these routes will be advanced.

(2) Key transportation hub cities. Based on the six main axes, seven corridors, and eight channels identified in the national comprehensive three-dimensional transportation network, the population and industry carrying capacity of urbanized areas at the intersections of these axes, corridors, and channels will be enhanced to ensure agglomeration development of transportation node towns along the Yangtze River corridor, China-Europe Railway Express routes, and the New Western Land-Sea Corridor.

(3) Cities with unique industries. These refer to urbanized areas where industries play indispensable roles in global and national industrial chains. On the one hand, efforts will focus on unique industries and their upstream and downstream links to strengthen R&D and innovation. On the other hand, other diversified industries will be cultivated to enhance urban economic resilience and emerging vitality.

4. Functional Upgrading of Urbanized Areas

During the 15th Five-Year Plan period, urbanized areas will accelerate the layout of new quality productive forces and new-type industrialization based on comparative advantages, strengthen the leading role of the Beijing-Tianjin-Hebei region, Yangtze River Delta, Pearl River Delta, and Chengdu-Chongqing area, and comprehensively cultivate new functions such as scientific and technological innovation highlands, new quality productive forces, and new-type industrialization agglomeration areas to accelerate the modernization process in urbanized areas.

(1) Beijing-Tianjin-Hebei, Yangtze River Delta, Pearl River Delta, and Chengdu-Chongqing urbanized areas. Focusing on next-generation information technology, integrated circuits, artificial intelligence, life and health, aerospace, and other key fields, these regions will accelerate the development of internationally competitive new quality productive forces and digital industrial clusters. Construction of international science and technology innovation centers in Beijing, Shanghai, and the Guangdong-Hong Kong-Macao Greater Bay Area will be advanced, with major scientific infrastructure clusters being deployed in comprehensive national science centers such as Beijing Huairou, Shanghai Zhangjiang, Guangdong-Hong Kong-Macao Greater Bay Area, and Hefei, Anhui. The Western Science City in the Chengdu-Chongqing region will be strengthened, and intercity sci-tech innovation corridors or new quality productive forces development axes such as Beijing-Xiong'an, G60 (Shanghai-Kunming Expressway), Shanghai-Nanjing-Heifei, Guangzhou-Shenzhen-Hong Kong, Guangzhou-Zhuhai-Macao, and Chengdu-Chongqing will be constructed.

(2) Urbanized areas in the middle reaches of the Yangtze River, Shandong Peninsula, Central Plains, Guangdong-Fujian-Zhejiang coastal areas, Guanzhong Plain, and Beibu Gulf. The national technological innovation and achievement transformation functions of central cities will be

enhanced to support the layout of advanced manufacturing industrial clusters such as industrial machine tools, instruments and meters, and new energy vehicles. The construction of Xi'an Comprehensive Science Center and Science and Technology Innovation Center will be strengthened. The innovative land consolidation and supply models in the integrated development demonstration zones across the Taiwan Strait will be promoted to increase new space for cross-strait industrial integration development. The construction of industrial transfer clusters in the Beibu Gulf urban agglomeration will be advanced.

(3) Urbanized areas in Harbin-Changchun, central and southern Liaoning, central Shanxi, central Guizhou, central Yunnan, Hohhot-Baotou-Ordos-Yulin, Lanzhou-Xining, Ningxia Yellow River region, and northern Tianshan slopes. Regional sci-tech innovation highlands will be built around characteristic industrial chains to support the layout of advantageous industries such as new energy and new materials. Sci-tech cooperation with eastern regions will be deepened, with the construction of applied undergraduate universities, vocational schools, and sci-tech innovation platforms being advanced, and optimization of industrial space stock being strengthened.

(4) Enhancing the carrying functions of county towns in urbanized areas. County towns in urban agglomerations and metropolitan areas will actively undertake radiation from central cities, promoting the spatial layout of private economies to form an integrated industrial chain development pattern with urban agglomerations and metropolitan areas. County towns adjacent to grain production functional zones and important agricultural product production protection zones will accelerate the layout of modern agricultural extension industrial chains, strengthening the allocation of basic public services and municipal pipeline networks. County towns adjacent to important ecological system protection and restoration major projects will accelerate the undertaking of ecological migrants from nature reserves. Specialized county towns focusing on energy and mineral resources, border trade, and tourism will be developed to increase the spatial allocation proportion of characteristic industries.

5. Enhancing Spatial Quality in Urbanized Areas

During the 15th Five-Year Plan period, the concept of people-centered cities will guide urban renewal, strengthening the construction of livable, resilient, and smart cities. lists the spatial quality enhancement projects for urbanized areas and priority promotion cities.

(1) Promoting livable city construction. Ecological green corridors between central cities and suburban new cities will be constructed, and green isolation belts between cities will be strengthened to build ecological security barriers. Urban internal ecological space restoration and quality improvement will be advanced, connecting green rings, corridors, wedges, and pathways to enhance urban ecosystem service functions and self-sustaining capabilities. Cir-

cular transformation of industrial parks will be strengthened, clean energy infrastructure networks will be accelerated, and a batch of ultra-low and near-zero energy consumption buildings will be constructed. The equity and accessibility of basic public services will be enhanced, with community-embedded service complex construction being promoted and multi-level, diversified public service facilities being allocated in new urban districts.

(2) Promoting smart city construction. Intelligent transformation of living and production spaces will be strengthened, expanding coverage of gigabit optical networks, industrial internet, and IoT information communication facilities. The deployment of "city brains" and integrated urban operation networks will be accelerated, and smart city spatiotemporal big data platforms and municipal-level real-scene 3D construction will be advanced. Green technology innovation and advanced green technology application will be strengthened, and the digital twin level of sci-tech innovation platforms and new quality productive forces clusters will be enhanced.

(3) Promoting resilient city construction. Urban renewal projects will be implemented, focusing on functional composites and improving land and building utilization efficiency. Renovation of urban villages will be prioritized in mega and super-large cities, promoting quality transformation of old urban areas and land structure adjustment to expand space for new quality productive forces and public spaces. Safe and resilient space construction will be strengthened, with "dual-use" public infrastructure being rationally laid out to enhance the ability to withstand and recover from major risk disasters.

References

1. Fan J, Wu J X, Gao X. Spatial characteristics of major function achievements in China's urbanized areas over the past decade and future layout optimization. *Economic Geography*, 2024, 44(1): 1-13. (in Chinese)
2. Fan J. To expedite the strategy of major function oriented zoning of China. *China Science Daily*, 2013-05-20(08). (in Chinese)
3. Fan J. The strategy of major function oriented zoning and the optimization of territorial development patterns. *Bulletin of Chinese Academy of Sciences*, 2013, 28(2): 193-206. (in Chinese)
4. Fan J. The scientific foundation of Major Function Oriented Zoning in China. *Acta Geographica Sinica*, 2007, 62(4): 339-350. (in Chinese)
5. Fan J. High-quality development of national territory space governance and regional economic layout during 14th Five-Year Plan in China. *Bulletin of Chinese Academy of Sciences*, 2020, 35(7): 796-805. (in Chinese)
6. Davis K. The urbanization of the human population. *Scientific American*, 1965, 213(3): 40-53.

7. Fan J. Draft of major function oriented zoning of China. *Acta Geographica Sinica*, 2015, 70(2): 186-201. (in Chinese)

8. Liu T, Peng R X, Zhuo Y X, et al. China's changing population distribution and influencing factors: Insights from the 2020 census data. *Acta Geographica Sinica*, 2022, 77(2): 381-394. (in Chinese)

9. Qi W, Liu S H, Liu Z. The novel pattern and driving factors of population spatial distribution on both sides of the "Hu Line" based on seventh census in China. *Acta Geographica Sinica*, 2022, 77(12): 3023-3040. (in Chinese)

10. Liu T, Zhuo Y X. A county-level analysis of China's population change: Insights from the 7th population census. *Population Research*, 2022, 46(6): 72-87. (in Chinese)

11. Yang Y, Qi W, Ma L, et al. Spatial optimization strategies of population function in China's world-class urban agglomerations during 14th Five-Year Plan period. *Bulletin of Chinese Academy of Sciences*, 2020, 35(7): 835-843. (in Chinese)

12. Qi W, Liu Z, Liu S H, et al. Identifying shrinking cities in China from 2010 to 2020 based on resident population in physical urban area. *Geographical Research*, 2023, 42(10): 2539-2555. (in Chinese)

13. Zhu Y, Lin L Y, Ke W Q. Trends in internal migration and mobility: International experiences and their implications for China. *Population Research*, 2016, 40(5): 50-60. (in Chinese)

14. He C F, Liang J S. The time and space change in the difference between China's regional economies: Commercialization, globalization and urbanization. *Management World*, 2004, (8): 8-17. (in Chinese)

15. Lu D D, Chen M X. Several viewpoints on the background of compiling the "National New Urbanization Planning (2014–2020)". *Acta Geographica Sinica*, 2015, 70(2): 179-185. (in Chinese)

16. Yao S M, Zhang P Y, Yu C, et al. The theory and practice of New Urbanization in China. *Scientia Geographica Sinica*, 2014, 34(6): 641-647. (in Chinese)

17. Fang C L. Basic rules and key paths for high-quality development of the New Urbanization in China. *Geographical Research*, 2019, 38(1): 13-22. (in Chinese)

18. Gu C L. Study on urban agglomeration: Progress and prospects. *Geographical Research*, 2011, 30(5): 771-784. (in Chinese)

19. Li X, Li G P, Zeng G, et al. *Economic Geography*. Beijing: High Education Press, 1999. (in Chinese)

20. Gu C L. Study on urban agglomeration: Progress and prospects. *Geographical Research*, 2011, 30(5): 771-784. (in Chinese)

21. Wei H B, Qi W, Liu S H, et al. Progress and prospect of suburbanization research in China under the background of new-type urbanization. *Progress in Geography*, 2022, 41(11): 2152-2164. (in Chinese)

22. Xi Jinping economic thought research centre. Connotative characteristics and development priorities of New Quality Productive Forces. *People's Daily*, 2024-03-01(009). (in Chinese)

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Note: Figure translations are in progress. See original paper for figures.