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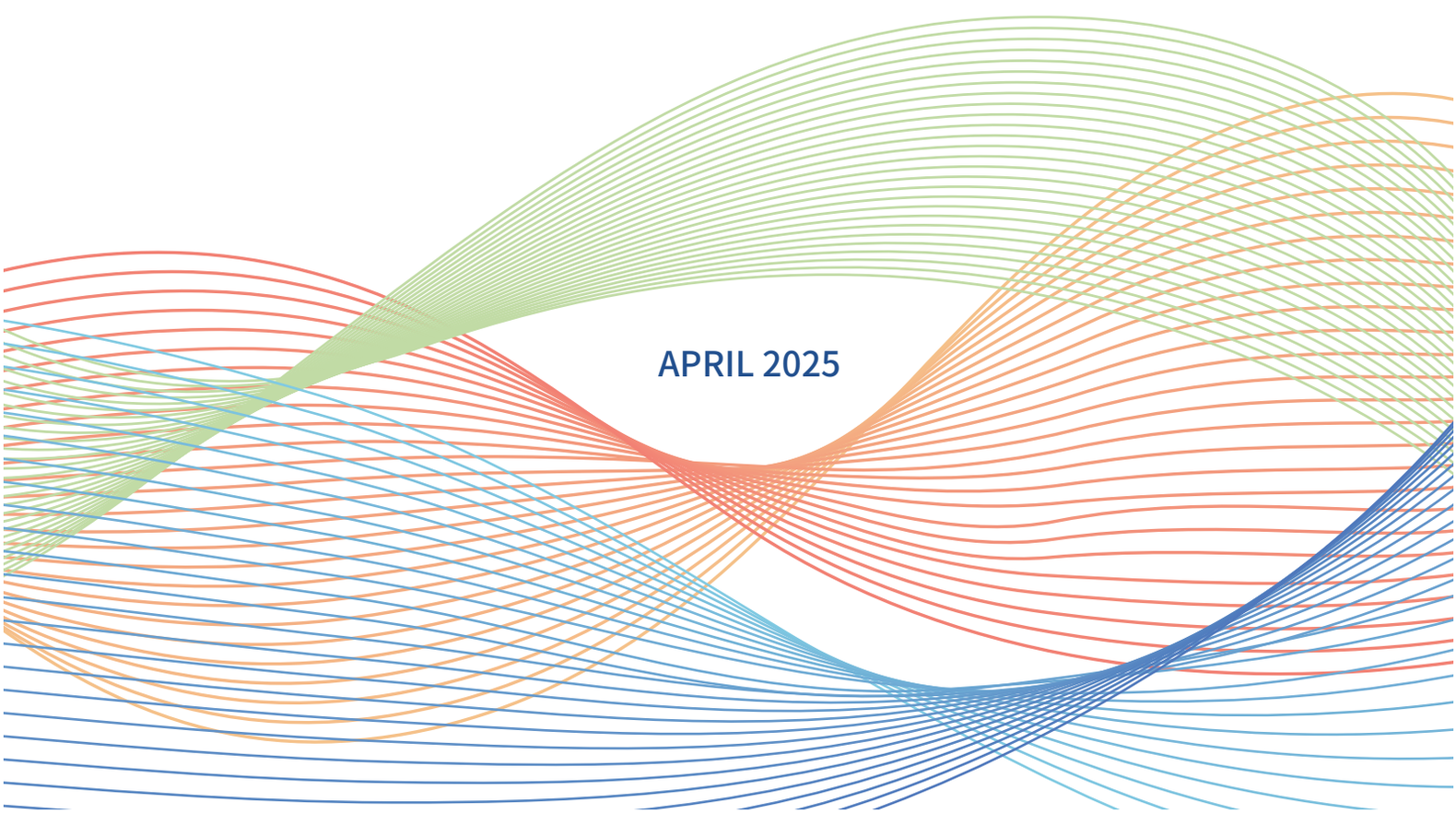
Empowering Global Knowledge Workers: AI, Productivity Tools, and the New Ways of Work

Yinxiang Biji Research Institute



APRIL 2025

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Introduction

With the rapid advancement of artificial intelligence (AI), industries are undergoing profound transformations in how work is conducted globally. For knowledge workers, the integration of AI is not only enhancing productivity but also revolutionizing workflows and creating entirely new operational models across fields such as healthcare, law, education, and professional services.

According to the recent research conducted by the Harvard Business School' s Institute for Technology & Operations Management and the Boston Consulting Group, consultants who leveraged AI assistance in consulting tasks completed 12.2% more assignments on average, worked 25.1% faster, and achieved over 40% improvement in the quality of their results.[1]

Microsoft CEO Satya Nadella has also emphasized that AI will transform knowledge work, but not replace it. He believes that AI will collaborate with humans, enabling new workflows and redefining job roles.[2]

While AI is profoundly reshaping the way knowledge workers operate, it also introduces new challenges related to professional skills, ethics, and privacy. Therefore, conducting an in-depth study about the impact of AI on knowledge workers holds significant practical importance.

As a leading company dedicated to knowledge management and AI applications, Yinxiang Biji has leveraged its years of expertise in tracking global knowledge workers and best practices in knowledge workflows. This research report, jointly released by the Yinxiang Biji Research Institute and the World Internet Conference, aims to provide a systematic analysis of how AI is transforming information acquisition, processing workflows, productivity tools, and knowledge work practices. It also explores the challenges faced by global knowledge workers and the opportunities ahead, offering valuable insights for researchers and professionals in the field of knowledge management.

[1] Forbes: Harvard And BCG Unveil The Double-Edged Sword Of AI In The Workplace

[2] Business Insider: Microsoft CEO says AI will change 'knowledge work' — but that doesn't mean it's going away

Contents

I.Knowledge Workers in the Artificial Intelligence Era

(I) The Evolution of the Knowledge Worker's Role

The concept of the "knowledge worker" was first introduced in the 1950s by Peter Drucker, a pioneer in business management[1]. He defined knowledge workers as individuals whose primary work is based on knowledge, focusing on the creation and application of information to drive organizational growth and innovation. The productivity and efficiency of knowledge workers are critical to an organization's success.

Over the past few decades, advancements in information technology and globalization have significantly transformed the identity and role of knowledge workers. Initially limited to researchers and engineers, the definition of knowledge workers has now expanded to encompass professionals across various industries. Their work has also evolved from executing singular tasks to engaging in multitasking, collaboration, and innovation-driven workflows.

In the artificial intelligence era, the identity and role of knowledge workers have once again undergone a transformation. Many repetitive and rule-based tasks no longer need to be performed by humans, shifting the focus of knowledge workers towards more creative domains. They are now required to possess a broader range of interdisciplinary knowledge, working collaboratively with AI to solve complex problems and drive innovation. For instance, in the healthcare field, doctors need not only medical knowledge but also an understanding of the principles and limitations of AI diagnostic systems to better serve their patients. The AI era demands that knowledge workers continuously learn and adapt to new technologies, enhancing their overall skills to remain competitive in a rapidly changing environment.

(II) The Transformation of Knowledge Work Methodologies

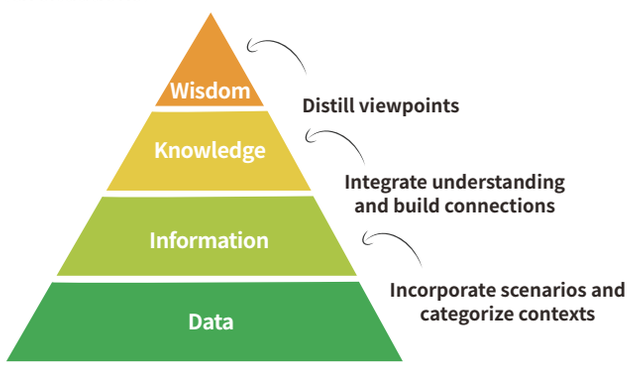
As the role of knowledge workers evolves, the nature of knowledge work itself is also changing. Traditional knowledge work has been based on the DIKW model (Data-Information-Knowledge-Wisdom model), which is typically represented in a pyramid structure, highlighting the added value at each level during the transformation process.

1.Data: Data refers to raw, unprocessed facts and figures that lack context. While they form the foundation of information, data itself does not carry direct value.

2.Information: When data is organized, processed, and given context, it becomes information. Information is meaningful and can be used to answer questions such as "who," "what," and "where."

3.Knowledge: Knowledge is the ability gained through experience, learning, and understanding, built upon information. It answers the question "how" and represents the internalization and personalization of information, involving a deep understanding and application of it.

4.Wisdom: Wisdom is the ability to make sound decisions based on knowledge, combined with values, judgment, and experience. It answers "why" and "when," reflecting an understanding and insight into complex situations.



DIKW Knowledge Management Pyramid

[1] Peter Drucker: The Landmarks of Tomorrow
[2] Tiago Forte: The 4 Levels of Personal Knowledge Management

Entering the 21st century and experiencing the rapid development of the information technology, knowledge work methodologies have become more structured. The CODE method emphasizes optimizing the knowledge workflow through four key steps: Capturing Organizing, Distilling, and Expressing. This approach has emerged in recent years as a strategy for efficiently managing and applying knowledge.

The CODE methodology provides a systematic framework to help knowledge workers effectively process information and knowledge. The core steps include:

1.Capture: Knowledge workers need to gather relevant data and materials from vast information sources. The CODE methodology emphasizes a systematic approach to collection, ensuring that the acquired materials are of high quality and relevance.

2.Organize: The captured information must be effectively organized for easy retrieval and application. The CODE methodology advocates for establishing clear categorization and indexing systems to improve the accessibility of information.

3.Distill: Extracting core insights from a large volume of information to form knowledge is a crucial step in knowledge work. The CODE methodology emphasizes analyzing and summarizing information to distill valuable knowledge.

4.Express: Effectively communicating the distilled knowledge to others is a key skill for knowledge workers. The CODE methodology encourages expressing knowledge in a clear and concise manner to promote its sharing and application.

Personal Knowledge Management
The CODE Method

The development of artificial intelligence has opened new possibilities for each stage of the CODE methodology. For Capture, AI can automate the process of selecting and gathering information from vast amounts of data, significantly enhancing the efficiency and accuracy of information retrieval. For Organization, by using large language models, AI can categorize and relate information, creating complex knowledge graphs that help users better understand and utilize the information. At distillation stage, through natural language processing and machine learning, AI can extract valuable insights from large volumes of information, assisting in decision-making and innovation. In the presentation phase, AI can generate reports, presentations, and even audio or video content, improving the efficiency and effectiveness of knowledge expression and dissemination.

(III) The Evolution of Tools for Knowledge Worker

Knowledge work revolves around the acquisition, processing, analysis, and application of information, and productivity tools focusing on information processing has played a crucial role in the daily work of knowledge workers. The origins of productivity tools can be traced back to the early 20th century. As industrialization progressed, businesses' growing need for information processing and management led to the emergence of early automation tools. Over the past century, with continuous advancements in information technology, productivity tools have undergone significant innovation and development.

Based on the functionality and application scenarios, productivity tools can be categorized into word processing, spreadsheets, presentation software, email clients, project management, note-taking and knowledge management, time management, online meetings, and so on. These tools creatively enhance daily work efficiency for knowledge workers by efficiently handling text, simplifying data analysis, optimizing information storage, retrieval, and presentation, as well as coordinating and tracking project progress, ultimately driving overall productivity improvement.

The evolution of productivity tools can be viewed through several stages:

Mechanization Stage: In the early 20th century, tools such as typewriters and calculators emerged, improving the efficiency of document processing and calculations.

Electrification Stage: In the mid-20th century, the invention of electronic computers made data processing and storage more efficient, giving rise to early spreadsheet and word processing software.

Integration Stage: In the 1980s, Microsoft introduced the Office suite, integrating word processing, spreadsheets, and presentation software into one platform, significantly enhancing users' work efficiency.

Mobilization Stage: With the widespread adoption of smartphones and tablets, productivity tools gradually shifted to mobile devices, allowing users to access and edit documents, manage tasks and schedules anytime, anywhere, greatly increasing work flexibility and efficiency. Yinxiang Biji was born in this stage.

Cloud Stage: In the early 21st century, the development of cloud computing, combined with the growing need for mobile work, enabled online access and collaboration for productivity tools. Cloud-based office suites such as Google Workspace and Microsoft 365 were developed in response.

AI Stage: In recent years, the introduction of artificial intelligence has endowed productivity tools with features like automated processing, smart recommendations, and voice recognition, further enhancing work efficiency.

Productivity tools provide knowledge workers with high efficiencies, while the demands from them drive continuous innovation and development of tools on the other side. In the age of artificial intelligence, this interactive relationship has become even more closely linked, collectively driving changes in work methods, and enhancing productivity.

(IV) The Symbiotic Evolution of Knowledge Workers, Productivity Tools, and Work Methods

In the age of artificial intelligence, knowledge workers are transitioning from being domain experts who rely on single skills to becoming innovators who collaborate closely with AI. The widespread application of AI technology has driven a transformation in knowledge work methods, particularly by making the four core steps of the CODE methodology (Capture, Organize, Distill, Express) more intelligent and automated. This also accelerates the evolution of productivity tools, enabling knowledge workers to leverage their potential more efficiently.

Knowledge workers are shifting from traditional information processors to AI-powered innovators, while productivity tools are evolving from passive toolboxes to active and intelligent collaborators. Knowledge work methods are entering a new era that is more dynamic, efficient, and intelligent.

This transformation further expands the boundaries of knowledge workers, requiring them to possess the ability to collaborate with intelligent productivity tools to adapt to the new productivity paradigm. At the same time, they must also address the challenges posed by AI to ensure the sustainable development of knowledge work.

II .The Transformation of Knowledge Work in the Artificial Intelligence Era

(I) A New Landscape for Knowledge Work

Peter Drucker predicted in his writings that as the economy shifted from producing physical goods to knowledge-driven sectors, the workforce would gradually transition from physical labor to roles that " apply theoretical and analytical knowledge". In this context, enhancing the productivity of knowledge workers became a core challenge for managements. Drucker pointed out that knowledge work is fundamentally different from assembly line work. The tasks are not predefined but need to be identified, defined, and executed by the workers themselves. Knowledge workers must collect data, process information, and identify and analyze problems before taking actions.

However, looking back over the past few decades, despite the immense potential of knowledge workers, a significant amount of time has been wasted on repetitive data processing, information collection, and internal communication. This has prevented them from focusing on more strategic and creative tasks. Today, with the support of AI, knowledge workers can more efficiently review and optimize their workflows, delegating repetitive tasks to AI, thereby freeing up more time and energy to focus on strategic and innovative work that machines cannot replace. For example:

At Alibaba, the AI customer service system automates the handling of a large volume of customer service requests, significantly reducing labor costs and improving service efficiency. Now, AI can independently answer over 80% of customer inquiries, allowing customer service representatives to focus on more complex problem-solving and customer relationship management, thereby improving overall work efficiency and customer satisfaction.[1]

Microsoft has integrated AI technology into its Microsoft 365 products, helping users extract key task information from many emails, automatically schedule meetings, and even provide agendas and track feedback for meetings. Through features like smart assistants, automated workflows, and data analysis, Microsoft has significantly enhanced the productivity of knowledge workers.[2]

(II) Leveraging AI to Improve Data Processing Efficiency

As the foundation of the DIKW Knowledge Management Pyramid, data is the starting point for the transformation from information to knowledge and ultimately to wisdom. In the age of artificial intelligence, the generation, storage, and processing of data have undergone profound changes, particularly in the following aspects:

1.Explosive Growth of Data:

According to statistics, with the development of technologies such as the Internet of Things (IoT), sensors and social media, the volume of global data has increased approximately 40-fold in the past decade. It is expected to reach 175ZB (1ZB = 10^21 bytes) by 2025.[3]

2.Diversification of Data Types:

The application of artificial intelligence has promoted the generation of non-structured data, including text, images, audio, and video. These diverse data types require new storage and processing technologies to meet the demands of various application scenarios.

3.Advancements in Data Processing Technologies:

To cope with the massive and diverse data, technologies such as cloud computing, big data processing, and distributed storage have been widely adopted, making data storage, management, and analysis more efficient and flexible.

[1] Case Study: How Alibaba Uses AI Chatbots to Serve a Billion Customers
[2] Microsoft 365 Copilot: How The AI-Powered Assistant Boosts Productivity
[3] IDC: Data Age 2025

4.Challenges in Data Governance and Privacy Protection:

As the volume of data increases, data governance and privacy protection have become important issues. How to fully harness the value of data while ensuring data security and privacy is a critical challenge that needs to be addressed.

In the past, data processing relied on manual methods, which were inefficient and prone to errors. The use of static, predefined rules to handle large volumes of data from multiple sources was costly and faced numerous challenges in integrating multi-format and multi-source data. The application of artificial intelligence technologies, especially the development of deep learning, optical character recognition (OCR), speech recognition, and other technologies, has greatly enhanced data collection efficiency, avoided repetitive tasks, and reduced human errors, making data a powerful support for efficient decision-making and innovation. For example:

1.Automation of Spreadsheet Data Collection:

The application of AI and machine learning technologies has brought revolutionary changes to the collection and organization of large-scale spreadsheet data. By utilizing AI, companies can use automated tools to extract key information from various formats of spreadsheets and PDF files, and automatically integrate this data into structured databases, thus reducing the workload of traditional manual data entry. For example, Walmart, a U.S. retail company, uses AI-powered data processing tools to extract and analyze critical data in real-time from millions of transaction records. This not only enhances the speed of data collection but also improves data quality, playing a crucial role in helping businesses make timely market decisions.[1]

2.Intelligent Collection of Handwritten Data:

The collection and conversion of handwritten data used to be a time-consuming process prone to errors. AI-powered OCR (Optical Character Recognition) technology can efficiently recognize handwritten text and convert it into editable, analyzable digital data. For example, Tencent Cloud's AI technology is applied in the collection and processing of handwritten order data in warehouse management. Traditional manual entry is not only slow but also prone to mistakes. In contrast, Tencent Cloud's OCR technology scans and recognizes handwritten order information, automatically entering it into the system, significantly improving the speed and accuracy of data processing. [2]

(III) AI Leading the Transformation of Information Organization

Transforming data into information is a critical aspect of knowledge work, a process that relies heavily on productivity tools such as document editing, spreadsheet processing, and task management products. In the past, knowledge workers spent a significant amount of time and effort organizing unstructured data into structured information. However, large language models (LLMs), with their powerful semantic understanding capabilities, can convert various forms of unstructured data—such as handwritten text, video, and audio—into structured data, making them as retrievable, organized, and meaningful information. Below are some key areas of evolution:

1.Multimodal Information Organization:

Artificial intelligence enables knowledge workers to process multimodal information (text, images, audio, video, etc.) more efficiently. For example, Granola, an AI application designed for professionals who frequently attend meetings, integrates with the Google Meeting platform to transcribe meeting content in real time and assist users in taking meeting notes. Users can write key points, and the AI intelligently supplements the notes based on the meeting audio, making the information more complete.

2.Intelligent Summarization and Information Extraction:

Knowledge workers often need to read through large amounts of documents, reports, and emails to extract key content, a process that can be time-consuming. The AI feature "Intelligent Summary" in Yinxiang Biji automatically

[1] How Walmart enhances its inventory, supply chain through AI

[2] How does OCR technology break through efficiency bottlenecks in digital transformation?

adds summaries to uploaded documents or saved web pages, helping users quickly understand the main points of the information. In industries such as law and healthcare, where large volumes of documents need to be processed, this significantly enhances work efficiency.

3.Automated Document Processing:

AI technologies are also radically changing traditional document processing methods. For instance, Google's NoteBookLM, powered by the Gemini model, allows AI to answer questions, generate summaries, extract keywords, and even create podcasts for two-way conversations based on user-uploaded documents, videos, and audio. This greatly enhances the efficiency of information processing and management.

As seen, artificial intelligence is enhancing the efficiency and quality of information organization through multimodal information processing and automated document handling, driving knowledge work into a new phase of intelligence and automation.

(IV) The New Breakthrough from Information to Knowledge Brought by AI

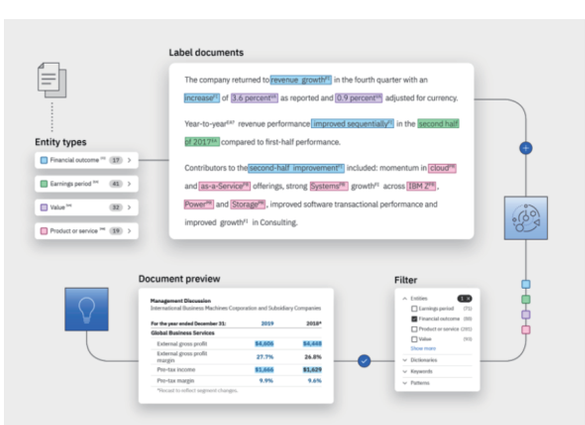
In traditional knowledge management, the conversion from information to knowledge relies on active user participation and manual processing. Users need to manually filter, organize, and structure information to create knowledge. This process is not only time-consuming and labor-intensive but also prone to limitations based on individual skill levels, resulting in inconsistent knowledge management efficiency and quality. While technologies such as bidirectional links and knowledge graphs have attempted to facilitate the effective conversion from information to knowledge, most bidirectional links still rely on manual tagging, and the creation of knowledge graphs primarily depends on pre-established connections in cloud-based notes and structured documents. For local documents without clear relationships, knowledge graphs are difficult to generate automatically, making the knowledge base more of an information repository rather than a complete knowledge system, which poses significant limitations.

In the AI era, the process of converting information into knowledge has undergone a fundamental transformation. Thanks to the powerful AI technologies, particularly the capabilities of large language models, information processing no longer relies solely on manual filtering and organizing. Large language models can quickly understand and analyze vast amounts of information, automatically extract key elements, and distill useful knowledge in a structured way. This method of conversion not only greatly improves efficiency but also reduces human errors, ensuring the quality of knowledge management.

The fundamental transformation in the conversion of information into knowledge is reflected in the following key aspects:

1.Knowledge Structure and Relationship Building Automation:

Large Language models possess powerful text understanding and reasoning capabilities, allowing them to automatically identify potential relationships between different pieces of information and build knowledge networks. For instance, IBM Watson Discovery helps businesses extract key concepts from unstructured data and establish contextual relationships, automatically generating knowledge graphs based on documents, emails, and meeting notes.



Watson Knowledge Graph

2.Intelligent Knowledge Retrieval and Context Understanding:

Traditional knowledge-base searches rely on keyword searches, which struggle to accurately match complex knowledge needs. In contrast, large language models understand the semantics of user queries, search relevant internal documents, and provide precise answers by integrating the existing knowledge base, offering structured summaries rather than just lists of documents. For example, Google Vertex AI Search, by integrating large language models and utilizing Retrieval Augmented Generation (RAG), enables smarter searches. It not only retrieves relevant documents based on user queries but also automatically synthesizes key information. In the healthcare industry, Vertex AI Search has been used to extract relationships between conditions and treatments from a vast of medical research papers, helping doctors quickly find best practices.

3.Automated Knowledge Generation and Deduction:

In the past, knowledge formation relied on expert inductive reasoning and organizing. Now, large language models can derive new insights based on existing information. For example, in personal knowledge management systems, Yinxiang Biji leverages large language models to combine user notes' context with recommend related notes, helping users uncover knowledge and build knowledge systems. In enterprise knowledge management systems, large models can automatically generate best practice guides based on historical project data. For example, Microsoft 365 Copilot, integrating large language models with a law firm's internal data, can summarize meeting minutes and based on historical cases, automatically draft legal documents, reducing repetitive tasks.

With the development of large language models, knowledge has shifted from manual organization to intelligent automation. This transformation makes learning knowledge more efficient, enabling both enterprises and individuals to build knowledge assets more quickly and freeing up knowledge workers to focus on higher-value creative tasks.

(V) The Emergence of a New Form of Intelligence in the AI Era

In the knowledge management model, the transition from knowledge to wisdom represents the highest level of evolution. While transforming information into knowledge requires systematic understanding, pattern recognition, and identifying relationships and causality, wisdom goes a step further. It builds upon deep comprehension of knowledge, incorporating critical thinking and creative application to make informed decisions and even drive forward-thinking innovations. This transformation is where the true value of knowledge work is realized.

As the final stage of the DIKW model, wisdom has traditionally been formed through an individual's accumulated knowledge, values, judgment, and experience, leading to deep understanding and insight within a specific domain. In the era of artificial intelligence, large language models can simulate certain characteristics of wisdom by recognizing complex patterns, uncovering hidden trends and relationships, and assisting decision-makers in making more informed choices in complex environments.

At the same time, wisdom in the AI era must also consider ethics, values, and long-term impact. When leveraging AI for decision-making, it is not only essential to consider effectiveness but also to assess fairness and societal consequences.

We are already witnessing the emergence of this new form of wisdom across various scientific research fields and industry applications, empowered by artificial intelligence. For example:

1.Google DeepMind' s AlphaFold leverages deep learning technology to extract patterns from vast amounts of protein sequence data and existing biological knowledge, successfully predicting the three-dimensional structures of proteins. This breakthrough has resolved a decades-old challenge in biology, demonstrating AI' s ability to derive rules from knowledge while also generating unprecedented scientific hypotheses that drive innovation in drug discovery and disease treatment.

AlphaFold has achieved an unprecedented level of prediction accuracy and is now widely used by researchers worldwide to accelerate new drug development. It exemplifies how AI can go beyond deep knowledge comprehension to integrate prediction and innovation, producing forward-looking wisdom with significant scientific and practical value.[1]

2.Duolingo integrates AI into its language learning platform by offering real-time conversation practice with AI, simulating real-world scenarios, and providing personalized feedback on learners' mistakes. By extracting patterns from vast linguistic data, AI enhances the learning experience, making it more interactive and tailored to individual needs. At the same time, Duolingo carefully balances intelligent services with fairness and social impact in education. The platform ensures that AI-generated dialogues adhere to cultural sensitivities, avoiding bias or inappropriate language, thereby promoting an inclusive and effective learning environment.[2]

The transition from knowledge to wisdom, empowered by artificial intelligence, signifies that AI is no longer merely a tool for information processing but is evolving into a collaborative partner that enhances human intelligence and assists in making better decisions.

The AI era is reshaping the entire process of knowledge work—from automated data collection to intelligent information organization, systematic knowledge generation, and ultimately, the evolution of wisdom. As demonstrated in best practices from companies such as Alibaba, Microsoft, Yinxiang Biji, Walmart, and Tencent Cloud, AI significantly boosts productivity by freeing knowledge workers from repetitive tasks, allowing them to focus on strategic and creative core values. Moreover, cases like AlphaFold and Duolingo illustrate that large language models not only simulate aspects of wisdom but also contribute to groundbreaking innovations in scientific research and education.

Looking ahead, AI will continue to expand the boundaries of knowledge work, fostering deeper collaboration between humans and productivity tools. It will not only enhance productivity but also serve as a catalyst for creativity and cross-disciplinary insights. This transformation—from data to wisdom—realizes Peter Drucker' s vision of knowledge work and redefines the way we work.

At the same time, as AI advances efficiency and intelligence, it is crucial to remain vigilant about ethical considerations, fairness, and social impact, ensuring that technological progress genuinely serves the long-term well-being of humanity.

III.The Future of Knowledge Work in the AI Era

The previous chapters have explored how AI empowers knowledge workers across various industries, liberating them from repetitive tasks and enabling them to focus on strategic and creative endeavors. This chapter will examine the future of knowledge work from three key perspectives: technological advancements, global development trends, and risk management in AI-driven empowerment. As AI continues to evolve, it is crucial to ensure that its development balances efficiency, fairness, and responsibility, shaping a sustainable and inclusive future for knowledge work.

(I) AI Further Advancing the Transformation of Knowledge Work

From a technological development perspective, the continuous advancement of artificial intelligence will bring deeper transformations to knowledge work in three key aspects: the optimization of large models, the expansion of multimodal capabilities, and the intelligent evolution of human-AI collaboration:

1.Optimization of Large Models and Multimodal AI Models:

Large language models (LLMs) and multimodal large language models (MLLMs) will continue to break performance boundaries. Current models like GPT-4, Google Gemini,

[1] Highly accurate protein structure prediction with AlphaFold
[2] Learning From and With AI: Duolingo' s Zan Gilani

and DeepSeek have demonstrated the ability to generate knowledge from unstructured data. Future models will combine reinforcement learning with neural symbolic reasoning to enhance their logical reasoning and cross-domain integration capabilities. For instance, in research, AI might not only predict protein structures (like AlphaFold) but also autonomously propose research hypotheses and design experimental processes. In business management, AI could automatically generate optimization strategies based on real-time market data and historical experiences. These advancements will enable knowledge workers to transition further from information processors to innovators.

2.Multimodal Interaction as a Core Feature of Knowledge Work:

Future productivity tools will fully support the collaborative processing of text, images, audio, and even 3D data. These tools will enable real-time video conference analysis, interactive visual report generation, and even the completion of complex tasks via voice commands or gestures. The widespread use of such technologies will lower the barrier to adapt, enabling knowledge workers without technical backgrounds to efficiently leverage AI.

3.Deep Human-AI Collaboration:

Human-AI collaboration will evolve into a deeper co-creation process, with AI transforming from a passive assistive tool into an "intelligent partner" capable of proactive learning and contextual awareness. For example, Microsoft 365 Copilot is already planning to track user habits over the long term to proactively optimize task priorities, predict project risks, and suggest cross-team collaboration strategies. This deep collaboration with AI will allow knowledge workers to focus on setting goals and evaluating results, while leaving execution details to AI, thereby freeing up more creativity and driving innovation.

（II）The Transformation of Knowledge Work Must Consider the Differences Across Countries

The development of artificial intelligence brings universal opportunities to knowledge workers, but looking globally, differences in technological levels, economic status, and educational resources among countries lead to varying development paths. How Global South countries can leverage AI to bridge the digital divide will be a key issue for future development.

For leading countries in artificial intelligence development, such as the United States, China, and major European economies, the deep application of AI will continue to accelerate. Through innovative ecosystems, these nations will continue to lead in large language model development and drive the knowledge work sector toward greater automation and personalization. With data advantages and industrial scale, AI will be more widely implemented in industries like manufacturing, education, and healthcare. At the same time, these countries are also advancing AI governance, wary of technological monopolies and data privacy issues. For example, the World Internet Conference released the "Research Report and Consensus Document on the Development of Responsible Generative AI". In addition, the EU has passed the "General Data Protection Regulation" (GDPR) and the "Artificial Intelligence Act," aiming to set standards for data governance and ethical applications and regulate AI use in knowledge work to ensure fairness and transparency.

For Global South countries, the widespread adoption of AI is both an opportunity and a challenge. These countries often face constraints such as insufficient infrastructure, a shortage of technical talent, and a digital divide. However, AI also offers the possibility of leapfrogging in knowledge work. For example, in the education sector, UNESCO has partnered with an Indian startup to provide low-cost, AI-driven learning platforms for students in rural areas, helping them acquire skills needed by multinational companies. In agriculture, Kenya's FarmDrive project uses AI to analyze planting data, offer precise planting recommendations, and provide loan support, thereby improving farmers' productivity and knowledge levels.

These practices demonstrate that through low-cost, scalable AI solutions, Global South countries can gradually narrow the gap with developed nations. However, AI can only truly empower knowledge workers

in the Global South and promote inclusive development when technical sharing is balanced with local adaptation. Coordination among technology-leading nations will be key to this process. These countries can support the Global South in building localized knowledge work ecosystems through open-source models, such as DeepSeek' s open-source model and Hugging Face' s open-source community.

Additionally, China' s Belt and Road digital cooperation initiative has promoted AI education projects in Southeast Asia and Africa. A landmark initiative is the World Internet Conference Digital Academy, officially launched in November 2024. This platform focuses on key digital economy domains including AI, cybersecurity, and cross-border e-commerce, offering comprehensive training programs and activities to cultivate professionals with broad international perspectives, cutting-edge digital thinking, and advanced digital skills. This will empower more countries and enterprises in their digital transformation, help bridge the global digital divide, and share the benefits of inclusive development.

The global development of artificial intelligence brings opportunities for knowledge work, but also faces challenges due to governance disagreements among leading technological countries and resource disparities in the Global South. Only through open, inclusive international cooperation and coordination can AI truly empower global knowledge workers and help knowledge work reach a new frontier of fairness and wisdom.

(III) Responsible AI is key to transforming knowledge work

While artificial intelligence enhances the efficiency and intelligence of knowledge work, it also presents potential risks, with ethics and fairness being the core challenges. Large language models may make unfair decisions due to biased training data. For example, AI used in recruitment might prioritize certain groups, potentially exacerbating social inequality. Research into Explainable AI (XAI) will ensure greater transparency in model development, allowing knowledge workers to understand and intervene in AI decision-making.

Furthermore, the AI industry needs to reference globally accepted ethical guidelines, such as the "Global AI Governance Initiative" issued by the Chinese government and the "Ethical Guidelines for AI Design" published by IEEE, to regulate AI applications in knowledge work.

Secondly, data privacy and security must be ensured. AI relies on vast amounts of data, and knowledge workers often handle sensitive information. For example, if a doctor were to leak patient data, it could result in severe consequences. Further solutions include Federated Learning, which trains models without sharing raw data, and edge-cloud integrated solutions, such as the AI PCs co-developed by Yinxiang Biji and Intel, which use local large language models to protect user data privacy.

Finally, how to avoid job displacement and skill imbalances is also a long-term challenge. While AI will not completely replace knowledge workers, the automation of certain repetitive tasks may lead to job reductions. The World Economic Forum's "Future of Jobs" report predicts that by 2030, 1 billion people globally will need upskilling, including the ability to collaborate with AI. Governments and businesses need to encourage knowledge workers to learn new skills such as data analysis and AI management, ensuring their competitiveness in the AI era.

The knowledge work in the AI era is full of potential but also accompanied by complexities. The acceleration of technological development will drive knowledge work from efficiency enhancement to wisdom co-creation, and deepened global collaboration will help bridge the digital divide. Effective risk control will ensure that this process serves the long-term well-being of humanity. As foreseen by Peter Drucker, the value of knowledge workers lies in creating and applying knowledge. The advent of AI not only fulfills this vision, but its development will inevitably push it to new heights. Looking ahead, knowledge workers, in balance between technological empowerment and humanistic care, will join hands with AI to open a new era of wisdom-driven knowledge work.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