Diary of HI & AI - Book Review

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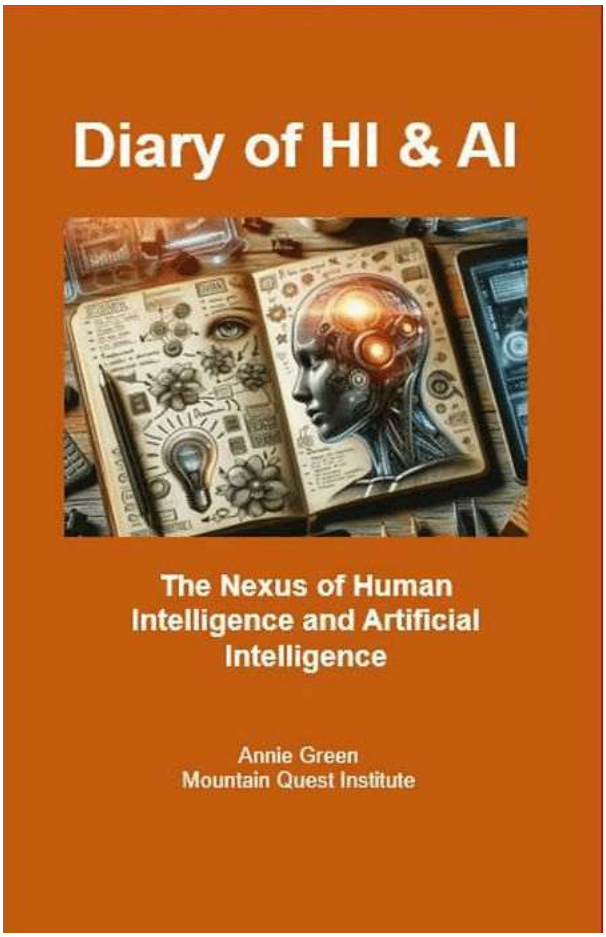
Diary of HI & AI: The Nexus of Human Intelligence and Artificial Intelligence by Annie Green explores how human and artificial intelligence can work together through Augmented Intelligence. It provides practical guidance on responsible AI, digital twins, data, ethics, and human-centered decision-making, helping readers prepare for an AI-enabled future.



The book Diary of HI & AI: The Nexus of Human Intelligence and Artificial Intelligence, written in 2025 by Annie Green, explores the integration of human and artificial intelligence. This integration, as she proposes, is the next step in the evolution of the human species, and the leap we are making in adopting artificial intelligence is one of the most significant leaps in the development from physical labor to intelligence-based life. Annie Green is a highly regarded colleague with extensive knowledge of artificial intelligence. The book is written in an original style: each chapter opens with a story about a well-known mythological figure, and, through one of their prominent characteristics, the author unfolds the chapter's central idea.

Many of us today already believe in the integration of intelligence, and from reading the book, one can learn how to turn this idea from a principle into reality.

Key topics raised in the book:

1. Artificial Intelligence:
    1. The Computer as a Digital Twin
    2. Data
    3. Technologies and Smart Tools
2. Human Intelligence:
    1. The Human as an Implementer of Responsible Intelligence
    2. Data Scientist
    3. All of Us
3. Living Together
    1. Combining Forces
    2. Facing the Future

Note: The book interweaves artificial and human intelligence throughout its entirety, accompanied by case studies. The schematic description above is intended to present topics concisely and clearly.

Definitely worth reading and applying; highly recommended. And as a bonus, you will meet many mythological figures we grew up with, and you will be able to see them in a new light.

Artificial Intelligence

The Computer as a Digital Twin

A digital twin is a virtual, dynamic representation of a physical object, process, or system that is continuously updated with real-time data from sensors. It enables simulation, monitoring, and analysis in a virtual environment to understand, analyze, and improve various aspects of our lives and to optimize the operations of the physical object.

Digital twins are based on technologies of artificial intelligence, the Internet of Things (IoT), big data, and analytics.

In recent years, the application of digital twins has been expanding both in breadth (for additional needs) and in depth (in the aspects it simulates). It is common across logistics, medicine, construction, smart cities, aviation, emergency management, and many other sectors.

Key capabilities:

- **Reflection:** understanding an existing situation based on available data;
- **Prediction:** diagnosing bottlenecks, risks, and emerging issues;
- **Simulation:** proposals for courses of action and associated implications;
- **Optimization**: refining courses of action.

Data

First, regarding data, it is worth understanding the concept of metadata (meta-data), labels that describe data by referring to their attributes.

For example, an image's metadata may include the camera used to take it, the date, and the people photographed.

The purpose of metadata is to enable quick, easy familiarity with data, and it is critical for organizing, cataloging, and managing massive amounts of data.

Metadata may also include information about the data's origin, historical context that enables time layers, and information that supports permissions and data

security. Since data forms the basis for many artificial intelligence technologies, and metadata underpins data, planning, managing, and using metadata is the foundation for leveraging these technologies.

In planning the data and accompanying metadata in digital twins, the following must be addressed:

1. The purpose of the representative data is to be collected.
2. Data collection sources and ensuring their accuracy, completeness, and currency;
3. Process and metadata planning; collection based on accepted standards and protocols.
4. Addressing:
    1. Risk challenges: deepfake, security, and more.
    2. Time management: multi-layered data.
    3. Methods of integrating data from different sources; a unified language for shared understanding.
    4. Methods of making information accessible and using it.
5. Implementation, including testing and validation; documentation.
6. Maintenance and updating in accordance with changing data and needs.

Data is, at the end of the day, the source of truth for information, intelligence, and knowledge systems. Good data can be a significant leap forward; incorrect, biased, misleading, or improperly analyzed data can (as shown by actual examples) cause significant damage, up to and including the destruction of companies. They must be treated and handled with the utmost reverence.

Technologies and Smart Tools

The technological world is constantly evolving. These developments include technologies that directly serve the world of intelligence, such as big data, cloud computing, robots, co-bots, smart algorithms, and more, as well as devices and applications that represent technological leaps in agriculture, medicine, drones, telephony, and more. The latter serve the world of intelligence indirectly and in multiple directions (feeding data on one hand and using it on the other).

Fundamental intelligence technologies include:

- Machine learning
- Natural language processing
- Computer vision
- Robotics
- Expert systems (mimicking decision-making processes).

Looking more deeply at the new world, not all that glitters is gold, and many technologies we have heard of have not succeeded (Google, for example).
But even the technologies that succeeded have affected human society, and not only in a positive way:

- In the threat to data security and privacy, people are sometimes not even aware of the information being collected about them.
- In the risks of addiction to the digital world and the impact on human mental health and well-being.
- In over-reliance on technology, while losing social and cognitive abilities.
- In incorrect recommendations due to errors in data or systems.

There is no doubt that technologies in general, and human intelligence applications in particular, represent human innovation on the one hand and, on the other hand, are reshaping how many sectors operate and improving our

quality of life. Nevertheless, they must be adopted with a human understanding of their impacts and by striking a balance that minimizes the unwanted ones.

Human Intelligence

The Human as an Implementer of Responsible Intelligence

Irresponsible intelligence stems, first and foremost, and this is important to understand, from human problems that are merely reflected by the machine! The implementation of responsible intelligence relates to several aspects.

Beware of:

- Unreliability and prevention of biases (discrimination and more)
- Data privacy exposure
- Information leakage and data security issues

And on a positive level:

- Integrity
- Ethics (alignment with professional standards and values)
- Transparency and explainability
- Moral principles.

And just as the human is the source of the problems in irresponsible intelligence, the human being is responsible for designing responsible intelligence systems and monitoring them, so that even if on the day of their launch they appear responsible, they will continue to operate as such over time (M.L.).

The Data Scientist

The data scientist is a key role player in the implementation of artificial intelligence. They are the architect who uses metadata to build the digital twin and the AI model within it. They must understand the context (metadata) to build a model that reliably reflects reality.

The data scientist is responsible for:

1. Model design
2. Data quality improvement
3. Building the model in an iterative process of integrating data and algorithms, testing them, learning, and refining.
4. Processing, analysis, and data-based learning.

All of Us

This chapter is one of the most important in the book.
Human thinking is priceless in its capabilities in the following aspects:

- Creativity
- Ethical judgment
- Emotional intelligence
- Adaptability and flexibility
- Critical thinking
- Infinite learning (see book summary on the topic >>)

These influence the advantages of human beings and their roles in a world of integrated intelligence, as described below.
In terms of Whole Thought (see book summary on the topic >>), AI has capabilities, especially in speed, in processing large amounts of data, in creating

patterns and connections (across time and place dimensions), and in identifying insights from them through integration and creating an overall picture.

But alongside these, the human being has cognitive and emotional advantages, beyond what was described above:

- Intuition
- Empathy
- Cultural understanding

And ultimately, the human adds two additional critical components to the equation:

- Human values
- Cultural heritage.

And a note of caution - the sin of hubris. As in other areas of life, in the field of artificial intelligence too, when we design and use intelligent systems, we must be careful and teach ourselves humility and a Growth mindset through learning, listening, and broad yet smart exposure to new information and knowledge.

Living Together

Combining Forces

Artificial intelligence in all its forms, from digital twins to personal applications, requires the human being in a loop:

1. Planning and design
2. Deciding on the data and streaming it (or defining, collecting, and improving it)

3. Judgment regarding decision-making methods based on artificial intelligence
4. Systems thinking regarding how the systems operate
5. Planning wise use
6. Maintenance of systems and applications
7. Control that ensures the implementation of responsible intelligence
8. Innovation and continued development.

But the book presents a deeper conception. Not only to combine forces in building intelligence, but also in its use:
A concept called Augmented Intelligence that focuses on enhancing human intelligence through technology. In this conception, the goal is not to replicate or replace human cognitive functions, but to work alongside them to improve their cognitive capabilities and decision-making processes; this is based on the advantages of the human being outlined above. Artificial intelligence can provide knowledge, but humans are more than the sum of their knowledge; they possess unique capabilities in how they use it.

Augmented Intelligence recognizes the complexity of human experience and the importance of empathy, and integrates people's emotions and behaviors into decision-making processes.
All this, without ignoring the technological capabilities to replicate human processes involving vision, movement, hearing, and other senses.

In fascinating case studies about Google, IBM, and others, Green describes how collaboration, meaning the sharing of knowledge and cooperation between machine and human being, is the key to creating responsible and valuable intelligence solutions.

Facing the Future

We must strive forward. To live with the capabilities and towards a smart and balanced digital transformation for the future. To plan strategically and with systems thinking, taking into account the existing situation, needs, opportunities, and risks. And to think about the future:
People today fear losing their jobs and livelihoods in the age of intelligence. Even though people have advantages, such a scenario is not without foundation, and some jobs will disappear, just as the secretarial profession has in recent years due to automation.

We, as managers, must learn to explain how new technology is changing our lives and how we must change our way of operating in this new era. We must ensure that all of us strengthen skills such as those mentioned above (critical thinking, infinite learning, and more), as well as specific skills related to the roles being built in the new era.

The understanding that this is an integrated world in which each side has an advantage, and a positive embrace of change, will ease the transition. Human-machine collaboration will enable smart utilization of what lies before us.
We may not know where we are headed, but if we bring our full humanity, and in a positive, meaningful way, we will be best prepared for it.