

ChatGPT on I Ching at Six Levels

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Abstract— This study questions how ChatGPT, a large artificial intelligence (AI) text-to-text platform, can be used in handling a less popular topic with limited academic research. As the subject, *I Ching* or the *Book of Changes* was chosen. The future synthesization of *I Ching* and popular toolkits in the mainstream of strategic management was set as a focus. The author systematically examined the platform at six cognitive levels, based on the Bloom's Taxonomy Verb Chart, from memory to create. The preliminary evaluation reveals: 1) ChatGPT is knowledgeable, and its performances are satisfactory even in a less popular domain; 2) the platform's performances show a non-linear model along the six cognitive stages, dropping dramatically at the highest level; 3) the platform is more powerful in associating information logically than in synthesizing information imaginatively. The evaluation suggests that ChatGPT can penetrate almost any areas with enough training along the technology development. Facing it, knowledge workers have to prioritize their efforts to become AI assisted creators.

Keywords— ChatGPT, *I Ching*, Bloom Taxonomy Verb Chart, Strategic Management, Knowledge workers.

I. INTRODUCTION

Since OpenAI introduced ChatGPT—an artificial intelligence language platform—at the end of November 2022, the ballooning of its adoption sets a series of world records. The platform reached 1 million users in its first week and it passed 100 million users' milestone within the first two months (Curry 2023). It is apparent that ChatGPT and other large Generative AI models are burgeoning (Gozalo-Brizuela and Garrido-Merchan 2023).

Varied academic studies have been conducted on the platform to test its applications and capabilities. One research checks its effectiveness in translating languages through comparing with Google Translate, including translation prompt, multilingual translation, and translation robustness (Jiao et al. 2023). Another research examines its usefulness in generating a literature review on a specific topic in the field of healthcare (Aydin and Karaarslan 2022). The third experiments ChatGPT with feeding private data and proprietary expertise for producing a defined output in finance domain (Dowling and Lucey 2023). Bommarito and Katz (2022) found that ChatGPT could achieve a correct rate of 50.3% for best prompt and parameters in the Evidence and Torts sections in the Bar Exam. Ward (2023) compiled a list of exams that ChatGPT has passed, including SAT, AP English, Google coding interview for level three engineer, law exams in four courses at the University of Minnesota, and one business course at the University of Pennsylvania's Wharton School of Business.

The debates on the results of testing and experimenting exist and continue. While some authors and testers state that

ChatGPT is dumber than people think (Bogost 2022) and it is fun, but it cannot become a real author (Thorp 2023), others regard ChatGPT's performances as impressive (Dipshan 2023, Aydin and Karaarslan 2022) and are excited with the platform's potentials (Firat 2023, Jiao et al. 2023, Dowling and Lucey 2023, Bommarito and Katz 2022).

Most of the previous applied examinations on ChatGPT has been focusing on popular topics, ranging from education, entertainment, business, and varied professions. Given the training mechanism of the platform—exposes machine learning algorithms to a massive amount of text in the public domain, enables it to response to users' requests in a conversational format, and reinforces outputs through human feedbacks (Gozalo-Brizuela and Garrido-Merchan 2023, OpenAI 2022), the performances of ChatGPT on a less popular topic are hardly systematically measured. Furthermore, most of the previous examinations were conducted at limited levels of cognition and action. Only a few, such as Dowling and Lucey (2023) cover multiple stages of a research process.

Based on the previous experiments and existing research gaps, this research is the first to provide a structured test of ChatGPT on a less popular domain with a widely recognized multi-level capability-identification hierarchy.

The selected domain for examining ChatGPT is *I Ching* or *the Book of Changes*. *I Ching* is regarded as the spring of Chinese culture and is well known in East Asian countries (Lan 2013). However, it was hardly known to western countries until 1950s. Furthermore, it was regarded only as a divination tool. Due to difficulty or alienness of its content, *I Ching* attracts very limited users among divination services consumers (O'Brien 2019). Academic research on *I Ching* is limited and most of them is associated to the translation of the book contents. The comparative less coverage and high concentration of topics make *I Ching* an ideal area for checking ChatGPT's knowledge on the domain and capability to act on associated issues.

The adopted examining hierarchy is Bloom's Taxonomy Verb Chart, which has been used in education at different levels. The chart describes and classifies observable knowledge, skills, and abilities of behaviors or learners. The formation of the chart is based upon six levels of observable actions reflected in cognitive activity. They are, ascend, remember, understand, apply, analyze, evaluate, and create. The chart can easily show how a subject to deal with information for fulfilling a task. By using selected verbs and ensuring the carry out of assigned actions, a behavior's performances of data processing, critical thinking, and problem solving can be measured against the spectrum of

capability (Thompson and Lake 2023). The wide use of the chart in designing and assessing learning activities make it practical to evaluate ChatGPT's effectiveness, at different levels or on different tasks, systematically.

Combining the unique topic and the full spectrum of skill and capability, this research engages ChatGPT to generate six types of outputs on dealing with I Ching, from knowing, understanding, applying, analyzing, evaluating it, to synthesizing it with other toolkits in strategic management. The last part is still a virgin land of research and ChatGPT should not be exposed to it very much during the training. Therefore, the testing outputs should be able to demonstrate the language platform's effectiveness in handling a less popular topic along the action-capability spectrum.

Given the research purpose, this paper is organized into the following sections. After this brief introduction, sections 2-7 record the conversations between the author and ChatGPT. Each section focuses on one capability. At the beginning of each section the problems revealed by the conversation are highlighted. The prompts, shown as bold, in each section are carefully designed based on the suggestion of Bloom's Taxonomy Verb Chart. The answers were generated by ChatGPT. Due to the training, the language model's answers contain certain repetitive contents. Therefore, the author performed necessary editing to streamline the answers and avoid redundancy. The final section concludes the evaluation, discusses the limitations of the study, and points out the avenue for further research.

II. EXAMINE CHATGPT'S MEMORY OF I CHING

According to Bloom's Taxonomy Verb Chart, the bottom level of a behavior's acting capability is to remember previously learned material. It means that a subject could recall facts, terms, basic concepts, and answers. In this section, the author selects verbs from the chart and asks ChatGPT to specify the meaning, developer, and structure of I Ching. The conversation is listed below.

The answers from the platform at this level sound intelligent. Two problems can be identified:

- It fails to attribute the development of I Ching to King Wen, the founder of West Zhou Dynasty (1100-771 BCE). King Wen has been widely regarded as the author of the current version of I Ching.
- It uses "Marsh" (bolded and italicized in the answer by the author) instead of "Lake" or similar words to translate "泽," one of eight basic trigrams. It means lake or similar water covered areas. The translation is obviously inaccurate.

Q: What is I Ching?

A: "The I Ching, also known as the Book of Changes, is an ancient Chinese divination system that has been used for centuries to provide guidance on important decisions. The I Ching is one of the oldest Chinese classic texts, and it has been the subject of scholarly study and interpretation for thousands of years. The I Ching is based on the concept of yin and yang, which are complementary and opposing forces that are present in all things. The book consists of a series of

hexagrams, which are combinations of six yin and yang lines. Each hexagram is associated with a specific meaning and provides guidance on how to deal with different situations or challenges.

Traditionally, the I Ching was consulted using yarrow stalks or coins, which were cast and interpreted to determine the appropriate hexagram for the situation at hand. Today, it is also commonly consulted using other methods, such as tossing coins or using online interpretations.

The I Ching is still widely used today, both in China and around the world, as a tool for personal and spiritual development, as well as for practical decision-making in various areas of life, including business, relationships, and health."

Q: Who developed I Ching?

A: "The development of the I Ching is shrouded in mystery and is difficult to attribute to any one person. According to tradition, the I Ching was first compiled by the legendary Emperor Fu Xi, who lived over 4,000 years ago. However, the earliest known version of the I Ching was found in the tomb of King Wu Ding, who ruled during the Shang Dynasty in China, around 1200 BCE.

Over time, the I Ching evolved, with new commentaries and interpretations being added by scholars and practitioners. One of the most famous of these was the philosopher Confucius, who lived in China in the 5th century BCE and wrote extensively about the I Ching.

Today, the I Ching remains an important part of Chinese culture and is widely used by people around the world as a tool for personal and spiritual development, as well as for practical decision-making in various areas of life."

Q: How many hexagrams in I Ching?

A: "There are a total of 64 hexagrams in the I Ching, each of which is made up of six lines, either solid (yang) or broken (yin). Each hexagram has a unique name and description, and is associated with specific attributes, situations, and advice.

The hexagrams are created by combining the two trigrams, which are symbols made up of three lines, either solid or broken. There are eight possible trigrams, which are associated with different natural phenomena, such as heaven, earth, water, fire, thunder, wind, mountain, and *marsh*.

By combining two trigrams, a total of 64 possible hexagrams can be created. Each hexagram represents a specific set of conditions and provides guidance on how to deal with different situations or challenges. The hexagrams are used as a tool for divination, personal and spiritual development, and practical decision-making in various areas of life, including business, relationships, and health."

Q: What are key elements of I Ching?

A: "The I Ching is a complex and multi-faceted system that incorporates a number of key elements. Here are some of the most important:

1. Yin and Yang: The I Ching is based on the concept of yin and yang, which are complementary and opposing forces that are present in all things. Yin is associated with qualities like receptivity, darkness, and femininity, while

yang is associated with qualities like activity, light, and masculinity.

2. The Trigrams: The I Ching uses a set of eight trigrams, which are combinations of three lines either solid (yang) or broken (yin). Each trigram represents a different natural phenomenon, such as heaven, earth, water, and fire.
3. The Hexagrams: The hexagrams are created by combining two trigrams, resulting in 64 unique combinations. Each hexagram is associated with a specific meaning, including advice on how to deal with different situations or challenges.
4. The Process of Consulting: Traditionally, the I Ching was consulted using yarrow stalks or coins, which were cast and interpreted to determine the appropriate hexagram for the situation at hand. Today, it can be consulted using other methods, such as tossing coins or using online interpretations.
5. The Commentaries: The I Ching is accompanied by a number of commentaries, written by various scholars and practitioners over the centuries. These commentaries provide additional insight and interpretation, and have helped to shape the way the I Ching is used and understood.
6. The Principle of Change: The I Ching is based on the principle of change, which emphasizes the importance of adaptability and flexibility in the face of changing circumstances. This principle is reflected in the hexagrams themselves, which are designed to provide guidance on how to navigate the changing dynamics of life.

Together, these elements form a powerful and multifaceted system that has been used for centuries as a tool for divination, personal and spiritual development, and practical decision-making."

III. EXAMINE CHATGPT'S UNDERSTANDING OF I CHING

The second level of a behavior's acting capability, reflected in Bloom's Taxonomy Verb Chart, is to translate and interpret previously learned material. It demonstrates a subject's understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas. In this section, the author instructs ChatGPT to conduct actions such as compare, classify, describe, discuss, and explain issues related to the I Ching, with a particular reference to its theoretical foundation, different contribution of western scholars, and interpretation of the first hexagram.

The answers from the platform at this level still sound intelligent. However, several problems can be identified from the responses.

- The numerical features of I Ching was not recognized as part of theoretical foundation. Those features, in fact, stimulate Leibniz's work on pre-established order.
- The interpretation of the first hexagram is problematic in contents. It fails to adopt the mainstream of I Ching study, using dragons as a sample to display a series of status in creation.
- Missing a link in explaining the first hexagram. Differing from the rest 62 hexagrams in I Ching, the first two hexagrams each has an extra judgement respectively

except normal six lines. The answers did not include this extra judgement in its interpretation.

Q: *Is there any theoretical foundation for I Ching?*

A: "Yes, I Ching has a rich theoretical foundation rooted in ancient Chinese philosophy and wisdom. The basis of I Ching is the concept of the Tao, or the ultimate reality that underlies all things and gives them their natural order. The hexagrams in I Ching are said to represent the dynamic interplay between Yin and Yang, the complementary forces that make up the Tao.

I Ching is also closely associated with the Chinese philosophical concept of change, or "the Tao of change." This idea holds that everything in the universe is constantly changing, and that it is possible to understand and navigate this change by understanding the patterns and relationships between events. This understanding is reflected in the 64 hexagrams of I Ching, which are believed to provide guidance and insight into the nature of change and how to respond to it.

Additionally, I Ching has been influenced by Confucianism, which emphasizes ethical and moral principles, and Taoism, which emphasizes living in harmony with the Tao. These philosophical influences are evident in the ethical and moral guidance that is often provided through I Ching readings.

Overall, I Ching has a complex and rich theoretical foundation that draws on ancient Chinese wisdom and philosophy and continues to be an important part of Chinese culture and spirituality."

Q: *In the western world, who contributes to the promotion and spread of I Ching? Please umber several and highlight their achievements.*

A: "In the Western world, there have been several influential figures who have contributed to the promotion and spread of the I Ching. Here are a few examples:

1. Richard Wilhelm: Richard Wilhelm was a German sinologist and translator who played a major role in popularizing the I Ching in the West. In 1923, he published a German translation of the I Ching that became widely popular and influential. He also wrote a commentary on the text, which helped to deepen Western understanding of the I Ching's symbolism and philosophy.
2. Carl Jung: The Swiss psychiatrist Carl Jung was another major figure in the Western interpretation of the I Ching. Jung was fascinated by the I Ching's use of symbols and archetypes, and he saw it as a valuable tool for accessing the unconscious mind. He wrote extensively about the I Ching, and his ideas helped to popularize the text among Western intellectuals.
3. James Legge: James Legge was a Scottish sinologist who made a major contribution to the Western understanding of the I Ching with his 19th-century English translation of the text. Legge's translation was one of the first to be widely available in English, and it helped to introduce the I Ching to a Western audience.
4. Hellmut Wilhelm: Hellmut Wilhelm, the son of Richard Wilhelm, continued his father's work of promoting the I Ching in the West. He co-translated the I Ching with his

father, and he also wrote several books on the subject, including "Understanding the I Ching" and "Heaven, Earth, and Man in the Book of Changes".

5. Alfred Huang: Alfred Huang is a contemporary I Ching scholar who has made significant contributions to the Western understanding of the text. He has translated the I Ching into modern English, and he has also written extensively on the subject, including the book "The Complete I Ching: The Definitive Translation".

These are just a few examples of the many figures who have contributed to the Western interpretation and promotion of the I Ching. Their work has helped to deepen our understanding of this ancient text and its relevance to contemporary Western culture.”

Q: Can you name some scholars who combine I Ching and Business Administration?

A: “Certainly! Here are a few scholars who have combined the principles of the I Ching with business administration:

1. Thomas Cleary: Thomas Cleary is a translator and scholar of Eastern philosophy who has written extensively about the application of the I Ching in business. His book "The Tao of Sales: The Easy Way to Sell in Tough Times" uses the principles of the I Ching to provide guidance for sales professionals.
2. Hung-Sying Jing: Hung-Sying Jing is a professor of business administration at National Chengchi University in Taiwan. He has written several articles and books on the application of the I Ching to business strategy, including "I Ching: The Book of Changes and Business Strategy".
3. Chun-Hung Chiu: Chun-Hung Chiu is a professor of management at National Taiwan University. He has written several articles and books on the application of the I Ching to leadership and management, including "The I Ching and Business: A Guide to Improving Leadership, Sales, and Innovation".
4. Chin-Ning Chu: Chin-Ning Chu is a speaker and author who has written several books on the application of Eastern philosophy to business. Her book "Thick Face, Black Heart: The Warrior Philosophy for Conquering the Challenges of Business and Life" draws on the principles of the I Ching to provide guidance for success in business.
5. Stuart R. Jennings: Stuart R. Jennings is a professor of management at the University of Houston. He has written several articles and books on the application of the I Ching to strategic management, including "The I Ching and Management: Ancient Wisdom for Modern Business".

These scholars have all explored the ways in which the principles of the I Ching can be applied to business administration, providing guidance and insights for success in the modern business world.”

Q: Can you explain the first hexagram Qian?

A: “Yes, the first hexagram of the I Ching is called Qian (also spelled Ch'ien or Chien), which is composed of six unbroken lines, representing the creative principle, the heavens, and strength.

Below is an overview of the interpretation of each line in the Qian hexagram:

Line 1: "The Creative" - This line represents the beginning of a new cycle or creative endeavor. It is a time to take action and set the wheels in motion. The line also suggests the need to have a clear vision and strong leadership to ensure success.

Line 2: "The Receptive" - This line represents a receptive and open attitude, ready to receive guidance and inspiration from the divine. It is a reminder that in order to create something new, one must be open and receptive to new ideas and perspectives.

Line 3: "Difficulties in the Beginning" - This line represents the challenges and obstacles that may arise at the beginning of a new venture. It suggests that perseverance and patience are needed to overcome these challenges.

Line 4: "Youthful Folly" - This line represents youthful energy and enthusiasm, but also the potential for recklessness and impatience. It suggests the need to balance enthusiasm with caution and wisdom.

Line 5: "Waiting" - This line represents a time of waiting and patience, allowing things to unfold naturally. It suggests the need to be prepared and alert for opportunities that may arise.

Line 6: "The Creative" - This line, like the first line, represents the creative principle and the need for strong leadership. It suggests that success can be achieved by maintaining a clear vision and taking bold action.

Overall, the Qian hexagram represents the beginning of a new cycle, the power of creativity and leadership, and the potential for challenges and obstacles along the way. It emphasizes the importance of being open and receptive to new ideas and perspectives, balancing enthusiasm with caution, and cultivating patience and perseverance in the face of difficulties.”

IV. EXAMINE CHATGPT’S APPLICATION OF I CHING

The third level of a behavior’s acting capability, reflected in Bloom’s Taxonomy Verb Chart, is to apply previously learned material in given situations. It demonstrates a subject’s ability to solve problems by using acquired knowledge, facts, techniques and rules in a different way. In this section, the author instructs ChatGPT to conduct actions such as illustrate, determine, and explain procedures, rules, and limitations in applying I Ching.

The answers from the platform at this level are straightforward and apparent. However, several points are worth noting.

- In answering how to determine the change line, the platform fails 1) to mention that it is determined by residual numbers in using 50 yarrow stalks or the status of casting three coins, and 2) to recognize that in many situations there is no changing line, which is part of I Ching’s features, recognizing temporary stability in the “Tao” of changing.
- In discussing the symbolic meaning of Qian hexagram, it fails to mention that the image of Qian hexagram is the only case among 64 hexagrams, consisting of all six “Yang” lines without any “Yin” lines.
- In presenting application limitations, the platform puts “with malicious intentions” at the end of prohibition list,

and also fails to prohibit “repetitive asking”. In the rules for consulting the I Ching, the two items are always on top.

Q: What are procedures for using I Ching?

A: “I Ching is an ancient Chinese divination text that is used to provide insight and guidance on life's questions and challenges. Here are the general steps for using the I Ching:

1. Formulate a clear question: Before consulting the I Ching, take some time to reflect on the issue or question you are seeking guidance on. It is important to formulate a clear and specific question to get a useful answer.
2. Cast coins or yarrow stalks: There are various methods for casting the I Ching, but the most common involve using three coins or 50 yarrow stalks. The coins or stalks are used to generate one of 64 possible combinations of six lines, known as a hexagram.
3. Record the hexagram: Each hexagram has a specific meaning and is associated with a particular chapter in the I Ching. Record the hexagram that you have cast, including any changing lines.
4. Interpret the hexagram: Once you have your hexagram, consult the I Ching to find the corresponding chapter and read its interpretation. It is important to read the interpretation carefully and apply it to your specific question or situation.
5. Consider the changing lines: If any of the lines in your hexagram are changing, these indicate additional layers of meaning and should be considered in your interpretation.
6. Reflect on the answer: Take some time to reflect on the answer you have received from the I Ching. Consider how it applies to your specific question or situation and what actions you can take based on the guidance provided.

It is worth noting that using the I Ching requires patience, intuition, and an open mind. The guidance provided by the I Ching is meant to be a source of insight and reflection, rather than a definitive answer or solution.”

Q: How to determine or obtain the changing lines in consulting I Ching?

A: “Determining the changing lines in I Ching is an important part of the divination process and can provide additional insights and nuances to the reading. Here are the steps to determine the changing lines when consulting the I Ching:

1. Cast the coins or yarrow stalks as you would normally do when consulting the I Ching. There are several methods for casting, but the most common ones involve tossing three coins or using 50 yarrow stalks.
2. Record the resulting hexagram. The hexagram consists of six lines, which can be either solid (yang) or broken (yin).
3. Find the corresponding hexagram in the I Ching. Each hexagram has a name and a number, and there are 64 possible hexagrams in total. The corresponding chapter in the I Ching provides the interpretation of the hexagram.
4. Determine the changing lines. Changing lines are lines that are in transition from one state to another, meaning that they will move from solid to broken or from broken to solid in the next hexagram. To determine the changing lines, you need to compare the current hexagram with its complementary hexagram, which is obtained by flipping

all the lines of the original hexagram. The changing lines are those that are different between the two hexagrams.

5. Interpret the changing lines. Each changing line has a specific meaning, and it can provide additional insights and nuances to the reading. Changing lines are usually indicated with an "X" or a broken line with a circle around it in the hexagram.
6. Obtain the second hexagram. Once you have identified the changing lines, you can construct the second hexagram by replacing the changing lines with their complementary lines from the opposite state. The second hexagram is used to provide further insight into the situation or question.

It is important to remember that the interpretation of the changing lines is an integral part of the I Ching divination process, and it should be considered carefully in relation to the question or situation at hand.”

Q: Does the image of a hexagram such as Qian mean something?

A: “Yes, the image of the Qian hexagram in the I Ching has symbolic meaning and can provide further insight into the interpretation of the hexagram.

The image of Qian is often depicted as the sky or heavens, representing the ultimate creative force and the origin of all things. The unbroken lines of the hexagram are seen as a symbol of strength and power, reflecting the firm and unyielding nature of the creative principle.

The image of the Qian hexagram is also associated with the concept of the "creative masculine," which is characterized by strength, courage, and determination. In this sense, the hexagram represents the potential for powerful action, decisive leadership, and the ability to bring new ideas and projects into being.

Overall, the image of the Qian hexagram reinforces the idea that this is a time for bold action and leadership, drawing on the strength and power of the creative principle. It suggests that success can be achieved through perseverance, determination, and a clear vision of what needs to be accomplished.”

Q: What are situations people shouldn't consult I Ching?

A: “While the I Ching can be a helpful tool for gaining insight and guidance on a wide range of topics, there are some areas or topics that may not be appropriate to consult the I Ching about. Here are a few examples:

1. Medical advice: The I Ching is not a substitute for professional medical advice or treatment. If you have health concerns, you should seek the advice of a qualified medical professional.
2. Legal advice: The I Ching is not a substitute for professional legal advice or representation. If you are facing legal issues, you should seek the advice of a qualified attorney.
3. Lottery numbers or gambling: The I Ching is not a tool for predicting the future with certainty, and it is not appropriate to use it for making decisions related to gambling or the lottery.
4. Malicious intentions: It is not ethical to use the I Ching to harm or manipulate others. If your intentions are not

benevolent or you are seeking to control or manipulate others, then the I Ching is not an appropriate tool for you.

In general, it is important to approach the I Ching with a spirit of openness, respect, and humility. It is not a magic or infallible tool, and it should not be used as a substitute for personal responsibility, critical thinking, or independent decision-making.”

V. EXAMINE CHATGPT’S ANALYSIS OF I CHING

The fourth level of a behavior’s acting capability, reflected in Bloom’s Taxonomy Verb Chart, is to break down previously learned material to look at relationships. It shows how a subject examine and break information into parts by analyzing linkage, making inferences, and finding evidence to support generalizations. In this section, the author instructs ChatGPT to focus on three relationships—which show great importance to the applications of I Ching—and test its criticizing and differentiating performances.

The answers from the platform at this level sound informative and smart. However, some points are needed to be clarified:

- In scrutinizing the relationship between I Ching and Jung and Leibniz’s research, the platform uses the same word “resonates” to describe the linkage. However, Jung develops the concept of synchronicity for offering a unique mechanism to explain why I Ching can work. He suggests three types of meaningful coincidence (Jung 1960). Leibniz develops the concept of pre-established order inspired by I Ching, particularly due to the mathematical combination of “Yin” and “Yang” lines at different levels in hexagrams (McDonough 2017).
- Although ChatGPT acknowledges that the relationship between the I Ching and quantum theory remains a subject of debate and exploration, it points out that I Ching may offer insights into the underlying principles of quantum physics. However, it avoids mentioning that quantum entanglement phenomenon may offer an explanation on I Ching’s working mechanism.

Q: *What is the relationship between I Ching and Jung's research on synchronicity?*

A: “The concept of synchronicity, as developed by the Swiss psychologist Carl Jung, suggests that apparently meaningful coincidences can occur that are not causally related, but are instead connected by their meaning or significance. This idea of meaningful coincidences resonates with the I Ching, which is often used as a tool for divination and guidance.

Jung was interested in the I Ching and incorporated it into his research on synchronicity. He saw the hexagrams of the I Ching as archetypal symbols that could reveal underlying psychological patterns and processes. Jung believed that the I Ching could be used as a means of accessing the collective unconscious, a universal realm of symbolic meaning and archetypal patterns.

Jung's interest in the I Ching led him to collaborate with the sinologist Richard Wilhelm, who translated the I Ching into German. Jung wrote the introduction to Wilhelm's

translation, and his ideas about synchronicity influenced Wilhelm's understanding of the I Ching.

Overall, there is a close relationship between the I Ching and Jung's research on synchronicity, as both concepts emphasize the role of meaningful coincidence and symbolic meaning in understanding the world around us. The I Ching can be seen as a tool for accessing and interpreting the archetypal patterns and symbolic meanings that underlie our experiences, while Jung's theory of synchronicity provides a framework for understanding the significance of these patterns and coincidences.”

Q: *What is the relationship between I Ching and Leibniz's pre-established order?*

A: “The concept of the pre-established order, as developed by the German philosopher Gottfried Wilhelm Leibniz, suggests that the universe is composed of individual substances that operate independently of each other, but are harmoniously connected through a pre-established harmony that allows them to act in accordance with each other. This concept resonates with the I Ching, which presents a view of the world as a dynamic, interconnected system of relationships and patterns.

Leibniz was influenced by Chinese philosophy and was particularly interested in the I Ching, which he believed contained a universal language of symbolic meaning. He saw the hexagrams of the I Ching as representing fundamental principles of the universe, and he saw the process of divination as a means of tapping into this underlying harmony and order.

Leibniz's concept of the pre-established order can be seen as providing a framework for understanding the I Ching's emphasis on relationships and patterns. The hexagrams of the I Ching are composed of lines that represent different forces and energies, and the interpretation of these lines is based on an understanding of their relationships to each other and to the whole. This view of the world as a dynamic system of relationships and patterns can be seen as compatible with Leibniz's idea of a pre-established harmony that underlies all of existence.

Overall, the relationship between the I Ching and Leibniz's pre-established order can be seen as one of mutual influence, with both concepts emphasizing the idea of a universal harmony and order that underlies the world around us.”

Q: *What is the relationship between I Ching and Quantum Entanglement?*

A: “The concept of quantum entanglement suggests that particles can become connected in such a way that their properties become interdependent, even when separated by vast distances. This idea resonates with the I Ching's emphasis on relationships and interconnectedness, and some scholars have suggested that the I Ching may offer insights into the underlying principles of quantum physics.

In particular, some scholars have suggested that the hexagrams of the I Ching may be seen as representing different states of quantum entanglement, with each hexagram representing a different pattern of interconnection between different forces or energies. The changing lines in the hexagrams can be seen as representing shifts in the nature of these interconnections, and the process of divination can be

seen as a way of tapping into these underlying patterns and relationships.

The relationship between the I Ching and quantum theory remains a subject of debate and exploration, and it is important to note that the two systems operate on very different levels of analysis. While quantum theory is concerned with the behavior of subatomic particles, the I Ching is concerned with patterns of relationships and energies in the world around us. Nonetheless, the idea that the two systems may offer insights into the nature of the universe remains intriguing and worthy of further investigation.”

VI. EXAMINE CHATGPT’S EVALUATION OF I CHING

The fifth level of a behavior’s acting capability, reflected in Bloom’s Taxonomy Verb Chart, is to evaluate previously learned materials or evidence found. It shows how a subject can present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria. In this section, the author asks ChatGPT to conduct varied assessments. Topics include the comparison of I Ching and similar products, rank toolkits based on a specific purpose, and assessing a real-world case for using I Ching to forecast the happening of the current Russia and Ukraine war. The answers from the platform at this level are quite informative, interesting, and diplomacy. However, some issues are observable:

- In comparing I Ching and similar tools, ChatGPT highlights that both Tarot cards and Runes are symbol-based divinations. However, its explanations on the originations of the symbols are vague.
- In analyzing I Ching’s role for strategic management, ChatGPT acknowledges that it provides insights into the underlying patterns and relationships in a business environment. However, it fails to mention the functions of archetypes contained in hexagrams (Lan 2013).
- In exploring the missing of number 7 in I Ching, ChatGPT notes that the I Ching does not contain a hexagram with the number 7. In fact, the whole system does not have anything to do with the number. It is so strange that all single digits except 7 are well presented in I Ching.
- In handling the real-world case of using I Ching, ChatGPT’s answers are tact. However, its argument that complex geopolitical issue, such as a war, is beyond the scope of any single divination system is arguable, since I Ching was burgeoned from foretelling the outputs of big events such as conflicts between countries.

Q: *What are similar products as I Ching in the world? Can you compare them?*

A: “There are several divination tools and systems around the world that share some similarities with the I Ching. Here are a few examples, along with some brief comparisons:

1. Tarot cards: The tarot is a system of divination that uses a set of cards with symbolic images and meanings. Like the I Ching, the tarot can be used for self-reflection and guidance, and it emphasizes the role of symbolism and intuition in understanding the world. However, the tarot is more focused on individual psychological themes, while

the I Ching emphasizes the role of relationships and patterns in the world.

2. Runes: Runes are a system of divination that uses a set of symbols carved onto stones or other objects. Like the I Ching, runes are often used for guidance and self-reflection, and they emphasize the role of symbolic meaning in understanding the world. However, the runes are more closely tied to Germanic and Scandinavian mythology, while the I Ching is rooted in Chinese philosophy.
3. Astrology: Astrology is a system of divination that uses the positions and movements of celestial bodies to gain insight into human affairs. Like the I Ching, astrology is concerned with patterns and cycles, and it emphasizes the interconnectedness of different parts of the world. However, astrology is more focused on the role of celestial bodies in shaping human destiny, while the I Ching is more focused on the role of human action and decision-making in shaping the world.
4. Numerology: Numerology is a system of divination that uses numbers to gain insight into the world. Like the I Ching, numerology is based on the idea that patterns and relationships underlie the world, and it emphasizes the role of symbolism and intuition in understanding these patterns. However, numerology is more focused on the meaning of individual numbers and combinations of numbers, while the I Ching is more focused on the meaning of the lines and hexagrams.

Overall, while there are some similarities between the I Ching and other divination systems, each system has its own unique approach and emphasis. The best way to determine which system is right for you is to explore each one and see which resonates most strongly with your own values and beliefs.”

Q: *Can you rank the major divination tools according to their role in helping a business to make a strategy?*

A: “It is important to note that no divination tool can provide a concrete and foolproof strategy for a business. However, some divination tools may be more helpful than others in generating insights and perspectives that can aid in the process of strategy development. Here is a ranking of some major divination tools according to their potential role in helping a business make a strategy:

I Ching: The I Ching is well-suited to helping a business make a strategy, as it is based on the principles of change and interdependence. The I Ching can provide insights into the underlying patterns and relationships in a business environment and can offer guidance on how to adapt to changing circumstances. The hexagrams of the I Ching are highly symbolic, and can be interpreted in a variety of ways to generate meaningful insights.

Tarot: Tarot can be a useful tool for generating insights and perspectives that can aid in the process of strategy development. The symbolism of the tarot can be used to generate new ideas and approaches, and the archetypal themes of the cards can offer insights into the underlying forces and energies at play in a business environment.

Astrology: Astrology can be a useful tool for understanding the underlying dynamics of a business environment and can offer insights into the timing and flow of different events. Astrological charts can be used to identify favorable times for making strategic moves, and can offer insights into the underlying energies and forces at play in a given situation.

Numerology: Numerology can be a useful tool for generating insights into the underlying patterns and energies in a business environment. The meanings of different numbers can be used to generate insights into the timing and flow of different events and can offer guidance on how to navigate complex situations.

Overall, it is important to remember that divination tools should be used as a means of generating insights and perspectives, rather than as a way of providing concrete solutions. The insights gained through divination should be integrated with other forms of analysis and decision-making in order to arrive at a well-informed and effective strategy.”

Q: *It seems that I Ching does not contain number 7. What is the reason or explanation?*

A: “You are correct that the I Ching does not contain a hexagram with the number 7. The reason for this is not entirely clear, and there are different interpretations and theories about why this is the case.

One theory is that the number 7 was considered to be a sacred or mystical number in ancient China and was therefore not used in the I Ching as a way of preserving its spiritual significance.

Another theory is that the I Ching was based on an earlier divination system that used eight trigrams, and when these were combined to form hexagrams, the number 7 was simply omitted because it did not fit into the structure of the system.

Another possible explanation is that the I Ching is a symbolic representation of the natural world, and the omission of the number 7 may reflect an aspect of the natural world that is not easily captured by the hexagrams. For example, some scholars have suggested that the number 7 may represent a transitional state between different phases of change, and therefore is not represented in the hexagrams because it does not correspond to a clear and distinct stage of transformation.

Regardless of the reason for the absence of the number 7 in the I Ching, it is worth noting that this does not detract from the overall significance and usefulness of the system. The hexagrams of the I Ching are highly symbolic and multifaceted and can be used to generate insights and guidance on a wide range of issues and situations. Whether or not the absence of the number 7 has any deeper significance, the I Ching remains a powerful tool for divination and personal growth.”

Q: *Raymond Lo consulted I Ching on Feb 23, 2022. The question he asked is "How Will the conflict between Russia and Ukraine develop in next 30 days." The result he got was total clash. The next day Russia invaded Ukraine. Is it a coincidence or I Ching does have forecasting capability?*

A: “As an AI language model, I cannot confirm whether the result obtained by Raymond Lo was a coincidence or not. The accuracy and effectiveness of divination systems like the I

Ching are subject to debate and skepticism. While some people may believe that divination can provide accurate predictions, others may view it as a form of superstition or subjective interpretation.

It is possible that the I Ching provided a warning or indication of the impending conflict, but it is also possible that the result was simply a coincidence. Additionally, it's important to keep in mind that the conflict between Russia and Ukraine was a complex geopolitical issue that involved many factors beyond the scope of any single divination system.

In general, it's important to approach divination methods like the I Ching with a critical and open-minded perspective, and to use them as a tool for guidance and insight rather than as a definitive source of knowledge or prediction.”

VII. EXAMINE CHATGPT’S SYNTHETIZATION OF I CHING

The highest level of a behavior’s acting capability, reflected in Bloom’s Taxonomy Verb Chart, is to create or compile previously learned materials to generate new solutions. It is usually shown in a subject’s action for synthesizing information together in a different way by combining elements in a new pattern or proposing alternative resolutions. In this section, the author instructs ChatGPT to be aware of causality and acausality analysis and combine I Ching and several popular analytical toolkits in strategic management. Based on it, the author asks for ChatGPT’s suggestion on acting in this field as a scholar.

The answers from the platform at this level are intelligent, tact, and stimulating. However, some problems are worth noting:

- In comparing and combining causality and acausality approaches, ChatGPT points out the key difference between them—having or having not the cause-and-effect relationships. However, it confines the application of acausality to the context of “a large dataset,” which may blur the boundary of acausality—meaningful coincidence—and statistical expression of causality.
- In combining I Ching and three popular strategic management toolkits in the main stream, ChatGPT lists the differences of involved toolkits respectively and hypothesizes the combining scenarios. However, the answers fail to point out the key difference and suggest an implementable complementary approach. For example, in combining I Ching with Michael Porter’s strategy formulation toolkit, ChatGPT fails to acknowledge and exploit the “strategy reversing” function of I Ching (Lan 2014).
- In foretelling the future of incorporating I Ching into the mainstream of Western business strategic management, ChatGPT acknowledges that it is a relatively niche field and offers a couple of suggestions. However, its answers are very general and possessing little implementing guidance.

Q: *Is causality analysis is more reliable than acausality tracing?*

A: “Neither causality analysis nor acausality tracing can be considered inherently more reliable than the other. The reliability and validity of either approach depend on a range of

factors, including the research question, the available data, and the theoretical framework being used.

Causality analysis aims to identify the cause-and-effect relationships between variables. It involves examining the temporal order of events and determining whether one variable has a direct or indirect effect on another variable. Causality analysis is widely used in many fields, including epidemiology, economics, and social sciences, and can provide valuable insights into the factors that contribute to a particular outcome.

On the other hand, acausality tracing is a technique that focuses on identifying patterns or relationships in data without necessarily establishing a cause-and-effect relationship. Acausality tracing can be used to uncover correlations or associations between variables that may be important for understanding a particular phenomenon. This approach is commonly used in machine learning and data science applications.

Both causality analysis and acausality tracing have their strengths and limitations, and the choice between them depends on the research question and the available data. For example, if the goal is to establish the causal relationship between two variables, causality analysis would be more appropriate. However, if the goal is to uncover patterns or relationships in a large dataset, acausality tracing may be more useful. Ultimately, the choice of method depends on the specific research question and the nature of the data being analyzed.

Q: Can you combine I Ching and Michael Porter's generic strategy?

A: "The I Ching is an ancient Chinese divination system that has been used for centuries to provide guidance on important decisions. Michael Porter's generic strategy, on the other hand, is a framework used in business strategy to identify a company's competitive advantage and determine its strategic direction. Although these two concepts come from different backgrounds, they can be combined to provide a unique perspective on strategic decision-making.

One way to combine the I Ching and Michael Porter's generic strategy is to use the I Ching to gain insight into the underlying forces and dynamics affecting a business or industry, and then use Porter's framework to develop a strategic response.

For example, a company may consult the I Ching to gain insight into the current state of its industry and identify any potential challenges or opportunities. Based on this analysis, the company can use Porter's generic strategies - cost leadership, differentiation, and focus - to develop a strategic plan that leverages its strengths and addresses any weaknesses or threats.

Alternatively, the I Ching can be used to provide guidance on the best strategic approach to take, based on the company's unique circumstances and the external environment. For example, the I Ching may suggest that a company should focus on differentiation, while also developing a low-cost advantage in order to achieve long-term success.

Ultimately, combining the I Ching and Michael Porter's generic strategy can provide a powerful framework for

strategic decision-making, helping companies to identify and leverage their competitive advantages, while also responding effectively to changing market conditions."

Q: Can you combine I Ching and SWOT analysis?

A: "The I Ching is an ancient Chinese divination text that is used to gain insights and guidance on different aspects of life. The SWOT analysis, on the other hand, is a business framework used to assess a company's strengths, weaknesses, opportunities, and threats. Here are some ways to combine these two approaches:

1. Use the I Ching to gain insights on the strengths and weaknesses of the company. The I Ching can provide guidance on how to leverage the company's strengths and address its weaknesses.
2. Use the I Ching to gain insights on the opportunities and threats facing the company. The I Ching can provide guidance on how to take advantage of opportunities and mitigate threats.
3. Use the SWOT analysis to identify the strengths, weaknesses, opportunities, and threats of the company. Then, use the I Ching to gain deeper insights into each of these areas.
4. Use the I Ching to identify potential risks and challenges that may arise in the future. Then, use the SWOT analysis to assess the company's readiness to handle these risks and challenges.
5. Use the I Ching to identify potential solutions and strategies to address the company's challenges and capitalize on its opportunities. Then, use the SWOT analysis to assess the feasibility and effectiveness of these solutions and strategies.

Overall, combining the I Ching and SWOT analysis can provide a more comprehensive and holistic approach to assessing a company's strengths, weaknesses, opportunities, and threats and developing effective strategies to address them."

Q: Can you combine I Ching and disruptive innovation theory?

A: "The I Ching is an ancient Chinese divination text that provides insights and guidance on different aspects of life, while the disruptive innovation theory is a business theory that explains how new technologies or business models can disrupt existing markets and industries. Here are some ways to combine these two approaches:

1. Use the I Ching to gain insights into the changing business landscape and emerging technologies that could disrupt the industry. The I Ching can help identify potential disruptors and suggest strategies to adapt to them.
2. Use the disruptive innovation theory to analyze the potential impact of new technologies or business models on the company. Then, use the I Ching to gain insights into how to respond to these disruptions and position the company for success.
3. Use the I Ching to identify potential opportunities for innovation and growth within the industry. The I Ching can provide guidance on how to develop new products, services, or business models that could disrupt the industry.

4. Use the disruptive innovation theory to identify potential threats to the company's existing business model or products. Then, use the I Ching to gain insights into how to adapt or pivot to mitigate these threats.
5. Use the I Ching to gain insights into the company's culture and values, which are critical factors in fostering a culture of innovation and adaptability. The I Ching can provide guidance on how to foster a culture that is receptive to change and open to new ideas.

Overall, combining the I Ching and disruptive innovation theory can provide a more comprehensive and holistic approach to identifying and responding to disruptions in the business landscape. The I Ching's focus on intuition and adaptability can complement the data-driven approach of the disruptive innovation theory, leading to more creative and effective solutions to disruptive challenges.”

Q: *Can you predict the trend and way that I Ching will be incorporated into the mainstream of Western business strategic management? What should a scholar do in this context?*

A: “As an AI language model, I don't have the ability to make predictions about future trends. However, I can provide some thoughts on the current state of the integration of I Ching into Western business strategic management and some possible directions for future development.

The integration of I Ching into Western business strategic management is still a relatively niche field, but there is growing interest in the principles and insights that can be gained from this ancient Chinese text. As global business becomes increasingly interconnected and influenced by diverse cultures and practices, there is a growing recognition of the value of diverse perspectives and non-Western approaches to problem-solving and decision-making.

Scholars who are interested in exploring the intersection of I Ching and business strategy could continue to develop and refine methods for integrating the principles of the I Ching into Western strategic management frameworks, while also remaining mindful of the cultural and philosophical nuances of the text.

One potential avenue for development could be the use of AI and machine learning techniques to analyze and draw insights from large datasets of I Ching consultations, allowing for more sophisticated and nuanced applications of the text to complex business challenges.

Overall, the integration of I Ching into Western business strategic management will likely continue to be a dynamic and evolving field, as practitioners and scholars explore new ways to apply the insights of this ancient text to contemporary business challenges.”

VIII. CONCLUSION

This study selects a longitude and a latitude to constitute the skeleton of exploration for examining ChatGPT. I Ching or the *Book of Changes* is used as the meridian. Although it is popular in East Asia, I Ching is less known to the western world. Additionally, the research on incorporating I Ching into the mainstream of strategic management is nearly a virgin land. By limiting the research scope and setting a unique

target, the research focuses on checking the usefulness of the platform in handling a less popular domain.

While I Ching is used as the longitude, a cognitive hierarchy based on the Bloom's Taxonomy Verb Chart is set as the latitude. The hierarchy demonstrates a behavior's action capacity at six levels: ascendingly from memory to understand, apply, analyze, evaluate, and finally to create. By tracing the performances of ChatGPT at all levels, the platform's action variation, such as vigorous, along the cognition spectrum is scrutinized.

This study systematically examines ChatGPT's usefulness, robustness, and creativeness in dealing with I Ching at different cognitive levels. The usefulness evaluation focuses on scrutinizing the information and guidance generated by the platform. The robustness assessment is mainly on interaction of the platform with the user and its tendency for associating related information. The creativeness analysis concentrates on the ways for synthesizing previously learned materials. To conduct the study, the prompts were carefully designed. The responses of the platform were critically analyzed.

Three findings can be drawn from the preliminary evaluation. Firstly, ChatGPT is capable even in dealing with a less popular domain. The conversations find that the platform is knowledgeable, and its performances are professional and satisfactory. Secondly, the overall quality of ChatGPT's responses show a non-linear model along the six cognitive stages. The analysis finds that the platform performances at a consistent level at first five levels. However, its usefulness, robustness, and creativeness drop dramatically at the last level. Thirdly, ChatGPT is more powerful in associating information logically than in synthesizing information imaginatively. It suggests that the platform can penetrate almost any areas with enough training. Nonetheless, going deep beyond association for creating new contents is still hard for ChatGPT.

This research shows several limitations while it documents and criticizes the performances of ChatGPT in memorizing, understanding, applying, analyzing, evaluating, and synthesizing I Ching. Firstly, the conversations were through English. It is unclear whether using Mandarin Chinese would change the examination results. Secondly, the evaluation is limited to an individual assessment, although the author is scholar with expertise in both I Ching and Strategic Management. Thirdly, it is qualitative analysis without quantitative measurement.

The combinations of the research findings and limitations point out the avenues of future studies. The following questions are worth exploring. Why has ChatGPT performed well even in even less popular domain? Will the variation of ChatGPT's performances along Bloom's Taxonomy Verb Chart be changed by altering topics or prompts? Is this evaluation comparable to other assessments? How could knowledge workers become creation workers by strategically using varied AI platforms?

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