



Life Journey of a Taiwanese-American Seismologist
臺裔美籍地震學家的人生歷程

FROM RICE PADDIES TO
GOLD HILLS
由田野邁向金山



YI-BEN TSAI 蔡義本

...my father sent me to enter a middle school in Taichung City in central Taiwan. True to his conviction, he and my mother worked very hard to scabble every penny to pay for my tuition and living expenses. Without their love and devotion to my education, I would not have had a chance to sit here to enjoy the class with you, not to mention a fulfilled personal life.

...父親將我送進台中市的中學，在他的信念下，他與我母親非常認真工作賺取每一分錢，用以支付我的學雜費。如果沒有他們對我的愛，我沒有機會在這裡跟你們分享這門課，更別說擁有豐富的人生。

These two letters offering admission and full financial support brought me good news. But they also posed a difficult choice between two distinctively different career paths. I realized I had to make a crucial decision. On the one hand, I could pursue a glamorous science. On the other, I would delve into a down-to-earth science. After considerable struggle, I decided to go to MIT to study geophysics, specializing in seismology. I set a goal to go back to Taiwan someday to study earthquakes there. It turned out I made a fortuitous choice.

開心地收到了兩封全額獎學金的錄取通知書，但因為是兩個截然不同的研究領域，讓我陷入兩難。我必須做出一個關鍵的決定，一個可以讓我追求迷人的科學(太空科學)，一個則將我引入務實的科學(譯者按:此處可能是作者的文字遊戲。Down-to-earth乃務實，又因字面剛好為“朝向地面/球”，可意指地球物理)。經過幾番掙扎，我決定去麻省理工學院學習地球物理學，專攻地震學。我的目標是：有一天回到臺灣研究臺灣的地震。結果證實我做了一個幸運且正確的選擇。

Now I am under the maintenance phase of treatments every three months. Despite all the woes and worries I am determined for now to eat right, sleep well, and exercise enough. Above all, I am going to remind myself to think positively, just like my singing fish will always sing out cheerfully 'Don't worry, Be happy' (as long as the battery is up). 現在我維持每三個月治療一次的階段，儘管有各種困難和擔憂，我仍決心要正確飲食、睡得好、並且有足夠的運動。最重要的是，我要提醒自己要積極思考，就像我的唱歌魚總會高興地唱出來“別擔憂，要開心”(只要電池電量正常)。

On the morning of January 31, 2018, he appeared very weak. He agreed my son to shave him. Family members were around him. He whispered to me "tell everyone do not mourn." ...then he quietly got off the train.

Chu-Fen Hsu Tsai

2018年元月31日早上，他看起來非常虛弱。兒子替他刮完鬍鬚後，他就在家人圍繞下，輕輕的跟我說：告訴大家不要哀傷。....之後他就閉上眼睛靜悄悄的“下車了”。

徐智貞



Yi-Ben Tsai 蔡義本

*From Rice Paddies
to Gold Hills*

由田野邁向金山

Life Journey of a Taiwanese-American Seismologist

臺裔美籍地震學家的人生歷程

Yi-Ben Tsai

蔡義本



Shape of Taiwan on a rock wall of Oak Creek, Las Vegas, USA. By Yi-Ben Tsai, July 2017 / 美國拉斯維加斯橡樹溪谷岩壁上的臺灣形象，蔡義本攝於2017年7月

Table of Contents / 目錄

About The Author.....	1
作者簡介	8
Sylvia's Memoirs Writing Class is Life Enriching.....	13
Sylvia的回憶錄寫作課讓人生更充實	14
My Father—An Added Son.....	15
我的父親—多出來的孩子（蔡添生）	17
My Memory of Childhood Outhouse.....	19
兒時茅廁的回憶.....	21
“The Road Directions are in Your Mouth”—My Mother	22
路就在你嘴裡—我的母親.....	26
My Childhood Memory of the Air Raid Shelter	29
防空洞的兒時記憶	31
I Was a Part-time Cowboy	33
兼職的牧童	35
Memory of the Chinese New Year	37
農曆新年的回憶.....	42
My Elementary School Teacher Mr. Ching-Hu Lu	45
我的小學老師 盧鏡湖先生.....	47
Looking Upward or Downward: Two Admission Letters Posing Hard Choice for My Career Path.....	48
抉擇：攸關職涯走向的兩封研究所錄取通知	50
My First Journey to a New World.....	52
航向新世界的首次旅程	55

The First Snow of 1965	57
1965年遇見第一場雪.....	61
A Long Night Following the Loma Prieta Earthquake	64
洛馬普里塔地震後的漫漫長夜	66
My Thanksgiving 2011	68
我的2011年感恩節.....	71
A Homecoming Visit Replete with Delightful Surprises	73
充實且滿是驚喜的返鄉之旅.....	80
My Year of 2012	85
我的2012年	90
Don't Worry, Be Happy	94
別擔憂，要開心.....	97
In Memory of Clancy Mead.....	99
克蘭西米德的回憶	100
A Birthday Reflection on My Survival from Three Close Calls	101
慶生讓我反思三次的幸免於難	106
Touching the Ground, Watching Your Hands.....	110
腳踏實地，凝視雙手.....	112
Is There Heaven?	113
有天堂嗎?.....	117
I Am Still Here	120
我還活著.....	123
A Trip to Taiwan.....	126
臺灣之旅.....	129
Believe in Science, Act Now to Save the Earth	131

相信科學，保護地球，即刻行動.....	133
Los Altos seismologist personally, professionally impacted by Taiwan quake.....	135
臺灣地震對加州洛思阿圖斯地震學家個人及專業上的影響	139
A-Gong, We Miss You 孫子們的想念.....	142
感念與蔡義本老師相處的時光 余水倍	144
地科學院何其榮幸，有過蔡義本院長 王乾盈	149
「臺灣地震研究導師－我們永遠的地科院長」編後語 張瑜芬	151
緬懷 蔡義本教授風範 林殿順	153
關於蔡義本老師的一些回憶 吳文男	155
回憶我們的典範恩師 王貞琇	157
Memories of Yi-Ben Tsai Hedda Hope.....	159
Postscript.....	164
後記.....	166

ABOUT THE AUTHOR

Yi-Ben Tsai (1940-2018)

— Son of Taiwan Earthquake —

Yi-Ben was born in the rural area of Houlong Town, Miaoli County, Taiwan, the eldest of nine children. He was a talented and self-motivated child. At a young age, he helped with household work and tending the family water buffalo. Yi-Ben was an excellent student, and was first in his class all through elementary school and high school. It was his countryside elementary school teacher who first noticed his potential and encouraged him to test for the big city schools. He was admitted to the provincial Taichung second Middle School, then provincial Taichung second high school, and continued to excel. After high school, he was honored to be admitted directly to National Taiwan University to study Electrical Engineering. He was thrilled to be selected for the nation's top university. His family and whole town were very proud of him—the first local kid to gain admission into National Taiwan University. From a young age he believed that the only way to achieve high performance was through hard work.

Good days were ahead. However, on August 7, 1959, before the start of his second year of college, an overnight flood swept away the lives of two sisters and everything the Tsai family owned. Yi-Ben was deeply impressed by the power of natural disasters. After graduating from college, he decided to

go to the Institute of Geophysics, National Central University, Taiwan.

1965: Yi-Ben started his journey abroad to the United States of America. The Massachusetts Institute of Technology was his number one choice for graduate study. Professor Keiiti Aki was his thesis advisor, specializing in seismology and Yi-Ben was a proud student of Professor Aki.

1969: Yi-Ben received his Ph.D. from the Massachusetts Institute of Technology.

1973: Returned to Taiwan with his young family, including an eight month old baby girl, to lead the “Earthquake Project Team of the National Science Council.”

1975: Together with professors Mao Shengtow and Hsu Ming-tong, strengthened and implemented seismic building code requirements in Taiwan. The adoption of these more stringent engineering requirements for buildings to resist seismic forces during earthquakes resulted in many lives saved in subsequent events (i.e. 1999 Chi-Chi earthquake).

1976: Presided over the conception of the Institute of Earth Sciences, Academia Sinica, Taiwan. In addition to continuing the already large-scale seismological research, he actively recruited foreign talent and began to train domestic elites.

1979: Yi-Ben decided to stay in Taiwan with his young son to continue serving his country while his wife and daughter went to the United States for her further education.

1980: Established the “Strong Motion Array in Taiwan, SMART” with the cooperation of the University of California, Berkeley.

1982: The Institute of Earth Sciences, Academia Sinica, Taiwan was formally established and Yi-Ben served as the founding director. He laid the foundation for the development of Taiwan earthquake science, such as the establishment of the “Taiwan Telemetry Earthquake Observation Network.”

1985: Turned down a second term as director to return to the United States, reuniting with his family. He worked as a seismologist for Pacific Gas and Electric Power Company (PG&E) for 10 years. Although he was in the United States for this period of his life, he often took time to visit Taiwan or for Tele-consultation.

1989: Yi-Ben pushed for the establishment of the Seismological Center of the Central Weather Bureau, Taiwan. A comprehensive and strong dynamic survey program was initiated, the first nationwide strong motion recording system in the world. When the magnitude 7.3 Chi-Chi Earthquake (September 21, 1999) occurred in Taiwan, the observation network completely recorded the source and fault rupture processes and the vibrations throughout the island, providing valuable data for post-disaster reconstruction and regional earthquake prevention. His vision for Taiwan earthquake science research and even earthquake engineering applications have achieved outstanding results.

1995: Accepted a teaching position from National Central University, serving as a professor in the Department of Earth Sciences and later as provost.

1996: Yi-Ben and the National Science Council strived to establish the "Earth Science Research Promotion Center" at National Central University. He served as the first director to promote the academic activities of earth sciences in Taiwan.

1998: Established the College of Earth Sciences at National Central University and served as the founding dean. As of now, the College of Earth Sciences is the first and only earth sciences college in Taiwan. It is committed to promoting the study of earthquakes and earth sciences.

2005: He retired from the provost position at National Central University, not by choice, but because of reaching mandatory retirement age. He was happy to have both the ability and opportunity to serve his country.

After his retirement from National Central University, he came home to join his family in the USA. His family was thrilled he was home. Later that year he worked for PG&E for the second time.

2008: Yi-Ben finished working for PG&E and officially retired for good.

Yi-Ben won numerous honors through out his professional career. Highlights include:

1979 Top Ten Outstanding Taiwanese Youth Award.

1982 Outstanding Science and Technology Talent Award of the Executive Yuan.

1995-1999 Outstanding Talent Development Foundation Distinguished Talent Lecture Award, and Provincial Taichung Second High School Outstanding Alumni Award, and National Central University Outstanding Alumni Award.

Yi-Ben was a humble scholar with a strict academic ethic and a strong willpower. When he was a child, poverty did not defeat him but trained him to be tougher and more generous. He was grateful that the cultivation of schooling and society made him successful in his studies and a productive person. Serving his country was his life's goal.

He led the seismological community in Taiwan for more than 40 years, cultivating countless talents and contributing to Taiwan's earthquake research and related disaster prevention applications. He was called the “Son of Taiwan Earthquake”.

Even in retirement he continued to work for the advancement of seismology in Taiwan. He was always available to students and continued to advise on their research and publications.

Not one to be idle, Yi-Ben continued to improve himself in his later years. Whenever the opportunity presented, he would attend lectures and participate in conferences. He learned Qigong, did yoga, exercised at the gym, and learned to write memoirs at the community senior center.

On February 6, 2016, Yi-Ben was presenting an article about earthquakes to his writing class. His mobile phone vibrated and he received a warning (from the Central Weather Bureau,

Taiwan) of the Tainan 6.4 magnitude earthquake. His classmates were greatly impressed by Taiwan's advanced research on earthquakes. He became the subject of a news article in the local newspaper.

Yi-Ben was a keen observer. He noticed things that many don't pay attention to. When we went to the Grand Canyon, he noticed a rock shaped like Taiwan in the wall of the Oak Creek. The design of this memoir cover is from the photo he took.

He was also very enthusiastic about the lives of our grandchildren, such as school activities, sports, academic performances, and family time.

In our last family vacation at a beach house on the Pacific Ocean facing Taiwan, Yi-Ben told us his wishes.

1. Let the children learn whatever they were interested in irregardless of the subject. A-Gong would pay any extra cost.
2. Don't be too harsh with children. Be positive, because everything has two sides.
3. Be kind to yourself and be kind to others.

It is worth mentioning that he lived up to these expectations he set.

1. He was a very generous donator, especially in education and research. He responded indiscriminately to whoever asked for a donation.

2. From his grandchildren's eyes he was a "yes" grandfather. One time I said "no" to my grandson and I heard him mumble to himself, "I wish A-Gong were here."
3. I seldom heard of a negative word come out of his mouth. He wouldn't criticize anyone including his students, colleagues, relatives.

Yi-Ben always said life was like riding a one-way train. Everyone gets off the train eventually, some people sooner and some later.

January 20, 2018, he received the first printed version of his book The Next Big Ones. He was so happy and grinned from ear to ear.

On January 31, 2018 in the morning, after a long illness, he appeared very weak. He agreed our son to shave him. Family members were around him. He whispered to me to "tell everyone do not mourn." ...then he quietly got off the train.

Chu-Jen Hsu Tsai

November 2019

作者簡介

蔡義本(1940-2018)

—臺灣地震之子—

義本出生於臺灣苗栗縣後龍鎮農村，是九個孩子中排行老大。他天資聰穎、自動好學、品學兼優，年紀輕輕就懂課餘幫忙家務種田放牛。他的小學老師看中他的潛能，鼓勵他參加臺中聯考。他是備取考上省立臺中二中，雖是備取，但他很珍惜這個機會而更加努力，不到一學期他從備取生躍升為名列前茅模範生。從那時刻起，他領會到要成功必要努力的信念。初中成績優異，他獲保送直升高中，高中時期成績特優，獲保送國立臺灣大學電機工程學系，就學期間半工半讀。看著大好前程就在眼前，不幸在1959年8月7日，他升大二之際，八七水災捲走了他兩個妹妹的生命及全家所有家當，義本深感自然災害的威力。大學畢業後，選擇到國立中央大學地球物理研究所研讀。

1965年義本隻身前往美國麻省理工學院進修，拜安芸敬一教授為指導教授，專攻地震學。他是安芸教授的得意門生。

1969年義本獲得美國麻省理工學院博士學位。

1973年3月舉家返臺，主持行政院國家科學委員會（簡稱國科會，為科技部前身）“地震專案小組”研究工作。

1975年與茅聲燾及徐明同兩位教授，共同推出臺灣建築物的耐震規範並予執行。

1976年主持中央研究院地球科學研究所籌備工作，除強化已具規模的地震學研究外，更積極延攬國外人才並培養國內精英。

1980年與美國柏克萊大學建教合作，主導臺灣強地動觀測網的建立(Strong Motion ARray in Taiwan, SMART)。

1982年主導籌備的中央研究院地球科學研究所正式成立，義本擔任首任所長，被稱為創所所長。為臺灣地震科學發展奠定重要的基礎，如臺灣遙記式地震觀測網的成立。

1985年首任所長任期屆滿，辭絕連任，返美與家人團聚，任職於美國太平洋煤電公司地震安全部。當時雖身在美國，但心繫臺灣，經常隔海諮詢或抽空短期返臺。

1989年協助中央氣象局地震測報中心的設立，推動全面性強地動觀測計畫。臺灣成為全世界第一個，在沒有大地震發生之前就推動強地震觀測計畫的國家。

1995年他接受國立中央大學邀請再度返臺，擔任地球科學系教授，重啟教育英才之重任。

1996年向國科會爭取於國立中央大學建立“地球科學研究推動中心”擔任首任中心主任，促進我國地球科學學術活動，提升地球科學研究能量。

1998年於國立中央大學成立地球科學學院，擔任首任院長也是創院院長。迄今為止，它仍是臺灣唯一地球科學領域的大學學院，致力於推動地震前兆研究，培育無數地球科學人才。

1999年921集集大地震發生時，所推動建立的強地動觀測網，完整記錄震源與斷層破裂過程及全島各地震動情形，對災後重建和地區防震提供寶貴數據。他的遠見對臺灣地震科學研究乃至地震工程應用，成效卓著。

2005年6月義本以教務長職責退休於國立中央大學。他非常慶幸自己有能力及機會，屢行當年對自己的承諾，即“為家鄉服務，回饋社會”。自國立中央大學退休後，他終於回到家，我稱此舉為“倦鳥歸巢”，他不以為然的對著我憨笑。隨後，他應太平洋煤電公司老闆邀請回任該公司。

2008年自美國太平洋煤電公司退休，他的人生職場就此正式結束。

義本先後獲得1979年十大傑出青年獎、1982年行政院傑出科技人才獎、1995-1999年傑出人才發展基金會傑出人才講座榮譽獎、省立臺中二中及國立中央大學傑出校友獎等。

義本是個治學嚴謹且宅心仁厚的謙謙學者，幼時的窮困不但沒有打倒他，反而把他訓練得更堅韌、更仁慈寬厚。他感激學校社會的培養，讓他順利完成學業成為有用的人。回饋社會替家鄉服務是他人生的目標。

他引領臺灣地震學界逾四十年，培育相關人才無數，對臺灣地震研究和相關防災應用的貢獻無窮，因此被稱為臺灣地震之子。

退休後他仍不忘舊業，對學生是有求必應，繼續指點學生研究，也參與了加州地震防災中心的研討。

於私他不斷充實自己，不讓自己閒著。只要有機會他會去聽演講、參與視頻會議。他在社區老人中心學氣功、做瑜珈及學寫回憶錄，有精力時還會去健身房運動。

2016年2月6日義本正在寫作班講解他撰寫有關地震的文章時，他的手機突然震動，收到臺南地震規模6.4大地震的警報訊息，

同學們大為震驚臺灣在地震研究的先進程度！當時此趣事還上了社區報紙。

義本有非常敏銳的觀察力，他可以注意到一般人忽略的事物。2017年我們去大峽谷遊玩時，他注意到在橡樹溪峽谷岩壁上有個像臺灣形象的岩石。此回憶錄封面的設計，就是由他所攝作品“峽谷岩壁上的臺灣形象”而來的。

對孫子孫女們的生活學業也熱心參與，比如學校活動，足球賽、音樂會等。夏天還跟小朋友們游泳比賽。

他特別注重孩子的教育。臨走前召喚我們到他跟前，告訴我們：

1. 讓孩子多學習。只要孩子有興趣，不管是音樂、藝術、文學、體能、科學及數理，都要讓他們去學，額外費用“阿公”會負責。
2. 不要對孩子太嚴苛。要從正面角度去教導，因為什麼事都有正反兩面。
3. 要對自己仁慈厚道，也對別人仁慈厚道。

值得一提的是，他以身作則確實做到了他對我們的期望：

1. 他特別喜歡捐款，尤其是教育或研究。只要有收到募款函，他一定捐，而且很慷慨。我常收到我母校謝函，才知道他又以我名義捐款給我母校，更不用說其它機構。
2. 對小孩子是有求必應。他是孫字輩的孩子王，有次我拒絕孫子的要求，孫子自言自語的說：真希望阿公現正跟我們在一起。

3. 對人對己都要仁慈厚道的哲學。我從未聽過他惡言批評過任何人，包括他的學生、同事、長官或親友，對孫字輩的更別說了。

義本把人生比喻成乘坐單程火車，遲早都要下車。有人早下車，有人晚下車而已。

2018年元月30日傍晚，他捧著剛由印刷廠印刷出來的專書“The Next Big Ones”，他的願望達成了，他開心的笑了。

2018年元月31日早上，他看起來非常虛弱。兒子替他刮完鬍鬚後，他在家人圍繞下，輕輕的跟我說：告訴大家不要哀傷。 ... 之後他就閉上眼睛靜悄悄的“下車了”。

徐智貞

2019年11月

Sylvia's Memoirs Writing Class is Life Enriching

March 20, 2015

I am a relatively late comer in Sylvia's Memoirs Writing Class.

When I signed up for the first time, I thought it would be like most school classes, with the teacher lecturing on how to write a good memoir, while the students just sit and listen. It was a big surprise to find out in the first class that my perception was totally off the mark! As time goes by, I find the class increasingly rewarding and inspiring by sharing and commenting on each other's writing of personal or family stories.

Sylvia's critiques and comments are always to the point and helpful. Over the years, I have learned from the class so much American history and culture I would never have gotten otherwise.

To me this class is truly life enriching. Thank you Sylvia!

Sylvia的回憶錄寫作課讓人生更充實

2015年3月20日

我在Sylvia的回憶錄寫作課裡是較晚註冊的學員。

當我第一次註冊時，我想這應該就像大部分的學校課程，老師教導如何撰寫好的回憶內容，學生只是坐著聽講。我卻在第一次上課時很驚訝地發現我的印象完全不可取。時間一長，我發現透過同學間對彼此個人或家庭故事作品的分享與建議，課堂越加地充滿回饋與啟發。希爾維亞（Sylvia）的評論與建議總是一針見血且有幫助。這幾年來，我從課堂上學到許多美國故事與文化，這是我原本沒機會獲得的。

對我而言，寫作課讓我的人生更充實。謝謝你希爾維亞！

Postscript

One of Yi-Ben's favorite pastimes after his retirement was writing. He participated in a memoir writing class run by the Los Altos Community Elderly Activity Center. He had mentioned that it would be nice to have his memoir published, though his cancer progressed too quickly for him to accomplish this. In order to fulfill his dream, our children compiled his memoir into a binder, printed and gave it out on his memorial service.

On what would have been his birthday in 2018, the Academia Sinica in Taiwan, National Central University, and the Taiwan Earth Sciences communities held a memorial seminar to commemorate him. Thanks to the organizers for their recognition of Yi-Ben, I presented this memoir to them as a souvenir on behalf of my family.

I was excited that Yi-Ben's memoir was loved by so many colleagues, friends and students. At that time, some professors and students suggested that it would attract more readers if it was translated into Chinese and published in Taiwan.

After discussion with Ms. Yu-Lin Fu and Ms. Wei-Fang Sun, we thought that it would make the memoir even more interesting if we added stories about Yi-Ben from friends, colleagues, and students to the original text. The original simple idea of publishing Yi-Ben's memoir evolved into a bigger project.

We realized we needed more help. “Yi-Ben Tsai’s Memoir” team was formed and led by Yu-Lin Fu. Chin-Wu Chen, Wei-Fang Sun, Tzu-Wei Lin, and Anyou Hong joined the team. For the past year, members of the team have been working diligently, taking time out of their busy lives for the memoir.

Finally, Yi-Ben’s memoir “from Rice Paddies to Gold Hills” was completed. From the bottom of my heart, I sincerely thank each team member for their efforts. Thanks also go to the memoir cover design of Hao Kuo-Chen, friends, colleagues, students, and even our little grandchildren, who contributed the articles. If I have missed anyone, please accept my apology.

Chu-Jen Hsu Tsai
November 2019

後記

義本退休後最喜歡的休閒活動之一是寫作，他參加了由Los Altos 社區老年人活動中心舉辦的回憶錄寫作班。他提過希望能出版回憶錄，不幸他還沒有實現願望前過世了。我的孩子們將他的回憶錄編印成小冊子，在追思會時送給親友們。

2018年3月23日即他的冥誕那天，中央研究院、國立中央大學、國立臺灣大學和其它臺灣地球科學機構，聯合在中央研究院舉行紀念研討會來紀念他。

為感謝大家對義本的懷念，我代表家屬贈送這本回憶錄給參與的機構作為紀念。

讓我很高興的是，義本的回憶錄受到許多老同事、朋友和學生的喜愛。當時就有一些師生建議將其翻譯成中文並在臺灣出版，也有人認為若添加一些有關義本的文章，會讓此回憶錄更有趣，因而成立“蔡義本回憶錄”團隊以應需求。成員有孫維芳、傅玉琳、陳勁吾、林祖慰和洪安又。在過去一年中，團隊成員為回憶錄公私兩忙，義本的回憶錄“由田野邁向金山”終於出爐。我由衷感謝每位團隊成員的努力與付出，感謝郭陳澔的封面設計及每位貢獻文章的老同事、朋友、學生及我們的寶貝孫女、孫子們。若有遺漏任何人請接受我的歉意。

徐智貞

2019年11月

From Rice Paddies to Gold Hills

Life Journey of a Taiwanese-American Seismologist

由田野邁向金山

臺裔美籍地震學家的人生歷程

Author 作者 / Yi-Ben Tsai 蔡義本

編輯委員會

總編輯 / 徐智貞

譯文審校 / 徐智貞 · 陳勁吾

責任編輯 / 孫維芳 · 傅玉琳

書封設計 / 郭陳澔

中文譯者 / 林祖慰 · 洪安又 · 孫維芳 · 陳勁吾 · 傅玉琳
(按姓氏筆劃順序)

出版發行 / 中華民國地球物理學會

地址 / (320)桃園市中壢區中大路300號國鼎圖書館305室

統一編號 / 08422284

電話 / +886-3-4255336

網址 / cgs.org.tw

E-mail / cgs@cgs.org.tw

印刷廠 / 正皓、長青印刷裝訂社

初版一刷 / 2020年11月

開本 / 25開 (A5 · 14.8公分 × 21公分)

定價 / 新台幣300元 (如有缺頁、破損、裝訂錯誤，請寄回更換)

ISBN /

All Rights Reserved · 有著作權 侵害必究

Printed in Taiwan · 在臺灣印製