

廣域書目系統學

圖書館事業與知識管理的基礎

Bibliography Complex:

Fundamentals of Librarianship and
Knowledge Management

顧 敏 等著



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Librarianship and Knowledge Management**

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**廣域書目系統學：
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作者 顧 敏 等

亞洲區總編輯 陳錦煌

亞洲區編輯經理 楊立平

企劃編輯 邱筱薇

執行編輯 吳曉芳

封面設計 吳東霖

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埃倫·泰斯 教授 序

Maxwell 早在 1932 年即引用 Sir Walter Greg 這段描述編目特質的說法：書目編製工作者所關注的是在紙張或羊皮紙上書寫，或打印的字符，「在這些字符中，書目人員僅注意代表字符的各種具體標示，但任何標示都不會影響編目工作對於知識的立場」。時至今日，在宣稱以科學程序建立書目的基礎精髓中，客觀中性仍是至今廣為被人接受的書目認知，顧敏館長主導的這本廣域書目系統學，亦無悖離這項原則，而是以科學方法建立書目體系。

任何文化的熟成與成長和圖書館密不可分，換言之，也與書目和圖書館卓越的表現緊密交織。書目是記錄各國或各學科文獻產出的關鍵工具，任何研究或資訊查找過程的品質，均有賴於利用書目辨識後取用相關文獻。同時任何研究均起始於書目，最後依靠更豐富的資源成其事。

各類型圖書館和社會成長，以及各類型圖書館和書目學研究之間，具有等同的互相關聯性，而形成一個三角互動的局面，這個局面會影響資訊的存取。資訊存取是一個文化或國家進入成長與發展所仰賴的黃金命脈。在資訊爆增的年代，書目如同圖書館一般，是聚合無窮資訊並建立改善資訊取用規則的金縷線。

具有卓識的本書作者顧敏館長，他選擇投入如此巨大能量，以期發揚書目各方面的重要本質，是非常適時與恰當的。另一方面，又可教育與提醒圖書館同道門知曉各種書目的基本作用，尤其是在這個無遠弗屆星網式資訊存取的數位時代。書目的基本認識更為重要。不論以數位形式取得的暴增資訊，或以級數成長的印刷型資訊，都需要更加了解書目本身的歷史、目的、作用、意義，以及對現代全球互連的因應能力。書目聚合龐雜資訊及資訊源的能力，對於確保資訊的有效性相當重要，並能對新知的知識成長產生附加價值。如同我在很多場合所言，資訊是在運用中產生價值的商品。

在肩負保存國家文獻、傳播知識及促進終身學習的任務之下，臺北

國家圖書館理應擔負和全球的圖書館員共同分享這本書的知識性內容，臺北國家圖書館的作為顯然與國際圖書館協會聯盟（IFLA）Bibliography Section 在提升書目建立及運用的議題不謀而合。Bibliography Section 也意識到書目技術的發展並未普及至全球，該團隊也要確保解決問題的方式，但無須依賴某些特定的技術。

因此，就增長圖書館對書目計量學的了解，以及掌握數位世代中遍地內容的情況而言，廣域書目系統學是填補空缺的重要齒輪。書目的形式也從印刷型轉變至數位型，然而，書目基本的目的及意義依然必須完整無缺。

身為 IFLA 的會長，本人很高興恭賀顧敏先生及其同仁能建構出如此鼓舞人心的出版品。



埃倫·泰斯 (Ellen R. Tise)

國際圖書館協會聯盟 (IFLA) 2009-2011 主席

FOREWORD

Maxwell quoted Sir Walter Greg way back in 1932 that the bibliographer is concerned with pieces of paper or parchment covered with written or printed signs. "With these signs he [bibliographer] is concerned merely [with the] arbitrary marks: their meaning is no business of his". This understanding of a bibliography is still widely accepted and remains in essence the basis for the claim that the procedures of bibliography creation are scientific. This book by Mr. Karl Ku does not deviate from this long standing acceptance that bibliographies are scientifically generated.

The maturation and growth of any culture is inexorably linked with libraries and intertwined with this assertion is the synonymy of bibliography with library excellence. Bibliographies are key instruments to record the literary output of a nation or of a discipline. The quality of any research or information seeking process depends on the bibliographic tools used to identify and access the relevant literature. It has aptly been stated that all research begins with a bibliography and ends with a better and larger one.

The synonymous relationship between libraries and growth and, libraries and bibliography brings to the fore the principle of access to information in this triangulation. Access to information is that golden thread that neatly binds a culture or nation onto the road of growth and development. As pivotal as libraries are to driving access to knowledge and information, bibliographies are those golden strands that pull together the vast ocean of information that is available and creating order to improve access in an era of a surfeit of information.

It is most appropriate that such a prominent author as Mr. Karl Ku chose to invest such vast energies in demonstrating the critical nature of bibliographies and to educate and/or remind librarians of the imperatives of bibliographies, especially in an age of ubiquitous access to information in the current digital era. The surfeit of information available in digital format, the exponential growth of the print information demand greater understanding of bibliographies, its history, its purpose and functions, significance and its capacity to engage the modern interconnected world. The capacity of bibliographies to pull together

this vast array of information and information sources is critical to ensure that information is meaningful and adds value to the growth of new knowledge and information. As indicated by myself on numerous occasions, information is the one commodity that grows in value with use.

It is most appropriate that the National Central Library of Taiwan, with the mission of preserving national documents, disseminating knowledge and facilitating lifelong learning, takes responsibility for sharing the intellectual content of this publication with the information seeking world of librarians. It is clear that the National Central Library, as an institution, shares the agenda of IFLA Bibliography Section in advancing the creation and use of bibliographies. The Bibliography Section promotes the importance of the discipline of bibliography to library professionals in all types of libraries (not just national libraries), to publishers, distributors and retailers and also to end-users. Whilst taking full account of technological possibilities, the Section is aware that such developments are not yet available in some areas of the world, and it will ensure that its solutions are not necessarily dependent on particular technologies.

Therefore, such a publication as *Bibliography Complex* is an important cog in filling the void in terms of libraries having a better understanding of bibliometrics and with libraries staying abreast with ubiquitous content in a digital era. The format of bibliographies has changed from print-based to digital however, the fundamental purpose and significance remains intact.

As the IFLA President, I would like to congratulate Mr. Karl Ku and the other colleagues for the well constructed publication that is truly inspiring.



Ellen R. Tise
President, International Federation of
Library Associations and Institutions (IFLA)
2009-2011

嚴立初 館長 序

個人在品讀顧敏館長與圖書館傑出同仁共同撰寫的這本專書內容時，深感興趣，本書主要對圖書館學領域中非常重要的書目學進行廣泛及其最新發展的研究，探討此書目工具這些年來如何演進，及其對全球使用者所帶來的知識加值。

本書從第一章書目學的源起與理論開始，提供讀者良好的指引，了解讀者如何透過 1900 年前的書本式目錄與之後的卡片目錄，來取得文獻上的資訊，其後有機讀目錄的發展，至今日的數位時代，已有各式各樣的方式，讀者可以用來取得以實體和數位出版的知識。

第二章探討中國古代的書目使用與管理，第三章偏重於近代歷史上編目在圖書館自動化之前的發展歷程。隨著圖書館自動化過程和服務，目錄經歷的重大變化，在於機讀目錄成為規範的那一天。圖書館突然發現，他們自己能夠跨越時空進行交換書目資料，並且在人類歷史上首次減少重複編目作業，此舉大為提升編目的生產力，提高所需成本的經濟效益。

第六章深入了解自動化索引系統如何取代大部分的人工作業，而第七章探討書目計量如何幫助圖書館更了解使用者和知識行為。最後三章，則研究現代聯網的世界，其網路資源對許多人來說已經成為主要資訊，不論老少皆是，且圖書館如何保存數位內容、數位資源，幾乎是現在每一個圖書館的重要發展特色。值得注意的現象，過去 30 年來，圖書館的資料格式，隨著時間的發展與技術上的進展，產生重大的變革，書目格式也隨之變化。全書第九章討論網域化書目改革傳統使用的印刷式書目，當然也為圖書館界帶來更多的知識加值。

我個人對顧敏館長與其研究團隊深為感佩，其能在工作繁忙之餘，為本書投入大量的時間與精力，合力完成這項研究成果，對圖書館界有相當的貢獻。本書將有助圖書館員與資訊專業人員進一步了解書目的起源、目錄與書目這些年來的諸多發展、以及在種種變革下未曾改變的書目基本價值，反而能在跨越時空下，連結人們與其所需的資源。在第十章中有明白

的揭示。

本人非常肯定，本書將受到特別是年輕世代圖書館員與資訊專業人員的喜愛，並可從中獲益匪淺，因為本書內容將有助其精進了解書目學，以及知曉如何利用書目做為工具，協助使用者更快速地取得他們所需要的資訊與資料。

恭喜顧敏館長與其同仁為圖書館界寫出這本如此引人興趣的專書。

嚴立初

Ngian Lek Choh

新加坡國家圖書館館長

Preface to Bibliography Complex

It is with great interest that I reviewed the content for the book written by Mr. Karl Ku, Director-General of the National Central Library and his wonderful colleagues. This is a comprehensive and up-to-date study of a very important area of librarianship, i.e. bibliography, how this tool had evolved over the years, and how it has added value to its users worldwide.

The book starts with a chapter on The Origin and Theory of the Bibliography. This gives the reader a good introduction on how information on documentations was made accessible to users through book registers before the 1900s and later, card catalogues. Machine-readable catalogues came next, and now, in the digital age, there is a wide variety of ways through which users get to know about knowledge that is published both physically and digitally.

Chapter two covers bibliographies used in the ancient world, and chapter three explores catalogues developed in recent history, before automation came into the picture. From then on, with automation of library processes and services, the catalogue underwent significant changes where machine-readable records became the norm of the day, and libraries suddenly found themselves able to exchange bibliographic records across time and space, and to reduce duplication in cataloguing for the first time in human history. This resulted in a huge increase in productivity and cost savings.

Chapter six dwells into automatic indexing systems that take away much of the manual work, and chapter seven explores how bibliometrics help libraries to better understand user and knowledge behaviour. The last three chapters look into the modern interconnected world, where web resources has become the primary source of information for many people, young and old, and how libraries keep up with digital content that now features strongly in almost every library. It is interesting to note that while the format of library materials have evolved over time due to the tremendous changes in technology over the past 30 years, the format of bibliography has also changed. Chapter nine of the book discusses this, where web-based bibliography transforms the traditional uses of print-based bibliography, and this certainly brings greater stakeholder value to the library world.

I am impressed that Mr. Karl Ku and his team took the time and effort to

research and write this extensive history on the bibliography complex, despite their very busy schedule, as it is a very valuable contribution towards the library community. The book will help librarians and information professionals understand better the why and the how of the beginnings of the bibliography, and how catalogues and bibliographies have evolved over the years, while not changing the fundamental value of the bibliography, in connecting people to resources that they need to use, over time and space.

I am sure many, especially younger librarians and information professionals, will enjoy the book and benefit from it, and understand more about bibliographies and how they help users get to the information and materials that they need much more quickly than they would, without this tool.

I congratulate Mr. Karl Ku and his colleagues for producing such a fascinating book for the profession.



Ngian Lek Choh
Director
National Library, Singapore

Paula Kaufman 教授 序

設想我們進入一所實體圖書館或虛擬圖書館時，不論資料的形式與典藏地點，只需要使用同一種系統就能找到所需要的內容，這種長久以來夢寐以求的「一次到位」(one-stop shopping) 服務已幾近實現。

伴隨數位時代的出現，內容傳遞以絢麗的新形式帶給全球的圖書館讀者，然而，滿載資源但令人目不暇給的各式各樣書目查詢系統，讓即便是天賦異稟的圖書館員都甘拜下風。因此，我們不難體會當圖書館讀者在無法輕鬆查到特定物件或瀏覽相關資料時，會感到既困惑又挫折。

顧館長及其同仁在撰寫廣域書目學這本書時，以書目系統為核心，並架構於知識倫理的框架上，所論述出的內容不但對圖書館，最終也將帶給讀者莫大的價值。這本論述集針對書目查詢系統發展提出相當重要的見解，從書目的起源及書目理論，以至含括傳統、現代及圖書館自動化的時代，再進入數位化世代。本書最後信心十足地展望未來，既吊人胃口卻又激發想像。

圖書館學長久以來建立於全球視野及全球互動的基礎上，圖書館員的專業訓練從閱讀 Ranganathan 的「圖書館五律」開始，其倫理及價值是全球圖書館員共有的資產，圖書館員總是盡力讓書目系統進行互動並具備整合能力。圖書館的成敗維繫於是否能實現趨近全球整合「一站式」書目系統的梦想。透過本書，顧館長及其同仁提供全球圖書館實現這種抱負的途徑。



Professor Paula Kaufman

伊利諾大學香檳校區圖書館總館長

Preface

Imagine entering a library physically or virtually and using only one system to find what the content you need, no matter its format or location. This long-desired fantasy of 'one-stop shopping' is closer than ever to being realized.

The emergence of the digital era has brought with it a panoply of new formats for delivering content to users of libraries around the world. With this richness of resources has come a dizzying array of bibliographic access systems that would bring the most talented librarians to their knees. Understandably, library users are confused and frustrated by their inability to locate easily what they want, whether through known item searching or more general browsing.

In writing this book, which centers on bibliographic systems and builds on the framework of knowledge ethics, Mr. Karl Ku, Director-General of the National Central Library, and his colleagues have produced a volume of great value and interest to librarians and ultimately to library users. This collection of essays provides an important perspective on the development of bibliographic access systems, beginning with the origins of bibliography and bibliographic theory, through the traditional, modern, and automated library eras and into the digital age. It ends with a provocative look at the future that whets the reader's appetite and stirs the imagination.

Librarianship has long been grounded in global perspectives and global interactions. Librarians around the world start their professional training by reading Raganathan's *Five Laws of Library Science*. Ethics and values are shared among the world's librarians, who have long strived to make their bibliographic systems interactive and able to be integrated. Libraries' success increasingly will depend on their ability to make the dream of a globally integrated 'one-stop shopping'-like system a reality. Through this volume, Mr. Karl Ku and his colleagues have provided the means for the world's libraries to realize this ambition.



Professor Paula Kaufman
University Librarian and Dean of Libraries
University of Illinois at Urbana-Champaign

顧 敏 館長 序

毋庸置疑，圖書館文明是人類文明的一部分；而圖書館的文明隨著人類文明持續發展。跨越人類歷史數千年的圖書館知識文明，每每都有豐碩的成果，總結各時期的發展綱領，圖書館知識倫理成為圖書館社會價值之維繫關鍵，是不變的知識基礎。而書目系統著實扮演著圖書館知識倫理的最佳代言者，是知識服務的核心元素，能在知識詮釋的基礎上，發展全方位的廣域知識領航。邁入 21 世紀後，書目系統已發展至全媒體思維架構的廣域書目系統。此種系統邏輯係承續圖書館自動化時代的概念，結合廣域圖書館的發展背景、數位化圖書館時代的國際趨勢和初階規範，以及 IFLA 的新編目原則精神。在這些基礎上安裝組態為廣域書目管理及服務，引導圖書館邁入知識內容管理境界的一種具體化努力成果。

身為現代圖書館的從業人員，尤其是肩負知識倫理世代傳承的知識工作者，對於知識領航的書目系統發展脈絡，以及世代間的轉折、啟承，乃至於預測前瞻之宏觀都責無旁貸。在此種使命的驅使下，國家圖書館自 2009 年晚春開始，由本人率領同仁展開一趟書目學探索的發現之旅，從知識紀錄、知識介面、知識傳播，及知識管理等四個構面出發，循著書目系統在圖書館文明的足跡而行，體驗人類文明遺產紀錄演進的大驚奇。在盛夏之際，極費思量的內容組織與《廣域書目系統學：圖書館事業與知識管理的基礎》書名終於定稿；而依據此次學理研討的結論為基礎所建置的「廣域圖書館書目系統」，也幾近完成架構設計，為國家圖書館擘劃開創書目服務的新里程碑。

誠如前述，書目系統儼然是知識倫理的門神，提示著豐富的宇宙天地，本書即是以書目系統概念為中心，架構於知識倫理面向上；在知識紀錄部分陳述近代編目發微與圖書館成長、機讀目錄與書目國際化；在知識介面部分列述書目參考服務、網域化書目及知識支援服務；在知識傳播方面，闡述自動化索引系統與學術傳播、書目計量與知識行為；在知識管理方面，則剖析古代書目與知識管理、數位化知識組織與內容管理。最後，

也對於 21 世紀書目研究趨向於全媒體大書目資料庫，多方位全面化營運的書目性綜合系統等，提出實質的探討與前瞻。在學術理論探討之餘，也儘量在每一個書目系統發展時期，輔以實證案例說明；進入跨世紀的時序，更將國家圖書館在廣域圖書館時代的作為與理念，完整且清晰地勾勒出輪廓，忠實地反映出書目學是守護各個時期圖書館命脈的磐石，書目學的發展對圖書館的營運有著動見觀瞻的關鍵。

相信在未來，書目學的研究必然是一個持續性的課題，無論是在討論知識管理、知識經濟、資訊社會方面，或者是在討論資訊科學和圖書館，書目學的重要性只會有增無減。21 世紀的資訊社會是多語言、多文化、多媒體的全球化社會，圖書館的工作仍然是擔負著資訊社會的心臟和實際行動；書目系統則是資訊社會的具體網絡，也是知識管理的實證表徵。本書的初衷僅是在為書目學發展的歷史做階段性的見證，期待有朝一日這段見證，能成為圖書館地球村的共同陽光，分享建構新世紀資訊社會中的知識倫理與核心價值。



國家圖書館館長

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臺北漢學大書房

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