圖書館使用者瀏覽行為之研究：
瀏覽結果及影響因素之分析

Research on Browsing Behavior in the Libraries：

An Empirical Analysis of Consequences, Success and Influences

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摘　　要

　　瀏覽之概念兼具科學和一般性的意義，也是人類最基本的資訊行為之一。瀏覽行為一般常在圖書館中見到，圖書館也常作為研究瀏覽的情境。文獻中更將瀏覽視為與知識的創造與創意的產生相關之重要活動。但傳統上，圖書館從業人員及研究者對讀者的瀏覽活動並不重視，許多研究指出其主因在於我們未能充分了解瀏覽的本質及動機，對瀏覽的結果亦所知有限。

　　晚近，隨著電腦的普及，終端使用者的遽增，以及各式各樣電子資料庫的出現，瀏覽作為一種檢索策略在人機界面的設計上更凸顯其重要。尤其越來越多的資訊系統不只是用來直接查詢資料，更用來瀏覽學習新知。許多不理想之資訊系統多因為未能考慮使用者不同的資訊需求及行為模式而失敗。因此，未來各種互動資訊系統必須支援包括瀏覽在內的各種檢索策略，這種系統設計之其前提是必

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須對影響瀏覽之因素，瀏覽之功能及瀏覽所帶來之結果有更深入的瞭解。

筆者曾對瀏覽行為的本質和動機做過有系統的理論探討與實證研究。建基在先前的研究成果上，本研究利用觀察、訪談和電腦檢索記錄，以內容分析法及統計法分析歸納三種類型圖書館的三十三個實際個案及其瀏覽活動，以實證資料獲知瀏覽行為的真正結果，構成成功的瀏覽之要件，以及影響瀏覽狀況之因素。最後探討此一研究對資訊尋求理論、資訊檢索研究、系統設計和圖書館實務等方面之意涵。

關鍵字：瀏覽，資訊尋求行為，使用者研究，搜尋策略，實證調查，質性分析

ABSTRACT

Browsing as an important part of human information behavior has been observed and investigated in the context of information seeking in the library in general and has assumed greater importance in human-machine interaction in particular. However, the nature and consequences of browsing are not well understood, and little is known of the success rate of such behavior.

In this research, exploratory empirical case studies from three types of libraries were conducted, using questionnaires, observation logs, interviews, and computer search logs, to derive the empirical evidence to understand, from the user point of view, what are the consequences of browsing, what constitutes successful browsing, and what factors influence the extent of browsing.Content analysis and statistical analysis were conducted to analyze and synthesize the data.The research results show：
（1）There are nine categories of the consequence of browsing, including accidental findings, modification of information need, found the desirable information, learning, feeling relaxation/recreational, information gathering, keeping updated, satisfying curiosity, and not finding what is needed. （2）Four factors that produce successful browsing：intention, the amount or quality of information, the utility of what is found, and help for solving problem or making judgment. （3）Three types of reasons for unsuccessful experience in browsing：not finding what one wanted, inadequate volume or quality of information, and not finding some things useful or interesting. （4）Three types of reasons for partial success：found the intended object but not happy with the quality or amount of information in it, not finding what one wanted but discovering new or potential useful information, not accomplish one purpose but achieve another one given multiple purposes. （5）The influential factors that affect the extent one

engages in browsing include browser's time, scheme of information organization, proximity to information resources, browser's goals, browser's knowledge, browser's experience, browser's interests, browser's expectation, feedback from the information system.

This study contributes to and has implications for information seeking theory, information retrieval research, system design and library practices.

Keyword : browsing, information seeking, user studies, empirical research, qualitative research

壹、研究背景

　　瀏覽是人類普遍而常見，卻未被十分了解的資訊行為，它是圖書館讀者常用的檢索策略，但其概念與資訊查詢（searching）在文獻中常混淆不清（註 1），同時圖書館學與資訊科學傳統上有偏向強調直接、明確的資料查尋，而忽略探索性的資訊行為如瀏覽，造成許多缺失（註2），而電腦傳播科技的衝擊使瀏覽在圖書館學與資訊科學中的重要性與日遽增，瀏覽成為網路使用者常見的資訊行為。（註3）許多學者指出一個能符合人性需求且適應人類資訊行為的系統必須同時兼具查詢與瀏覽的功能（註4），但如何支援瀏覽的活動，評估一個系統的可瀏覽性（browsability），以及完整的資訊行為理論之發展，均需要對瀏覽此一現象具有更充分的了解。（註5）

　　筆者先前以數年時間探討此一課題，曾以文獻分析法，分析整合六個學術領域之相關文獻，發展了初步之理論架構並發表於Annual Review of Information Science Technology 中（註6）。同時，筆者在後續研究中，針對瀏覽的本質、動機及其發生之情境進行實證研究，描述瀏覽行為的四個基本面向及本質，提出瀏覽行為之分類法，發現了九種瀏覽的模式，並有系統地描述其發生之情境（註7）。本研究在先前之研究成果上，進一步對瀏覽之結果、影響因素及成功要件，做有系統的實證分析與探討，以期能對資訊行為之理論、研究及資訊服務實務有所貢獻。

貳、研究問題

　　本計劃的三個研究課題為：

　1.瀏覽有什麼結果？（What are the consequences of browsing?）

2.構成成功的瀏覽經驗之要件為何？（What constitutes successful browsing?）

3.影響瀏覽的因素為何？（What factors influence the extent that people engage in browsing?）

參、研究設計

本研究為探索性研究，以圖書館使用者為研究對象，採納多重實證調查（Triangulation methods）之資料。首先，使用列舉（enumerative）及綜合分類法（synthetic classification methods）辨識瀏覽類型，蒐集影響瀏覽之因素與瀏覽成敗之評估，以歸納法及反覆分析法建構其分類體系，分析整理來自三種不同類型圖書館（包括公共、學術及專門圖書館各一）、三十三個個案之觀察記錄、面談錄音稿、及電腦查詢過程檔案等三種實證資料，再以描述性統計分析顯示各類型瀏覽及成功發生之頻率。

本研究使用資料來源之特色在結合多種實證調查方法，具有多項資料來源，可相互印證補足，增加資料分析結果之可信度。三種不同類型之圖書館情境使資料來源兼具普遍性及代表性，研究結果不侷限於某單一之情境也不受限於任一系統或資源。

在此調查研究中，參與調查之圖書館使用者於初進圖書館時即由調查者詢問其造訪之目的，隨後在其同意下觀察並記錄其在圖書館內之活動。最後當研究對象結束圖書館拜訪時，調查者以觀察記錄為基礎，針對每一活動，按序詢問圖書館使用者以下三個問題：

1.「我觀察到你…（插入所觀察到的行為），你當時想要做什麼？」（What did you intend to do at that time?）

2.「以你想做的事為依據，透過剛剛的活動，你認為你達到目的的程度如何？」（How successful were you with that activity?）

3.「你為什麼那樣覺得呢？」（Why do you feel that way about it?）

若該使用者使用了電腦公共目錄，則每一螢幕視為個別之活動，依相同之方式進行訪問。

先前之研究分析第一個問題之回答發現了瀏覽行為的特色並提出一分類架構。本研究中以廣義的瀏覽定義，首先蒐集先前辨識的各種瀏覽行為。接下來，分析第二個問題之回答可從圖書館使用者的角度瞭解構成成功的瀏覽經驗。從第三個問題之回答分析可歸納出影響各種瀏覽行為成功與否之原因類型及瀏覽所帶來之真正結果或效應。最後，分析影響瀏覽行為之因素並以描述性統計顯示以上

各因素發生之相對頻率，以得知最常與最少發生之因素與結果。

肆、研究方法與實施

關於瀏覽實證調查的困難，可見於先前發表的許多有關瀏覽的實驗計劃中（註8）。文獻作者指出，圖書館中欠缺有關瀏覽之習性的基準性資料，使得描述、測量、或評估這種似乎是無指引性的活動產生許多問題。文獻中有人建議，問卷、觀察記錄、個人日記、以及由讀者主觀評估率涉瀏覽的可能性或代價，均可作為蒐集資料的來源。Licklider（註9）建議研究者著眼於瀏覽活動時圖書館使用者的說明敘述，並定義在瀏覽範圍中的情境或行動過程。而文獻中一致的呼籲是，應調查人們在一般性的資訊搜尋過程中，特別是瀏覽的目標與動機。因此，此一瀏覽行為的實證研究之設計著重於辨識及描述瀏覽活動，以及引導人們從事這些活動之條件狀況，特別是目標與動機。

為提供一分析性的語言以描述各種不同的瀏覽活動，並提出瞭解瀏覽的理論架構，筆者曾針對「瀏覽的本質為何」「構成瀏覽行為的基本面向為何」及「瀏覽的動機及引發該行為的情境為何」三個問題，以文獻分析法、多重實證調查法及內容分析法為研究方法，從理論及實證兩方面作有系統之探討。首先分析並整合六個學術領域相關文獻，發展初步之理論架構。接著，以觀察法與半結構式訪談法，蒐集來自三種不同類型之圖書館（含學術、公共、專門圖書館）三十三個個案之書面問卷結果、觀察記錄、面談及電腦查詢記錄檔等四種實證調查資料。最後，以內容分析法分析辨識出兩百三十三件活動事件，再根據調查分析之結果，舉證及修正初步架構中之概念，提出最終具有實證資料支持的瀏覽行為理論模式（註10）。本研究建基在先前之研究成果上，沿用相同之研究設計架構與方法，進一步對瀏覽之結果、影響因素及成功要件，做有系統的實證分析與探討。

一、資料來源

本研究實證部份的資料是來自作者參與的一大型研究計劃，從四個不同的圖書館收集而來（註12）。此計劃試圖了解人們在圖書館中從事的活動有哪些，以及這些活動與他們一般性的目標及其他特徵之關聯如何，也想知道他們所從事的活動之成功率如何。這個研究計劃的特色有二：一是在於它的研究設計；在這次的設計中，圖書館使用者的目標意圖及使用者所在的一般情境都被納入考量。二是它的研究方法；本計劃運用了問卷、觀察法、訪問法及電腦交易記錄法等多

種方法，來研究人們在真實生活情境下基本的資訊行為。

圖書館為本研究提供了一個適當的情境，因為：（1）各類圖書館使用者在社經變數上、知識及經驗上，使用圖書館的目的及其他變數上是多樣化，異質性高；（2）在圖書館中及不同圖書館間經由提供各種資訊資源及設備，圖書館的環境鼓勵各種資訊搜尋、檢索及使用行為的發生；（3）在圖書館的遭遇與活動也代表人們在其他日常生活中類似的活動（例如在家中閱讀報紙與期刊）。因此所搜集的資料為調查瀏覽行為提供一個良好的初步資料來源。

二、資料蒐集情境

提供蒐集資料的四個場所代表了三種型態的圖書館，包括兩處學術圖書館，一處公共圖書館，及一處專門圖書館。第一個學術圖書館，為科學與醫學的學術支援單位，另一個學術圖書館為支援社會與人文科學的學術單位。這些設施的讀者包含學生、教師及職員。這二所學術圖書館皆為政府寄存圖書館，但也開放給學術社區外的使用者。公共圖書館，其位於紐澤西的一個縣，對該縣所有的縣民開放。至於專門圖書館，是一個銀行的資訊中心及研究圖書館，對公司的員工提供服務。以上所有圖書館皆提供線上公共目錄，並採用標準分類系統，如國會或杜威分類體系，且以書架排架書籍，其他如期刊或報紙資料以字母順序或某種標準（如現行與裝訂期刊分開，付費的出租書與其他免費圖書分散排列。）

本研究自三種類型圖書館（只含一處學術圖書館）中，以隨機取樣方式各取出 11 個個案，而原來三個圖書館中各有樣本數為：公共圖書館 38 個、專門圖書館 24 個、學術圖書館 40 個，因此共自 102 個中取出 33 個個案，其中學術圖書館者以大學生及研究生為主，專門圖書館個案為該機構員工，公共圖書館者為一般縣民。

三、資料蒐集步驟與過程

就讀者自己說明其上圖書館的目的並同意參與而言，研究對象是自行選擇的。訪談員接近剛進圖書館大門的人，首先說明本計劃的目的（即使用圖書館研究）。然後，問他們是否願意參加，如果同意，訪談員就問：「你今天上圖書館的目的為何?」只有同意參與而其目的涉及使用圖書館的資料者才納入研究對象。因此，來圖書館還書，讀自己的資料等均不包含在內。假如這位讀者不同意參與或不合格，則與下一位進入圖書館的人進行接觸，訪談將以同樣的方式進行，直到取得有合格並同意參與的人。為增加參與的誘因，每位合格且同意參與的人都給予一份謝禮金。

同意後，每位讀者查詢前有一簡短的訪談，緊跟著自我填報一份簡短的問卷以便訪談人員了解其一般背景。在查詢前的簡短訪談時，訪談員請問參與者：「明確地說，今天是什麼事使你到圖書館來？」以便引導出更多有關他這次拜訪圖書館的目的之描述，同時亦將其回答記錄在查詢前訪問表中。除了有關參與者一般背景的問題外，另有簡短的查詢前問卷，詢問參與者他想運用那些類型的圖書館資料。

訪談員隨即在三公尺外跟隨該圖書館使用者，並記錄其行為及所在的圖書館位置。如果使用者想要使用線上公用目錄，他就被引導到指定的電腦前操作。因該電腦可以記錄使用者使用線上公用目錄之查詢過程，並設有線上查詢前後的問卷以供填答。當該使用者表示已完成他上圖書館要做的事時，訪談員即請他填寫一份自我報告式的查詢後問卷。

填完之後，跟著進行半結構性的訪談。在此時訪談中，訪談員根據其觀察記錄，對使用者描述其觀察到使用者的每一個活動，問他從事該活動的用意為何，實現其意圖的程度如何，以及，為什麼使用者如此評估。例如，訪談員會使用下列模式：「我觀察到你做了X，你的用意是什麼？」其中X是觀察到的實際行為。待使用者回答後，訪談員接著問「對那項活動，你成功程度如何呢？」，然後使用者對被觀察到的特定行為之成功率加以評估。對該回答，訪談員最後提問「為什麼你是這樣認為？」，請使用者敘述為什麼給予某項活動某種成功率的評價。倘若研究對象用到線上公用目錄，每一個螢幕都依序重播給他看，每個螢幕被視為獨立的活動，而以同樣的方式進行訪談。

經過以上程序所得之資料包括觀察記錄、訪談的錄音帶、訪談文稿、結構性及開放性問卷資料及電腦查詢記錄（當使用者在圖書館使用線上公用目錄時）。

四、資料蒐集工具

以上使用到資料蒐集的工具有四種：活動觀察記錄單、線上公用目錄查詢記錄、半結構式訪談大綱及結構式問卷。其中問卷有二組：「查詢前問卷」探詢使用者拜訪圖書館的目的及使用資料型態，「查詢後問卷」探詢促成使用者來到圖書館的原因，使用者對來訪後所發現的資料之數量、價值及重要性的評估，以及成功地達成其目的的重要性如何。查詢後問卷也包括有關個人自傳式的問題，如教育程度、職業、年齡、使用圖書館電腦及圖書館目錄之經驗等。

五、資料分析方法及過程

（一）分析方法

此實證研究是由第一階段文獻分析所提出的初步理論模式所引導，但不侷限於此。在這個實證研究中，瀏覽活動是自人們所從事的各種圖書館活動中加以辨認及分析。也就是說，為瞭解構成瀏覽行為的要素，必須同時找出並檢驗其他的資訊活動或非瀏覽的活動。特別是依循初步架構之指引，辨認研究對象的掃瞄行為、動機、接觸的資源及認知層面之特徵，以便經由實證研究之結果驗證及釐清初步架構中的概念。資料分析採用的方法為內容分析法。使用列舉式及綜合式分類法來分辨類別，並根據第一階段發展出來的初步理論架構中之面向及類別，以反覆歸納法發展編碼系統。

以內容分析法分析觀察記錄中圖書館使用者的活動，並分析訪談中提問「我觀察到你做了這個和那個（重複觀察記錄的資料），你這項活動的意圖為何」之內容，可發掘瀏覽之行為特徵與涉及的資源特色，該行為及資源的類別。分析查詢前後的訪談內容，可發掘瀏覽的動機及認知層面；亦即，分析入門時對「你今天來訪的目的為何」之回答，以及事後訪談時對每個活動問及「你做那活動的用意何在」之回答，以便針對某一活動，找出個案間共通的「主題」以及「意圖」或「目標」的種類。

（二）分析過程

資料分析分為兩個階段進行，第一階段選出10個個案發展初步的編碼系統。第二階段將此編碼系統應用於其餘23個新個案。經由反覆的資料分析過程，隨著個案一一地加入分析，逐步修訂原始的編碼系統。實際執行程序如下：

A.分析單位之辨識

（1）每一個個案被視為由一連續性的「移動」所構成。這些移動在觀察記錄中是註記為「到（某處）」，而某處可指圖書館中的某個區域，如新到非小說區、小說區、現行期刊室、架號363的書架等。「移動」也可由訪談人員一次次的提問，如：「首先，我觀察到你到（某一個地方），你用意何在？」或「下一步，我看見你到（某地方），你的用意為何？」來區分。

在每一次的移動中，有所謂「插曲式」的事件。每個事件即構成用來分析的基本單位。每一事件是由一組可資辨認的用意或目標的活動所組成，或一組使用某種可資辨識的對象之活動。因此，一個事件之產生，首先是在圖書館中之實體或邏輯上的空間之間移動來認定。在每一次移動中，新的事件之發生始於正在考慮的目標或對象改變了，而這種改變可經由一次次類似移動的提問中，如「當你在（某處）時，我觀察你做（某事），你做那事的用意是什麼？」得到確認。

（2）在每個個案中的所有事件均依序編號，每個編號可用作分析時的參考點。如：一個事件的編號為 W014#<1>，即表示這個事件來自 W 圖書館中 014 這個個案的第一個移動中之第一個意圖或對象。個案、移動和插曲事件之關係可描述如下：一個個案是由一個或更多的移動所構成，每一個移動即指向一個實體性或邏輯性的地方。每個移動是由一個或更多的插曲事件所組成，每個插曲事件是由一個意圖或對象來定義。

（3）就每個個案而言，滿足瀏覽最廣義之意義者首先被提出。即涉及「掃瞄一圖書館資源」的事件被視為是潛在的瀏覽活動，將進一步做分析。掃瞄的操作型定義為「看過或行經一項資源」，資源是人們用來解決問題、克服困難、消磨時間或休閒的東西。在圖書館中，可以是館藏中的一項資料，或指包含書、期刊、參考工具等整體館藏而言。也可以指如光碟、電腦目錄，或其他如標誌、樓層圖等這類搜尋輔助設備。有些在圖書館中觀察到的行為與掃瞄圖書館資源此一活動無關，如：與人談話、使用影印機、看自己的筆記本等，則不再做進一步分析。

B.內容分析步驟

（4）下一步則由從觀察及訪談資料中，根據文獻分析而來的理論架構，描述每一件涉及掃瞄資源活動之特徵。以個案 W004 為例。在第一個動作的觀察記錄裏註記：

「直接到新到非小說區，掃瞄書架，選了一本書，看著書皮，放回書架。」這個事件即可描述具有以下之特徵：直接到一個已知的地點，看過書架上一本本的書，選了一個項目並審察該項目的外皮。因此，行為上的特徵即為直接移動、看、選、審查，其中涉及的資源是書，並且該行為特徵隱含使用者具有地理位置的知識。在訪談文稿中，訪談者說：「我見到你做的第一件事是，直接去到非小說區瀏覽。看起來好像自架上選了一本書，看了書皮上的封面，就在那時你留下了那本書。你能告訴我你當時的用意是什麼嗎？」使用者說：「我想，我一看到那書，且看到了封面及主題之後，我便決定那是一本我會喜歡讀的書。」

在以上對話中，如同也反映於以下二個事件中，使用者的目標或用意是「尋找」傳記來讀，而對象是「傳記」。

（5）然後即可辨識出事件之間相對應於理論架構中各面向的共通處。在觀察資料中緊接著的兩個事件為：

掃瞄、注視封面、放回；

掃瞄、查看前幾頁、保留。

注意二者具有相同的行為特徵，即注視書架，選了一本，檢查書的某一部

份。在訪談資料中之記載如下：

訪談員：「你繼續去那兒瀏覽，你選了一本書，看看封面，然後放回架上。選了另一本書，看看封面，就發現了一本書，你將它留下來。在那時，你的用意何在？」

使用者：「我猜想，我大多數時傾向傳記文學，我放回的那本書極可能不是傳記性的。」

訪談員：「然後你挑了一本書，且保留了它。」

使用者：「是，那是一本傳記。」

訪談員：「因此，你要那本書是因為想找一本傳記？」

使用者：「是，想找一本我覺得具有休閒、有娛樂性的傳記。」

從以上的談話中，意圖是「尋找」，對象是「傳記」，涉及的資源是書。按此，行為及動機上的特徵與涉及的資源，便可以被辨識出來。然後，各面向中相似的特徵再歸納成一個個不同的類別。例如，就行為方面而言，三個不同的動作是：「注視」、「挑選」、「翻查」。就動機而論，意圖類型之一是「找尋」，對象類型之一是某一文學類型的書。

（6）每一事件當有獨特的特徵出現時也會加以記錄。再以W004個案為例。

個案004中下一個事件為：

訪談員：「好，你接下來做的事是你到這二樓來，現行期刊區，你開始瀏覽架子，注視著一本雜誌，看著封面，然後放回架上，再繼續瀏覽，在當時，你企圖做什麼？」

使用者：「極可能是找本健康雜誌，而那兒一本也沒有。看了 Mother Earth 新聞，只有那樣。我判定在那雜誌裏沒有很多我感興趣的文章，所以我繼續瀏覽下去到 Newsweek 的地方，拿了二本。」

類似前述，在此事件中，我們注意到使用者直接到一個已知的地點，行為特徵是掃瞄一系列架上的期刊，挑了一項，審察那項目的封面。涉及的資源是期刊，對象是一健康雜誌。值得注意的是雖然使用者的意圖是「去尋找一本健康雜誌」，但他沒有找到任何一本。也就是說，審查所挑選出來的期刊的意圖是「評估」該項目，以便判定是否為令其感覺有趣的讀物。然後讀者判定了這些文章並不令他感興趣，結果將該項目放回架上。就動機或意圖方面而言，這就是一個辨識事件中獨特所在的一個例子。此外，這些事件中所考慮的資源之共同處為它們均是「資訊物件」。以這種方式，將特定行為的事件一一辨認出來並加以分類。那些相關的類別則進一步歸納成更一般性的類別。當隨後愈來愈多個案的事件加入應用，初步的類別就不斷被加以修訂。

（7）在分析過程中，對所有個案以上第 4-6 個步驟均反覆執行。每當描述及分析一個新的事件，它或者對了解瀏覽而言是重要的新面向提供了實證性的描述，或者對理論上既存的面向提供了經驗性的證據。

伍、資料分析結果與詮釋

本文報告此研究自觀察及訪談而得之資料，以內容分析法及統計分析法進行資料分析與整理，以及資料的詮釋。首先，分析條列瀏覽的結果及其意義，並引證相關實例；接著，整理歸納出構成成功瀏覽之因素；其次，探討影響瀏覽之因素並統計以上各因素發生之頻率；最後，蒐集、歸納各種瀏覽類型，並統計各類型發生之頻率。

一、瀏覽的結果

從文獻分析來看，在圖書館學與資訊檢索領域中瀏覽的結果包括：意外發現、資訊需求的修正、找到目標資訊、學習、失去方向、資訊超載、時間花費、娛樂與監督/監視等。對照而言，本研究發現瀏覽結果的類別如下所示：

1.意外發現

意外發現指的是尋得原先沒有預期找到或令人感到興趣的資訊。這個類別典型的例子如下：

（1）L049〔#3〕

I：Okay, what did you intend at that time?

U：Because that is my favorite aisle, it is related with my profession, so you see, there is foundations, there is soil dynamics, there is a lot of subjects that is real interesting.

I：I see.

U：〔and〕The geology of technical engineering. But I was looking at some titles, and then I decided to take the one that I found there, I found it no problem, and I found by chance another one that I wanted to read.

（2）L072〔#5〕

I：Okay, then in terms of this whole locating activity, how successful were you?

U：For the overall day?

I：No,……for……while you were at the stacks?

U：Probably pretty good.

I：Why do you feel that way?

U：Well for both the things which I came here with information about in terms of call numbers or EPA document numbers I was able to go locate those and will be walking out with them. I even went so far as to find some things I didn't expect to find.

以上兩個例子均是在書架間找尋所要的項目時，掃瞄該區間的書背而意外發現有興趣的資料。

2.資訊需求的修正

這個類目指的是讀者掃瞄所在的資訊環境，察覺到沒有預期或有用的資訊，而這些資訊可能改變讀者的知識狀態，接著影響或改變原先的資訊需求。

例如個案 W078 原先要使用一本 Value Line 的數據資料作有關公司的分析，但有人在用，因此翻閱了另一本書 the World Almanac「便考慮改變作報告的方向」，分析有關運動選手的數據。

I：Okay, you reshelved that, and you went over to the reference librarian and what did you ask her？〔#3〕

U：Right, the World Almanac of Records or something like that.

……

I：So what did you intend to accomplish using the

U：Okay, now I was considering another topic that had to do with, since we are very open ended on the kind of things we are allowed to analyze, I was looking for something in sports, sports statistics, like teams or individuals or something like that. And I figured that might be a good source of data, because like I said I still haven't fully decided, so I wanted to see what was in that, if there might be anything.

I：And do you feel you were successful, did you find anything?

U：Yeah, I did find something that I may, could possibly do the paper. I still may do the company thing, somebody was using the Value Line as I said, ah, and I didn't want to start collecting all of the data from that until I decided that's what I'm going to do. But I did get something out of the almanac which was ah……

（2）L004〔#6〕

I：So then I saw you read a note on hand and then you turned to the stacks, the back stacks, I think it is about stack #30, first of all you were at stack #27, then you went to stack #30. Right?

……

U：I went to look for another book.

I：Is that the book you were looking for?

U：No, it was another book. <u>I didn't find the book I was looking for in that room.</u>

I：Okay, and you also browsed the spines?

U：Yeah, <u>because I didn't find the book I was looking for, so I was just looking for other books because it was the same material.</u>

　　上例中，使用者在書架間原本在找特定的一本書，沒有找到但掃瞄過程發現附近都是相似的書時就「開始檢視其他的書」，不再侷限一定要該書。

　　3.找到目標資訊

　　指讀者找到想要的資訊，不管讀者想要獲得的資訊的形式為何。典型例子如下，其中W028翻閱兩本有關汽車的書找到所要的特定方面的資料，F004則是從檢視數種書中找出所要的一本：

　　（1）W028〔#2〕<1>

I：Okay, the first one you took out was 1989 New Car Prices. You flipped through the pages, and you stopped at one page and studied it, and you stopped periodically to take notes. What were you trying to do at that point?

U：I left that book to go because I went to another book that rated the cars that was the specific and then I went back to the

I：Do you recall the title of that that book?

U：New 1989 Car Ratings. That's not the specific title but that's the gist of it, but I don't recall it.

I：So did you have specific car models in mind?

U：Yes I did, well one specific car, the rest I chose mostly at random, you know background. <u>Specifically, I was looking for the Skylark Buick.</u>

I：Skylark Buick? and so in general do you feel you were successful at finding the information you wanted in these books?

U：Yes.

I：And why do you feel that way?

U：<u>Because I was looking for specific points and each of those was covered by these two books.</u>

　　（2）F004〔#1〕

I：…ok, after I met you in the back of the library, you went right to the card catalog and you flipped through a few cards. What was the intent of that activity?

U：…I was trying to search for the author's name, and I realized what it was because it was already in the bibliographical reference that I had gotten before, so I knew ba-

sically where it was, and it was just a matter of sorting through these five or ten books that we have and finding the appropriate one that I was looking for.

I：Ok, and with that activity did you feel successful or unsuccessful?

U：Successful

I：And why did you feel that way?

U：I found the exact book and it was properly placed on the shelf, so.

4.學習

這個類目指使用者透過翻閱檢視或有選擇性地使用資訊源所含的資訊，產生新知或吸收原來不知道的訊息。典型例子如下，在翻找是否有感興趣或有用的資料的過程中，獲知原本所不知道的事件或與切身需要有關之消息：

(1) W088〔#2〕<2>

I：Okay, and then you actually sat down and you read the first magazine and you read it, then you flipped through the pages, continued reading, what was your intent with that activity?

U：Merely to scan to see if there was anything of strong interest that I might want to read. I actually only read two of the articles but most, both of these magazines were fairly, heavily pictures so, not a lot of reading material.

I：Okay, for this activity did you feel successful or unsuccessful?

U：Oh successful, it increased my knowledge of current events.

I：And why did you feel that way?

U：Because I read things that I had not read before.

(2) F021〔#1〕

I：And during this flipping and selecting, it was the same activity,…you also had set aside two issues

U：Uh hum

I：What was the intent with that activity?

U：Um, well, when I came here I knew exactly what I was looking for, an article on a company that had possible data to file on our reports that we do, the balance of payments. so I had remembered reading the article but I didn't remember what issue it was. So I was looking through the different issues, but I couldn't find it. But in the process I found other things that were of interest.

I：Good, with that activity did you feel successful or unsuccessful?

U：Um, successful

I：And why did you feel that way?

U：Um, well I got some information on industry categories to increase my knowledge of what certain corporations do and maybe some possible leads on companies that might not be filing at the present time but are potential filers.

（3）L009〔#2〕

I：After that I saw you sitting down and read the journal again, what did you intend to accomplish at that stage and how successful were you?

U：Well sometimes the copying machine doesn't work well and it misses part of the pages and so I was, I had a specific aim to get this paper, so I was reading the key parts whether they had the specific methods I was looking for in that paper.

I：Were you successful?

U：Yeah, I read the methods and I found out more or less what they had done.

5.休閒娛樂

瀏覽的結果之一是滿足讀者休閒（W059）消磨時間（W079）或暫時性逃離日常例行公事的需求（如L026）。下例中，W059 在掃瞄新到小說區的書架後尋找到自認還不錯的休閒讀物，而W079 以瀏覽書架打發時間既是目的也是結果。

（1）W059〔#2〕

I：After the rental books you started browsing in the new fiction area, selected a book, read the jacket and kept the book. What was your intention at that point?

U：Just to find some diversion reading that sounded reasonably good.

I：Do you feel you were successful or unsuccessful?

U：Successful enough.

I：Why did you feel that way?

U：The story sounded like it might have some interest to me, as a diversion.

（2）W079〔#2〕

I：Okay, after you made your first selection you continued browsing the new fiction area for another few minutes, again doing the same thing looking at the cover of the jacket, looking through…At that point you did select another book, what was your intention there?

U：I didn't have any intention there.

…

U：Just, I had no, wasn't setting out with anything of any, just I didn't know whether it was the cover that caught my eye, or the title that caught my eye, or it the subject

matter that caught my eye. Any one of those could have been.

I：Okay, during that second activity in the new fiction area did you feel you were successful or unsuccessful?

U：Successful as, the fact that I didn't find anything was successful I guess. Again, that was strictly, it was a casual reading with no significance whatsoever. Because I was just killing time, you know it wasn't important, it was important to kill time.

（3）L026〔#9〕<2>

I：Okay, let's do it one by one at that time. In the first volume what did you find?

U：The first volume…and then the second volume…it was titled "The Metromax Project"…and that was exactly what I was looking for, but the other article helped. And just maybe in the middle of it, I took a break for five minutes. And I started paging around. And I found something on television, broadcasting for meterology. They gave certificates for people who are on television and radio. I just paged through that, I found Frank Fields' name, he's a TV guy on Channel 2, so that caught my eye and I just sort of relaxed and went back to what I had to do.

…

I：When you paged around how successful were you, did you find something interesting? You said that for the last 5 minutes you just paged through…

U：Yeah, I paged through just to see if I would find something that might be interesting and not related to what I was doing, just to give me a break and I did find something interesting, as I said it was about the television stuff, and it was fun to read for a while, it gave me a well needed break.

6.資訊蒐集

資訊蒐集指的是獲取某些資訊以備未來可能之利用；可為篩選想要的資訊之過程產生的結果，亦可為偶然遇到的結果。

例如，下例中 W088 直接拿起特定的報紙翻閱，蒐集商業相關訊息，W014則在篩選中蒐集到另一目的可能用上的資訊，而 F009 則在掃瞄資訊時恰巧看到感興趣的主題而順便蒐集到未來有用的資訊。

（1）W088〔#1〕<1>

I：…you went right to the newspaper, the daily newspaper display area, I saw you select a newspaper and you took the paper to a table in the reading area and you began to read the first section. What was your intention with that activity?

U：To get the perspective of the Wall Street Journal on the current events that influence

business.

I：Okay, in that activity would you say you were successful or unsuccessful?

U：Successful.

I：And why do you feel that way?

U：Well, this is an information gathering session, I mean for me, from the newspapers and since I read the articles that have interest to me, I felt that that was success.

（2）W014〔#8〕<5>

I：Then you pulled out another, another book on trains, largely the, as the time before?

U：A little different, this one was about⋯a specific railroad I was interested in, the New York Central, and one of their train stations.

I：And how successful were you?

U：I think I was a little more successful there.

I：Why do you feel that way?

U：The book had certain history and information and diagrams that I felt I could use in the future for other work that I was doing.

I：So it had sufficient detail. Then you put it back again because you have other projects pending at this point?

U：Right. I'm going to keep that one in the back of my mind.

（3）F009〔#2〕

I：Ok, um, after you held onto that volume, you continued scanning once more and then you walked over to the reference desk and I saw you flip through a journal that was on the desk there. What was your intent with that activity?〔#2〕

U：Um, because the topic was interesting. It had to do with China and I'm interested in China.

I：Ok, and with that activity, did you feel successful or unsuccessful?

U：Successful

I：And why did you feel that way?

U：Because it was interesting, and I learned that this piece of reference was available for some potential future use.

7.跟上新知

指經由掃瞄翻閱，追蹤了某一主題、有興趣的事物或事件、或某一知識領域的發展而保持知識上不落後。

（1）W004〔#3〕

I：Okay, then you went down further,…and you did some more browsing and then selected, I believe, it was two magazines which you looked through and decided to keep. What was your intention at that point?

U：Well, the first magazine that I picked up featured an article about Nancy Reagan's latest book, My Turn, and because I feel as though I've heard and read enough about her, I just didn't feel as though I wanted to go through that. So I found two others that I thought had things in them that were not, that I hadn't really read about too much.

I：Okay, do you feel you were successful?

U：Yes.

I：Why do you feel that way?

U：Well, I guess it's that Newsweek sums up pretty well what takes place thoughout the world and it has a lot of good concise articles that can keep me up to date.

（2）W088〔#1〕<2>

I：After reading the first section of the paper, you did the logical thing and read the second section of the paper. What was your intention in that activity?

U：More of the same thing, the center section concentrates more on financial news whereas the first section also relates to world news as it affects business.

I：Okay. And for the second activity did you feel successful or unsuccessful?

U：Successful.

I：And why did you feel that way?

U：Because I got up to date on the events that had transpired as of the 30th of November.

8.滿足好奇心

滿足基於外在事物的刺激而引發個人內在欲一探究竟的心態。

（1）W079〔#5〕

I：Okay, then you sat down in the little sitting area there, reading area, and you picked up one of your books and you kind of looked through the beginning, slowly page through the rest of the book. What was your intention with that activity?

U：Curiosity, it happened to be, the book was "What Do People Do in Bed."

I：Oh. That was the title, huh?

U：Yeah, it was the title. It just struck my curiosity about why someone would write a book and whether it was worthwhile reading and it was, it wasn't worthwhile taking out. But it satisfied my curiosity though. I mean, it wasn't a particularly interesting book so I put it back.

I：Did you feel successful or unsuccessful with that?

U：Successful.

I：And why did you feel that way?

U：Because it satisfied my curiosity.

9.另外一類則是在掃瞄活動後，個案表示「沒有找到所需的資訊」。

上述本研究中發現的瀏覽結果及其定義參見表一。對照表二相關文獻中揭示之瀏覽結果，在圖書館學與資訊科學文獻中所討論瀏覽的結果中，「失去方向」、「資訊超載」、「時間花費」等各項並未在本研究中出現，這些項目與資訊檢索的情境有相當大的關係。雖然此研究有些案例也出現讀者使用線上公用目錄的情形，因為所蒐集的資料並不限定在讀者與資訊檢索系統互動的過程，因此文獻中這幾種結果並未突顯出來。

另一方面值得注意的是，「資訊蒐集」這個項目未在圖書館學與資訊科學文獻中特別提及，但在本研究中發現「資訊蒐集」是相當重要的一項瀏覽行為之結果。傳統上圖書館的服務往往假設讀者對所需的資訊有相當清楚的了解，而卡片目錄的設計即以有限的檢索方式而且相當結構化地引導讀者找到所需資訊，忽略了讀者資訊需求變動的本質。我們時常可以聽到讀者覺得目錄不易使用的抱怨，卻沒有真正了解、傾聽他們的需要。在本研究中，讀者是經由一資訊過濾（information filtering）的過程在蒐集資訊，或者尋找最終想接觸的資訊線索。檢索系統設計人員應思索如何在系統設計上支援這項需求。

表一：本研究中發現的瀏覽結果及其定義

瀏覽的結果	定義
1.意外發現	意外發現指的是尋得原先沒有預期找到或令人感到興趣的資訊
2.資訊需求的修正	讀者察覺到沒有預期或有用的資訊，而這些資訊可能改變讀者的知識狀態，接著影響或改變原先的資訊需求
3.找到目標資訊	指讀者找到想要的資訊，不管讀者想要獲得的資訊的形式為何
4.學習	涵蓋閱讀、吸收或有選擇性地使用資訊對象所含的資訊
5.休閒享受	滿足讀者消磨時間、休息或暫時性逃離日常例行公事的需求
6.資訊蒐集	獲取某些資訊以備未來可能使用；或為一確認的過程；或尋找想要獲得資訊之線索；資訊蒐集常包括評估或資訊過濾（information filtering）的過程
7.跟上新知	對某一主題、有興趣的事物、事件、或某一知識領域保持不落後
8.滿足好奇心	滿足基於外在事物的刺激而引發個人內在欲一探究竟的心態
9.未找到所需資訊	指沒有找到引發資訊搜尋行為的標的資訊

表二：文獻中揭示之重要的瀏覽結果

	意外發現	修正資訊需求	找到目標資訊	學習	失去方向	資訊超載	時間花費	休閒娛樂	監控
圖書館學	X	X						X	X
資訊檢索領域		X	X	X	X	X			

二、瀏覽成功之因素

本節歸納就瀏覽成功與否進行分析的結果。分析資料來自當訪談員針對個別之掃瞄活動詢問「對於那項活動，你成功地達到目的的程度如何？」，以及使用者對被觀察到的特定行為是否達成目的所做的評估敘述。其中，依受訪者回答成功地達成目的的程度，可區分為三個類型：成功、部份成功、不成功。以下根據各個類型，將受訪者回答的理由與發生之次數歸納如下。

表三：讀者認為成功的理由與發生次數

認為成功的理由	發生頻率（次）
1.1 Found the item needed（找到所需項目）	<7>
1.2 Found "an" item needed （找到一件所需項目）	<14>
1.3 Found "new" items that matched personal interest（找到個人感興趣的新事物）	<5>
1.4 "Keeps me up to date"（讓我跟上新知）	<8>
1.5 Accomplished what was intended to do（讓我達到目的）	<7>
1.6 Information read was interesting（所讀的資訊很有趣）	<1>
1.7 Information read was entertaining（所讀的資訊有調劑效果）	<3>
1.8 Information was pertinent to what is needed（資訊和所需吻合）	<9>
1.9 Gained more information on the subject（獲得有關該主題更多的資訊）	<1>
1.10 Found information for future reference or potential use（找到未來可以參考或可能用上的資訊）	<4>
1.11 Didn't find the item intended but found other information of inter-est.（沒有找到所想找的，但是找到了其他感興趣的資訊）	<3>
1.12 Information read was useful for making a decision（所讀的資訊有助於訂定決策）	<7>
1.13 Was able to decide what not to read, so as to not waste time（使我能夠決定什麼是不必讀，所以不會浪費時間）	<2>
1.14 Didn't notice I skipped anything interesting or useful（我沒有錯過什麼有趣或有用的資訊）	<4>
1.15 Not urgent（不急）	<1>
1.16 No reason（沒有什麼理由）	<1>

　　基本上，圖書館瀏覽者經驗成功的理由可區分為四個主要類型（詳見表三）。第一為「達成從事該活動的企圖」，如第 1.1 項至第 1.5 項。　第二類型與所發現的「資訊之質或量」有關，如第 1.6 項至第 1.9 項。第三類型是「發現所接觸項目的功用（Utility）」，如第 1.10 項與第 1.11 項。第四類型則主要與「協助決策、判斷」有關，如第 1.12 項至第 1.14 項。換言之，當瀏覽的結果使得讀者得以做決策，或判定是否要繼續閱讀下去或應放棄並離開一資料區時，也被認為是瀏覽活動一種正面的結果。

表四：讀者認為不成功的理由與發生次數

認為不成功的理由	發生頻率（次）
2.1 Didn't find the item(s) looked for 　（沒有找到想找的）	<18>
2.2 The item read was not what was intended 　（所讀的東西不是我想要的）	<4>
2.3 Didn't find that many interesting items 　（沒有發現許多有趣的東西）	<2>
2.4 Level of detail was not right 　（〔書中〕所包含的細節層次不是我要的）	<2>
2.5 Didn't find anything useful or interesting 　（沒有找到任何有用或有趣的東西）	<3>

　　另一方面，如表四中顯示，圖書館使用者認為不成功的理由主要是「沒有找到所要找尋的項目」，如第 2.1 及 2.2 項。第二類理由與「所找到資訊的質或量不足」有關，如第 2.3 及 2.4 項。另一類不成功的理由是「沒有發現任何有用或有趣的東西」，如第 2.5 項。

　　根據讀者之說明，部份成功的理由主要可歸納為三類（詳見表五）。第一類，就能找到該資訊物件或資訊本身是成功的，但就所發現的資訊品質或數量並不適合而言，卻覺得不成功；如 3.1-3.2 及 3.5。第二類，就沒有找到所尋找的東西而言是不成功，但就發現了自己感興趣或具有潛在價值的新資訊而言，是成功的；如 3.3-3.4 及 3.6。第三類主要是就數個目的而言，沒有達到其中的一個目的是不成功，但就達成另一目的而言是有幫助的；如 3.7。

表五：讀者說明部份成功的理由【yes 表示成功、no 表示不成功】

3.1〔F023#2<2>：113-115〕
yes -- for finding some information on the topic of interest（對感興趣的主題找到了一些資訊）
no -- not finding the kind of information/answer needed（沒有找到所需要的資訊或解答）
3.2〔F023#2<1>：89-91〕
yes - for finding some information（找到了一些資訊）
no -- not the quality of information needed（not up to date, not in summary form）（不是我要的資訊品質，如不夠新穎、不是以摘要形式呈現）
3.3〔W058#3<4>：110-112〕
yes -- found out information that was new to me（發現了對我而言是新鮮的東西）
no -- not finding the book I came here for（沒有找到我來這裡要找的那本書）
3.4〔W058#3<3>：97-99〕
yes -- found out what is available for future use（發現了有些什麼未來可以用上的東西）
no -- not finding what was looked for（沒有找到所要找的）
3.5〔lsm004#3：41〕
yes -- found a couple of things（找到一兩樣東西）
no -- didn't find that much（找到的東西不夠多）
3.6〔lsm049#2：233-235〕〔W019#5<3>：101-103〕
no -- not finding what was looked for（沒有找到所要找的）
yes -- found a book which was good（找到一本不錯的書）
3.7〔W019#5<1>：76-77〕、〔F023#1〕、〔lsm062：579-580〕
no -- for one purpose（沒有達到某個目的）
yes -- for the other purpose[1]（但達到另一個目的）

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[1] For example, after scanning a selected item of the shelf, the patron L062 stated that："It's not successful but it helped me by saying 'don't bother to keep looking further'".

三、影響瀏覽程度之因素

影響瀏覽程度之決定因素可以由蒐集的半結構性訪談資料中訪談員詢問：「對那項活動，你成功地達到目的的程度如何呢？」中，使用者對被觀察到的特定行為之成功性評估；對該回答，訪談員最後提問「為什麼你是這樣認為？」，請使用者敘述為什麼給予某項活動某種成功率的評價。倘若研究對象用到線上公用目錄，每一個螢幕都依序重播給他看，每個螢幕被視為獨立的活動，而以同樣的方式進行訪談等之回答進行分析。

根據資料分析的結果，影響瀏覽的因素可歸納如下，包括時間、鄰近性、組織架構、目標、知識、經驗、興趣、期望、回饋、好奇心等。其中，就影響瀏覽的時間長短而言，本探索性研究顯示「可用時間」、「鄰近性」、及「組織架構」等三個因素對瀏覽程度的影響最為明顯。

1.時間

W059 想要找些休閒讀物，當她發現她所感興趣的書之後說到，雖然可能有其他的書她會有興趣，但因為趕時間所以就不再瀏覽下去。

（1）W059〔#1〕&〔#3〕

I：Okay, the first thing I saw you do after I met you downstairs, was browse the rental book area, selected a book, looked at the jacket, you kept the book and then you continued browsing. What was your intent at that point?〔#1〕

U：I was looking for a specific book on the bestseller list which they didn't have, I picked another which is very（inaudible）and I will attempt it.

I：Okay, at that point did you feel you were successful or unsuccessful?

U：Successful enough because I can always get what I was looking for another time.

I：And why did you feel that way?

U：Because I'm in a real hurry and the book I picked will probably suit my needs.

...

I：Okay, after the fiction area you moved over to the new nonfiction area, I saw you pick up two books, look at them, replace them and you picked up a third looked at the jacket the cover and you kept that. What was your intention there?〔#3〕

U：There are some nonfiction books I would like to read, I don't have the list of what I was really looking for with me but I do always scan for my husband as he is a historical nonfiction history buff and I found one, A Portiat of Stonewall Jackson which he may enjoy.

I：Do you feel you were successful or unsuccessful?

U：Successful.

I：And why did you feel that way?

U：There was one book I liked, there were many books, some others have more interest to me and I don't have the time right now, this is a hurry visit.

（2）〔W037#3〕

W037 讀者瀏覽了報紙的其中一版，說道當他暑期有較多時間時，就會花更多的時間來覽讀。

"I mean I didn't read it that thoroughly, you know, maybe I picked up a few articles here and there but in summer time, I probably spend more time reading that really closely, because I have more time, you know."

2.組織架構

L004 從第 27 號書架移動到 30 號書架，沿著書架掃瞄書背，事後說道：

"Yeah, because I didn't find the book I was looking for, so I was just looking for other books, because it was the same material." 〔L004#6〕

同樣如下例，L062 發現與他所想要找尋的東西相似者全部集中在架上一處時，便開始瀏覽起來。

"Ya, when I got there… Well, I wrote down the call numbers and it seemed like a lot more were under the same number TL. I think, that was 570 or something. So, when I got there, all the titles looked good…or looked like they might have something. So I pulled them out and looked in the table of contents. And some of them looked good, and some of them didn't. So I kept the good ones, and put the other ones back." 〔L062#2〕

然而，L026 則因排架凌亂，不得不掃瞄書架以便找到所需。

"Well, I was looking for the magazine "Bulletin of the American Meterological Society" and it was in alphabetical order but it was just a little confusing walking up and down because the shelf lines are pretty long and it wraps around, so it was a little bit like walking in a maze, but I was just looking for the journal that I was looking for." 〔L026#8〕

3.鄰近性

L062 發現與他所想要找尋的東西相似者全部集中在架上一處時，說道：

"I kind of looked through the ones I had listed first……Then, while I was there, I just looked at all the rest."

L049 則是找書的回程中，沿著書架掃瞄書背：

"So I decided to go again and look at the aisle, the shelves. And I found another one that

I like by chance. So I decided to leave the other one; to abandon the other one." 〔L049#5〕

4.目標

目標影響個體是否要從事瀏覽行為。如下例中，F009 想要確認某一物件是否為所要，因而瀏覽。

（1）F009〔#1〕<2>

I：Ok, after that I observed you selecting a book, you kind of looked through the beginning, flipped through it a little bit and you held on to that book. What was your intent with that activity?

U：Because I found the book. I looked twice. My intent was to make sure that it was what I was looking for.

I：Ok, and with that second activity, did you feel successful or unsuccessful?

U：Yes, successful

I：And why did you feel that way?

U：Because it was what I was looking for.

5.知識

影響瀏覽因素之一是個體對所掃瞄資源之既有知識。三個例子如下，其中 W078 檢視某本書的內容，以便與某一「已知」事物作比較，F021 不斷檢視不同卷期的雜誌，因為「所知不完全」，而 L049 沒有繼續檢視書後的索引，因為從其他的線索「知道」不值得如此作：

（1）W078〔#1〕<1&2>

I：The first thing that you did was go to the reference shelf over here by the magazines and you started to browse, what were you trying to accomplish at that point?

U：…I was actually looking specifically for the Value Line.

I：Yeah, you pulled out a Moody's too?

U：Yeah, I pulled out a Moody's also, just to kind of you know, just to kind of look through and see if they had anything similar to the, I'm familiar with the way Value Line does things by industry where they will have a page, an industry grouped together. Each company will have a page or two where they will have a lot of data regarding it, so you can kind of look at things that way. They really didn't have anything in Moody's, that kind of, gave all of the information that I wanted.

（2）F021〔#1〕

I：When I met you in the back of the library, you went directly to the loose periodical area Um, went to where the Fortune magazines were and you selected an issue, flip-

ped through the pages and returned the issue, that happened about 8 times. And, dur-
ing this flipping and selecting, it was the same activity, flipping through you also had
set aside two issues. What was the intent with that activity?

U：Um, well when I came here I knew exactly what I was looking for.
An article on a company that had possible data to file on our reports that we do.
The balance of payments, so I had remembered reading the article but I didn't re-
member what issue it was. So I was looking through the different issues but I coul-
dn't find it but in the process I found other things that were of interest.

(3) L049 [#5]

I：Alright, then finally just to give me some idea how you go about finding stuff in the
book when you retrieve it, you just said that you look at the index and then you look
at the text, right? For the first one, did you do the same thing for the next few tries
or did you change your…

U：No, it's always the same. According to the book, this is a very old book, because the
cover is old, you know, so I don't bother

I：Because sometimes I saw you just scan the text, you didn't go to the back part.

U：Yeah I did it. And I do it all the time because, I don't know, it is something you can't
explain, you know. The cover is old and the title is, and the author is not well known,
so you wouldn't go to see the index and all, you wouldn't waste your time.

6.經驗

過去使用特定資源的經驗影響瀏覽的行為。如下例：

F023 [#1] <2>

I：Ok, after I met you inside the library, you went right over to the newspaper area,
where the old back issues hang in the folders, and you looked through a few folders
and selected a stack of issues. What was your intent with that activity?

U：I was trying to find back issues in the month of February, on commodity prices and
I was particularly interested in the Wall Street Journal so I went specifically to those
newspapers.

……

U：I was trying to find, again, the analysis for each of the specific commodities that I
was interested in and reporting on. And I remembered what page it was on because
it's consistent through all their newspapers. And once I figured out what section and
what page it was on I just went directly to that each time, that place in the newspaper.

7.興趣

個體的興趣影響瀏覽行為。個體會為尋找感興趣的東西而瀏覽（如 W014,
L001），而當遇到感興趣的東西，個體也會進一步檢視瀏覽（如 F009）。

（1）W032〔#1〕<2>

I：Okay, great. Okay, then you continued to browse that area and I saw you select an-
other book, look at the jacket and keep it again.What was your intention for that ac-
tivity? These are hard, I know.

U：I kept it, so that's, it must be this one. I like art and I don't really know that much
then there is a French painter and I don't know very much about that painter. He is
an Impressionist painter and that's my favorite as far as art.

……

I：Were you specifically looking for a book about art?

U：No, no. When I come in here I never really know what I'm going to read.

I：Okay, so you don't have anything in mind?

U：No, I just thought, to find something that would hold my interest.

I：And why did you feel successful at that point?

U：I thought that I would learn something.

（2）W014〔#6〕<2>

I：Then you went back to the 621's and you seemed to browse in that section again.
What did you intend to accomplish at that point?

U：I guess, at that point I was just browsing in general.…

I：Then, finally you did pull out a book and you looked at it and you went through the
pages. What were you trying to accomplish at that point?<2>

U：The title interested me, it was something I didn't see in the, on the computer but the
title looked interesting so I browsed through it.

（3）F009〔#2〕

I：Ok, um, after you held onto that volume, you continued scanning once more and then
you walked over to the reference desk and I saw you flip through a journal that was
on the desk there. What was your intent with that activity?〔#2〕

U：Um, because the topic was interesting. It had to do with China and I'm interested in
China.

8.預期

對一資源的預知或期待影響個體瀏覽行為。

　　例如，下例中 L001 想看看最近護理方面的最新發展，特別是裝訂期刊中有否她一直在找、令她感興趣的東西，因此直接到裝訂期刊架上取下特定的護理期刊翻閱瀏覽。另一例中，F006 試圖尋找有關某一公司的資料，先查閱索引，翻到某一頁面檢視後，因知其他頁面應也列有該公司的訊息，因此進一步翻閱。

（1）L001〔#1〕

I：You said you came to the library to look at some materials, especially journals to get some idea of what is going on in your field, the nursing field. The first thing you did is go to the shelves, the journal stacks, and I saw you take down some materials. What did you try to accomplish at that time?〔#1〕

U：I wanted to look for the most recent material I could find that was bounded, I know the other section there was more, but I wanted to see what I could find, just to see anything that was interesting to me that I had been looking for. 〔After flipping through the pages〕I found something on administration that was interesting. And the other ones I just picked to see, you know, the professional information.

（2）F006〔#1〕<2>

I：Then you selected another volume. You looked at the beginning and then you looked in the middle and read a little bit. What was the intent with that activity?

U：I was trying, the front I was looking in the index to find the page that the company is listed on. Um, when I did find the page it wasn't all that informative but I knew that there were several other pages that this company was listed in the book.

9.回饋

系統對使用者的回應亦影響瀏覽之程度。如 W019 在使用線上公用目錄時，決定不再覽讀下去時說道：

U：It was another heading. It had fashions and I guess they had a lot of subheadings, so I picked a subheading.〔#7〕<4>

I：And then you displayed the titles under that subheading?

U：Yeah, and no, it said there were 138 titles so I said do I want to see them all, no I didn't want to see them all, so they asked for a second description and I tried school and I tried teen, I think, I tried a couple of things and none of them were successful. I got zeros for that sort of thing. So that really didn't work too well either.

10.好奇心

個體會因為好奇心的驅使而產生瀏覽行為，如下例。

I：Okay, then you sat down in the little sitting area there, reading area, and you picked

up one of your books and you kind of looked through the beginning, slowly page through the rest of the book what was your intention with that activity?

U：Curiosity, it happened to be, the book was "What Do People Do in Bed."

I：Oh. That was the title, huh?

U：Yeah, it was the title. It just struck my curiosity about why someone would write a book and whether it was worthwhile reading and it was, it wasn't worthwhile taking out. But it satisfied my curiosity though……

陸、結論與建議

本研究從圖書館使用者的角度，在自然情境中檢視讀者進行瀏覽時，實際發生之結果，探討構成成功的瀏覽經驗之原因，並分析、辨識影響瀏覽之因素。瀏覽在本研究中採取其最廣義的定義為「掃瞄資訊資源之活動」。研究結果顯示，圖書館使用者之瀏覽結果，就正面而言，包括：意外發現，資訊需求的修正，找到目標資訊，學習，休閒娛樂，資訊蒐集，跟上新知，滿足好奇心。其可能的負面結果為找不到所需要的資訊。

另一方面，本研究發現，圖書館使用者成功的瀏覽經驗與下列數個因素有關：達成從事該活動的企圖，滿意所發現的資訊之質或量，發現所接觸項目的功用（發現原先並不知道而有用的東西），以及，接觸到能夠協助決策判斷之資訊。就部份成功因素來分析發現，就能找到該資訊物件或資訊本身是成功的，但就所發現的資訊品質或數量並不適合而言，卻覺得不成功；或者，就沒有找到所尋找的東西而言是不成功，但就發現了自己感興趣或具有潛在價值的新資訊而言，是成功的；或就數個目的而言，沒有達到其中的一個目的是不成功，但就達成另一目的而言是有幫助的。本研究此一發現指出，瀏覽動機與結果涉及多個目的之同時進行與評估，而非如文獻中強調單一目標之滿足。

就影響瀏覽之因素而言，可歸納為個人因素，資訊組織因素，以及情境因素等三方面。個人因素包括：目標、知識、經驗、興趣、期望、好奇心。資訊組織因素為組織架構。情境因素包括時間、鄰近性、與回饋機制。

本研究結果對相關理論、研究與實務等三個層面之意涵如下：

就理論層次而言，瀏覽是人類非常基本的資訊行為，具有多面向的本質。影響瀏覽之因素指出，瀏覽之動機可以是多重且複雜的。人有基於好奇心、潛在興趣等內在動機而瀏覽，或為找尋特定項目，卻因知識或已知資訊之不足而瀏覽。本研究顯示，人們經常同時帶著不只一種資訊需求或興趣，只有一部份是有意識

地尋求滿足，另一部份則是不完全的認知。那些隱而未顯的需求或興趣，只有在人們接觸到符合其需求或興趣的資訊物件時，才將內在的資訊需求或興趣引發出來；亦即經由瀏覽的刺激性聯想而產生。對資訊需求的意涵乃是，瀏覽作為一種非語言性的行為，可滿足處於「無法言宣階段」或「潛在」的資訊需求。

另一方面，本研究發現，使用者起始時或為找尋特定資訊或物件，但因暴露在可自由檢視其他物件的資訊環境中，鼓勵圖書館使用者檢視原先未知的資訊物件，因此增加意外發現的機率。若是資訊物件依其相似性組織在一起，則更增加意外發現的機率。因此，瀏覽有意外發現的結果並非盲目的運氣。資訊服務人員可以透過規畫，設計出鼓勵瀏覽並增加意外發現機率的圖書館或資訊檢索系統。同時，使用者指出，除意外發現外，透過瀏覽也可產生過濾不必要的資訊或蒐集到有用資訊的結果。對資訊搜尋行為之意涵，此等現象支持「人們傾向發掘資訊（discovery），而非僅止於搜尋特定資訊」的主張。

就資訊檢索研究而言，本研究顯示瀏覽不應被視為一種偷懶的查詢行為或次等的搜尋策略。因此，使用者的心智模式研究應探討影響瀏覽的個人因素，如目標、知識等，如何改變個體的資訊搜尋行為。

就圖書館實務而言，瀏覽除受內在因素（如興趣）之影響外，亦受鄰近性與資訊組織架構等外在因素的影響。此意涵資訊服務者如館員，應瞭解掌握讀者的興趣，以讀者興趣作為組織資訊的依據，將具有共同特徵之物件，利用明顯的路徑與標識，清楚明白地揭示在潛在讀者的眼前。例如，排架位置不用傳統的分類號改用文字類目標示，亦可將讀者可能有興趣的館藏部分，細分獨立出來，說明每一細部之共同特徵，如以較小主題為標示而非某一段類號。同理亦可應用在電子圖書館之設計。

就系統設計而言，經驗到成功瀏覽的原因指出，充實資料庫中資訊內容的數量與品質仍為系統成功的重點之一。另一方面，系統人員應重視覽讀環境的介面設計，需可支援各種瀏覽模式，以有計畫地增加學習新知及意外發現等效果。此外，系統評估應將系統瀏覽性列入考量，而學習效果或意外發現亦可作為評估的新標準。

總之，瀏覽不是一種沒有目的、沒有系統、次級的資訊行為，也不是一種偷懶的查詢方法，而是人類非常基本的資訊活動。瀏覽也不只是一種資訊搜尋行為，更是一種學習策略，一種篩選技術，一種辨識資源的活動。傳統上對瀏覽的偏見，強調明確、直接的查詢，並不符合現實中人們的資訊行為模式。圖書館實務者及研究者應認識到瀏覽的豐富性及多面性，而系統設計人員及使用者應透過

對瀏覽更深入的瞭解，考量如何更有效地支援瀏覽活動，同時避免其潛在的負面結果。

誌謝

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註 9：同上註。

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註 12：此大型研究計劃由在 Rutgers University, School of Communication, Information and Library Studies 任教的 Nichloas Belkin 與 Tefko Saracevic 博士發起之「第三代線上公共目錄的設計原則：使用者與圖書館利用考量」。