RDA 的書目關係

藍文欽　整理

大綱

- 關係之意涵與其特性
- 書目關係之意涵與其功用
- 書目關係之關鍵文獻、書目關係之類型及連結機制
- Relationships in Original RDA
- Relationships in New RDA

關係之意涵與其特性

何謂關係（What are relationships）？

- 事物間的連帶作用

  --《教育部重編國語辭典》修訂本「關係」條目

- 人和人或人和事物之間某種性質的**聯繫**

  --《漢典》「關係」條目

- the way in which two or more people or things are **connected**
- the state of being **related** or interrelated

  -- 以上兩則出自*Merriam-Webster's Unabridged Dictionary*“relationship”條目

- the way in which two things are connected

  -- *Cambridge Dictionary* 與 *Oxford Learner's Dictionary*“relationship”條目有相同的解釋

何謂關係（2）

William Kent的經典著作 *Data and Reality*，對relationship有如下的定義：

"Relationships are the stuff of which **information is made**. … A relationship is an **association** among several things, with that association having a particular **significance**. For brevity, I will refer to the significance of an association as its '**reason**'. … There's an association between a teacher and a class, because he teaches it. … Relationships can be **names**, and … the name being a statement of the reason for the association." (Kent, 2012, p.101)

何謂關係（3）

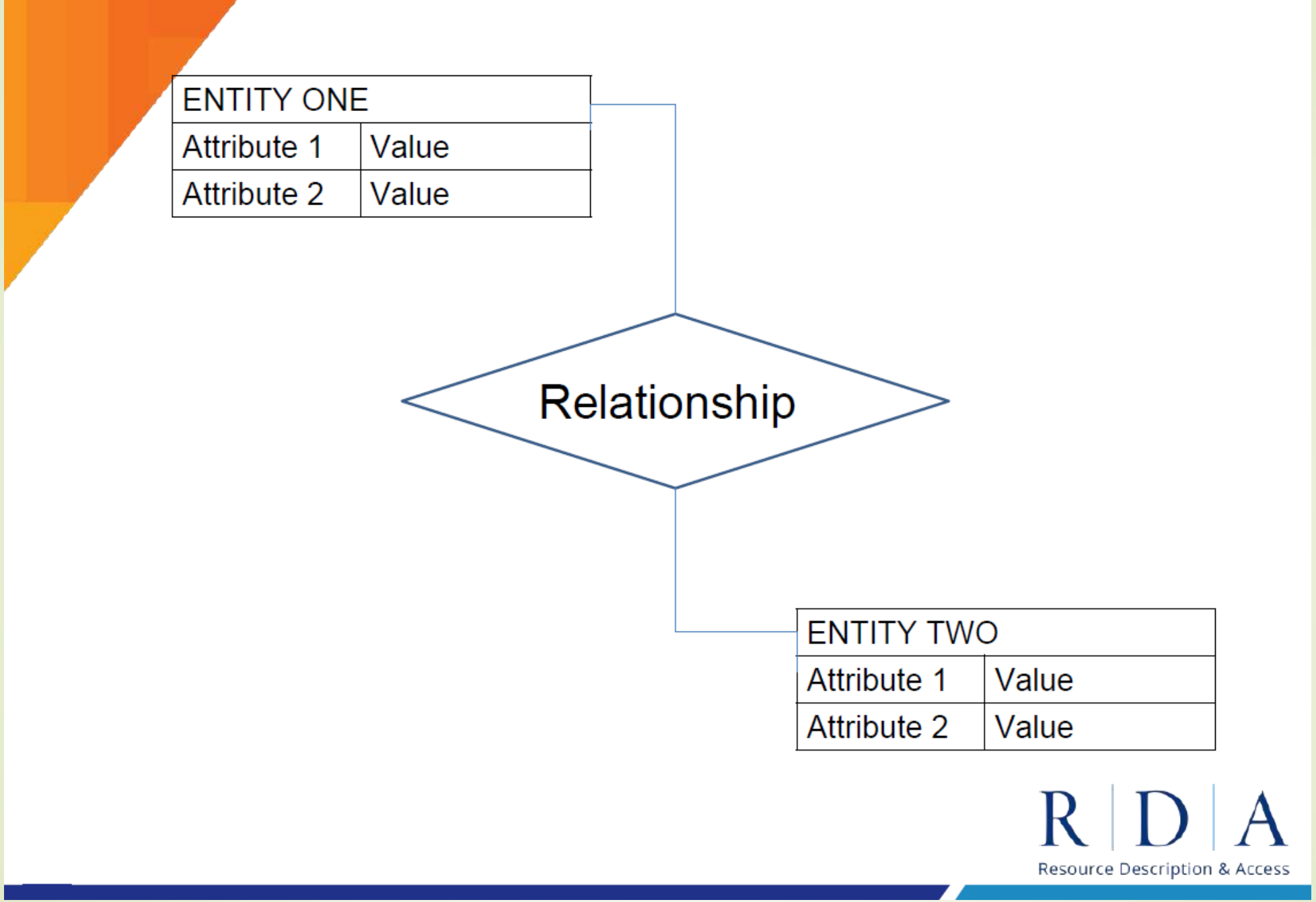
知識組織領域中存在多元且多樣的關係，更多的細節請參考：

- Green, R. (2001). Relationships in the organization of knowledge: An overview. In C. A. Bean & R. Green (Eds.), *Relationships in the organization of knowledge* (pp.3-18). Dordrecht: Kluwer Academic Publishers.
- Green, R. (2008). Relationships in knowledge organization. *Knowledge Organization, 35*(2/3), 150-159.
- Glushko, R. J., Mayernik, M., Pepe, A., & Maloney, M. (2016). Describing relationships and structure. In R. J. Glushko (Ed.), *The discipline of organizing* (4th Professional edition). Retrieved from https://ischools.org/resources/Documents/Discipline%20of%20organizing/Professional/TDO4-Prof-CC-Chapter6.pdf
- Moreira, W., & Martínez-Ávila, D. (2018). Concept relationships in knowledge organization systems: Elements for analysis and common research among fields. *Cataloging & Classification Quarterly, 56*(1), 19-39.

何謂關係（4）

根據新版*RDA Glossary*，可找到下列相關係目：

- **Relationship**: A specific association between two entities
  - **Entity:** An abstract class of a physical or conceptual thing in the universe of human discourse.
  - **Class**: A set of things that have broad attributes, behaviours, relationships, or semantics in common.
- **Relationship element**: An element that relates two RDA entities [UF *Relationship designator* 關係用語/關係標示語]
  - **Element**: A specific aspect, characteristic, attribute, or relationship used to describe an RDA entity.



Source: Brendorfer, T. (2020). Relationship element. RDA orientation, March 11, 2020.

何謂關係（5）

雖然 ”the concept of a relationship is pervasive in human societies in both informal and formal senses (Glushko, Mayernik, Pepe, & Maloney, 2016, p.299)”，同時 “relationships abound in the library and information science (LIS) world (Bean & Green, 2001, p.vii)”，但請注意，新版 **RDA關注的relationships，以規則中涉及的 13 個實體（ entities ）間的連結為主，而 relationship element就是用於表述兩個實體間的關係性質或類型 [新版RDA中不再採用*Relationship designator*，改以Relationship element取代]**

關係之特性 (1)

根據前述定義，可歸納出「關係」的基本特性：

- Connection / Association / Relatedness
- Context
- Reason (Significance)
- Name (Semantic label / Meaningful association)

"When we talk about relationships we specify both the resources that are **associated** along with a **name** or statement about the **reason** for the association." (Glushko, Mayernik, Pepe, & Maloney, 2016, p.299)

關係之特性 (2)

- **具意義的概念單元**：Green, Bean, & Myaeng (2002, p.vii)指出：

  "Relationships constitute important **conceptual units** and make significant contributions to **meaning**."

- **動態發展**：人與人、人與事物、或事物與事物之間的連結是**開放性質**，會隨著時間發展而有變化，例如夫妻關係可能因離婚而消失，兩個家庭或因聯姻而成了親家，作者因出版新作建立了新的著作關係，一部作品新添增訂版或不同語文譯本也產生新的書目關係等。

- 關係「往往隨著知識領域的**發展**或個體物件的**演變**而發生」（國家圖書館館藏發展及書目管理組，民107，頁3），故Wilson（1968）認為一部作品的創作是其**書目家族的啟始**，書目家族是**開放性**的，是動態發展的，家族會因新增的連結而擴充、改變其家族成員。

關係之特性（3）

Glushko, Mayernik, Pepe, & Maloney (2016, p.300)提出，關係可以從五項觀點分析：

- **Semantic** perspective (語意)—What the relations mean

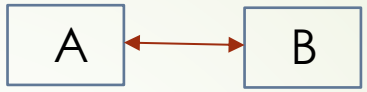
  The semantic perspective is **the most essential one**; it characterizes **the meaning of the association** between resources. → 關係如何用有意義的方式連結

  e.g., work *created by* person, expression *translated by* person, manifestation *published by* corporate body, item *owned by* family.

  涉及：symmetry（對稱）, transitivity（遞移）, equivalence（等同）, inverse（反向）

(續見下頁)

關係之特性（4）

- Symmetry vs. Asymmetry （對稱/不（非）對稱）
  - A is-married-to B.　B is-married-to A.
  

  (對稱關係)
  - 老闆雇用員工，員工受雇於老闆　(不對稱關係，反向之關係用語不同，如「夫-妻」即是一例)
- Transitivity (遞移具可推論性)
  - A is-taller-than B; B is-taller-than C → A is-taller-than C
  - A is-sibling-of B; B is-sibling-of C → A is-sibling-of C
- Equivalence (等同關係/同義關係)
  - 紅樓夢 is-equal-to 石頭記；梁啟超 is-equal-to 飲冰室主人；腳踏車 is-equal-to 自行車 。
  - Father (English) is-equal-to 父親 (Chinese)
- Inverse (當語意關係非對稱時，反向關係的用語有區別，下例之關係用語只是舉例)
  - 教師(教授)→學生；學生(學習)→教師
  - 醫師(診察)→病患；病患(就診)→醫師
  - 以RDA為例：work described by 與 description of work 互為反向關係元素 (續見下頁)

關係之特性（5）

Glushko, Mayernik, Pepe, & Maloney (2016) (續)

- **Lexical** perspective (關乎語彙表達及其形式，包含同義、多義等相關問題)

  The lexical perspective focuses on how the conceptual description of a relationship is expressed using **words** in a specific language. → A relationship is always expressed using words in a specific language. (i.e., name)

- **Structural** perspective (展現的形式結構)

  The structural perspective analyzes the **actual patterns of association, arrangement, proximity, or connection** between resources without primary concern for their meaning or the origin of these relationships.

(續見下頁)

關係之特性（6）

Glushko, Mayernik, Pepe, & Maloney (2016) (續)

- **Architectural** perspective (強調關係組件的數量和抽象級別)

  The architectural perspective emphasizes **the number and abstraction level of the components** of a relationship, which together characterize its complexity.

  主要包括：*degree* (or arity，指所需運算元的數量), *cardinality* (關係基數), *directionality* (方向性)

  Degree: A ←is married to→ B (元數為2)

  Author –writes→ Book –published by→ Publisher (元數為3)

(續見下頁)

關係之特性（7）

Cardinality（關係基數）

- 一個人只有一個身份證字號（one-to-one）
- 一個學系可招收複數學生 （one-to-many）
- 多個研究生為同一老師所指導 （many-to-one）
- 學者可參與多個研究計畫，研究計畫也可有多位學者參與（many-to-many）

Directionality（方向性）

- 父 is-father-of 子 （關係用語只能單向用於父→子）不對稱關係
- 子 is-son-of 父 （關係用語只能單向用於子→父）不對稱關係
- A is-friend-of B （關係用語可用於雙向 A←→B）對稱關係

關係之特性（8）

Glushko, Mayernik, Pepe, & Maloney (2016) (續)

- **Implementation** perspective (實施、建置)

  The implementation perspective considers how the relationship is implemented in a particular **notation** and **syntax** and the **manner** in which relationships are arranged and stored in some technology environment. It considers how a relationship is **realized** or **encoded** in a technology context.

  如：格式框架、語法、編碼（序列化）…

  像是否採用RDF、XML、或特定model等都可在考慮範圍

關係之特性（9）

另外，關係亦可具有broader/narrower 的上下位層級性質，如下例：

RDA

Relationship element:

Summary of

Related Elements

For broader elements, see Work: **description of work**.

For narrower elements, see Work: **abstract of**.

- 以上述RDA 關係元素 ***summary of*** 為例，其廣義的上層元素為 ***description of work*** ，其下層元素為 ***abstract of*** ，亦即 *description of work* > *summary of* > *abstract of* ，三者就是廣義、狹義的上下層級關係。
- 關係元素若具有上下層級性質，就要留意其屬性之繼承性。

書目關係的意涵及其功用

何謂書目關係

- “A bibliographic relationship is an association between two or more bibliographic items or works." (Tillett, 1991, p.150)
- 「書目關係是界定兩個或兩個以上書目實體在目錄以某種方式發生關聯所產生的特定關係，目錄的匯集和導航功能正是藉由書目實體的關係和連接所達成的。」（高紅，2006，頁108）
- “Bibliographic relationships provide a means for **relating/connecting** two or more bibliographic entities.” (Noruzi, 2012, p.409)
- 書目關係：「展現兩個或以上書目實體之間的關聯，是讓讀者瀏覽於書目世界的一種方式。」（陳淑君，2019）

何謂書目關係 (2)

- "Bibliographic relationships broadly defined include **all relationships involved in the descriptive cataloging** of **bibliographic units**, whether considered as physical or material units, on the one hand, or as intellectual units, on the other hand." (Green, 2001, p.7)
- A bibliographic relationship is "defined as the **association**, **relation**, **connection**, and **interaction** between different bibliographic entities, or components of entities." (Arsenault & Noruzi, 2012, p.641) [以下是Cambridge Dictionary的釋義]
  - Association: the fact of being involved with or connected to someone or something
  - Relation: the connection or similarity between two things
  - Connection: the act of joining or being joined to something else; the state of being joined or connected in some way
  - Interaction: an occasion when two or more people or things communicate with or react to each other

何謂書目關係 (3)

- 綜言之，書目關係是從編目或資源描述的觀點，就書目世界（bibliographic universe）中，實體間存在的各種連結而言，兩個書目實體或其組成部分之間因某種因素產生關聯，即稱之為書目關係，如作者與作品、作品與作品、作品與其表現形式或具體呈現之間的關係等。

就文獻所見，對書目關係範圍的認定有不同主張，如：

- **Tillett（1991）**認為圖書館的目錄包含四種關係，即書目關係、檢索款目關係、名稱關係和主題關係
- **Green（2001）**介紹知識組織中的關係，包括：書目關係、內文本與互文本（intra-and intertextual）關係、主題關係、相關性（relevance）關係。

書目關係與目錄的目的

- 在西洋編目的發展歷程中，從Panizzi 於1841年完成91條規則起，經 Jewett (1952)、Cutter (1904)、Lubetzky (1953) 至1961年IFLA發布的巴黎原則 (Paris Principle)，及之後的英美編目規則 (AACR) 第一版 (1967)、第二版 (1978) 等，基本上都主張圖書館目錄的目的 (objectives) 或功能應包括**查尋** (finding) 與**聚集** (collocating)，前者以特定/已知項目的查找為主，後者則著眼於相關資料的聚集（如相同作者、一書的各種版本、相同主題等）。（關於西方編目規則的發展，請參見張慧銖(民92)）
- 查尋與聚集兩項，普遍被視為圖書館目錄應具的基本功能，而書目關係的確立與應用，有助於上述功能的發揮。

書目關係與目錄的目的 (2)

- IFLA於1998年出版*Functional Requirements for Bibliographic Records* (FRBR)，提出4項使用者工作：find、identify、select、acquire/obtain，其報告中指出，書目實體間關係的確立，有助於上述使用者工作的達成（詳見FRBR報告6 User Tasks）。
- FRBR報告的5.1節指出：”Essential to all entity-relationship models is the **identification and mapping of relationships** between the entities”，並強調："In the context of the model, **relationships serve as the vehicle** for depicting the link between one entity and another, and thus as **the means of assisting the user to "navigate"** the universe that is represented in a bibliography, catalogue, or bibliographic database."
- FRBR的6.1節也指出：”find entities that correspond to the user's stated search criteria (i.e., to locate either a **single** entity or a **set of entities** in a file or database as the result of a search using an attribute or relationship of the entity)” →藉關係與脈絡的呈現，提供使用者更有用的尋找資料的途徑

書目關係與目錄的目的 (3)

- IFLA 於2009 年正式發布The Statement of International Cataloguing Principles（簡稱ICP），將navigate納入目錄的功能，與find (包括single resource及 sets of resources)、identify、select、acquire/obtain合為目錄的五項基本功能。2016年修訂版ICP，又加入explore，與navigate合為一項。聲明中強調目錄應協助使用者 “to navigate and explore within a catalogue, through the logical arrangement of bibliographic and authority data and the **clear presentation of relationships** among entities”。
- 可見有效運用書目關係於書目系統的組織與呈現，是目錄能發揮聚集功能，並協助使用者瀏覽與探索的重要機制。 如張慧銖（民92）所言：「目錄之目的與功能就是藉由**書目間的關係與連結**而達成的。」（頁222）

書目關係與目錄的目的 (4)

- IFLA為整合FRBR家族於2017年發布*IFLA Library Reference Model* (LRM)，提出5項使用者工作，包括：find (隱含聚集功能)、identify、select、obtain、explore，在explore項目的說明文字中指出：
- The user may be browsing, **relating** one resource to another, making unexpected connections, or getting familiar with the resources available for future use. The explore task acknowledges the importance of **serendipity** in information seeking. [資訊偶遇]
- To discover resources **using the relationships** between them and thus place the resources in a **context**
- To facilitate this task the information system seeks to support discovery by **making relationships explicit**, by providing contextual information and navigation functionality

書目關係的重要性

"Relationships play a very important role in assisting the user to complete the tasks of finding, identifying, selecting, and exploring. **Relationships are the key to navigating through the bibliographic universe**. They carry information about the nature of the links that exist between entities, enable collocation, and provide pathways to improve resource discovery. " (Oliver, 2021, p.38)

由前述目錄目的或使用者工作的討論，可見書目關係與目錄的查找、聚集與瀏覽/探索功能的發揮，息息相關，有助於增進目錄的效用及滿足使用者的資訊需求。

- 書目關係可視之為一種工具， 用以協助使用者「**航行**」在目錄世界中，並「**聚集**」相關的著者與作品及其內容版本、載體版本與單件，方便使用者獲取相關的資源。這種呈現方式也有學者稱之為**「書目家族」的聚集**。(鄭玉玲、許令華、牛惠曼、林淑芬，民100，頁4)
- 書目關係為什麼重要，其最大的功能即在發揮資源聚集的功效，……方便使用者獲取相關資源。……透過書目關係的建立與呈現，也可以是**相關作品資源展現示意圖**的一種方式。 (鄭玉玲等人，民100，頁18)

書目關係的重要性 (2)

- 兩個或兩個以上書目實體間之書目關係資訊能**支援使用者任務**之資源的發現（find）、辨識（identify）、選擇（select），

  …… 包括**改善使用者對於所給予實體的了解**，以潛在地強化實體的辨識及選擇或不選擇，並經由從已知實體引導至相關實體的方式，來改進使用者在發現相關實體方面的**選擇權**，甚而書目關係資訊可加強使用者透過建立實體群組及促進**書目世界資料庫及目錄的導航**，了解手邊系統與資料庫及系統內的知識組織。(鄭玉玲等人，民100，頁15)

- 透過「關係」可以反映實體之間的**交集程度和親疏遠近**，並可藉以做為實體間分類**組織的依據**。(鄭玉玲等人，民100，頁14)

書目關係的重要性 (3)

- 書目關係為什麼重要，其最大的功能即在發揮資源**聚集**(collocation)的功效，將相關的著者與作品及其表現形式、具體呈現與單件聚集，方便使用者獲取相關資源。.....隨著科技進步，數位物件.....蓬勃發展，加上數位出版品容易複製、改版、傅布的特性，造成相同作品多種版本的情況，因此數位物件本身與其他數位物件即存在各種不同關係。不僅數位出版品，對於圖書館而言，**資源之間的相關版本或多重衍化**.....等書目關係，若無法在書目紀錄中呈現與其他相關**書目彼此關聯之邏輯性**，便無法於圖書館目錄上展現資源查詢的效果與資料匯聚的功能。(國家圖書館館藏發展及書目管理組，民107，頁1)

書目關係的重要性 (4)

- “Bibliographic relationships allow users to view a variety of items related to their search terms and locate the materials that will best meet their needs. Large databases with many items can simplify the **display** of information to users by employing FRBR based bibliographic relationships.” (Gonzalez, 2005)
- “Identification of bibliographic relationships allows users to navigate between related works and can help information systems designers **organize large result sets in a way that is more useful** to end users.” (Arsenault & Noruzi, 2012, p.641)
- “Most organizing systems are based on many relationships to **enable the system to satisfy** some intentional purposes with individual resources or the collection as a whole.” (Glushko et al., 2016, p.299)

書目關係的重要性 (5)

- "**Entities do not usually exist in isolation** but are associated with one another through different types of relationships. … Any study of the bibliographic record must take into account relationships that exist between entities in the bibliographic universe and in the catalogue that is a partial representative of that universe. The end results of these relationships and the object of bibliographic records is access to adequate and precise information, to entities that **satisfy** information needs. … **The study of bibliographic relationships is central to an understanding of the nature and structure** of the bibliographic record, the catalogue, and ultimately, to the study of cataloguing principles." (Fattahi, 1997, Chapter 4)

書目關係的重要性 (6)

綜言之，就書目關係的重要性可以歸納如下：

- 隨著數位出版與網路資源的普及，加上國際間出版品的交流，一部作品衍生出多樣相關物件的情況越來越普遍，書目關係的有效處理已經成為一種必要。
- 書目關係有助於目錄之目的/使用者工作的達成，在查找、辨識、選擇圖書資料方面，書目關係可以提供脈絡與線索、協助辨識選擇；在聚集與瀏覽/探索方面，書目關係提供連結聚集的條件與探索的路徑，提升目錄的探索力（exploitative power），增加資訊偶遇的機會。
- 書目關係可以提供書目系統組織及呈現資源的框架，展示書目實體間的連結網絡，以更有用的方式或邏輯架構將檢索結果呈現給使用者。
- 書目關係是瞭解書目性質與結構的核心議題，也與目錄的設計有關聯。

書目關係的關鍵文獻、
書目關係的類型及連結機制

It is important to understand the **types** of relationships that exist in the bibliographic universe as they have been identified to date, and the **means** currently used for identifying and linking bibliographic records for related bibliographic entities.

-- (Vellucci, 1998, p.105)

19世紀至20世紀八０年代的發展

- “In nineteenth and early twentieth century, catalog design was relatively atomistic; the **emphasis was on individual records** more than groups of records.” (Bates, 2003, p.18)
- “For more than a century, **bibliographic relationships were discussed by implication within the context of the collocating function of the catalog**. It was not until the late **1970's**, however, when the move toward online catalogs sparked hopes for a more sophisticated catalog structure, that bibliographic relationships became an independent topic of discussion. Theoretical and **empirical examination** of the concept began in earnest in the **1980's** and continues to the present day.” (Vellucci, 1998, p.105)
- 自19世紀中葉Panizzi提出91條規則，經Cutter、 Lubetzky 等人，至1961年Paris Principle，聚集功能一直被視為目錄的目的之一，但書目關係的概念尚未被正式提出，至1980年代才出現書目關係的實證研究。

UNIMARC 三種書目關係

IFLA於1977年出版Universal MARC Format (簡稱UNIMARC），1980年推出第二版，兩版均提出三種書目關係的類型與定義，是編目規範中最早針對書目關係正式予以分類與界定的嘗試，在書目關係研究的發展歷程中有其重要意義。UNIMARC的三種關係類型如下：

- ***Vertical*（垂直關係）**— 指整體對部分或部分對整體間之上下階層關係（the hierarchical relationships of the whole to its parts and the parts to a whole）
- ***Horizontal*（水平/橫向關係）**— 指一單件與其不同語言、形式、媒體的版本之間的關係（the relationship between versions of an item in different languages, formats, media, etc.）
- ***Chronological*（年代/時序關係）**— 指一單件在不同時間產出的各版本間的關係（the relationship in time between issues of an item）

(IFLA Section on Cataloguing, 1980, p. 58-59)

Goossens & Mazur-Rzesos (1982) 垂直關係之三個階層

Goossens 與 Mazur-Rzesos（1982）針對整體-部分的階層關係（UNIMARC稱為垂直關係）進行系統性的分析，其目的在發展一個用於表述此類關係的理論模型。他們提出用三層級（three-tier schematic representation）樹狀結構，以呈現從簡單到複雜的階層關係，包括（轉引自 Tillett, 2000, p. 10-11; Vellucci, 2016, p.19-20）：

- The highest level is called the **set** level
- The intermediate level is called the **subset** levels
- The lowest level is called the **piece** level
- Special notation is used for each level

Tillett (1991) 認為這是以嚴謹方式分析書目關係的最初嘗試 (p.155)

Hagler & Simmons(1982) 目錄中之五種書目關係

Hagler與Simmons(1982)主張作品有不同版本與形式等複雜情況，然而圖書館目錄未能明確指引，故建議目錄應就出版品間之關聯予以釐清，並提出目錄中存在下列五種關係(pp.45-55)：

- **Edition**：一作品之各種版本、形式或重印、重刷等情況
- **Continuations and Sequels**：作品之前後集或隨時間而連續出版之相關產品
- **Accompanying items**：一個出版品或組件中包括至少兩個部分，一個作為主件，其餘作為附隨資料，其間的關係應予註明
- **Contents**: The parts of a single publication，如選集與其所收錄之單篇文章
- **Series**：叢書中之單本與叢書間之關係

他們另指出**書目關係具複雜性**，可能會有兩種關係同時存在的現象

Tillett (1987)博士論文提出七類型書目關係

Tillett (1987)在其博士論文*Bibliographic Relationships: Toward a Conceptual Structure of Bibliographic Information Used in Cataloging*中，檢視從Panizzi 91條規則至英美編目規則第二版共24種編目規則，分析規則中用以連結書目實體的各種類型與機制，根據研究發現提出書目關係的七種類型：

- **等同關係 *Equivalence relationship***: 指作品之具體呈現（manifestation）與其原樣拷貝複製品（exact copies），或原件與其內容和著作權未受影響（ intellectual and artistic content and authorship are preserved）之重製品間的關係，如：影印本、摹寫本（facsimile）、重印/重刷本、照相本、微縮本等

Tillett (1987) 七種類型書目關係(2)

Tillett (1987) 提出的書目關係的七種類型 (續)：

- **衍生關係 *Derivative relationship***: 指一作品與基於該作品進行改動（modification）後的新作間的關係，包括：
  - 作品的變化（variations）或不同版本，如：不同版本、修訂/更新本、翻譯、摘要、文摘（digests）等
  - 基於一作品予以改編、改寫而成一新作品，如兒童版
  - 改變文類或體裁（genre），如改編為劇本、小說、歌詞等
  - 依仿某作品之風格或主題內容而成的新作，如：自由翻譯/意譯（free translation）、改述（paraphrases）、模仿（imitations）、戲謔/滑稽式仿作（parodies）

Tillett (1987) 七種類型書目關係(3)

Tillett (1987)提出的書目關係的七種類型（續）：

- **描述關係 *Descriptive relationships***: 指一作品與描述、評論（criticism, evaluation, review, or critiques）、解說、或註釋該作品之新作間的關係，包括導讀、案例（casebooks）等
- **整體-部分（部分-整體）關係 *Whole–part* (or part-whole) *relationships***: 指選輯、全集、叢書、或套書與其所收錄之組成部分（component part）間的關係（由上對下），或是指該組成部分與其所屬選輯、全集、叢書或套書間的關係（由下對上）
- **伴隨關係 *Accompanying relationships***: 指單件與附隨該單件一起出版發行之其他物件間的關係，如伴隨圖書一起出版的光碟或地圖摺頁。另外，也包括像逐字索引、索引之類的相關作品

Tillett (1987) 七種類型書目關係(4)

Tillett (1987)提出的書目關係的七種類型（續）：

- **連續關係 *Sequential relationships***: 指因不同時間出版，而使兩筆書目實體間產生接續（continue）或先刊（precede）等序列關係，如一作品與其續集或前傳（prequel），或連續出版品中各刊間的關係等
- **共享特性關係 *Shared characteristic relationships***: 當兩筆書目實體間具有上述六類型關係以外的共同書目特徵（如：相同作者、書名、主題、出版者、出版年、語言等），即稱之為共享特性關係。 (參見 Tillett, 1991)

Vellucci (1998) 認為Tillett的研究，是書目關係研究的奠基之作，更啟發後續許多檢視、分析書目關係的研究。

O'Neill & Vizine-Goetz (1989) 主張目錄中需標誌書目關係的五類實體

- O'Neill and Vizine-Goetz (1989) 認為線上目錄的普及與目錄全球化的發展，出版品的數量與變化愈形複雜，使用者對目錄的期望與要求改變，書目呈現有需要從概念結構上改進。他們提出一個包含五項書目實體的階層結構，並指出各階層實體間由上到下是一對多的關係。五項書目實體依序由上到下包括(p.172)：[參見Green (2001, p.7-8)的評論]
- ***Work***: a set of related texts with a common origin and content
- ***Texts***: a set of editions with the same content
- ***Editions***: a set of printings produced from substantially the same type image
- ***Printings***: a set of books printed at one time or printed at different times containing no more than slight variations
- ***Books***: an individual physical manifestation of a bibliographic entity

Smiraglia (1992)博士論文提出衍生關係的八種子類型

Smiraglia (1992)的博士論文 *Authority Control and the Extent of Derivative Bibliographic Relationships*，針對Tillett提出的七類書目關係中的衍生關係做更深入的探討。他以Georgetown University圖書館線上目錄為對象，專門分析書目中呈現的衍生關係的特性與範圍。他對衍生關係的定義如下：”derivative bibliographic relationships exist between any new conception of a work and its original source (the **progenitor**), or its **successor**, or **both**” (p.26)。結果指出，該研究分析的目錄樣本中，有近五成出現衍生關係，而且人文學類的作品相對較常出現衍生關係。

Smiraglia (1992)提出衍生關係的八種子類型 (2)

Smiraglia的研究提出衍生關係的八種子類型，包括：

- **並時衍生關係** *Simultaneous derivations*：指一作品同時(或幾乎同時)發行之不同版本間的關係
- **相繼衍生關係** *Successive derivations*：指作品經過改寫、修訂或接續發行的不同作者之新作品等，如修訂版、第二版等
- **譯本關係** *Translations*：作品譯為不同語文
- **擴增關係** *Amplifications*：如插圖本、由文學作品改為音樂創作、評論（criticisms, commentaries等）、製作索引/逐字索引等
- **摘錄關係** *Extractions*：包括節略（abridgments）、濃縮（condensations）或摘抄（excerpts）

Smiraglia (1992)提出衍生關係的八種子類型 (3)

Smiraglia提出衍生關係的八種子類型（續）

- **改編關係***Adaptations*：將作品簡化或改編/寫劇本、歌詞，音樂的編曲，及其他對作品的改動
- **表演關係** *Performances*：作品錄製為聲音或視覺影像
- **前身關係** *Predecessor derivations*：Smiraglia在研究初期設定的類型為前述七種，但分析後發現，有些作品在發行後才有其前傳或前集的出版，故新增前身關係

Smiraglia與其學生Leazer後續針對 OCLC WorldCat書目紀錄中出現的衍生關係進行分析，大抵確定上述的分類是穩定而可行
(Leazer & Smiraglia, 1996, 1999; Smiraglia & Leazer, 1999)

Vellucci (1994) 博士論文探討音樂資源中的書目關係

- 有鑑於音樂目錄中存在大量書目關係，Vellucci (1994)的博士論文 *Bibliographic Relationships among Musical Bibliographic Entities* 特以此為題，檢視音樂目錄中的書目家族現象。她採用Tillett的書目關係類型為基礎，但省略「共享特性關係」這一項。
- Vellucci發現，大約 94%的音樂資源至少會有一項Tilette所界定的書目關係，比在一般圖書中出現的次數更頻繁。
- 她的研究同時確認，Tillett 與 Smiraglia所提出的書目關係類型在音樂目錄中多可發現，Tillett的書目關係類型可作為書目關係研究的基礎架構。(參見Vellucci, 1997)

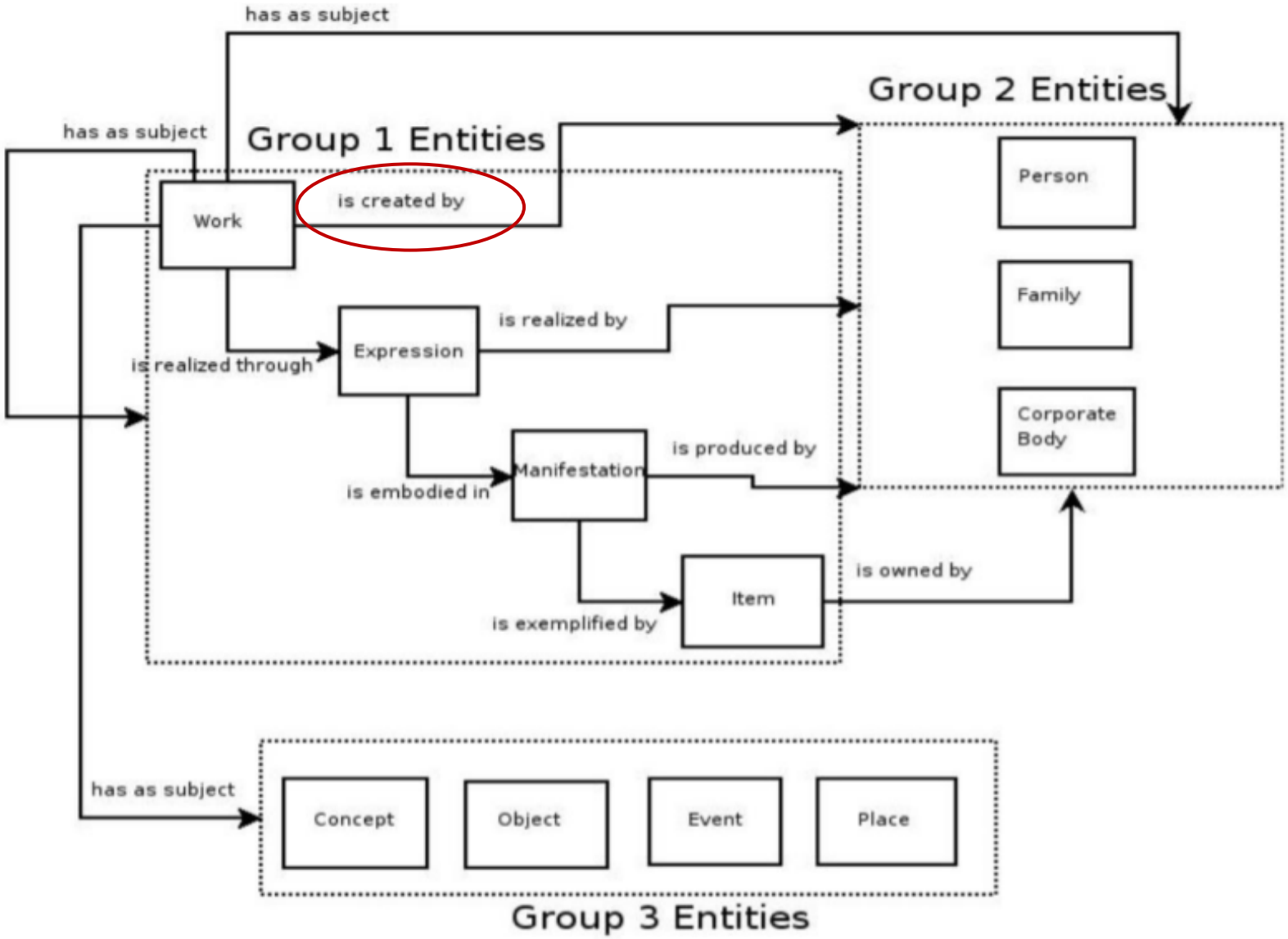
Arsenault & Noruzi (2012)認為書目關係的研究中，Tillett、Smiraglia 與 Vellucce三位，是其中最傑出的 (p.644)

FRBR (1998/2009)概念模式中之關係

- FRBR由IFLA於1998年正式出版（2009年有修訂版），是關於書目世界的概念模式，強調使用者的方便性，以功能需求為導向，採用實體關係（entity-relationship）模式作為核心基礎 。
- FRBR包含三組實體：[詳見FRBR報告第三章 3.1.1-3.1.3]
  - The primary group comprises the products of intellectual or artistic endeavour: **work**, **expression**, **manifestation**, and **item**. [WEMI]
  - The second group comprises those entities responsible for the intellectual or artistic content, the production and dissemination, or the custodianship of such products: **person** and **corporate body**.
  - The third group comprises an additional set of entities that together with the entities in the **first and second groups** may serve as the subject of a work: **concept**, **object**, **event**, and **place**.

FRBR概念模式中之關係 (2)

右側high level圖示，說明FRBR三組實體之關係(兩實體間之聯繫詞)，如：work **is created by** person



Source: https://cataids.wordpress.com/2009/06/24/frbr-do-you-understand-it/

FRBR概念模式中之關係 (3)

前頁high level圖示中，實體（以方塊表示）與實體之間的聯繫詞，即用以表示二者的關係，以FRBR報告5.2.1的說明為例：

- The first of those relationships indicates that **a work is "realized through" expression**. Viewed from the reverse direction, the relationship indicates that **an expression "is a realization of" a work**, which is in fact how expression is defined as an entity ("the intellectual or artistic realization of a work...."). The logical connection between work and expression, as reflected in the model through the **relationship link**, serves as the basis both for identifying the work represented by an individual expression and for ensuring that all expressions of a work are linked to the work. (p.57) → 下頁提供更多實例供參

FRBR概念模式中之關係 (4)

- A work <is **realized** through> an expression; an expression <is a realization of> a work.
- An expression <is **embodied** in> a manifestation; a manifestation <is the embodiment of> an expression.
- A manifestation <is **exemplified** by> an item; an item <is an exemplar of> a manifestation.
- A work <is created by> a person or corporate body; a person or corporate body <has created> a work.
- An expression <is realized by> a person or corporate body; a person or corporate body <has realized> an expression.
- A manifestation <is published by> a person or corporate body; a person or corporate body <has published> a manifestation.
- An item <is owned by> a person or corporate body; a person or corporate body <owns> an item.
- A work <has as subject> a person; a person <is subject of> a work.
- A work <has as subject> an event; an event <is subject of> a work.

FRBR概念模式中之關係 (5)

除了三組實體間的主要關係外，FRBR第5章還有第一組實體之其他關係類型，如：

- *Work-to-Work* Relationships, e.g., successor, supplement, …
  - Whole/Part Work-to-Work Relationships, e.g., has part, is part of
- *Expression-to-Expression* Relationships, e.g., revisions, translations, ...
  - Whole/Part Work-to-Work Relationships
- *Expression-to-Work* Relationships
- *Manifestation-to-Manifestation* Relationships
  - Whole/Part Manifestation-to-Manifestation Relationships
- *Manifestation-to-Item* Relationships
- *Item-to-Item* Relationships
  - Whole/Part Item-to-Item Relationships

Tillett (2001)對FRBR書目關係的分類

Tillett (2001)參酌其提出的七種書目關係類型，將FRBR中的書目關係予以分類，包括：

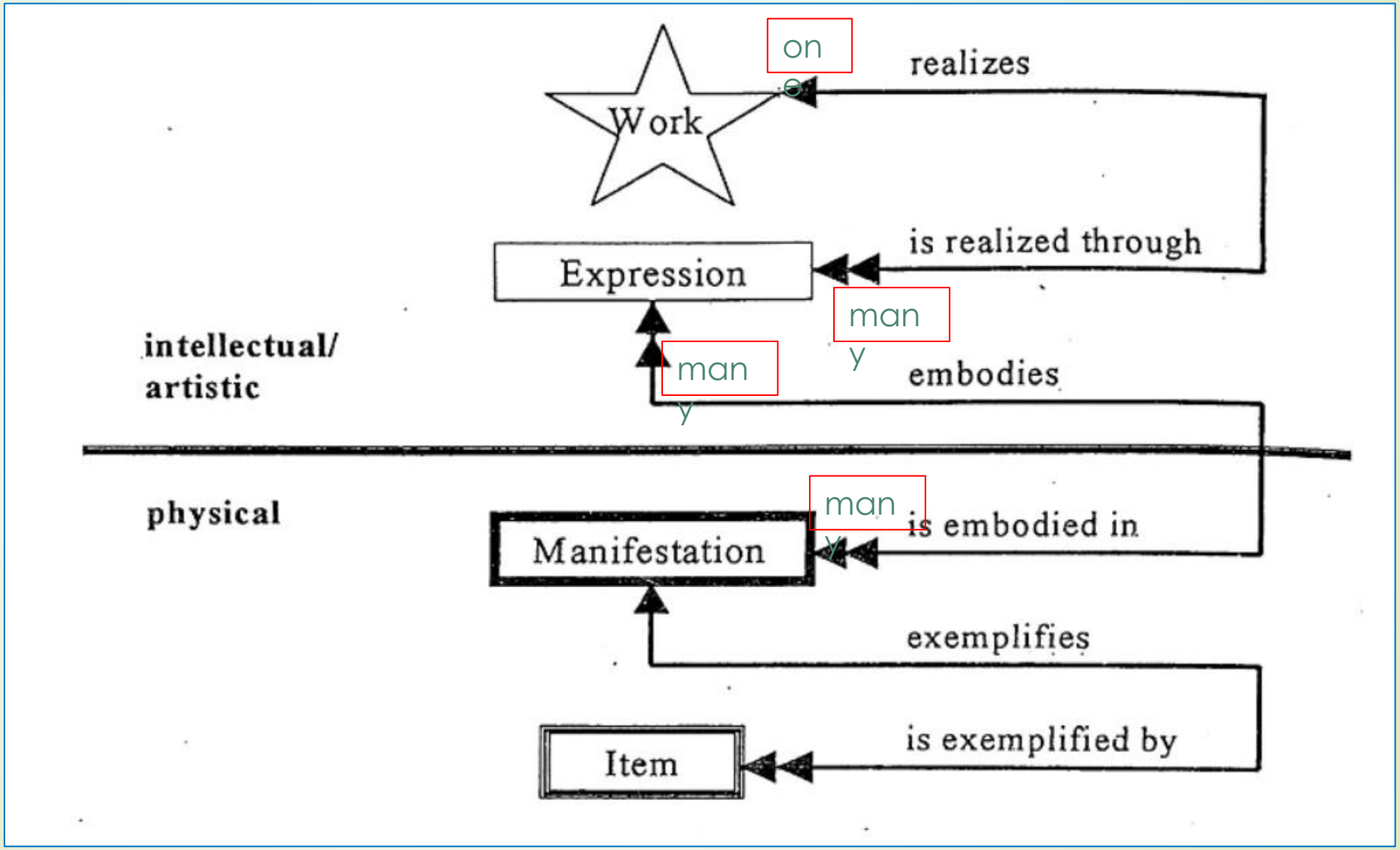
- **Primary relationships**: 以FRBR第一組實體WEMI為主（亦有稱之為Intentional relationships）
- **Content relationships**: 在作品內容上有程度不等的關聯，包含等同、衍生、描述等關係類型
- **Whole-part and part-to-part relationships**: 一個集合體(aggregate)與其組成部分(components)，或組成部分與組成部分間的關係（如：伴隨關係、連續關係）
- **Shared characteristic relationships**
- **Responsibility relationships**: 以第二組實體與第一組實體間的關係為主
- **Subject relationships**: FRBR之第一、二、三組實體均可作為subject

Tillett對FRBR書目關係的分類（2)

Primary relationships

(Source: Tillett, 2001, p.22)

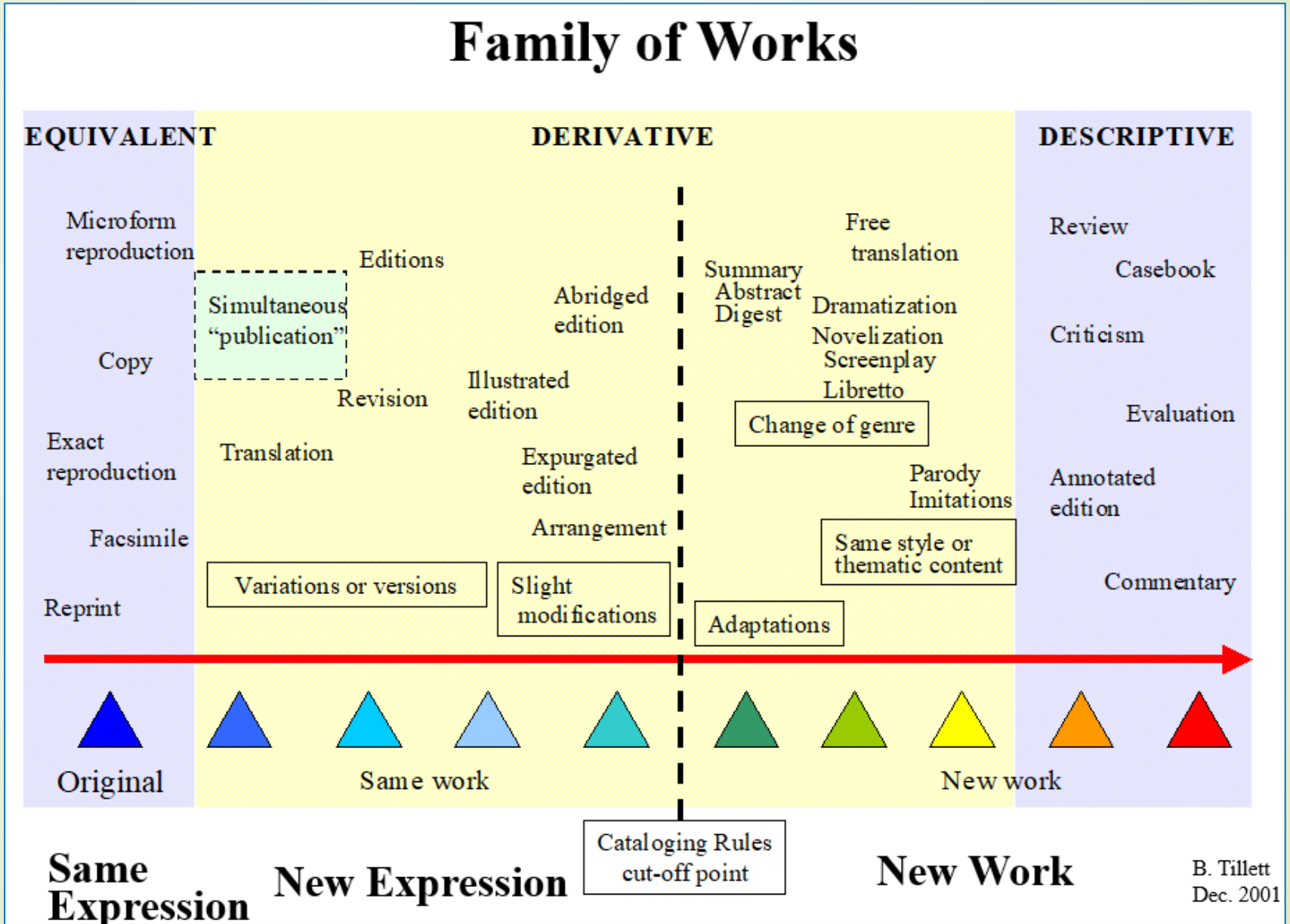
箭頭用於表示關係基數，單箭頭代表one，雙箭頭代表many



Tillett對FRBR書目關係的分類（3)

Content relationships

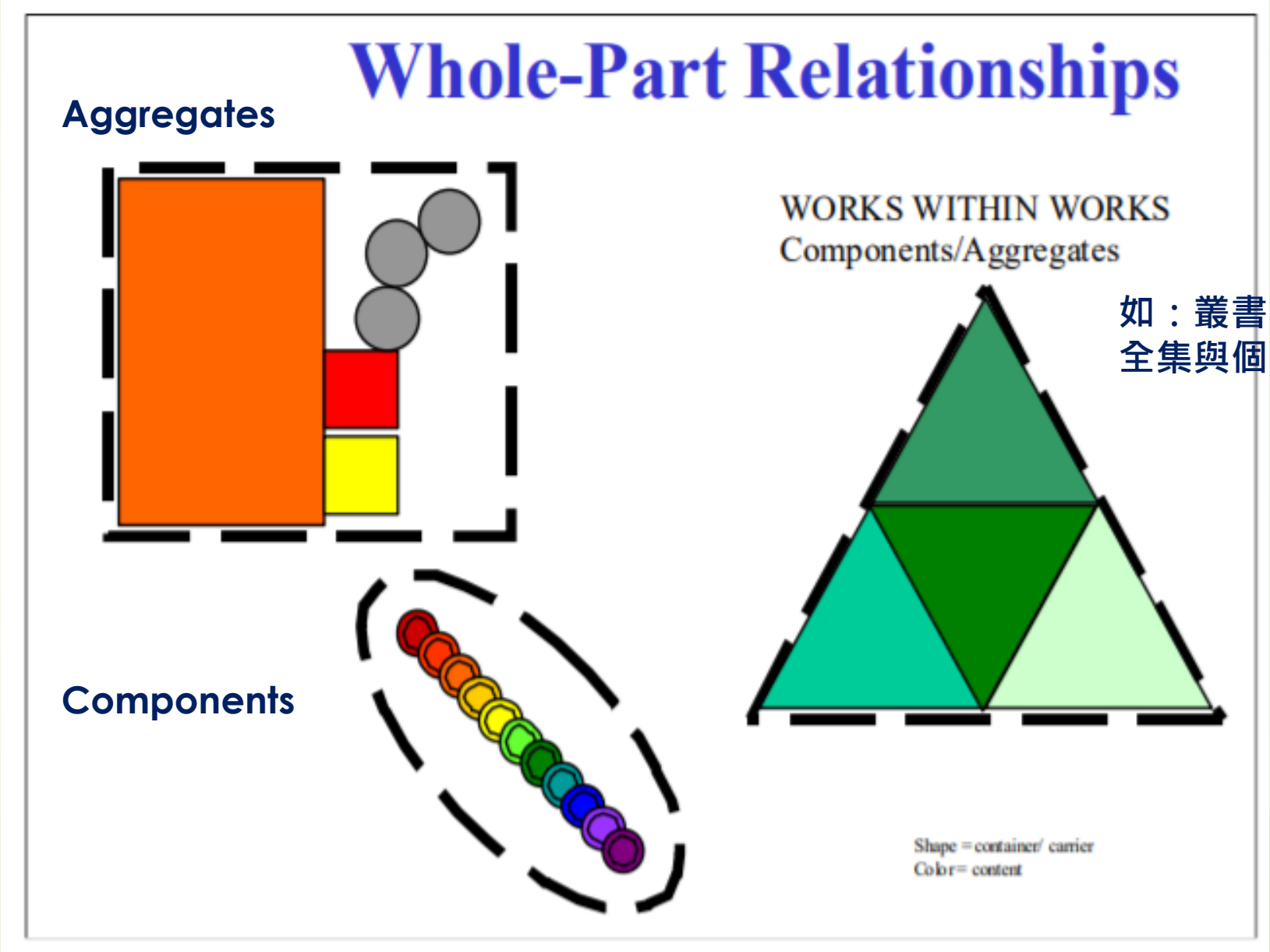
(Source: Tillett, 2003)



Tillett對FRBR書目關係的分類（4)

Whole-part relationships

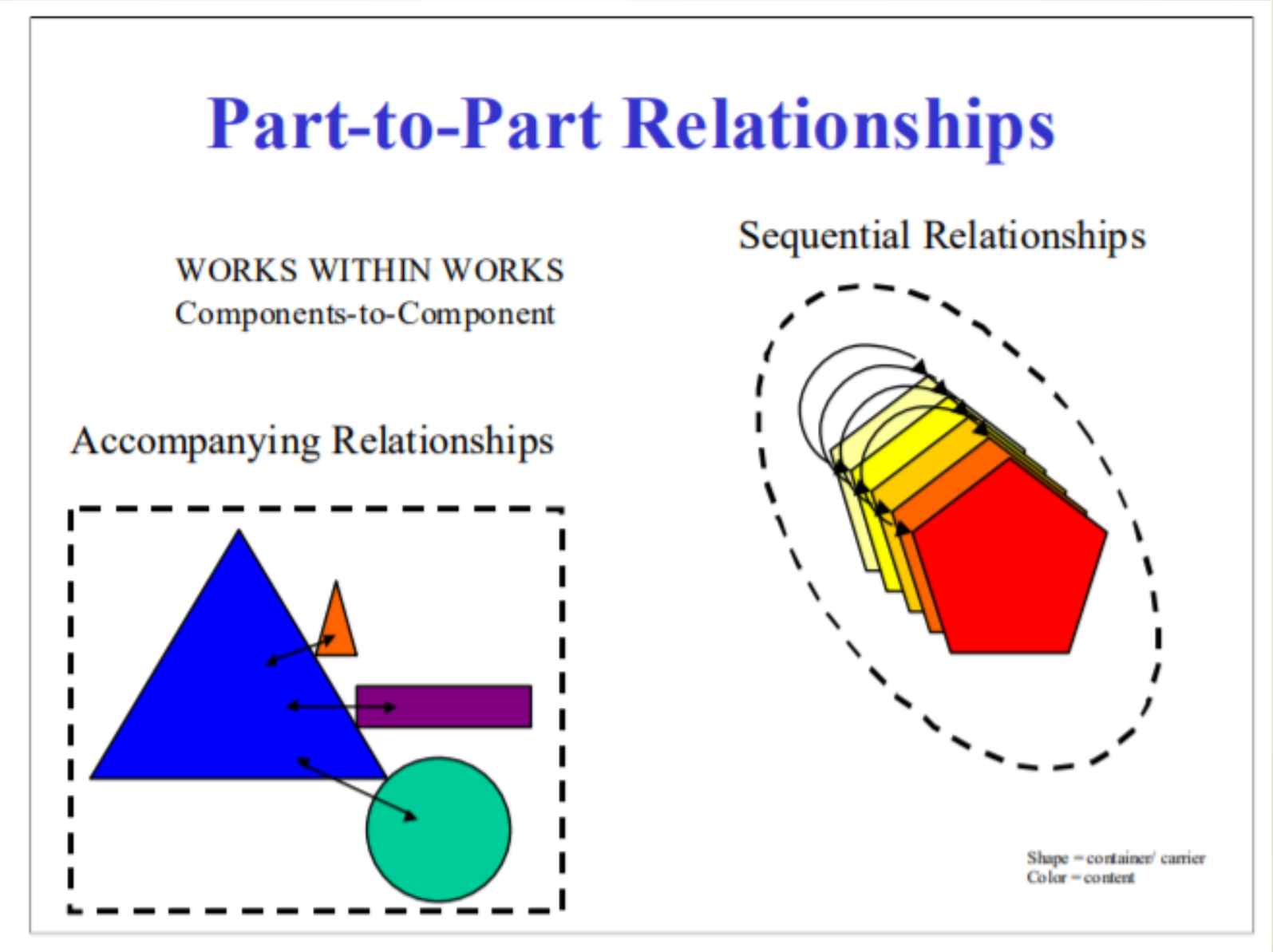
(Source: Tillett, 2003)



Tillett對FRBR書目關係的分類（5)

Part-to-part relationships

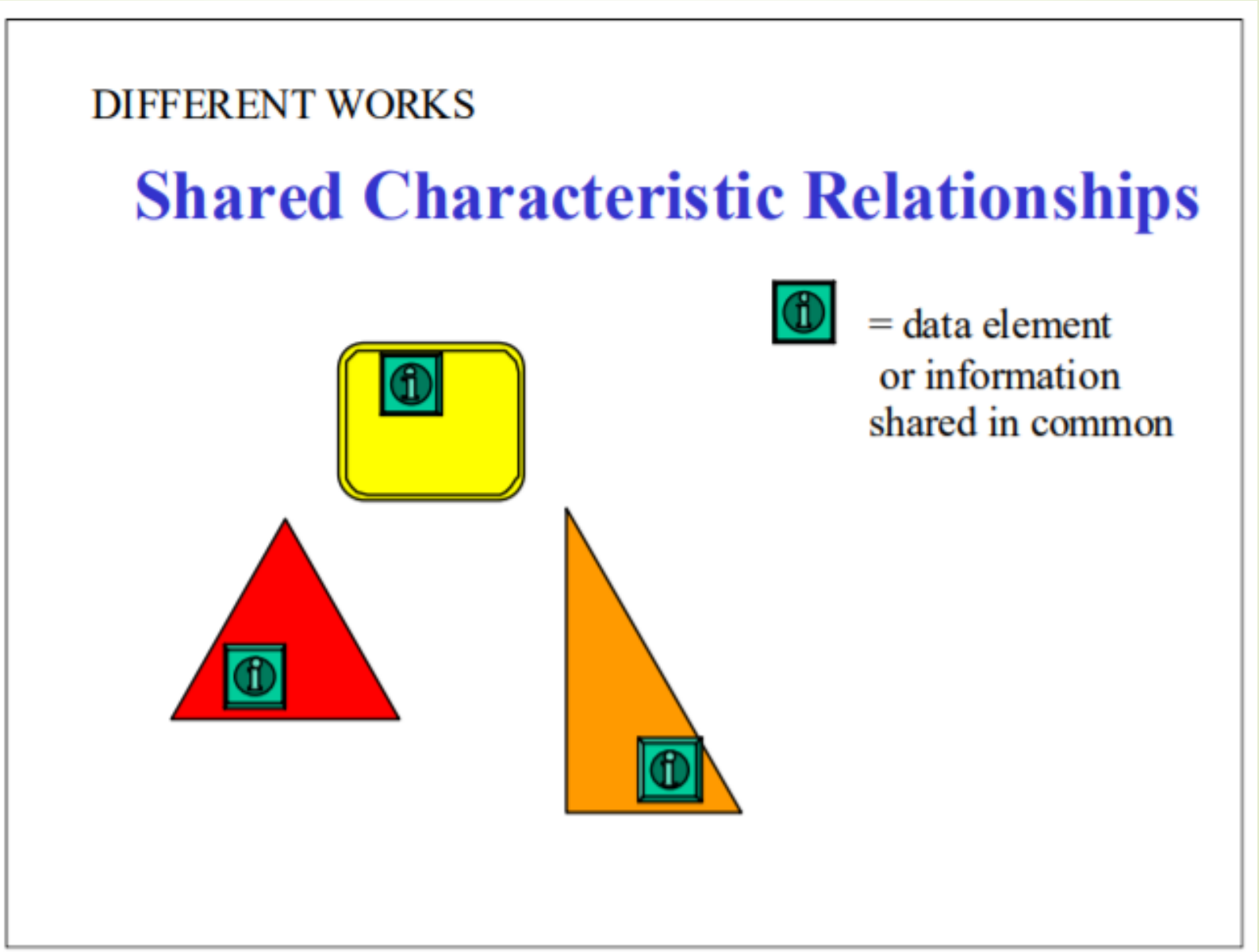
(Source: Tillett, 2003)



Tillett對FRBR書目關係的分類（6)

Shared characteristic relationships

(Source: Tillett, 2003)



Svenonius (2000)

Svenonius (2000, p.100-105) 依據set-theoretic觀點，將書目關係分為下列類型 [部分關係類型下方*縮格斜體*展示的是該關係之**反向關係**]：

- **Membership** relationship – between an individual information entity and the sets to which it belongs
  - *Instantiation* relationship – between a set and the items belonging to it
- **Inclusion** relationship – between a subset of an entity and the entity itself
  - *Inheritance* relationship – between a set and its subset
  - *Derivative* relationship – between a superwork and a work
- **Equivalence** relationship – between any two members of the same set
- **Aggregation** relationship – the part-whole relationship
  - *Component part* relationship – the whole-part relationship
- **Sequential** / **Chronological** relationship- between some entities loosely related in content but separated in time
- **Commentary** relationship – between a bibliographic entity and one or more other such entities

IFLA LRM中的書目關係

- IFLA於1998出版FRBR最終報告，其後陸續完成Functional Requirement for Authority Data (FRAD)及Functional Requirement for Subject Authority Data (FRSAD)。
- 因為FRBR、FRAD、FRSAD三者在使用者工作、實體、關係等存在不一致之處，為消除其間的歧異，IFLA決議將三者整合。2017年8月，最終版IFLA Library Reference Model (簡稱LRM)獲得認可，取代原FRBR家族（Riva, Le Bœuf, & Žumer, 2017）。
- LRM 含括11個實體，與FRBR將實體分為三群不同，項目亦有變化，包括：Res、Work、Expression、Manifestation、Item、Agent、Person、Collective agent、Nomen、Place、Time-span。
- 這些實體間具有**階層性**，可以下頁表格呈現。

IFLA LRM中的書目關係 (2)

Entity Hierarchy

Top Level	Second Level	Third Level
LRM-E1 Res		
--	LRM-E2 Work	
--	LRM-E3 Expression	
--	LRM-E4 Manifestation	
--	LRM-E5 Item	
--	LRM-E6 Agent	
--	--	LRM-E7 Person
--	--	LRM-E8 Collective Agent
--	LRM-E9 Nomen	
--	LRM-E10 Place	
--	LRM-E11 Time-span	

Source: (Riva, Le Bœuf, & Žumer, 2017, p.19)

IFLA LRM中的書目關係 (3)

- Relationships are an essential part of the bibliographic universe: they connect instances of entities and provide context for them. **In the IFLA LRM model, the relationships are declared in a general, abstract way** and thus enable implementers to include additional details in a consistent and coherent way by introducing additional refinements.（Riva, Le Bœuf, & Žumer, 2017, p.61）
- LRM的書目關係是逐一賦予編號（如：LRM-R1, LRM-R11等），共有36種關係。而關係分為兩階層，第一層為LRM-R1，LRM-R2至LRM-R36歸為第二層。這些關係可以分為五種類型（primary relationships、responsibility relationships、subject relationships 、appellation relationships、relationships among agents），後續分項介紹。

IFLA LRM中的書目關係 (4)

談LRM的書目關係，有兩個關鍵字需要認識：domain 與range，根據LRM提供的詞彙定義（Riva, Le Bœuf, & Žumer, 2017, p.100）：

- ***Domain***: the source entity, or departure point, for a relationship
- ***Range***: the target entity, or arrival point, for a relationship

[若套用函數的概念，domain稱為「**定義域**」（應用範圍上的限制），range為「**值域**」（所有可能值的集合）]

例如：

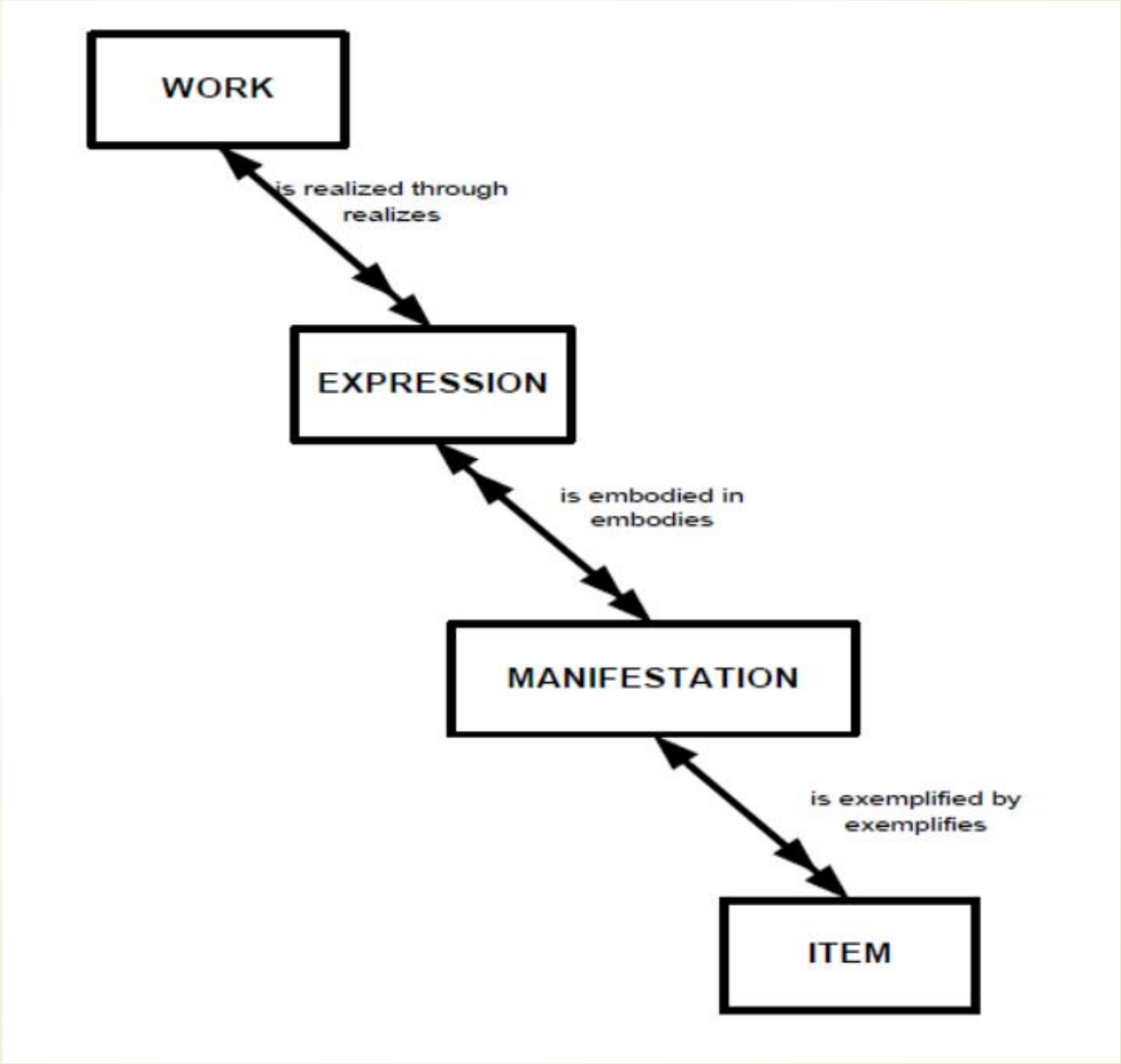
- Person <Created> Work → 此例中，Person是domain，Work是range
- Work <Is created by> Person → 此例中，Work是domain，Person是range
- 在一般關係圖示的慣例中，domain在 左側，range在右側；若是反向(inverse)關係，則位置需對調。
- **Domain與Range的概念，同樣應用於新版RDA**。

IFLA LRM中的書目關係 (5)

Primary Relationships
between Work, Expression, Manifestation, and Item

LRM中的核心書目關係，以WEMI之間的關係為主

（Source: Riva, Le Bœuf, & Žumer, 2017, p.83）

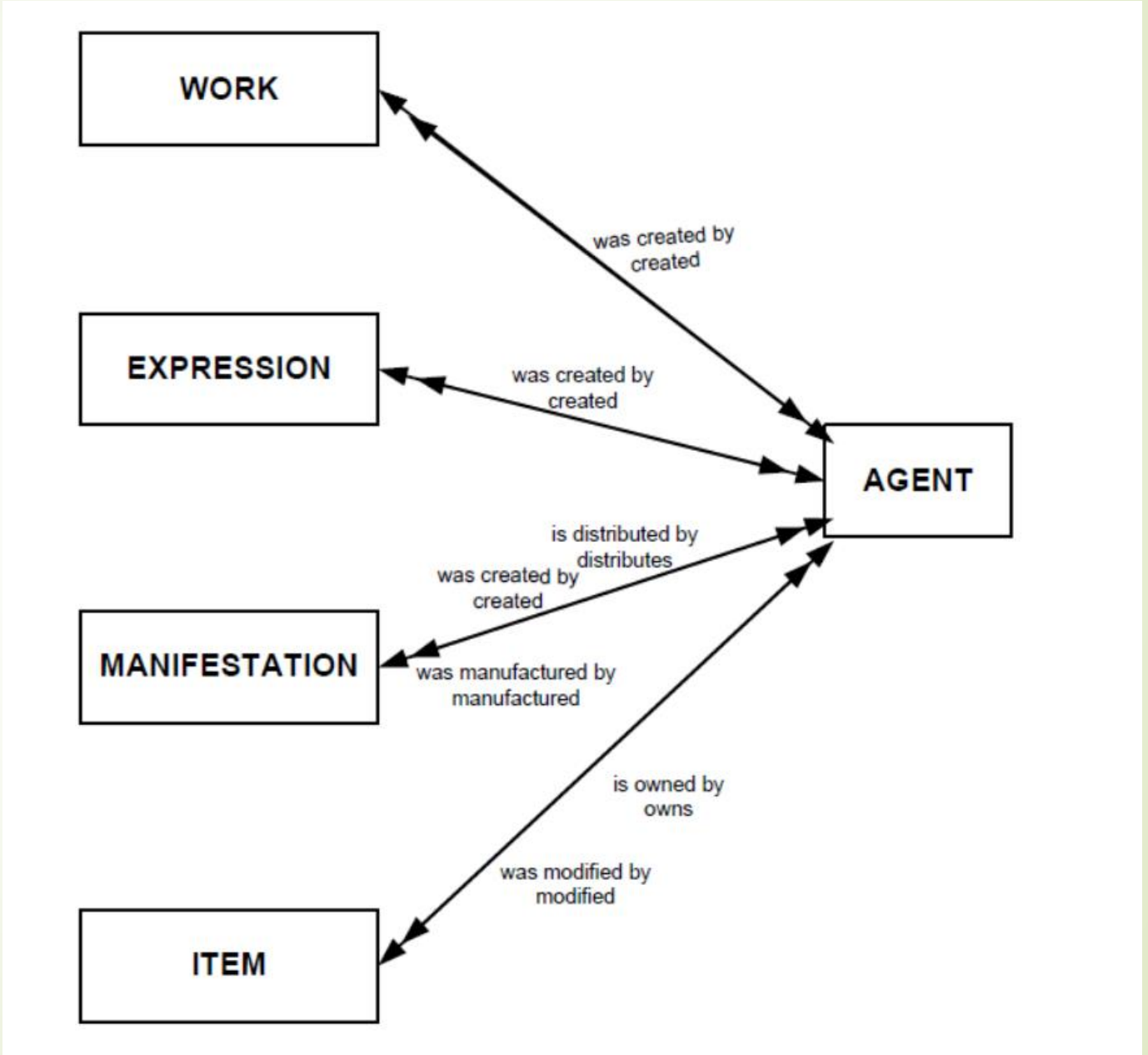


IFLA LRM中的書目關係 (6)

Responsibility Relationships

between Agent and Work, Expression, Manifestation, and Item

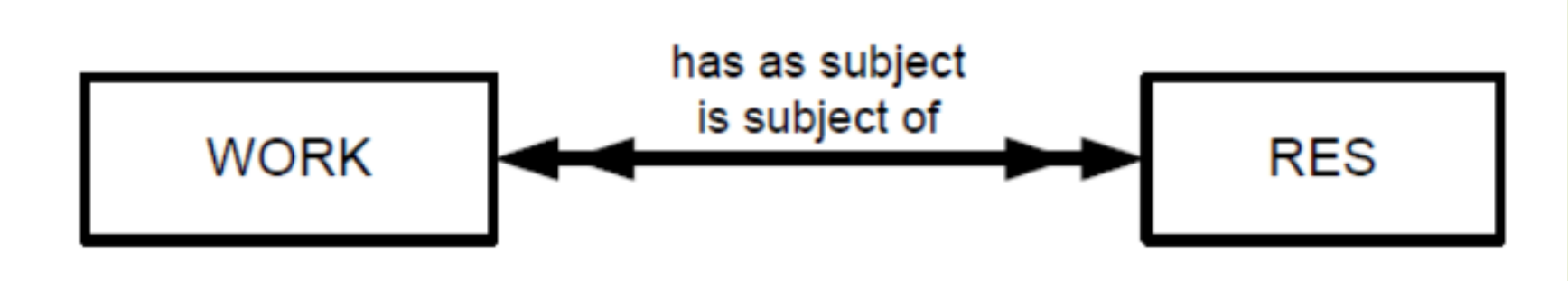
(Source: Riva, Le Bœuf, & Žumer, 2017, p.84)



IFLA LRM中的書目關係 (7)

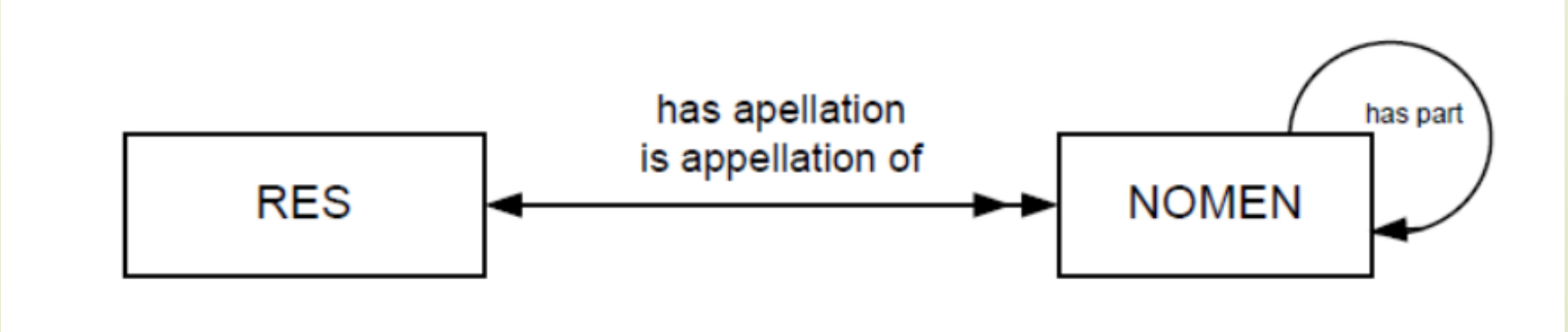
Subject Relationships

(Source: Riva, Le Bœuf, & Žumer, 2017, p.85)



Appellation Relationships

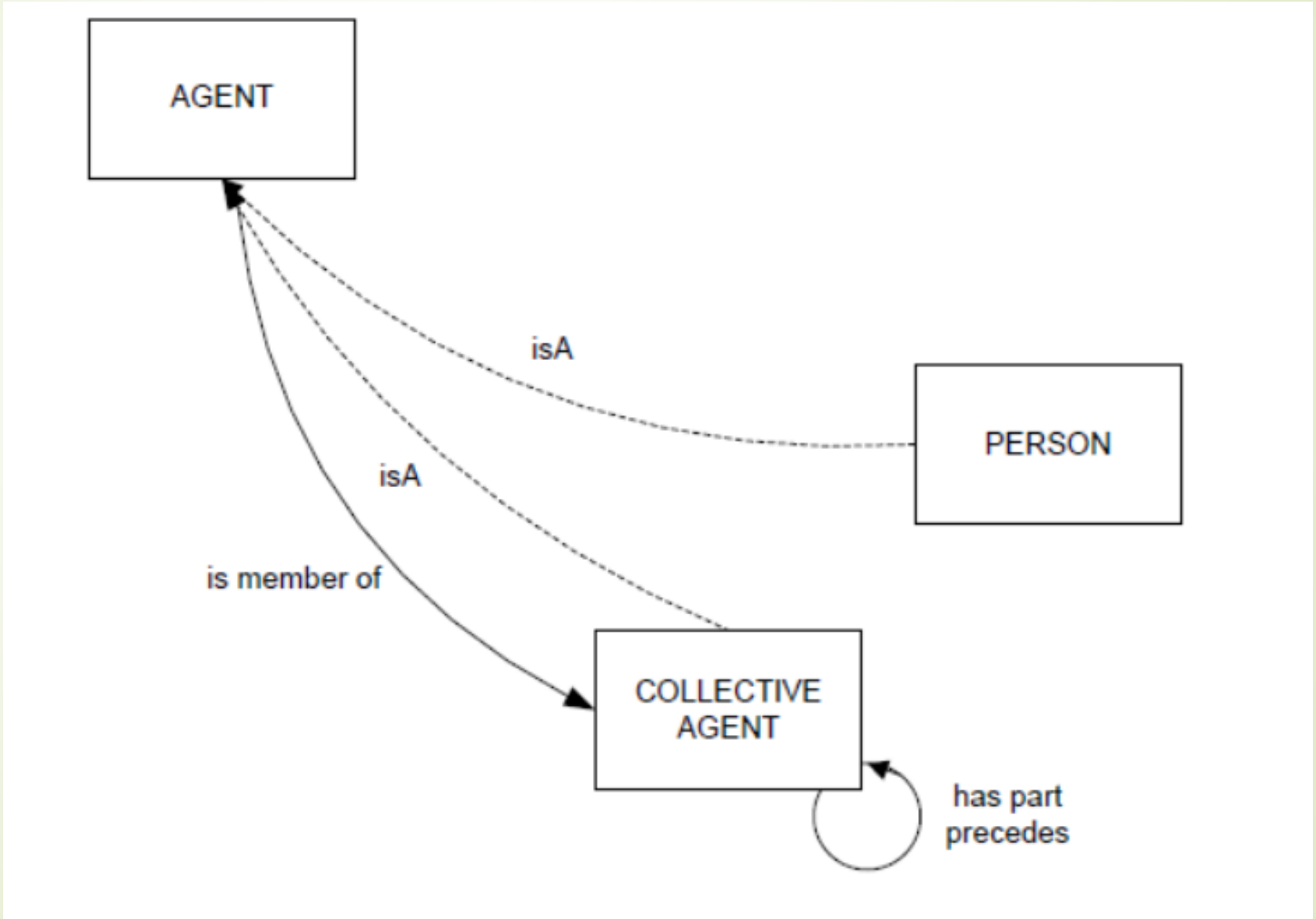
(Source: Riva, Le Bœuf, & Žumer, 2017, p.85)



IFLA LRM中的書目關係 (8)

Relationships among agents

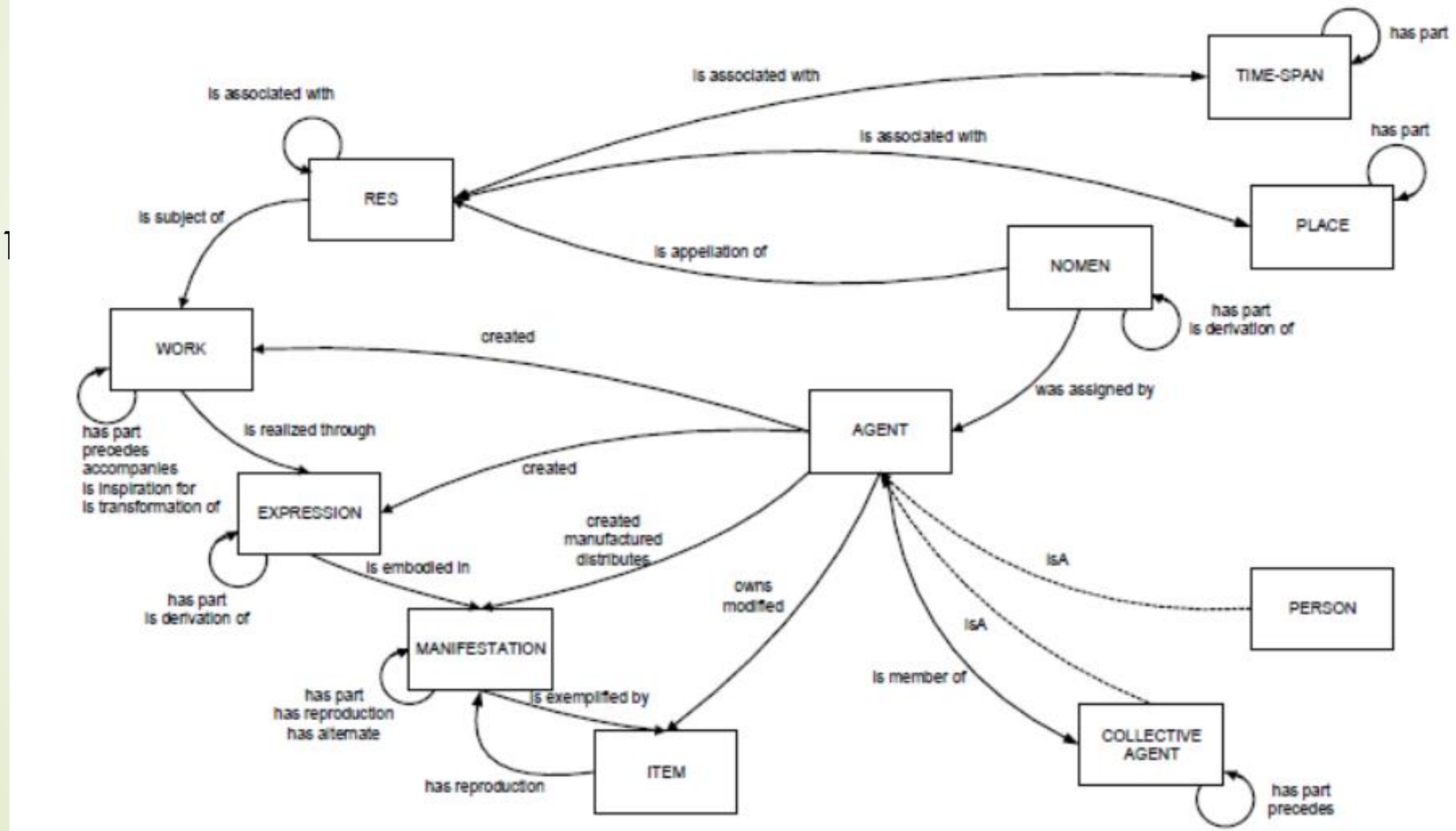
(Source: Riva, Le Bœuf, & Žumer, 2017, p.85)



IFLA LRM中的書目關係 (9)

Overview of Relationships

(Source: Riva, Le Bœuf, & Žumer, 201 p.86)



書目關係之連結機制(Linking devices)

- Vellucci (1998, p.105)指出，我們不僅要認識書目關係的類型，更要知道在目錄系統中如何辨識與連結相關的書目紀錄。連結機制就是在目錄中用以表述書目關係的工具（means）。

連結機制有兩項功能（Vellucci, 1998, p.14）:

- A linkage helps to **identify** a specific or potential **relationship** among bibliographic entities. [識別]
- It serves to **link** the bibliographic records for the related entities. (i.e., to link corresponding related records) [連結]

書目關係之連結機制 (2)

Tillett (1992) 分析英美編目傳統，指出其書目關係連結機制包括：

Main entry	Series statement
Uniform title	Physical description addition
Added entry	Note
Dash entry	References
Analytical entry	Hypertext link
Multilevel description	Integrated record displays from shared data in databases
Edition statement	

書目關係之連結機制 (3)

Vellucci (1997, Chap. 14-17)將其研究中發現的連結機制分為四群：

- ***References***— See references; see also references; explanatory references
- ***Access points***— name-title; uniform title; name; title; series title; subject headings; dash entries
- ***Notes***— contents; accompanying material; form and medium of performance; language; edition and history; “with;” relationship to reproduction; physical description; responsibility; local holdings; summary; notation; other formats; series
- ***Other information found on the bibliographic record***— title and statement of responsibility; edition statement; publication statement; physical description; series statement; musical presentation statement; MARC 040 field; MARC holdings data

書目關係之連結機制 (4)

Svenonius (2000, p.98-100)分析AACR採用的連結機制如下：

- Work IDs
- Notes
- Formal linkages (called linking entries)
- See also references
- Codes (如：前導用語 Reprint, Continuation, etc.)
- Emblematic (象徵/代表) description – the description of an individual item as standing in for or representing a set of equivalent items
- Hierarchical or multilevel description
- Analytic description

Relationships in Original RDA

- Original RDA Toolkit -- first published in June 2010
- Original RDA Print -- first published in Nov. 2010
- LC began to employ RDA rules -- since November 2011
- LC RDA Implementation Day One -- March 31, 2013
- 國家圖書館新進西文資料採RDA編目 -- March 31, 2013

What Is RDA ?

- **RDA: *Resource Description and Access*** was developed by the RDA Steering Committee (RSC; formerly the Joint Steering Committee (JSC) for Development of RDA) as part of its strategic plan (2005-2009) to replace the Anglo-American Cataloguing Rules, 2nd Edition Revised, which were first published in 1978. [2005年決定由AACR3改名RDA]
- RDA is **a package of data elements, guidelines, and instructions** for creating library and cultural heritage resource metadata that are well-formed according to international models for user-focused linked data applications.
- RDA provides a set of guidelines and instructions on formulating data to support resource discovery.

Source: RSC Website. About RDA. http://www.rda-rsc.org/content/about-rda

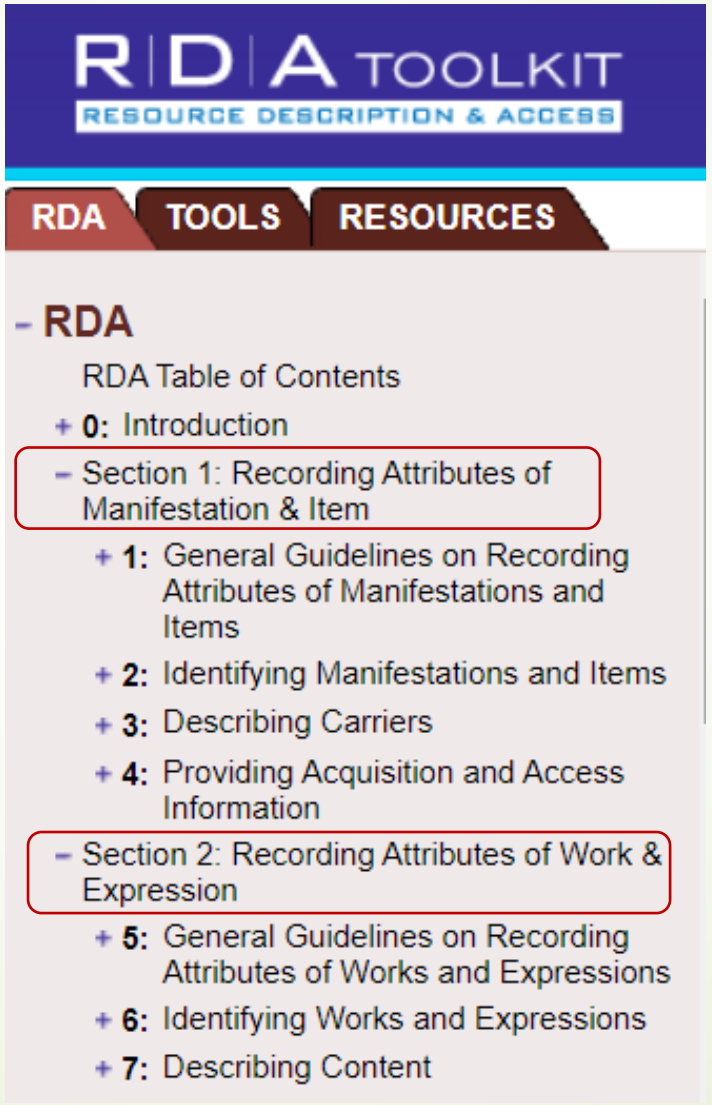
What Is RDA？ (2)

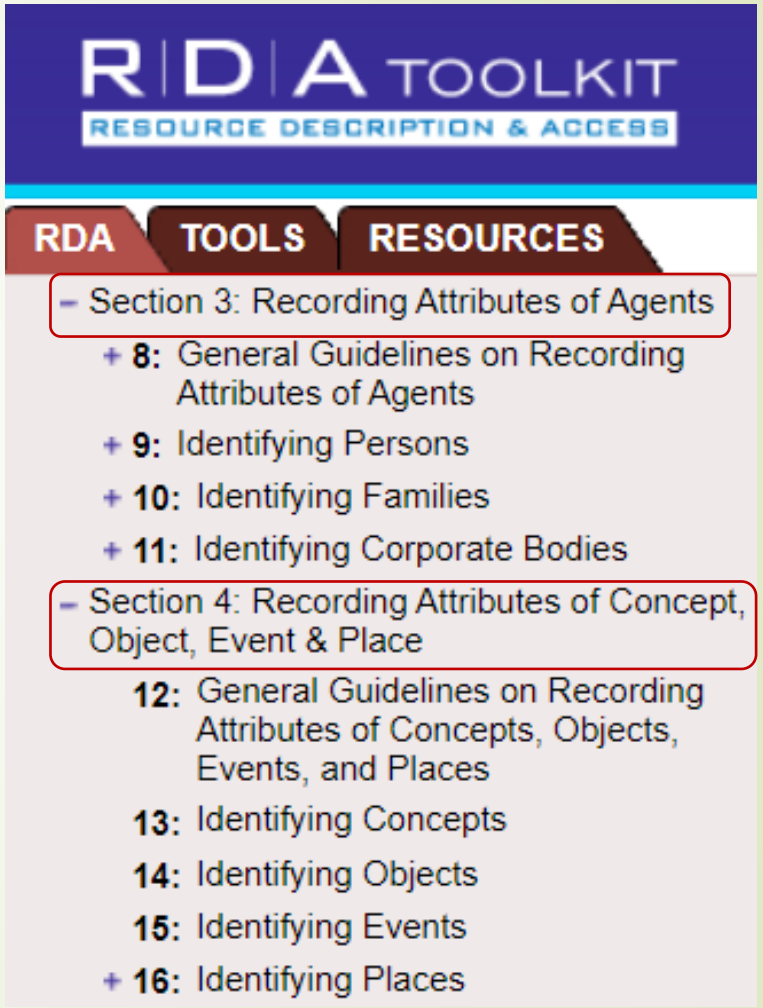
- RDA is a content standard. RDA answers the question: "What data should I record and how should I record it?" (Oliver, 2010, p.2)
- Original RDA is based on IFLA's conceptual models and cataloging principles, including *Functional Requirements for Bibliographic Records* (FRBR), *Functional Requirements for Authority Data* (FRAD), and *Statement of International Cataloguing Principles* (ICP).
- FRBR, FRAD and FRSAD provide a theoretical and logically coherent basis → FBRB家族提出的三組實體（Group 1: WEMI; Group 2: Person, Family, Corporate body; Group 3: Concept, Object, Event, Place）成為original RDA著錄描述的核心實體

舊版RDA前四組Sections以實體屬性之著錄為主

Original RDA Toolkit仍可由下列網址取得https://original.rdatoolkit.org/

- Section 1是FRBR第一組實體中的具體呈現與單件
- Section 2是FRBR第一組實體中的作品與表現形式
- Section 3是FRBR第二組實體中的個人、家族、團體
- Section 4是FRBR第三組實體中的概念、物件、事件、地點
  （Chap. 12-15未完成）

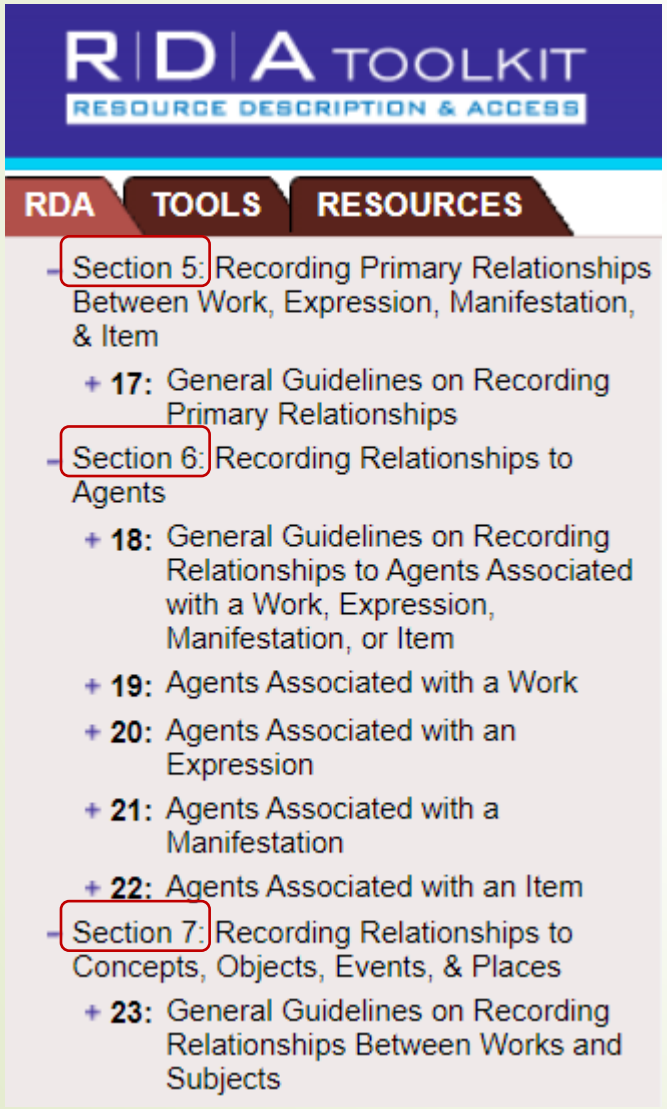


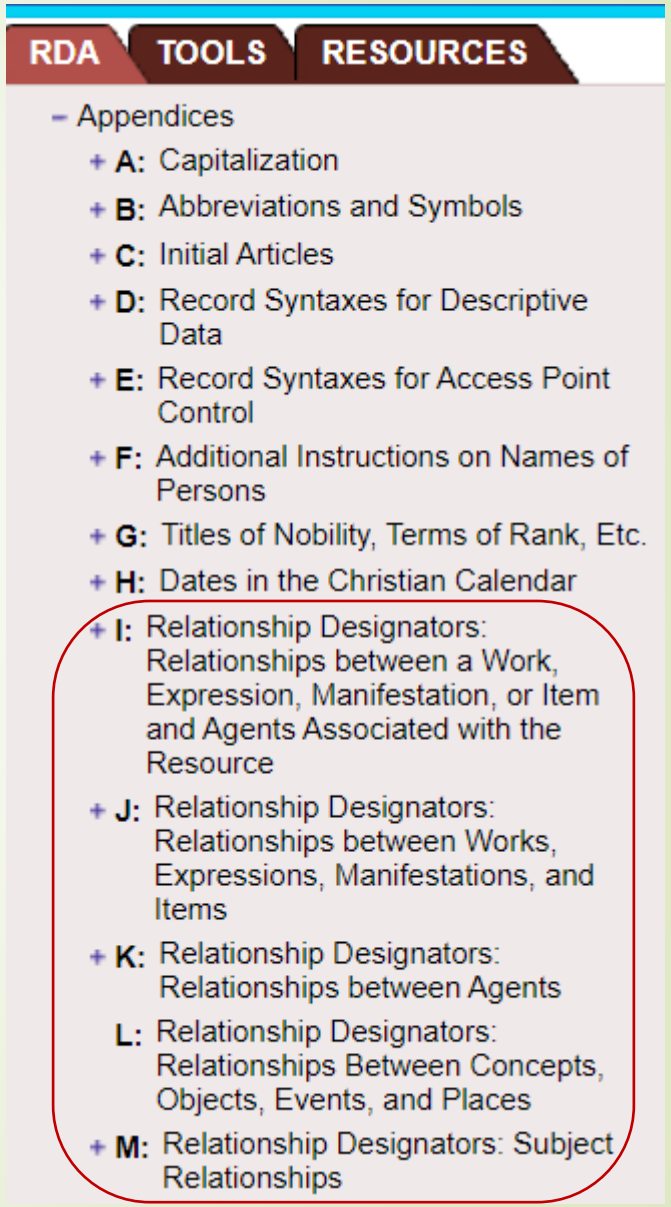


More than half of RDA chapters are devoted to relationships

舊版RDA從Section 5到Section 10 (Chapters 17-37)與附錄I-M 均用於描述/著錄各種實體間的關係

(Chap. 33-37及附錄L 未完成)





What Is RDA？(3)

- 舊版RDA規則共有38章（chapter）(含第0章)，1-37章分為10個區段（section），另有13個附錄（appendix）[其中有9章及附錄L未完成，規則中註明to be developed]。
- 舊版RDA第0章為導論，第1區段到第4區段主要描述FRBR和FRAD中所定義的11個實體的屬性，各區段的第1章說明該段的目標、原則、和核心項目，各段的後續章節則分別說明相關實體屬性的著錄規則。第5區段到第10區段主要描述FRBR和FRAD所定義的關係，各區段的第1章為該段的一般指引，包括適用範圍、詞彙、原則、關係著錄方式等，各段的後續章節則分別說明各類實體之關係的著錄規則。
- RDA後附13個附錄[原為12個，後增加附錄M，迄今附錄L仍未完成]，包括：大小寫及縮寫等相關規定、RDA著錄項目及檢索點與詮釋資料間之對應、描述各類實體間關係的五種關係用語表等。

參見：鄭玉玲、許令華、林淑芬、牛惠曼（民101），頁33-34。

Techniques Used to Record Relationships

Original RDA中用以著錄關係的techniques，大抵有下列方式 [定義取自舊版RDA Glossary]：

- **Identifier**（識別碼/符）: A character string uniquely associated with an entity (e.g., work, expression, person, subject), or with a surrogate such as an authority record for an entity. The identifier serves to differentiate an entity from other entities. [依定義改寫]
- **Authorized access point**（權威檢索點）: A standardized access point representing an entity.

Techniques Used to Record Relationships (2)

Original RDA用以著錄關係的techniques(續)：

- **Description**: A set of data recording and identifying an entity.
  - Structured description: A full or partial description of a related entity using the same data that would be recorded in RDA elements for a description of that related entity presented in an order specified by a recognized display standard.
  - Unstructured description: A full or partial description of an entity written as a phrase, sentence, paragraph, etc.
- **Relationship designator**（關係用語/關係標示）: A designator that indicates the nature of a relationship between entities represented by authorized access points, descriptions, and/or identifiers. A relationship designator **is recorded with** the authorized access point and/or identifier representing the associated agent.

Techniques Used to Record Relationships (3)
MARC Examples

- Identifier, e.g.
  - 110 2# $0 (DLC)n 80119883 $e author.
  - 110 2# $0 (uri)http://id.loc.gov/authorities/names/ n80119883 $e author
- Authorized access point, e.g.
  - 110 2# $a Society of Actuaries, $e author.
- Structured description, e.g.
  - 776 08 $i Also issued as: $t Health statistics
- Unstructured description, e.g.
  - 500 ## $a Translation of the author's novel Digital fortress.

Source: LC Training for RDA. Module 4: Relationships in RDA.

Techniques Used to Record Relationships (4)

Example: 第17章 WEMI主要關係之著錄方式

17.4.2 Techniques Used to Record Primary Relationships

Record a primary relationship by using one or more of these techniques, as applicable:

a) **identifier** for the work, expression, manifestation, or item, e.g., ISWC: T-072.106.546-8; http://larvatusprodeo.net; ISBN 978-1-59688-083-2

b) **authorized access point** representing the work or expression, e.g., United States. Constitution of the United States; Qur'an. Spoken word

c) **composite description**, e.g., The three evangelists / Fred Vargas ; translated from the French by Siân Reynolds. — London : Vintage Books, 2006. — Translation of: Debout les morts [說明：Original title of the work combined with the description of the manifestation]

Techniques Used to Record Relationships (5)

Example: 第24章中WEMI與Related WEMI 關係的著錄方式

24.4 Record the relationship between a work, expression, manifestation, or item and a related work, expression, manifestation, or item by using one or more of these techniques, as applicable:

a) **identifier** for the related work, expression, manifestation, or item, e.g., ISSN 0042-0328; urn-3:RAD.ARCH:15009

b) **authorized access point** representing the related work or expression, e.g., Geophysics (Tulsa, Okla.);

c) **description** of the related work, expression, manifestation, or item, e.g., Filmed with: Russkie skazki Vostochnoĭ Sibiri / sbornik Aleksandra Gurevicha. — Irkutsk : Ogiz, 1939.

Relationship Designator 關係用語/標示

- 關係用語/標示旨在說明關係的性質(Record an **appropriate relationship designator** to specify the nature of the relationship)，一般是與識別碼與（或）權威檢索點搭配使用
- 舊版RDA之關係用語收錄於附錄I-M，分列如下：
- **附錄I**: Relationship Designators: Relationships between a Work, Expression, Manifestation, or Item and Agents Associated with the Resource
- **附錄J**: Relationship Designators: Relationships between Works, Expressions, Manifestations, and Items
- **附錄K**: Relationship Designators: Relationships between Agents
- **附錄L**: Relationship Designators: Relationships Between Concepts, Objects, Events, and Places **[To be developed 尚未完成]**
- **附錄M**: Relationship Designators: Subject Relationships

附錄J Relationship Designators: Relationships between Works, Expressions, Manifestations, and Items

This appendix provides general guidelines on using relationship designators to specify relationships between works, expressions, manifestations, and items, and lists relationship designators used for that purpose. 包含之關係類型：

- Related Work Relationships
  - Derivative Work Relationships
  - Referential Work Relationships（ e.g., commemoration, commemoration of ）
  - Whole-Part Work Relationships
  - Accompanying Work Relationships
  - Sequential Work Relationships

附錄J 關係用語 (2)

- Related Expression Relationships
  - Derivative Expression Relationships
  - Referential Expression Relationships
  - Whole-Part Expression Relationships
  - Accompanying Expression Relationships
  - Sequential Expression Relationships
- Related Manifestation Relationships
  - Equivalent Manifestation Relationships
  - Referential Manifestation Relationships
  - Whole-Part Manifestation Relationships

附錄J 關係用語 (3)

- Related Item Relationships
  - Equivalent Item Relationships
  - Referential Item Relationships
  - Whole-Part Item Relationships
  - Accompanying Item Relationships

Example:

- *adaptation of (work)*: A work that has been modified for a purpose, use, or medium other than that for which it was originally intended.
- **adapted as (work)**: A work that modifies the source work for a purpose, use, or medium other than that for which it was originally intended.
- **augmentation of (work)**: A work whose content is added to by another work.
- **augmented by (work)**: A work that adds to the content of a predominant work.

PCC Guidelines on Relationship Designators

Three documents to know:

- *PCC Guidelines for the Application of Relationship Designators in Bibliographic Records* (2013)

  http://www.loc.gov/aba/pcc/rda/PCC%20RDA%20guidelines/Relat-Desig-Guidelines.docx

- *PCC Guidelines for the Application of Relationship Designators in Authority Records* (2014)

  http://www.loc.gov/aba/pcc/rda/PCC%20RDA%20guidelines/Relat-Desig-Guidelines-AUTH-Final.docx

- PCC Standing Committee on Training. *Training Manual for Applying Relationship Designators in Bibliographic Records* (2015)

  http://www.loc.gov/aba/pcc/sct/documents/rel-desig-guide-bib.pdf

Relationships in New RDA

RDA 3R計畫 → New RDA

- RDA原是以FRBR、FRAD等概念模式作為基礎架構，2016年FRBR LRM草案提出，目的在整合FRBR家族，作為基礎的概念模式改動，等同宣告RDA必須隨之修訂。故RDA Toolkit宣布自2017年後凍結修訂工作，開始進行RDA Toolkit Restructure and Redesign Project的3R計畫。
- 此次修訂，除以IFLA LRM為基礎外，也參酌鏈結資料、RDF、Dublin Core Abstract Model等。同時，RDA的實體、屬性與關係元素、詞彙等也在RDA Registry（ https://www.rdaregistry.info/ ）發布為鏈結資料格式 。
- RDA 3R計畫的Beta試用版，於2018年上線，正式版則於2020年12月15日啟用。

New RDA重視書目關係的呈現

- Relationships are more important in the new RDA than in the original RDA. “RDA is designed to support the production of well-formed data that has a consistent structure, recognizable both by humans and by computers. **The data should not just be structured but should also indicate relationships between data**. … From the start, there was an intention to design RDA so that the data produced would be well-formed and **interconnected**, data that could be used as linked data.” (Oliver, 2021, p.7)
- **Relationship is one of the principles governing RDA**.
  - The metadata describing an entity should indicate significant relationships between that entity and other entities (source: RDA toolkit > Guidance > Introduction to RDA > Objectives and principles governing RDA)

New RDA重視書目關係的呈現 (2)

- RDA “continues the principle of precise identification of relationships with controlled terminology to ensure consistency.” (Oliver, 2021, p.116)
- RDA allows one to record all significant relationships. RDA itself does not prescribe a maximum number of relationships. Policy statements and application profiles may prescribe minimums and maximums, but RDA does not. (Oliver, 2021, p.89) → **關係的描述不受rule of three的限制**

RDA Entity

- 舊版RDA以FRBR、FRAD等概念模型為其理論基礎，其實體包括WEMI及Person、Family、Corporate body、Concept、Object、Event、Place，計11種。
- 新版RDA以IFLA LRM為基礎，依其11種實體增改為13種，以下列表比較LRM與新版RDA之實體類型：

IFLA LRM	Res, Work, Expression, Manifestation, Item, Agent, Person, Collective agent, Nomen, Place, Time-span
New RDA	RDA Entity, Work, Expression, Manifestation, Item, Agent, Person, Collective agent, Corporate body, Family, Nomen, Place, Timespan

RDA Entity (2)

- LRM以Res為其top level實體，New RDA則改以**RDA Entity** 作為其所有實體之supertype，又於Collective agent之下分出**Corporate body**與**Family**。另外，LRM的Time-span改為Timespan，以避免hyphen(-)對檢索造成的影響
- New RDA之實體具階層性：
  - Entity **subtype**: A narrower category of an entity.
  - Entity **supertype**: A broader category of an entity.
- **RDA Entity** is an entity supertype of every other type of RDA entity → New RDA中最上層的實體是RDA Entity [E 需大寫]
  - Work, Agent, etc. are entity subtypes of RDA Entity

Source: 2, 3兩項取自(James, 2021)

RDA Entity (3)

- Agent has three levels of hierarchy
  - Person
  - Collective Agent
    - Corporate Body
    - Family
- Agent is an entity supertype of Person and Collective Agent (and its subtypes)
- Person, Collective Agent (and its subtypes) are entity subtypes of Agent
- An entity subtype can automatically be described as its entity supertype
  - Every Manifestation is an RDA Entity
  - Every Corporate Body is an Agent (Corporate body < Collective agent < Agent)

Source: (James, 2021)

Entity Hierarchies

由右例中，可看出實體Agent之下，可分為Collective Agent與Person兩個實體，Agent是Collective Agent與Person 之supertype。而Collective Agent之下，又可分出Corporate Body與Family兩個實體。所以就Agent而言，它是三階層的呈現。
Agent對RDA Entity而言，是subtype；反之，RDA Entity 是Agent的supertype

Entities > Agent

Agent

Definition and Scope

An entity who is capable of deliberate actions, of being granted rights, and of being held accountable for its actions. An agent includes a collective agent and a person.

Prerecording

This entity is an *entity supertype*.

For a more specific description, use one of the following entity subtypes if suitable:

- Collective Agent
  - Corporate Body
  - Family
- Person

This entity is an *entity subtype*.

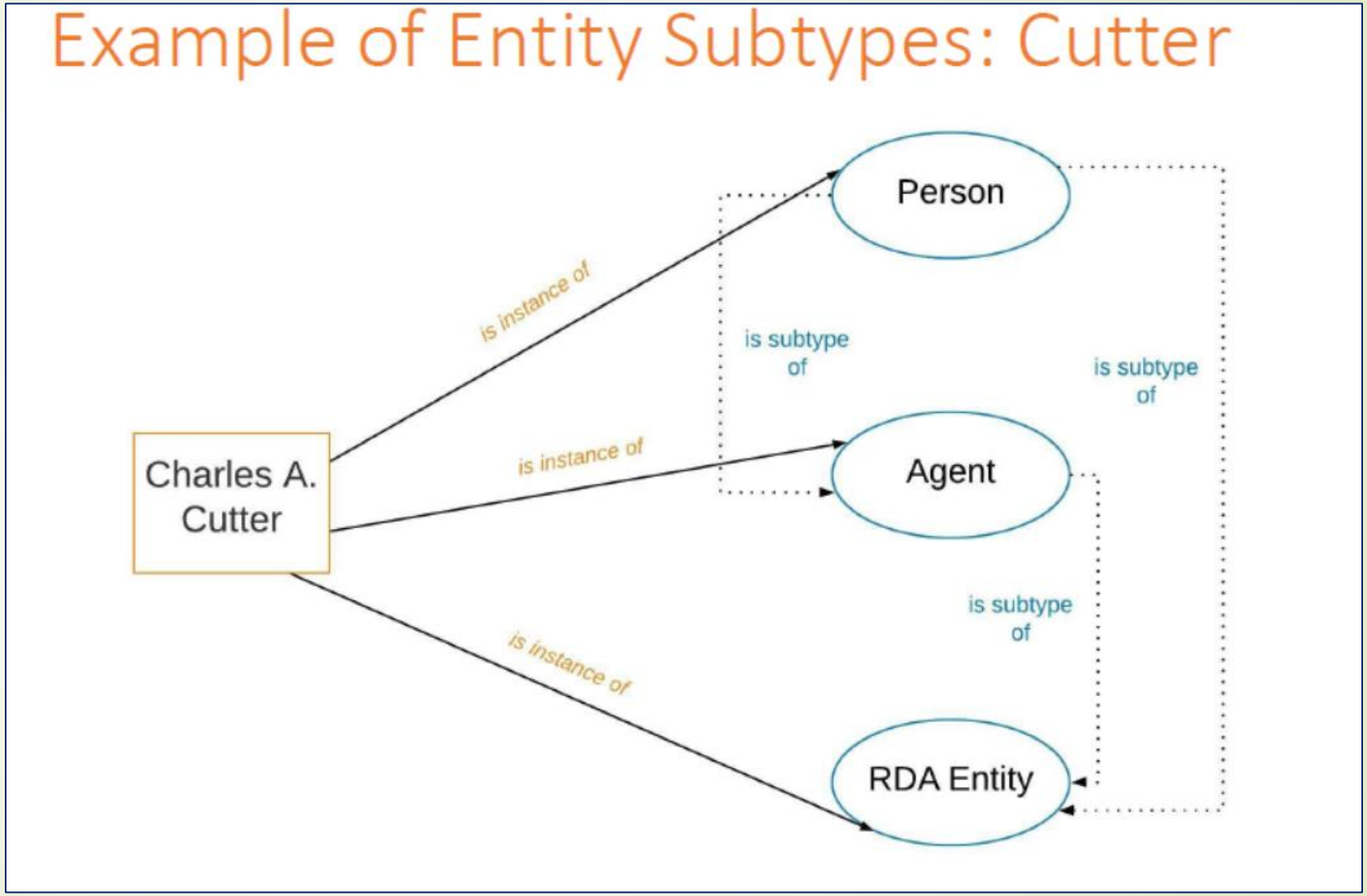
For a more general description, use the *entity supertype*:

- RDA Entity

Agent實體的階層式呈現

An entity subtype can automatically be described as its entity supertype. An entity supertype cannot automatically be described as its entity subtype.

右圖中，Cutter屬於實體**Person**的實例，自然也是Person的上層實體Agent的一個實例，同時也是Agent的上層實體RDA Entity的一個實例。亦即，可自動由實體Person，上推至其上層實體Agent，再上推至最上層實體RDA Entity。相對的，Agent卻無法自動推至其下層實體Person



Source: (James, 2021)

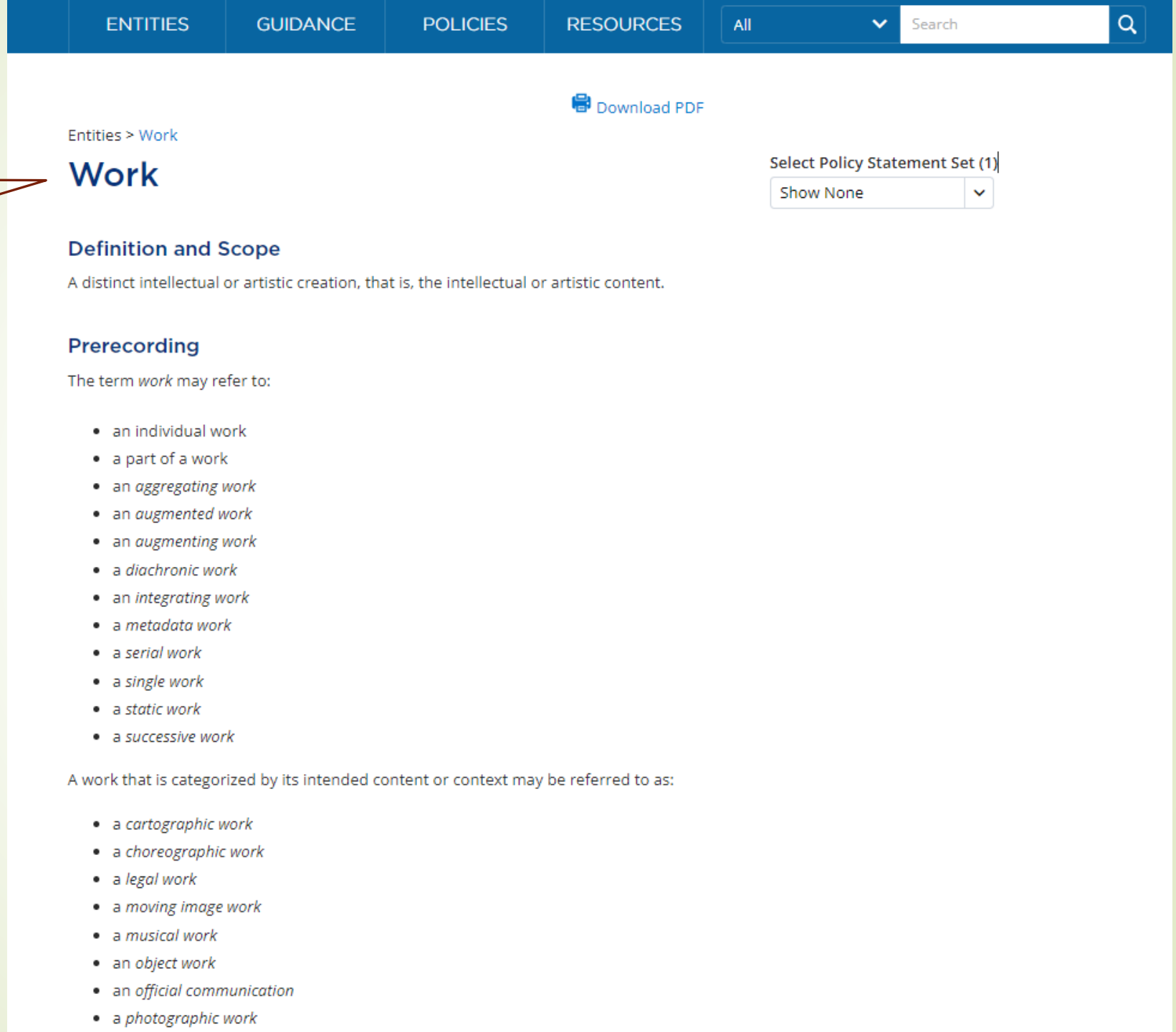
RDA Entity (4)

- RDA consists of **entities that are described by elements**
  - ***Relationship elements*** relate two RDA entities
  - ***Attribute elements*** provide characteristics of an RDA entity
- In new RDA Toolkit, content is chiefly organized around RDA entities
  - Each entity has its own page with elements listed
  - Each element has its own page
  - *Related Elements section* links to inverse elements and broader and narrower elements in the element hierarchy

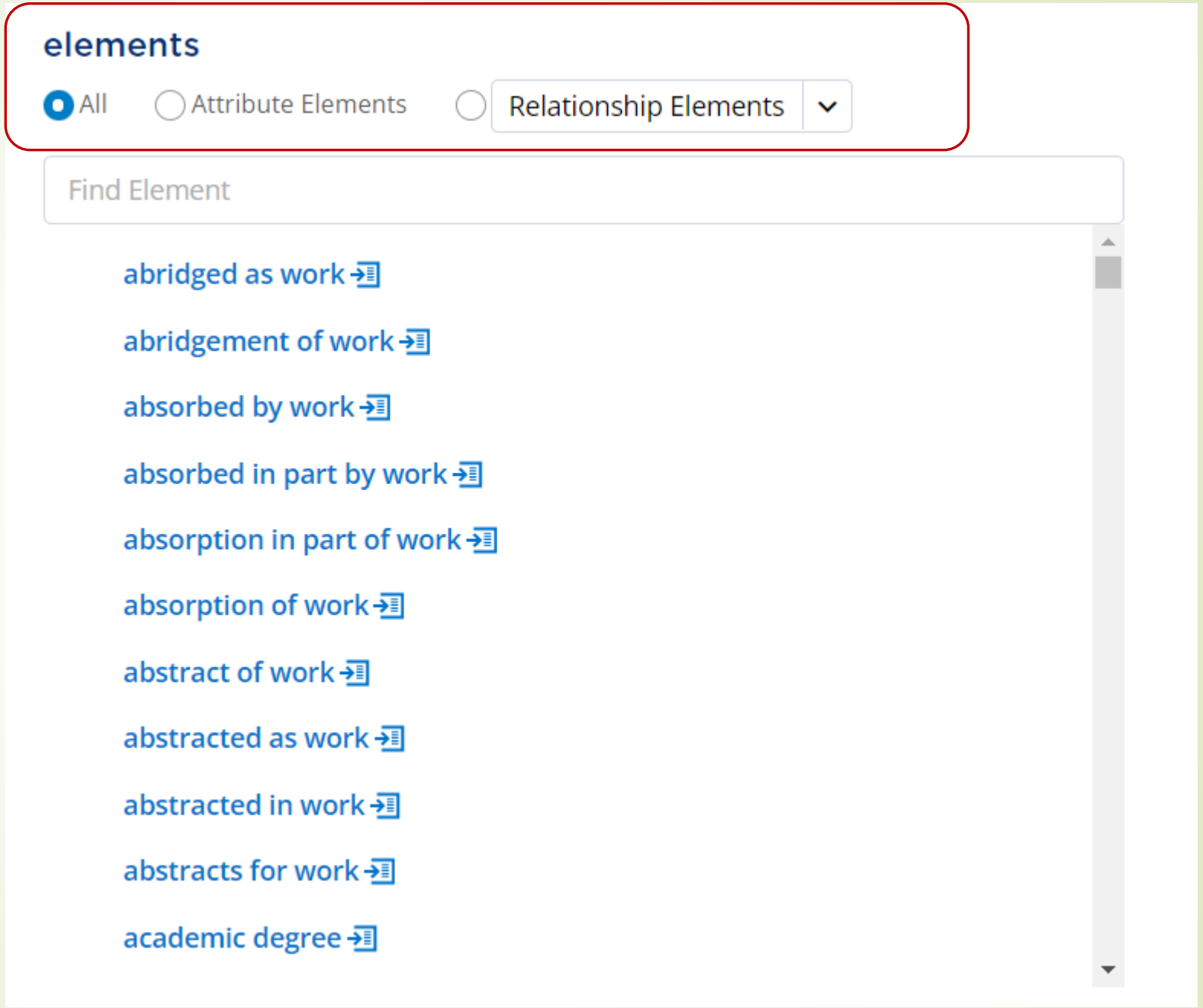
Each entity has its own page

實體名稱

新版 RDA Toolkit 中，每一個實體(Entity)有其獨立的頁面，將相關資料集中呈現，並透過超連結連到相關項目的網頁



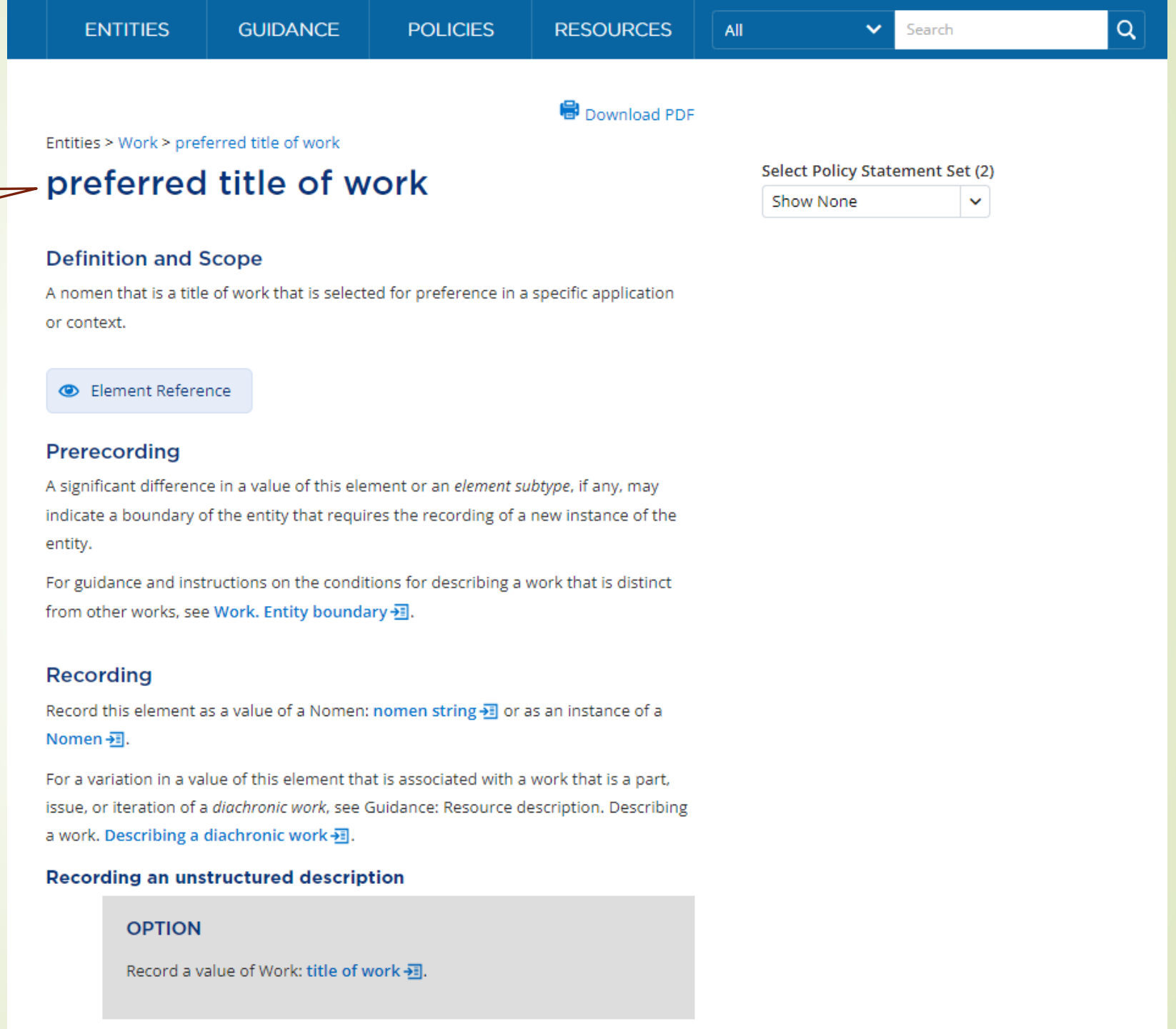
擷取自Work entity之頁面，顯示其相關的 elements（Attribute elements 與 Relationship elements）均集中在該實體同一頁面之elements項目之下



Each element has its own page

Element title

新版RDA Toolkit中，每一個Element有其獨立的頁面，將相關資料集中呈現，並透過超連結連到相關項目的網頁



Entities > Work > preferred title of work

preferred title of work

Definition and Scope

A nomen that is a title of work that is selected for preference in a specific application or context.

Element Reference

將 Element Reference 展開，可查知該element的 IRI、Domain、Range、Alternate labels、Dublin Core Terms、IFLA LRM、MARC 21 Authority、MARC 21 Bibliographic 等項資訊（多寡不一）

IRI

http://rdaregistry.info/Elements/w/P10223

Domain

Work

Range

Nomen

Alternate labels

has preferred title of work

preferred title for work

− Dublin Core Terms

http://purl.org/dc/terms/title

− IFLA LRM

http://iflastandards.info/ns/lrm/lrmer/R13

+ MARC 21 Authority

Entities > Work > preferred title of work

preferred title of work

Preferred title of work這個element的頁面上，可見其**著錄方式**及**Related elements**（下頁列有說明）

Data provenance

OPTION

Record a *source of information*. For general guidance, see Guidance: Data provenance. Recording a source of metadata.

Recording a structured description

著錄方式

This recording method is not applicable to this element.

Recording an identifier

Record an identifier that is a stringified IRI for the instance of Nomen as a *real-world object*.

For general guidance on identifiers, see Guidance: Recording methods. Recording an identifier.

Recording an IRI

Record an IRI for the instance of a Nomen as a *real-world object*.

Do not record an IRI for the entity that is being described.

A nomen references the Nomen: nomen string that is the value of an *appellation element*.

For general guidance on IRIs, see Guidance: Recording methods. Recording an IRI.

Related Elements

For broader elements, see

RDA Entity: preferred name of RDA entity

Work: title of work

一個element可以屬於兩個以上的broader elements

For the inverse of this element, see Nomen: preferred title of work of.

在**Related Elements**區段會列出該element 的broader、narrower及inverse elements。

Preferred title of work是Preferred name of RDA entity的狹義元素

由此頁面可知，一個broader element可有多個narrower elements，而各narrower element之間，屬於同階關係

preferred name of RDA entity

Related Elements

For broader elements, see RDA Entity: name of RDA entity.

For narrower elements, see

- Agent: preferred name of agent
- Place: preferred name of place
- Timespan: preferred name of timespan
- Expression: preferred title of expression
- Item: preferred title of item
- Work: preferred title of work
- Manifestation: title proper

For the inverse of this element, see Nomen: preferred name of RDA entity of.

RDA Entities in RDA Registry

- The RDA Registry contains **linked data** and **Semantic Web representations** of the elements and relationship designators approved by the RDA Steering Committee (RSC). (Source: https://www.rdaregistry.info/)
- The RDA Registry contains **vocabularies** that represent the RDA entities, elements, and controlled terminologies as RDA element sets and RDA value vocabularies in the Resource Description Framework (RDF). (Source: http://www.rdaregistry.info/rgAbout/)
- RDA Registry is considered the official RDA **namespace**. RDA is now intrinsically linked to its namespace. (Oliver, 2021, p.8) → RDA Registry 提供 RDA entities 及 elements的識別符

RDA Registry (https://www.rdaregistry.info/)

RDA Registry | Elements | Values | Data | Tools | About | GitHub Project | RDA Toolkit

RDA Registry

- RDA Registry (Home)
- Elements (RDA element sets)
  - Classes
  - Agent properties
  - Expression properties
  - Item properties
  - Manifestation properties
  - Nomen properties
  - Place properties
  - Timespan properties
  - Work properties
  - RDA Entity properties
  - Unconstrained properties
  - RDA/ONIX Framework elements
- Values (value vocabularies)
  - RDA values
  - RDA/ONIX Framework values
- Data (Linked data using RDA vocabularies)
  - Curie prefixes (Abbreviations for compact URIs, XML namespaces, etc.)
  - Examples (Single resource)
  - R-Balls (Multiple resources)
  - Datasets (Multiple resources)
- Tools
  - Maps (RDF maps between RDA vocabularies and other namespaces)
  - Alignments (Alignment tables for RDA vocabularies and other namespaces)
  - Profiles (Application profiles using RDA vocabularies)

Welcome to the RDA Registry!

The RDA Registry contains **linked data and Semantic Web** representations of the entities, elements, and terminologies approved by the RDA Steering Committee (RSC).

For details of the latest release see Release 5.1.0.

Downloads

v5.1.0 (zip)
v5.1.0 (tar.gz)

Contacts

The RDA Registry is maintained by the RSC in association with ALA Digital Reference.

Please use the contacts below for more information.

RSC Technical Team Liaison Officer: Damian Iseminger
Director of ALA Digital Reference: James Hennelly

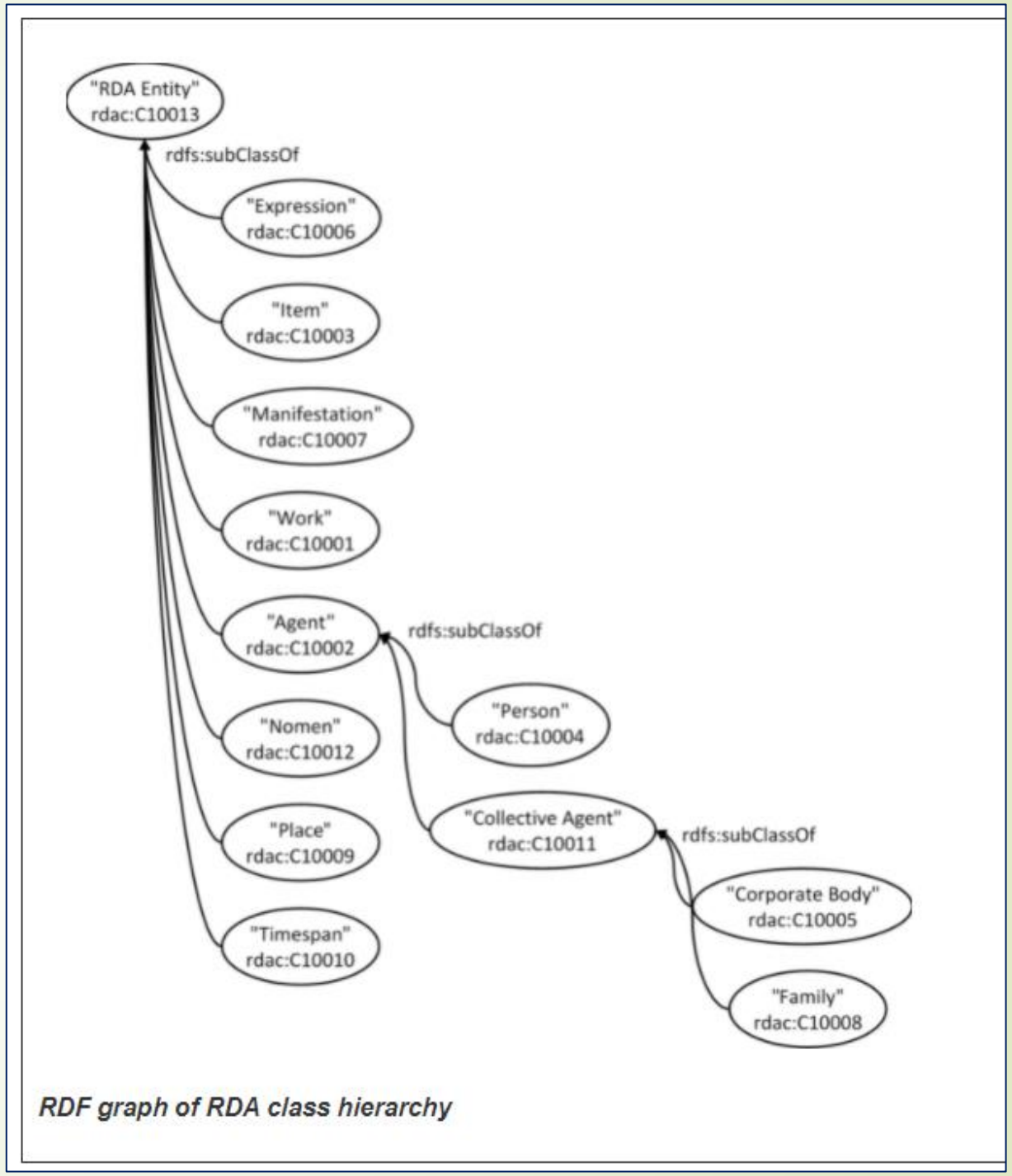
If you discover a problem with the representations of the RDA vocabularies, or have a question, or even wish to engage in a philosophical or practical discussion, please raise an issue!

View the project on GitHub.

RDA Classes element set

- An RDA entity is represented in the RDA Registry as an **RDF class**.
- RDA classes are identified and described in the RDA Classes element set.
- Each RDA entity is associated with a set of elements that describe characteristics of the entity and relate the entity to other entities.
- An RDA element is represented in the RDA Registry as an **RDF property**.
- An RDA entity is associated with an element by being declared as the domain of the element.

Source: http://www.rdaregistry.info/rgGuide/rgRDAEntities.html



RDF graph of RDA class hierarchy

Note:
The **rdac** is a prefix for RDA Class. RDA has devised many prefixes which are recommended for use in a compact URI (**curie**)

RDA element sets

Source: http://www.rdaregistry.info/Elements/c/

Classes

Classes that represent the RDA entities, including RDA Entity, Work, Expression, Manifestation, Item, Agent, Collective Agent, Person, Family, Corporate Body, Nomen, Place, and Timespan.

Number of elements:	13
Namespace:	http://rdaregistry.info/Elements/c/
Suggested prefix:	rdac
Example curie*:	rdac:C10001

* registered at prefix.cc

Downloads

- CSV (text/csv) (English language only)
- JSON-LD (application/json | application/json+ld)
- N-Triples (text/rdf+nt)
- RDF/XML (application/rdf+xml)

Languages

Arabic Catalan Danish Dutch English Estonian Finnish
French German Greek Hungarian Italian Norwegian
Spanish Swedish Vietnamese

Classes Index

Show 25 entries Search:

#	CURIE	Label	Definition	Subclass of
#	rdac:C10001	"work"	"A distinct intellectual or artistic creation, that is, the intellectual or artistic content."	http://rdaregistry.info/Elements/c/C10013 ["RDA entity" (en)]
#	rdac:C10002	"agent"	"An entity who is capable of deliberate actions, of being granted rights, and of being held accountable for its actions."	http://rdaregistry.info/Elements/c/C10013 ["RDA entity" (en)]
#	rdac:C10003	"item"	"A single exemplar or instance of a manifestation."	http://rdaregistry.info/Elements/c/C10013 ["RDA entity" (en)]
#	rdac:C10004	"person"	"An agent who is an individual human being who lives or is assumed to have lived."	http://rdaregistry.info/Elements/c/C10002 ["agent" (en)]
#	rdac:C10005	"corporate body"	"A collective agent who is composed of persons who are organized for a common purpose or activity."	http://rdaregistry.info/Elements/c/C10011 ["collective agent" (en)]
#	rdac:C10006	"expression"	"An intellectual or artistic realization of a work in the form of alpha-numeric, musical or choreographic notation, sound, image, object, movement, etc., or any combination of such forms."	http://rdaregistry.info/Elements/c/C10013 ["RDA entity" (en)]
#	rdac:C10007	"manifestation"	"A physical embodiment of an expression of a work."	http://rdaregistry.info/Elements/c/C10013

RDA Elements in RDA Registry

- RDA data elements are labelled and precise so that one can predict the information that will be contained in that element. (Oliver, 2021, p.89)
- RDA elements are categorized as: Relationship elements and Attribute elements. An RDA element is represented in the RDA Registry as an **RDF property**.
- Each RDA element is assigned to one and only one RDA entity by declaring the class representing the entity as the **domain** of the property corresponding the element.
- Every RDA property has a domain of one RDA class.
- All elements that can be inherited from an **entity hierarchy** are explicitly identified and defined in RDA.
- Example of elements reflecting class hierarchy
  - rdax:P00015 "has note on RDA entity"
  - rdaa:P50391 "has note on agent"
  - rdaa:P50392 "has note on collective agent"
  - rdaa:P50393 "has note on corporate body"
  - Shortcuts (Source: http://www.rdaregistry.info/rgGuide/rgRDAElements.html)

RDA element sets

Source: http://www.rdaregistry.info/Elements/w/#P10223

Work properties

Properties that represent the attribute and relationship elements of the RDA Work entity.

Each property in the element set:

- has a domain of the class that represents the Work entity.
- is linked from its child **datatype** property in RDA Work datatype properties by *rdfs:subPropertyOf*.
- is linked from its child **object** property in RDA Work object properties by *rdfs:subPropertyOf*.

Number of active elements:	590
Namespace:	http://rdaregistry.info/Elements/w/
Suggested prefix*:	rdaw
Example curie:	rdaw:P10001

* registered at prefix.cc

Downloads

- CSV (text/csv) (English language only)
- JSON-LD (application/json | application/json+ld)
- N-Triples (text/rdf+nt)
- RDF/XML (application/rdf+xml)

Languages

Arabic Catalan Danish Dutch English Estonian Finnish French German Greek Hungarian Italian Norwegian Swedish Vietnamese

Properties Index

Show 25 entries

Search: P10223

#	CURIE	Label	Definition	Subproperty of
#	rdaw:P10223	**"has preferred title of work"**	"Relates a work to a nomen that is a title of work that is selected for preference in a specific application or context."	http://rdaregistry.info/Elements/w/P10088 ["has title of work" (en)] http://rdaregistry.info/Elements/x/P00021 ["has preferred name of RDA entity" (en)]

Showing 1 to 1 of 1 entries (filtered from 607 total entries)

Previous 1 Next

Element Hierarchies

- element subtype: A **narrower** category of an element. (RDA Registry稱為subproperty)
- element supertype: A **broader** category of an element. . (RDA Registry稱為superproperty)
- Element subtype may be a more specific type of relationship/attribute
  - Example: Manifestation: title proper is an element subtype of Manifestation: title of manifestation
- Element subtype may describe an entity subtype
  - Example: Person: related work of person is an element subtype of Agent: related work of agent

Source: (James, 2021)

從關係的角度言，瞭解**element的層級關係**有其重要性，因為涉及階層間之**繼承性**。

Entities > Manifestation > title proper

title proper

擷取自Title Proper之頁面，顯示title of manifestation是其broader element

Recording an IRI

Record an IRI for the instance of a Nomen as a *real-world object*.

Do not record an IRI for the entity that is being described.

A nomen references the Nomen: nomen string that is the value of an *appellation element*.

For general guidance on IRIs, see Guidance: Recording methods. Recording an IRI.

View in Context Example

Example

Related Elements

For broader elements, see

RDA Entity: preferred name of RDA entity

Manifestation: title of manifestation

Element supertype

For narrower elements, see

Manifestation: parallel title proper

Element subtype

For the inverse of this element, see Nomen: title proper of.

Entities > Person > related work of person

related work of person

擷取自Related work of person之頁面，顯示related work of agent是其broader element，而creator person of work of則是其narrower element

Related Elements

For broader elements, see

Person: related RDA entity of person

Agent: related work of agent

For narrower elements, see

Person: academic supervisor of

Person: addressee person of

Person: commissioning person of

Person: consultant person of

Person: creator person of work of

Person: dedicatee person of work of

Person: dedicator person of

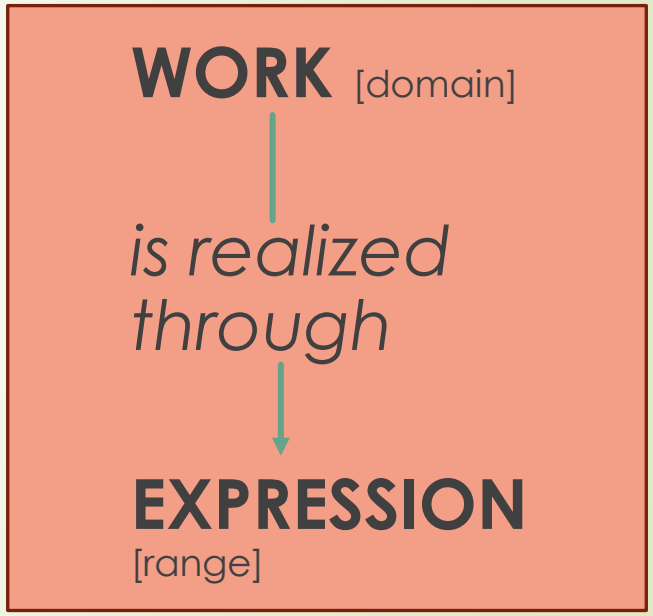
Person: director person of

Element supertype

Element subtype

Domain and Range

- Entities serve as domains and ranges of relationships
- **Domain:**
  - The source entity, or departure point, for a relationship
  - The domain is the first entity mentioned in a relationship
- **Range:**
  - The target entity, or arrival point, for a relationship
  - The range is the second entity mentioned in a relationship



Source: (Standing Committee on Training Program for Cooperative Cataloging, 2020)

Domain and Range (2)

- **Domain**: The RDA entity that is described by an element.
- **Range**: The RDA entity that is the value of a relationship element.
- Every element in RDA has a Domain but only relationship elements have a Range
- Domain-element-Range works like an **RDF triple** (subject-predicate-object)

Source: (James, 2021)

Entities > Person > related nomen of person

related nomen of person

Definition and Scope

A nomen that is associated with a person.

Element Reference

IRI

http://rdaregistry.info/Elements/a/P50348

Domain

Person

The RDA entity that is described by an element.

Range

Nomen

The RDA entity that is the value of a relationship element

Alternate labels

has related nomen of person

+ **IFLA LRM**

Related RDA entity of agent > Related RDA entity of person > Related work of person > Creator person of work of → 前列4個 relationship elements，其間具有上下層級性質，請注意其各自的domain與range

Entities > Agent > related RDA entity of agent

related RDA entity of agent

IRI

http://rdaregistry.info/Elements/a/P50304

Domain

Agent

Range

RDA Entity

Alternate labels

has related RDA entity of agent

Entities > Person > related RDA entity of person

related RDA entity of person

IRI

http://rdaregistry.info/Elements/a/P50310

Domain

Person

Range

RDA Entity

Alternate labels

has related RDA entity of person

Entities > Person > related work of person

related work of person

IRI

http://rdaregistry.info/Elements/a/P50311

Domain

Person

Range

Work

Alternate labels

has related work of person

Entities > Person > creator person of work of

creator person of work of

IRI

http://rdaregistry.info/Elements/a/P50542

Domain

Person

Range

Work

Alternate labels

is creator person of work of

Resource Description Framework (RDF)

- The Resource Description Framework (RDF) is a framework for representing information in the Web.
- RDF is able to represent simple statements about resources as a *graph* of nodes and arcs representing the resources, and their properties and values.
- RDF is a W3C recommendation.

- The underlying structure of any expression in RDF is a collection of **triples**, each consisting of a subject, a predicate and an object.
- A set of such triples is called an RDF graph.
- This can be illustrated by a node and directed-arc diagram, in which each triple is represented as a node-arc-node link (hence the term "graph").

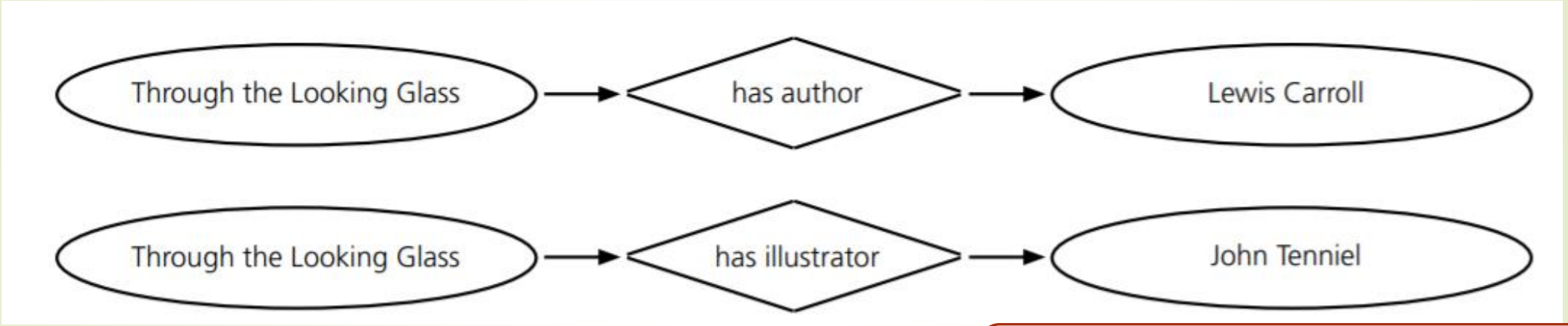
Resource Description Framework (2)

- Each triple represents a statement of a relationship between the things denoted by the nodes that it links.
- Each triple has three parts: a subject, an object, and a predicate (also called a property) that denotes a relationship.
- The direction of the arc is significant: it always points toward the object.
- The nodes of an RDF graph are its subjects and objects.
- The assertion of **an RDF triple says that some relationship, indicated by the predicate**, holds between the things denoted by subject and object of the triple.

詳見：W3C RDF Primer http://www.w3.org/TR/rdf-primer/

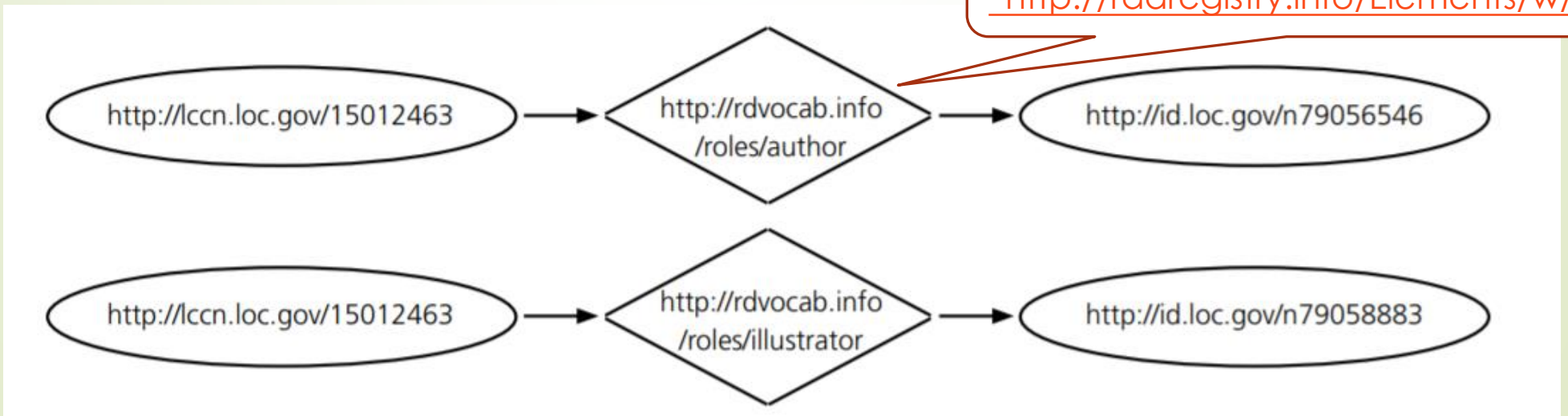
RDF Examples

Source: (Coyle, 2010, p.30)



An author and a contributor, in RDF triple form

"has author agent"
"http://rdaregistry.info/Elements/w/P10065"



An author and a contributor represented by URIs

Domain and Range: Relationship Element Example

Domain: Corporate Body

"Trinity College"

反向關係中是Range

has related place of corporate body

related corporate body of place

Range: Place

"Connecticut"

反向關係中是Domain

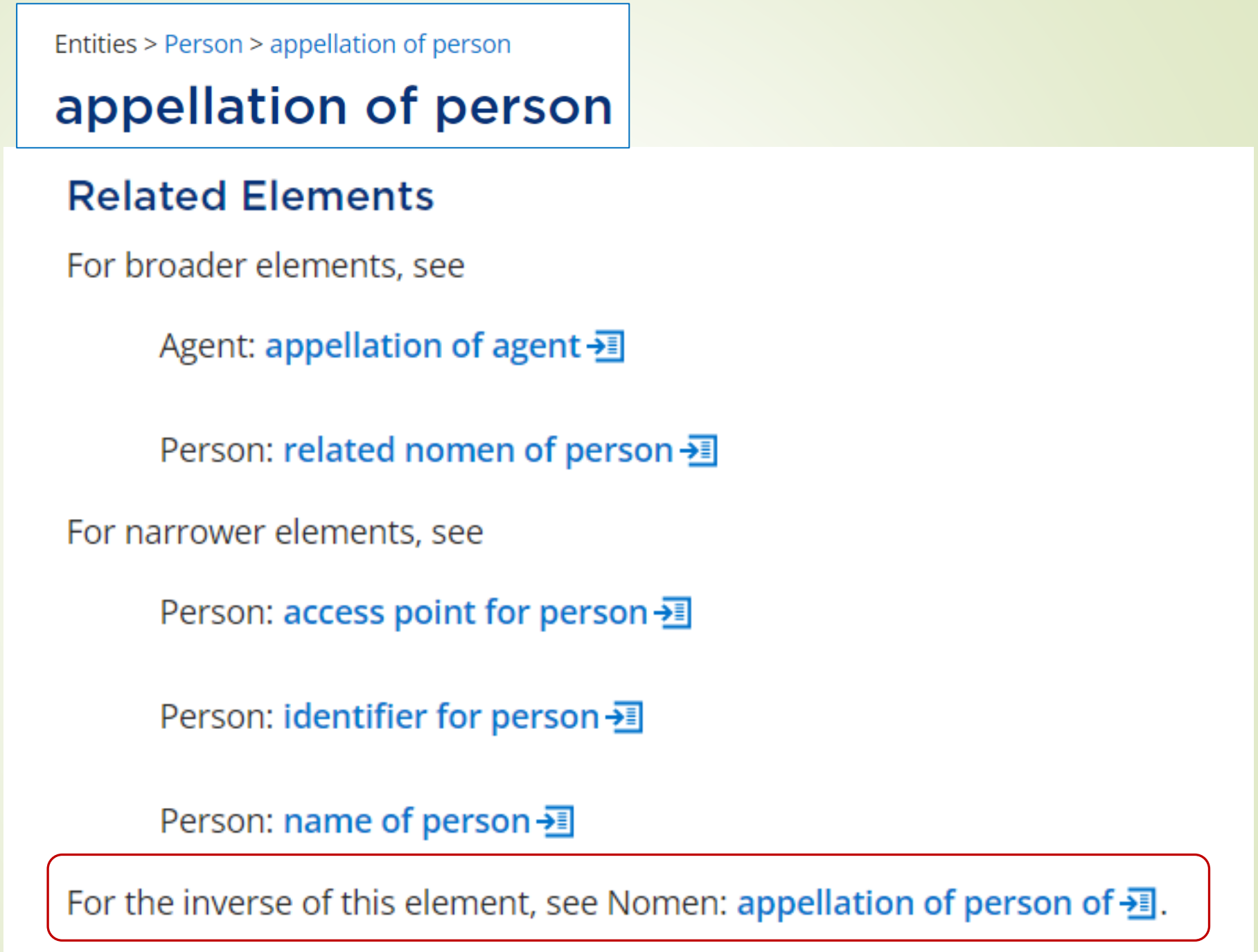
Source: (James, 2021) 另增反向關係

Inverse (Reciprocal) Relationships

In inverse (反向) relationships the entity that served as the domain becomes the range, the entity that served as the range becomes the domain, and the inverse name of the relationship is used

Source: (Standing Committee on Training Program for Cooperative Cataloging, 2020)

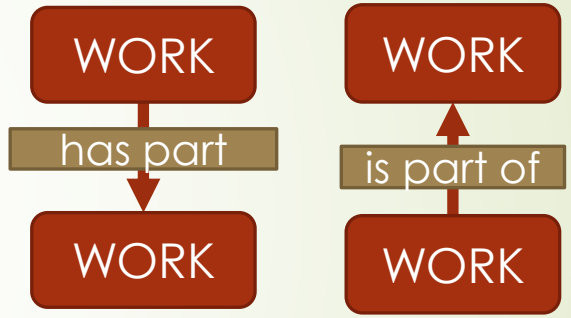
擷取自appellation of person之頁面，顯示appellation of person of 是其inverse relationship



Recursive and Symmetric Relationships

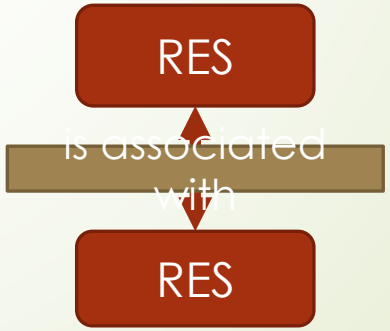
- **Recursive**（遞迴）:
  - A relationship for which the **same entity** serves as both domain and range

    WORK *has part* **WORK**
    WORK *is part of* **WORK**



- **Symmetric**（對稱）:
  - A relationship for which the relationship name is the same as the name of the inverse relationship

    RES *is associated with* **RES**
    RES *is associated with* **RES**



Source: (Standing Committee on Training Program for Cooperative Cataloging, 2020)

Cardinality 關係基數

- Cardinality specifies the number of instances of the domain and range entities that may be connected by the specific relationship.
- 1 to M (one to many):
  WORK *is realized through* **EXPRESSION**
  - Each *work* has one or more *expressions* that realize it.
  - Each *expression* realizes exactly one *work*.
- M to M (many to many):
  WORK *was created by* **AGENT**
  - Any *agent* may create many *works*.
  - A *work* may be created by many *agents*.

Source: (Standing Committee on Training Program for Cooperative Cataloging, 2020)

Relationship Elements 命名方式

- Relationships that express states or ongoing activities are named in the present tense

  AGENT *is member of* **COLLECTIVE AGENT**

  RES *is subject of* **WORK**

- Relationships that express actions that were logically completed in the past are named in the past tense

  WORK *was created by* **AGENT**

  AGENT *created* **EXPRESSION**

  NOMEN *was assigned by* **AGENT**

  PLACE *is associated with* **RES**

Source: (Standing Committee on Training Program for Cooperative Cataloging, 2020)

Relationship Elements

- In the IFLA LRM model, relationships are an essential part of the bibliographic universe: they **connect** instances of entities and **provide context** for them. The relationships in the LRM are generally presented at a high level; RDA provides many additional refinements to LRM relationships.
- An RDA *relationship element* links two RDA entities that may be the same or different types of entity.
- The first entity is the entity being described (domain). The second entity is referred to as the *related entity* (range).
- Each relationship element has instructions for applying the RDA recording methods to the value of the related entity.
- The set of relationship elements of an RDA entity has a **polyhierachical** semantic structure.

Source: RDA Toolkit>Guidance > Introduction to RDA > Data elements

Relationship Elements (2)

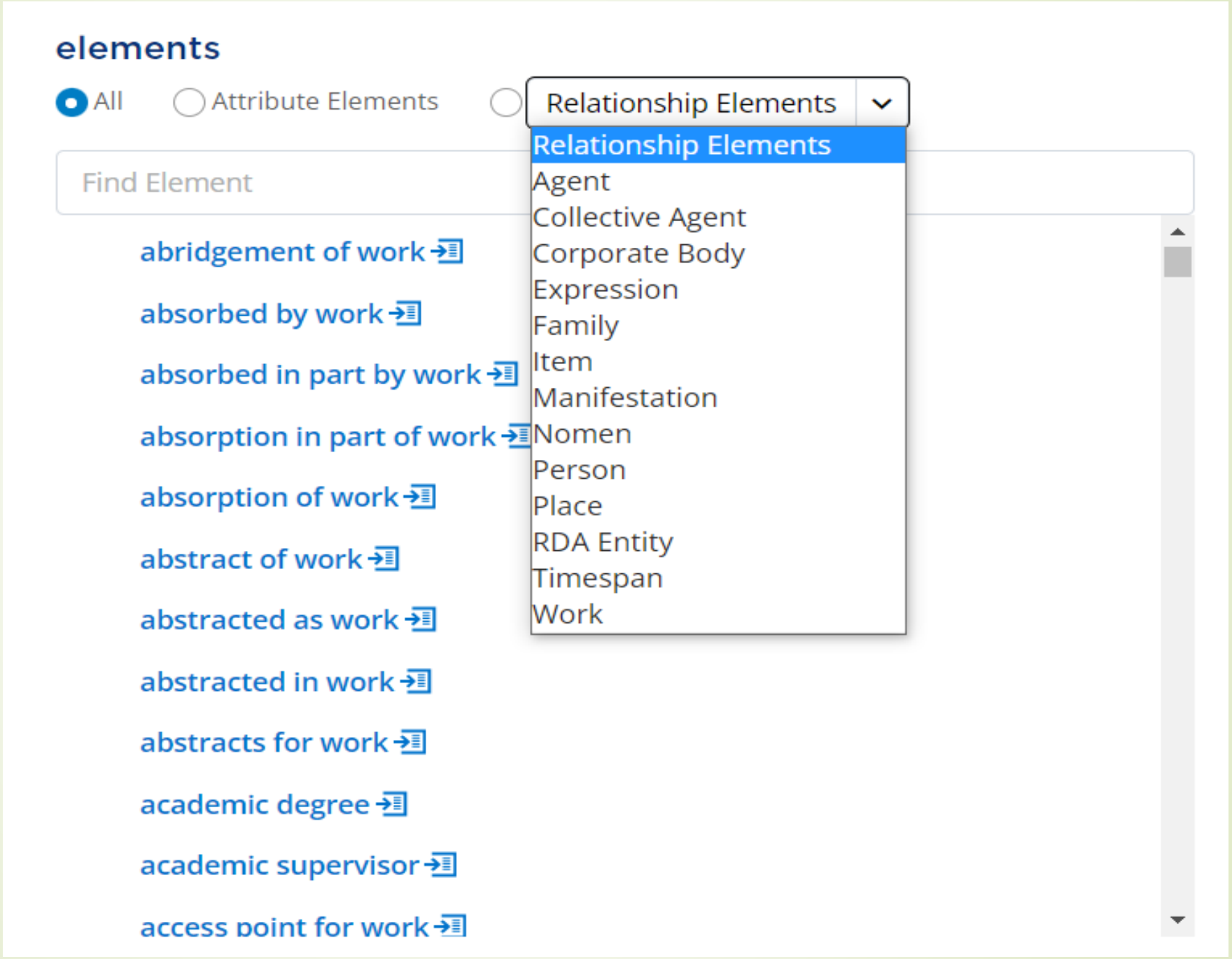
- 舊版RDA將Relationship designators (關係用語)以附錄形式收錄，新版RDA改稱Relationship elements，並將其與相關實體合併呈現，不再分列。→ Attribute elements and relationship elements are together. They are all listed in the elements section for the entity.
- 若一元素為某項relationship element類型（type）之一，則該元素亦具有該relationship element之性質。如：Creator is a relationship element. Composer is a type of creator. → Composer is a relationship element. (James, 2018)
- 所有elements已在RDA Registry (http://www.rdaregistry.info/)登記

#	CURIE	Label	Definition	Subproperty of
#	rdaw:P10065	"has creator agent of work"	"Relates a work to an agent who is responsible for creating a work."	http://rdaregistry.info/Elements/w/P10311 ["has related agent of work" (en)]

Entities > Work

Work

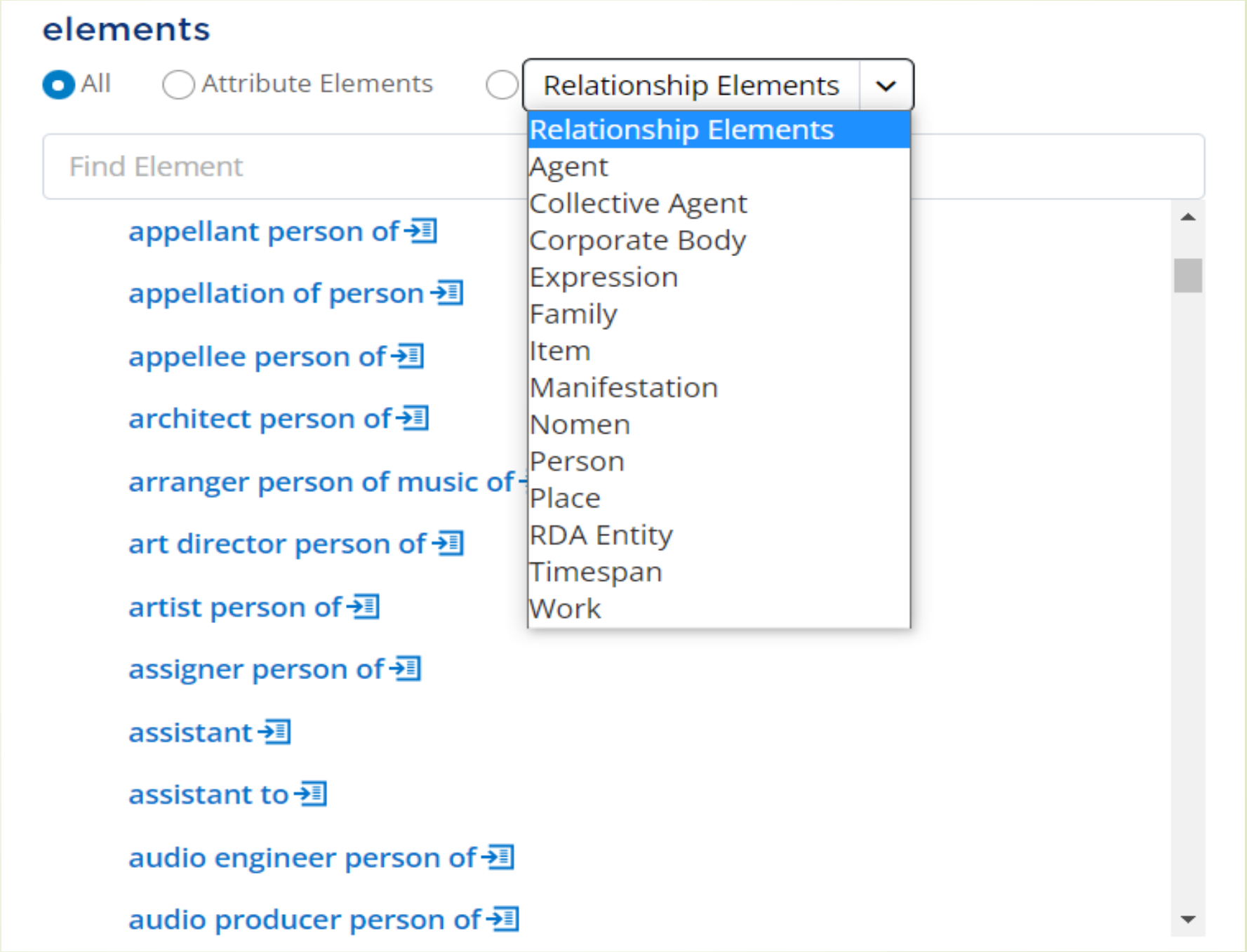
Work Entity之Relationship Elements



Entities > Person

Person

Person Entity之 Relationship Elements



RDA Registry
http://www.rdaregistry.info/

RDA Registry | Elements | Values | Data | Tools | Releases | About | FAQ | Guide | Project | RDA Toolkit

RDA element sets

Work properties

Properties that represent the attribute and relationship elements of the RDA Work entity.

Each property in the element set:

- has a domain of the class that represents the Work entity.
- is linked from its child **datatype** property in RDA Work datatype properties by *rdfs:subPropertyOf*.
- is linked from its child **object** property in RDA Work object properties by *rdfs:subPropertyOf*.

Number of active elements:	590
Namespace:	http://rdaregistry.info/Elements/w/
Suggested prefix*:	rdaw
Example curie:	rdaw:P10001

* registered at prefix.cc

Downloads

- CSV (text/csv) (English language only)
- JSON-LD (application/json | application/json+ld)
- N-Triples (text/rdf+nt)
- RDF/XML (application/rdf+xml)

Languages

Arabic Catalan Danish Dutch English Estonian Finnish French German Greek Hungarian Italian Norwegian Swedish Vietnamese

Properties Index

Show 25 entries Search:

#	CURIE	Label	Definition	Subproperty of
#	rdaw:P10001	**"has respondent"**	"Relates a work to a person who is a candidate for a degree who defends or opposes a thesis provided by the praeses in an academic disputation."	http://rdaregistry.info/Elements/w/P10437 ["has creator person of work" (en)]
#	rdaw:P10002	**"has identifier for work"**	"Relates a work to a nomen that is an appellation of work that consists of a code, number, or other string, usually independent of natural language and social naming conventions, used to identify a work."	http://rdaregistry.info/Elements/w/P10329 ["has appellation of work" (en)] http://rdaregistry.info/Elements/x/P00018 ["has identifier for RDA entity" (en)]
#	rdaw:P10003	**"has other distinguishing characteristic of work (Deprecated)"**	"Relates a work to a characteristic, other than form of work, date of work, or place of origin of the work, that serves to differentiate a work from another work with the same preferred title of	

- The relationship elements have a definition and scope, element reference, and instructions for up to four recording methods.

Entities > Work > abstract

abstract

Definition and Scope

A work that is an objective summary of a work.

Element Reference

Prerecording

Recording

Record this element as a value of Work: appellation of work or as an IRI.

Recording an unstructured description

Record an unstructured description for a related work as a value of Work: title of work.

For general guidance on unstructured descriptions, see Guidance: Recording methods. Recording an unstructured description.

Recording a structured description

Record a structured description for a related work as a value of Work: access point for work.

Relationship Shortcuts

- A *shortcut* is a *relationship element* that directly relates two RDA entities that are indirectly related through one or more intermediary entities. [關係捷徑，亦即跨越/省略中間層級]
- This allows the two entities to be associated without recording any of the intermediary entities or relationships.
- Information about an intermediary entity cannot be inferred from the value of a shortcut element.
- For example, Manifestation: **work manifested** relates a *manifestation* and a *work*. It is a shortcut for:
  - Manifestation: **expression manifested**
  - Expression: **work expressed**
- There is one intermediary entity, an *expression* that is embodied by the manifestation and is a realization of the work.

Source: RDA Toolkit>Guidance > Introduction to RDA > Data elements

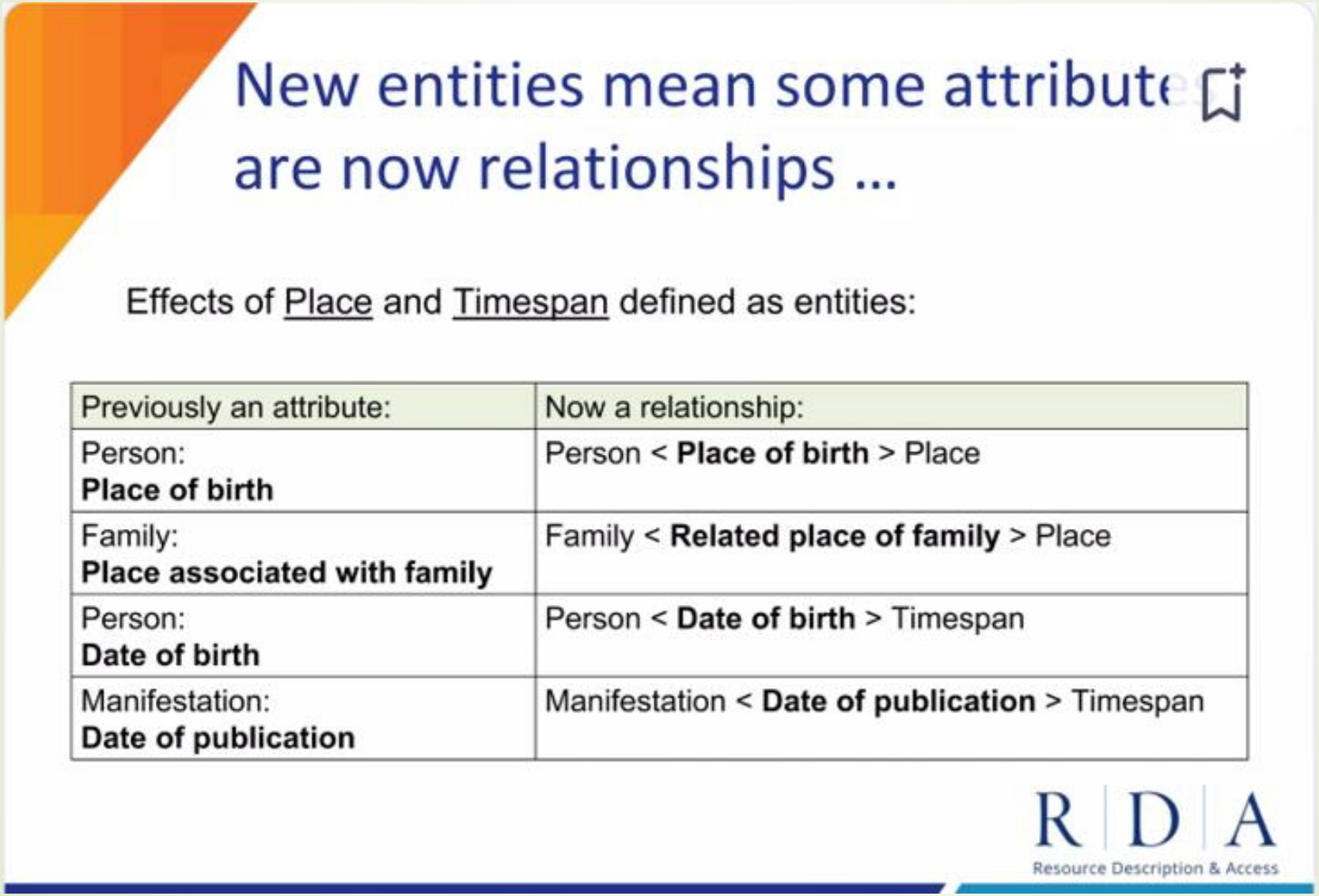
New RDA中的一些重要改變

舊版RDA中原屬於attribute的若干元素 ，新版RDA改為relationship

- “For example, when recording data about a print book, one still records the **date of publication**, such as ”2020.“ It is a discrete and precise data element, an element that describes the manifestation. Originally, it was treated as a descriptive characteristic, an attribute. **Now *date of publication* is understood to be a relationship between a *manifestation* and a *timespan*.** The data recorded in this element is a value of *timespan*. “ (Oliver, 2021, p.2)

不過，作為編目員，對此變動毋須過於掛慮，因為從實務觀點，若一本書的出版年是2024年，我們記錄的仍是年代2024，即使其性質已經由屬性轉為manifestation 與timespan之間的關係。Yes, we still recording the same recognizable data.

New RDA中的一些重要改變 (2)



Source: Brenndorfer, T. (2020). Relationship element. RDA orientation, March 11, 2020.

New RDA中的一些重要改變 (3)

新增Aggregating work與Aggregating expression

- 根據RDA Toolkit > Guidance > Aggregates的說明：
  - An *aggregate* is a manifestation that embodies an aggregating expression and one or more expressions that are aggregated. The expressions that are aggregated may realize one or more works. [IFLA LRM 5.7: An aggregate is defined as a manifestation embodying multiple expressions.]
  - An aggregate embodies one and only one *aggregating expression*.
  - An aggregate may be issued in one or more units.
  - There are three kinds of aggregate:
    - *collection aggregate* (IFLA LRM 稱為Aggregate collections of expressions)
    - *augmentation aggregate* (IFLA LRM 稱為Aggregates resulting from augmentation)
    - *parallel aggregate* (IFLA LRM 稱為Aggregates of parallel expressions)

New RDA中的一些重要改變 (4)

- "An important new relationship that cannot be traced back to any relationships in the earlier models is the aggregation relationship." (Oliver, 2021, p.62)
- "The *aggregating work* and *aggregating expression* are basically the plan for a particular mani*festation* to embody several *expressions*. The introduction of the *aggregating work* and *aggregating expression* provides the bridge between WEMI and the challenge of modelling any type of collection or aggregate in a way that is consistent and useful." (Oliver, 2021, p.64)
- **Aggregation is not a type of whole-part relationship**. The *has part/is part of* relationship is a completely different relationship. For works and expressions, the whole-part relationship is inherent and always applies. In a collection of children's stories, a single story does not have an inherent relationship to the collection. (Oliver, 2021, p.64)
- 關於Aggregates的描述問題，在RDA Toolkit的Guidance下的 Aggregates項目中有說明

New RDA中的一些重要改變 (5)

Aggregating work對Serial的影響

- When dealing with serials, there are three different levels-the article, the issue, and the whole serial.
- Each **article** in a serial is the *expression* of an individual *work*. The articles are embodied in serial issues. Each article is an *expression of a work* that may be aggregated by more than one *aggregating expression*
- Each **issue** of a serial is an aggregate *manifestation* that embodies a collection of articles, that is, a collection of *expressions* of *works* created by different persons.
  - The **sequence of serial issues** is a sequence of *manifestations* where the individual issues/manifestations share certain characteristics. The individual serial issue has a whole-part relationship to the sequence. But this whole-part relationship is only at the manifestation level.
- The **serial *work*** is the overall plan, the purpose and scope of the journal, the editorial criteria used when selecting articles. This overall *aggregating work*, the editorial policy, is the serial *work*.
- The whole-part relationship does not exist at the *work* or *expression* level. (Oliver, 2021, p.65)

New RDA中的一些重要改變 (6)

針對Diachronic work(歷時作品)的處理

根據RDA Toolkit > Guidance > Diachronic work(歷時作品)的說明：

- A *diachronic work* is a work that is **planned to be embodied over time**, rather than in a single act of publication. When the plan is carried out, the content of the work changes over time by being realized by one or more discrete expressions that are embodied by one or more manifestations.
- The essence of a *diachronic work* is a plan for the change of content.
- An *extension plan* describes the intended method for extending the content of a work through time.
- Types of diachronic works：There are two types of diachronic works, characterized by the method that is intended to extend the content:
  - extension by accumulation
  - extension by replacement

New RDA中的一些重要改變 (7)

Diachronic work(續)

- A *successive work* is a plan to accumulate content at intervals. Content from previous iterations of the work is retained. This process cumulates the content in a set of expressions. Each expression realizes a single issue of the work and is embodied by a single manifestation. [先前的作品內容仍然保留]
- An *integrating work* is a plan to replace content at intervals. Content from previous iterations of the work is assumed to be inaccessible. This process integrates the content in a single expression that is embodied by a single manifestation. [更換內容]
- A transformation boundary is an *entity boundary* for a *diachronic work*. A *diachronic work* is planned to be realized by a set of one or more expressions over time. A difference in plan is necessary to determine a distinction between two diachronic works. [區辨兩部歷時作品之間的界線]
- The actual change of content of a *diachronic work* cannot be predicted. This means that a *diachronic work* is realized by one and only one expression and embodied by one and only one manifestation. This is known as a ***WEM lock***.

Recording Methods

The data value of an RDA element can be recorded using one or more of the following methods:

- Recording an unstructured description
- Recording a structured description
- Recording an identifier
- Recording an IRI

Element instructions tell you which methods are allowed for that element.

Source: RDA Toolkit>Guidance>Recording Methods

Entities > Expression > translation of

translation of

根據此element著錄的指示，四種方式均可應用，包括unstructured description, structured description, identifier, IRI

Recording

Record this element as a value of Expression: appellation of expression or as an IRI.

Recording an unstructured description

Record an unstructured description for a related expression as a value of Expression: title of expression.

For general guidance on unstructured descriptions, see Guidance: Recording methods. Recording an unstructured description.

Recording a structured description

Record a structured description for a related expression as a value of Expression: access point for expression.

For general guidance on structured descriptions, see Guidance: Recording methods. Recording a structured description.

Recording an identifier

Record an identifier for a related expression as a value of Expression: identifier for expression.

For general guidance on identifiers, see Guidance: Recording methods. Recording an identifier.

Recording an IRI

Record an IRI for a related expression as a *real-world object*.

For general guidance on IRIs, see Guidance: Recording methods. Recording an IRI.

Unstructured Description

An unstructured description of an RDA entity is a **string** that is a kind of Nomen [i.e., a label includes a name, title, access point, or identifier]

Example:

- The tragedy of Hamlet
- Nancy Peral

Kinds of unstructured description include:

- A manifestation statement
- An unstructured note
- A name or title in direct order, as it appears in sources of information
- An uncontrolled term for a concept

Source: RDA Toolkit>Guidance>Recording Methods；參見：James, 2021

Structured Description

Kinds of structured description include:

- An access point
- A structured note
- A name or title taken from an authority control system
- A term for a concept taken from a controlled vocabulary
- A value associated with a structured data type, including numbers, dates, and times

A structured description can be associated with a string encoding scheme or a vocabulary encoding scheme (VES). Example:

- Pool (Game)
- New York: Oxford University Press, 1998.
- Pearl, Nancy [VES source: VIAF]

Source: Toolkit>Guidance>Recording Methods ; 參見：James, 2021

Identifier

Kinds of identifier include:

- An identifier assigned by an independent, external agent
- An identifier assigned by a local agent
- A notation for a concept taken from a controlled vocabulary

An identifier is associated with a *vocabulary encoding scheme* [VES].

Example:

- ISBN 1-57061-381-8
- Q5294 [Wikidata identifier for DVD]
- 75645081 [VIAF identifier for Nancy Pearl]

Source: Toolkit>Guidance>Recording Methods ; 参見 : James, 2021

IRI (International Resource Identifier)

An IRI is an identifier based on Semantic Web technologies that is used as the referent of an entity or controlled term in linked open data using Resource description framework (RDF).

- An IRI of an RDA entity is not treated as a kind of Nomen because the value of a nomen string is an RDF literal.
- All URIs are IRIs. IRIs are globally unique.

Example:

- http://viaf.org/viaf/75645081 [IRI for Nancy Pearl, VES: VIAF]
- http://rdaregistry.info/termList/RDAContentType/1020 [IRI for RDA content type “text”]
- 在一個element頁面展開其 

即可獲知此元素之IRI

Source: Toolkit>Guidance>Recording Methods；參見：James, 2021

translator person of

Definition and Scope

An expression that includes a contribution by a person of expressing the linguistic content of the work in a different language.

A translator may also translate linguistic content between forms of the same language from different time periods.

Element Reference

IRI

http://rdaregistry.info/Elements/a/P50585

Domain

Person

Range

Expression

Alternate labels

is translator person of

+ **IFLA LRM**

+ **MARC 21 Authority**

"translator person of"這個element的IRI

Vocabulary Encoding Scheme (VES)

- RDA provides a vocabulary encoding scheme (VES) for each RDA entity that includes the relationship elements for the entity.
- A vocabulary encoding scheme is presented as an element set for the entity in the RDA registry.
- Each element set provides data for **identifying** and **recording** each element associated with the entity:
  - A Toolkit label and a Registry label that can be used for a structured description of the element
  - A compact version of a Registry IRI for the element that can be used for an identifier for the element
  - A Registry IRI that is the IRI for the element

Source: Guidance > Introduction to RDA > Data elements>Recording relationship elements

由RDA Registry取得label及RDA IRI

RDA value vocabularies

RDA Content Type

Concepts for a categorization that reflects the fundamental form of communication in which the content is expressed and the human sense through which it is intended to be perceived.

Number of active concepts:	24
Namespace:	http://rdaregistry.info/termList/RDAContentType/
Suggested prefix*:	rdaco
Example curie:	rdaco:1001

* registered at prefix.cc

Concepts index

Show 25 entries

#	CURIE	Preferred label	Definition
#	rdaco:1008	"computer program"	"A content type that consists o performed by a computer."

VES (2)

- VES is a named structured list of representations of **controlled values** for elements
- Provides values that may be recorded with structured description, identifier, and/or IRI
- Examples:
  - Getty Arts & Architecture Thesaurus (AAT)
  - LC Name Authority File
  - MARC code list for countries or languages
  - LCSH
  - RDA/ONIX Framework value vocabularies
  - VIAF

Source: (James, 2021)

VES (3)

A VES may be categorized as:

- A **value vocabulary** that provides terms for a set of concepts that are associated with an attribute element.
- An **instance vocabulary**, dataset, or authority file that provides access points for entities that are associated with a relationship element.
- An element set that provides **labels** for elements that are used in a metadata description set.

A VES may also provide a value for an identifier or IRI for the entry in the vocabulary.

Source: Guidance > Introduction to RDA > Data elements>Recording relationship elements

VES Example

- *layout:* 300404422
  - Identifier from Getty for term “long-line format”
  - Attribute element
- *content type:* text
  - RDA Content Type VES term
  - Attribute element
- *place of publication:* gr
  - MARC Country Code for Greece
  - Relationship element (Range: Place)
- *printer person:* http://vocab.getty.edu/ulan/500093929
  - IRI for William Caxton from Getty ULAN
  - Relationship element (Range: Person)

Source: (James, 2021)

RDA Value Vocabularies List

(http://www.rdaregistry.info/termList/)

RDA Registry | Elements | Values | Data | Tools | Releases | About | FAQ | Guide | Project | RDA Toolkit

RDA value vocabularies

RDA Reference value vocabularies

- RDA Aspect Ratio Designation
- RDA Bibliographic Format
- RDA Broadcast Standard
- RDA Carrier Extent Unit
- RDA Carrier Type
- RDA Cartographic Data Type
- RDA Colour Content
- RDA Configuration of Playback Channels
- RDA Content Type
- RDA Extension Plan
- RDA File Type
- RDA Font Size
- RDA Form of Musical Notation
- RDA Form of Notated Movement
- RDA Form of Tactile Notation
- RDA Format of Notated Music
- RDA Frequency
- RDA Generation
- RDA Groove Pitch of an Analog Cylinder
- RDA Groove Width of an Analog Disc

RDA value vocabularies are recommended for use as Vocabulary Encoding Schemes for specified RDA properties.

The vocabularies contain terms, definitions, and scope notes in English.

RDA Reference value vocabularies are used in RDA applications, including RDA Toolkit.

The labels, definitions, and scope notes are covered by the Translation Policy for RDA and RDA Toolkit.

Translations may be partial or out-of-date.

Current and pending translations include:

- Arabic
- Catalan
- Chinese
- Danish
- Dutch
- Estonian
- Finnish
- French
- German
- Greek
- Hebrew
- Hungarian

Relationship Label Vocabulary

- A new development is the PCC's **relationship label vocabulary**, available on the RDA metadata guidance page. For example, the label *composer*, … now stands for *composer person/family/corporate body of work*. For the most part, **this results in no change of relationship designators**. One exception is the former *container of (work)* and *container of (expression)*, which will become *expression manifested* (as in analytic authorized access points) or *part* (as in legitimate whole/part relationships). … Another change is the *Based on* relationships: *based on (work)* will be renamed *source work*, and *based on (expression)* will be renamed *source expression*.

Source: RDA Changes in Theory and Practice (March 2, 2023)
https://cmc.wp.musiclibraryassoc.org/documents/rda-changes-in-theory-and-practice/

Relationship Label Vocabulary (2)

This series of Metadata Guidance Documents embodies the PCC Policy Committee (PoCo) recommendation: "Use element labels from a new vocabulary that the PCC community will create and maintain as a part of the application profile and policy statements." **PoCo has decided to use "deverbalized unconstrained elements" based on the unconstrained verbalized elements in the RDA registry**. These Metadata Guidance Documents include the PCC-approved relationship label to use with every currently available relationship element. (source: https://cmc.wp.musiclibraryassoc.org/documents/rda-changes-in-theory-and-practice/)

Metadata Guidance Documentation: Relationship Labels

CATALOGING AND ACQUISITIONS

- Cataloging and Acquisitions Home
- About the Organization
- Contact
- FAQs
- News

- Acquisitions
- Resources for Cataloging
- Catalogs, Authority Records
- Classification and Shelflisting
- Cooperative Cataloging Programs
- Descriptive Cataloging
- Products for Purchase
- Publications, Reports
- Subject Headings & Genre/Form Terms

Resource Description & Access (RDA) Metadata Guidance Documentation: Relationship Labels

Relationship Labels

This series of Metadata Guidance Documents embodies the PCC Policy Committee (PoCo) recommendation: "Use element labels from a new vocabulary that the PCC community will create and maintain as a part of the application profile and policy statements." PoCo has decided to use "deverbalized unconstrained elements" based on the unconstrained verbalized elements in the RDA registry. These Metadata Guidance Documents include the PCC-approved relationship label to use with every currently available relationship element.

Introduction *(PDF : 253 KB)*

Relationship Labels for Works			
Work to Work *(PDF : 279 KB)*	Work to Expression *(PDF : 130 KB)*	Work to Manifestation *(PDF : 92 KB)*	Work to Item *(PDF : 91 KB)*
Work to Person *(PDF : 173 KB)*	Work to Corporate body *(PDF : 171 KB)*	Work to Family *(PDF : 136 KB)*	Work to Place *(PDF : 130 KB)*
Relationship Labels for Expressions			
Expression to Work *(PDF : 128 KB)*	Expression to Expression *(PDF : 217 KB)*	Expression to Manifestation *(PDF : 93 KB)*	Expression to Item *(PDF : 92 KB)*
Expression to Person *(PDF : 167 KB)*	Expression to Corporate body *(PDF :*	Expression to Family *(PDF : 168 KB)*	Expression to Place *(PDF : 128 KB)*

Removing the Relationship Matrix

Mon, 06/15/2020 - 20:07 Posted in: #3R Project

When the RDA Toolkit beta site debut in June 2018, what had been relationship designators in the original toolkit became relationship elements. The Relationship Matrix was included in the beta site as a replacement for the appendices I-L that allows users to do a quick look-up of relationship elements. Unfortunately from the debut of the Relationship Matrix the feature has suffered from inaccuracies in its content and difficulties processing updates to the content.

It has become clear that the Relationship Matrix concept is simply not working. The Copyright Holders of RDA, in consultation with the RDA Steering Committee, have decided to remove the Relationship Matrix from the RDA Toolkit beta site, effective immediately. If the feature can be rebuilt and operate reliably, it will be returned to RDA Toolkit.

The recent revisions to the Elements list found on entity pages provides an excellent alternative to the Relationship Matrix. You can learn more about this feature in the April release announcement.

Source: https://www.rdatoolkit.org/node/226

謝謝聆聽
敬請指教

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- 國家圖書館館藏發展及書目管理組編著（民107）。**RDA書目關係編目參考手冊**。臺北市：國家圖書館。
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