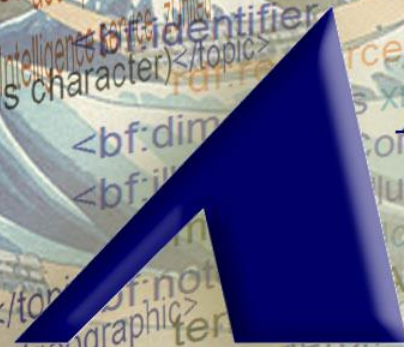


IFLA-LRM:

a New Foundation

for RDA



**Amigos
Library
Services**

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Agenda

❖ FRBR

❖ What is IFLA-LRM?

❖ Background

❖ Explanation of IFLA-LRM

➤ Entities

➤ Attributes

➤ Relationships

❖ RDA Changes Because of IFLA-LRM

Sources

- ❖ Consolidation Editorial Group of the IFLA FRBR Review Group, *IFLA-Library Reference Model*,
<https://www.ifla.org/publications/node/11412>
- ❖ *Implementation of the LRM in RDA*
 - <http://www.rda-rsc.org/ImplementationLRMinRDA>
- ❖ Kathy Glennan, *RDA Developments of Note*
 - <http://alcts.ala.org/ccdablog/wp-content/uploads/2017/01/IFLA-LRM-MW17.pdf>

FRBR



The background of the slide is a traditional Japanese woodblock print illustration. It depicts a large, turbulent wave crashing over several boats. The boats are filled with people, and the scene is set against a backdrop of a mountain, likely Mount Fuji, under a cloudy sky. The style is characteristic of Edo-period art, with bold lines and a limited color palette of blues, greens, and browns.

Group 1	Group 2	Group 3
Work	Persons	Any Group 1 or 2 entity
Expression	Families	Concept
Manifestation	Corporate Bodies	Object
Item		Event
		Place

FRBR Example—Group 1

- ❖ **Work**—J.R.R. Tolkien: “In a hole in the ground there lived a Hobbit”
 - Tolkien thinks of an idea for a story of Bilbo’s journey with a wizard and some dwarves
- ❖ **Expression**: *The Hobbit*
 - Tolkien decides the story will be a written text in English
- ❖ **Manifestation(s)**: first edition published and distributed by Allen & Unwin, September 21, 1937
- ❖ **Item**: a copy of the first edition



FRBR Example Group 2

- ❖ **Work**—created by JRR Tolkien (person)
- ❖ **Expression**—Tolkien (person) decides to express his ideas in English as a written text
- ❖ **Manifestation**—Allen and Unwin (corporate body) arranges for copies to be printed and publishes the book
- ❖ **Item**—Oxford University (corporate body) owns a copy of the first edition



FRBR Example Group 3 – Subjects of a Work

❖ *The Hobbit* is about:

- Hobbits (group 3 concept)
- Bilbo Baggins (hobbit), Gandalf (wizard), Thorin Oakenshield (dwarf), Smaug (dragon) (group 2 persons)
- A ring, a treasure (group 3 objects)
- Lonely Mountain (a.k.a. Erebor) (group 3 place)
- Battle of Five Armies (group 3 event)

FRBR in the Bibliographic Record

**Creator
(Group 2)**

**Work
(Group 1)**

100 1 Tolkien, J. R. R. \$q (John Ronald Reuel), \$d 1892-1973.

240 10 Hobbit

245 14 The hobbit, or, There and back again / \$c by J.R.R. Tolkien.

260 London : \$b G. Allen & Unwin, \$c [1937]

300 310 pages : \$b illustrations ; \$c 20 cm

336 text \$b txt \$2 rdacontent

337 unmediated \$b n \$2 rdamedia

338 volume \$b nc \$2 rdacarrier

520 A tale of the adventure of a company of dwarves in search of dragon-guarded gold. A reluctant partner in this perilous quest is Bilbo Baggins, a comfort-loving, unambitious hobbit, who surprises even himself by his resourcefulness and skill as a burglar.

**Manifestation
(Group 1)**

650 0 Middle Earth (Imaginary place) \$v Fiction.

650 0 Baggins, Bilbo (Fictitious character) \$v Fiction.

650 1 Fantasy.

Group 3 Place

**Group 3
Person**

**Group 3
Concept**

What is IFLA-LRM?

- ❖ A consolidation of FRBR, FRAD and FRSAD
 - Remains a high-level conceptual model
 - Entity-relationship framework
 - Changes to the model reflect insights gained since these were first published
- ❖ Development began in 2010
- ❖ “Revised after world-wide review” version released August 2017
- ❖ Formerly known as FRBR-LRM

Modeling Decisions

❖ Based on

- CIDOC CRM (International Committee for Documentation Conceptual Reference Model)
- FRBRoo (object-oriented FRBR, an extension of CIDOC CRM)

❖ Emphasis on user tasks, not library tasks

❖ Extensible framework

- Types may be expanded via sub-entities

User Tasks

- ❖ Find
- ❖ Identify
- ❖ Select
- ❖ Obtain
- ❖ Explore
- ❖ Deprecated user tasks
 - Contextualize (part of Explore) from FRAD
 - Justify (a library staff task) from FRAD

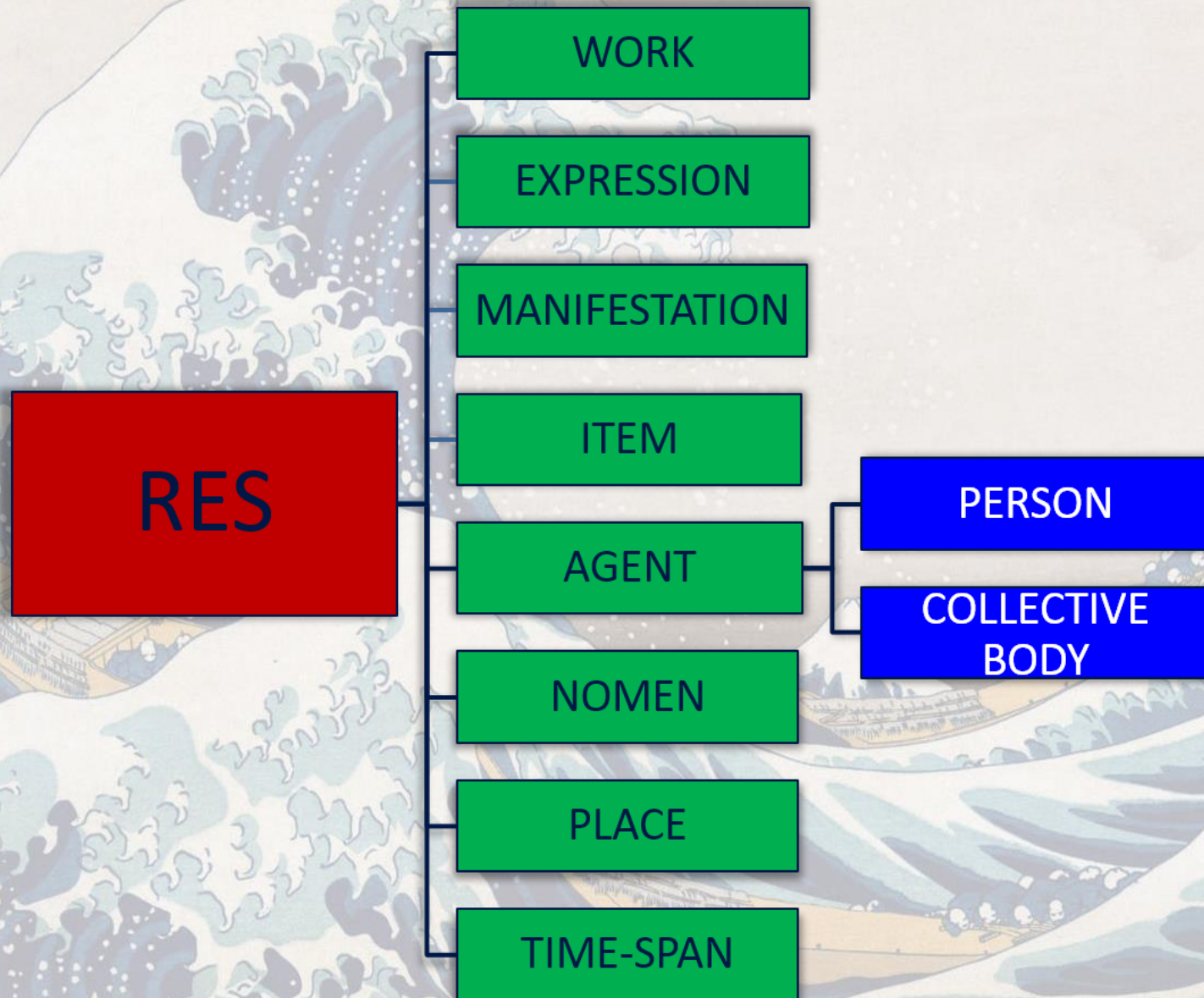
FRBR LRM is Hierarchical

❖ "IsA" relationships

➤ Example: *Work* **IsA** *Res*

❖ *FRBR* group 1-3 designations are deprecated

Entity Hierarchy



Entity Structure: Hierarchies

- ❖ IFLA-LRM entities have hierarchical relationships
 - Some entities are superclasses and have subclass relationships with other entities
 - Any instance of a subclass entity is also an instance of the superclass
 - Allows for streamlining; avoids repetition in defined relationships and attributes



Entities

- ❖ RES is the highest level entity
- ❖ Old group 1 entities retained
 - *Work*
 - *Expression*
 - *Manifestation*
 - *Item*
- ❖ These entities are *disjoint*
 - An entity can't be more than one of these simultaneously



Res

- ❖ *Res* (Latin) = *thing*
- ❖ Includes both physical things and conceptual objects
- ❖ Definition: "Any entity in the universe of discourse"
- ❖ Highest level entity

Work

❖ Definition: “The intellectual or artistic content of a distinct creation”

❖ Scope notes:

- “... the constellation of concepts and ideas that form the shared content of what we define to be *expressions* of the same *work*.”
- “A *work* comes into existence simultaneously with the creation of its first *expression*, no *work* can exist without there being (or there having been at some point in the past) at least one *expression* of the *work*.”

Examples of Works

- ❖ Homer's *Odyssey*
- ❖ Ursula K. Le Guin's *The Earthsea trilogy*
- ❖ Wolfgang Amadeus Mozart's *Piano sonata KV 281 in B flat major*

Expression

- ❖ Definition: “A distinct combination of signs conveying intellectual or artistic content”
- ❖ Scope notes:
 - “An *expression* is a distinct combination of signs of any form or nature (including visual, aural or gestural signs) intended to convey intellectual or artistic content and identifiable as such.”

Examples of Expressions

- ❖ The English translation by Robert Fagles of Homer's *Odyssey*, copyright 1996
- ❖ “English text of Agatha Christie's *They do it with mirrors*, original copyright 1952 [same English text also published under the title *Murder with mirrors*]”
- ❖ A recording of a specific performance by the Amadeus Quartet and Hephzibah Menuhin on piano of Franz Schubert's *Trout quintet*

Manifestation

- ❖ “A set of all carriers that are assumed to share the same characteristics as to intellectual or artistic content and aspects of physical form.”
- ❖ Scope notes:
 - A *manifestation* results from the capture of one or more *expressions* onto a carrier or set of carriers. As an entity, *manifestation* represents the common characteristics shared by those carriers, in respect to both intellectual or artistic content and physical form.

Examples of Manifestations

- ❖ “Homer. *The Odyssey* / translated by Robert Fagles, Penguin Classics, Deluxe edition published in New York by Penguin Books in 1997, ISBN 0-670-82162-4”
- ❖ *They do it with mirrors* / Agatha Christie published in the UK by William Collins & Sons in 1952 [a *manifestation* of a detective novel]
- ❖ *Murder with mirrors* / Agatha Christie published in the US by Dodd, Mead & Co. in 1952 [another *manifestation* of the same detective novel, published in a different country with a different title]

The background features a traditional Japanese ink wash painting style illustration. A large, stylized wave dominates the center, with a boat navigating through its base. In the upper left, a vertical calligraphic inscription reads '富嶽三十六景 神奈川' (Fujizaka Sanjūrokkajō Kanagawa).

Item

- ❖ Definition: “An object or objects carrying signs intended to convey intellectual or artistic content”
- ❖ Scope notes:
 - In terms of intellectual or artistic content and physical form, an *item* exemplifying a *manifestation* normally reflects all the characteristics that define the *manifestation* itself.
 - An *item* is in many instances a single physical object, but in other cases an *item* may consist of multiple physical pieces or objects.

Examples of Items

- ❖ The manuscript known as the *Codex Sinaiticus*
- ❖ Library of Congress Copy 2 of Homer. *The Odyssey / translated by Robert Fagles*, Penguin Classics, Deluxe edition published in New York by Penguin Books in 1997, ISBN 0-670-82162-4
- ❖ Peter Jackson's personal copy of *The lord of the rings. The two towers*, Special extended DVD edition, published in 2003, ISBN 0-7806-4404-2 [a 4-disc set with 2 booklets]



Agent

❖ New *Agent* entity includes

➤ *Person*

➤ *Collective Agent*

❖ *Collective Agent* "designates a wide range of named groups of persons that bear a particular name and act as a unit."

➤ Includes families and corporate bodies of all types

❖ "The entity *person* is restricted to real persons who live or are assumed to have lived" (LRM-E7, p.29)

Examples of Agents



❖ Persons

- Margaret Atwood [person]
- Peter Jackson [person]

❖ Collective agents

- Masuda family
- Borromeo family
- Dallas Symphony Orchestra
- Symposium on Glaucoma



Nomen

- ❖ *Nomen* (Latin) = Name
- ❖ Definition: A designation by which an entity is known
- ❖ All entities are identified by their *Nomen(s)*
- ❖ Anything not covered by other entities (e.g., fictional persons, places, groups) can be covered by *Nomen*

Examples of Nomens

- ❖ 'Agatha Christie' as a way of referring to {the *person* Dame Agatha Christie, Lady Mallowan}
- ❖ 'Agatha Mary Clarissa Miller' as a way of referring to {the *person* Dame Agatha Christie, Lady Mallowan}
- ❖ 'United Nations' as a way of referring to {the *collective agent* United Nations} in English
- ❖ 'Christie, Agatha, 1890-1976. Murder with mirrors' as a way of referring to {the *work* *Murder with mirrors* by Agatha Christie}
- ❖ 'Brahms, Johannes, 1883-1897. Quartets, violins (2), viola, cello, no. 1, op. 51, no. 1, C minor' as a way of referring to {Johannes Brahms's *work* *String Quartet No. 1*}

More Examples of Nomen

- ❖ 'March 1, 2015' as a way of referring, in English and within the Gregorian calendar scheme, to the *time-span* that elapsed between zero o'clock on the 1st of March 2015 and midnight on the 1st of March 2015
- ❖ '780' as a way of referring to music in the DDC [classification number for the topic {music} in DDC]

The background is a traditional Japanese woodblock print style illustration. It depicts a large, curling blue wave with white foam. Several wooden boats with thatched roofs are shown navigating through the waves. In the distance, a snow-capped mountain, likely Mount Fuji, is visible under a pale sky. In the upper left corner, there is a vertical rectangular frame containing Japanese text: '富嶽三十六景' (Fujisan Sanjūrokkajō) and '神奈川' (Kanagawa).

Place

- ❖ Definition: a given extent of space
- ❖ Identified through
 - physical objects (geographical features) or " ...relevance with regards to a particular *agent* (geopolitical entities such as countries, cities, etc.)"
 - Locations of events

Examples of Places

- ❖ Montréal (Québec) [area culturally identified as a *place* although the central city has absorbed adjacent towns throughout its history]
- ❖ Mississippi River
- ❖ Antartica

Time-Span

- ❖ Definition: a temporal extent having a beginning, an end and a duration.
- Even brief intervals have a time span
- ❖ Can be associated with actions or occurrences that happened during a period of time

Examples of Time-Spans

- ❖ 2015-03-01 [*time-span* of a day expressed in the Gregorian calendar in YYYY-MM-DD format]
- ❖ the period of time beginning on 1st January 2015, ending on 31 December 2015, and having a duration of one year [may be referred to as '2015 A.D.' (using *Anno Domini*) or as '2015 CE' (using common era)]
- ❖ Twentieth Century
- ❖ Ordovician Period [*time-span* lasting from 488.3 to 443.7 million years before present]
- ❖ Age of Enlightenment

Deprecated FRBR Entities

❖ FRBR Group 3

➤ Concept

➤ Object

➤ Event

➤ Place

❖ Place is repurposed (see above)

Deprecated FRAD Entities

- ❖ *Identifier* [could be a type of nomen]
- ❖ *Controlled Access Point* [could be a type of nomen]
- ❖ *Rules* [out of scope]
- ❖ *Agency* [out of scope]

Changes to FRSAD Entities

❖ *Res* (formerly *Thema*) – Single top level entity

➤ Redefined without reference to the subject relationship

❖ *Nomen*

➤ *Definition: any sign or arrangement of signs by which an entity is known*

➤ Merged with FRAD:*Name*

➤ Includes pseudonyms

Attributes

- ❖ 37 attributes relating to 10 entities
 - Entity *collective agent* has no attributes
- ❖ Attributes are representative; not an exhaustive list
- ❖ "Attributes characterize specific instances of an instances of an entity."
- ❖ Attributes organized by entity they characterize
- ❖ Can be controlled values or free-text



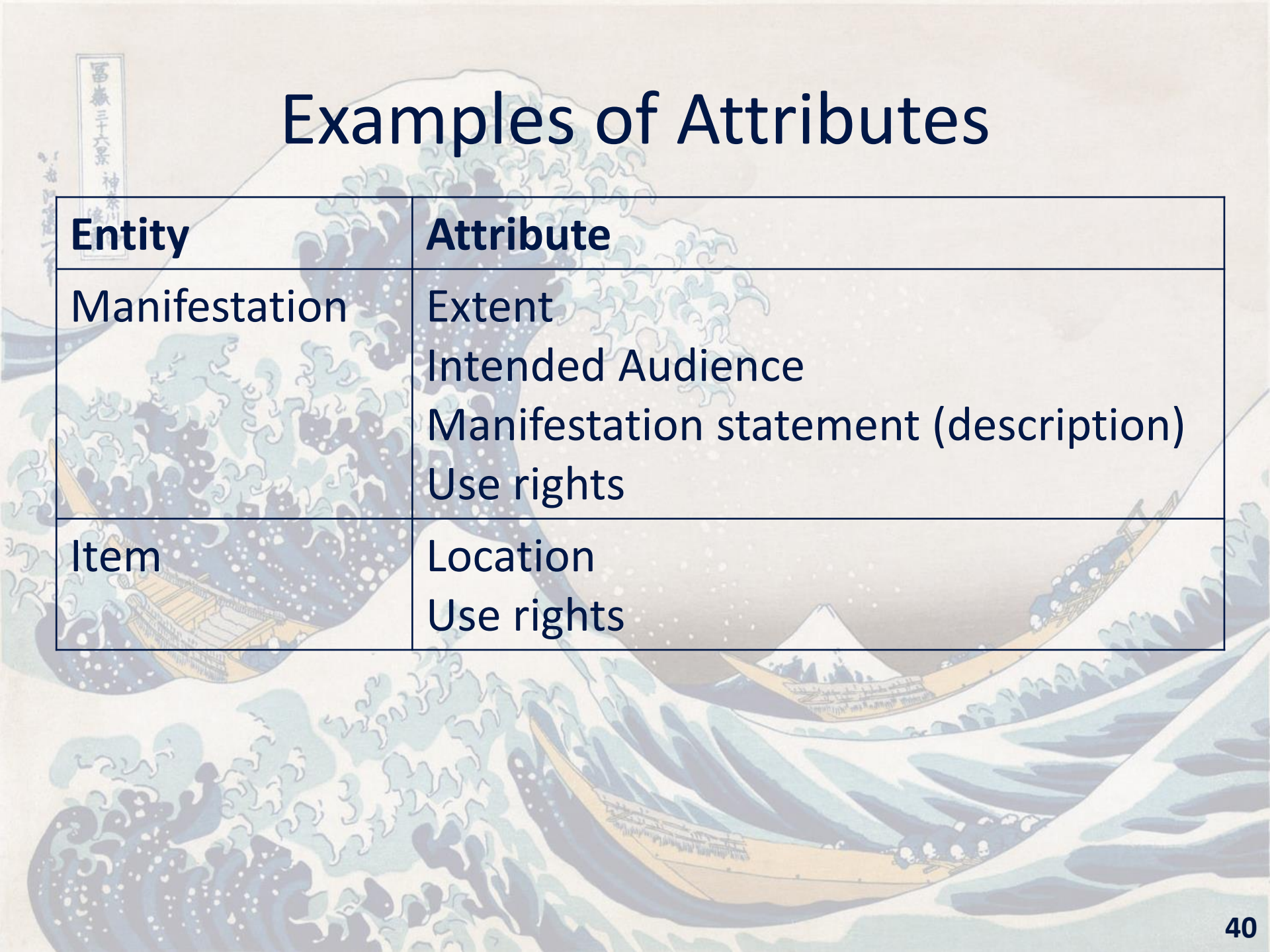
Two Common Attributes for Res

- ❖ Category – a class to which the entity belongs
- ❖ Note – unstructured textual information

Examples of Attributes

Entity	Attribute
Res	Category Note
Work	Representative expression attribute
Expression	Extent Intended Audience Cartographic scale Language Key Medium of performance

Examples of Attributes



The background features a traditional Japanese woodblock print illustration. It depicts a large, stylized wave in shades of blue and white, with a boat navigating through it. In the distance, a snow-capped mountain, likely Mount Fuji, is visible under a pale sky. The style is characteristic of Edo-period art, with bold outlines and a limited color palette.

Entity	Attribute
Manifestation	Extent Intended Audience Manifestation statement (description) Use rights
Item	Location Use rights

Examples of Attributes

Entity	Attribute
Agent	Contact information Field of activity Language
Person	Profession/Occupation
Nomen	Nomen string Scheme Script

Examples of Attributes

Entity	Attribute
Place	Location
Time-span	Beginning Ending

Relationships

- ❖ Connect two declared entities
- ❖ 36 defined relationships in model; not an exhaustive list
- ❖ Declared in both directions
 - WORK is realized through EXPRESSION
 - EXPRESSION realizes WORK

Relationships

- ❖ Recursive relationship – same entity serves as both domain and range
- ❖ Symmetric relationship – forward and reverse relationships are the same
- ❖ One-to-many vs. many-to-many



Example

RES is associated with RES

MANIFESTATION has alternate MANIFESTATION

Both of these relationships are *recursive*
and *symmetric*

Relationships between Work, Expression, Manifestation, and Item

Work

is realized through
realizes

Expression

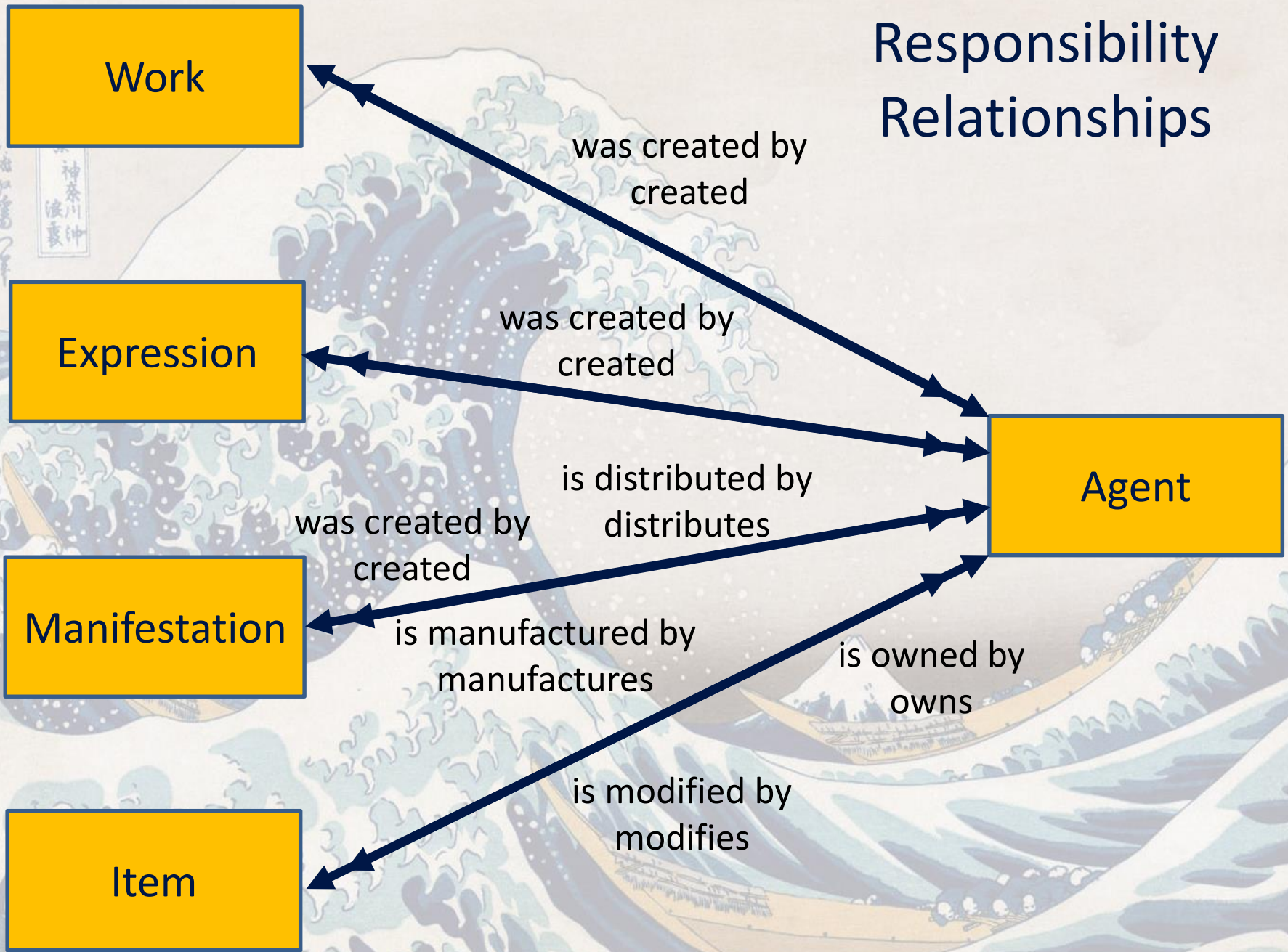
is embodied in
embodies

Manifestation

Is exemplified by
exemplifies

Item

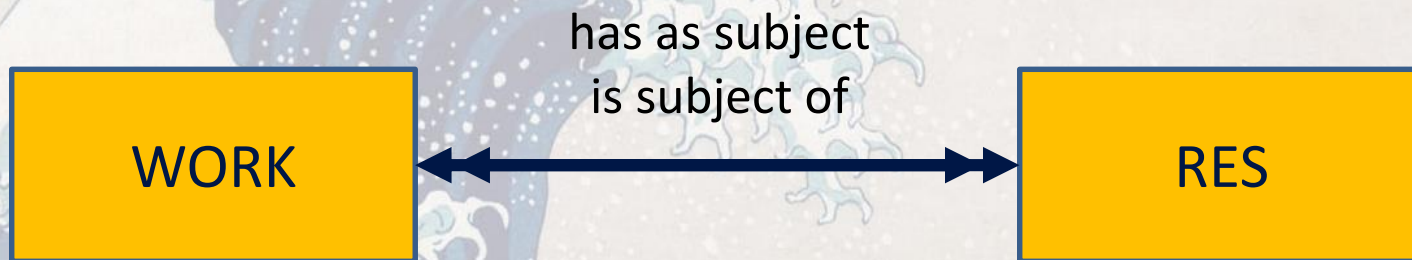
Responsibility Relationships





富嶽三十六景 神奈川 浪裏

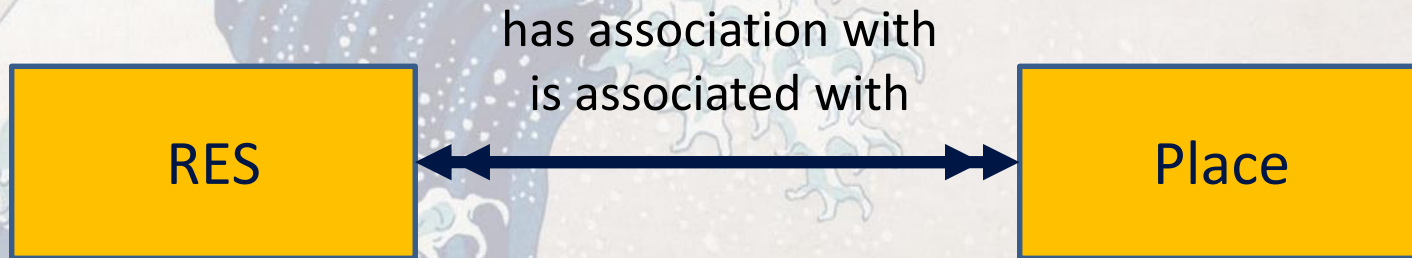
Subject Relationship



Appellation Relationship



Place Relationship

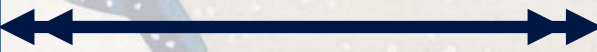


Time Span Relationship



Relationship between Agent and Name

NOMEN



Agent

was assigned by
assigned

富嶽三十六景 神奈川 浪裏

Relationships Among Agents

Agent

Person

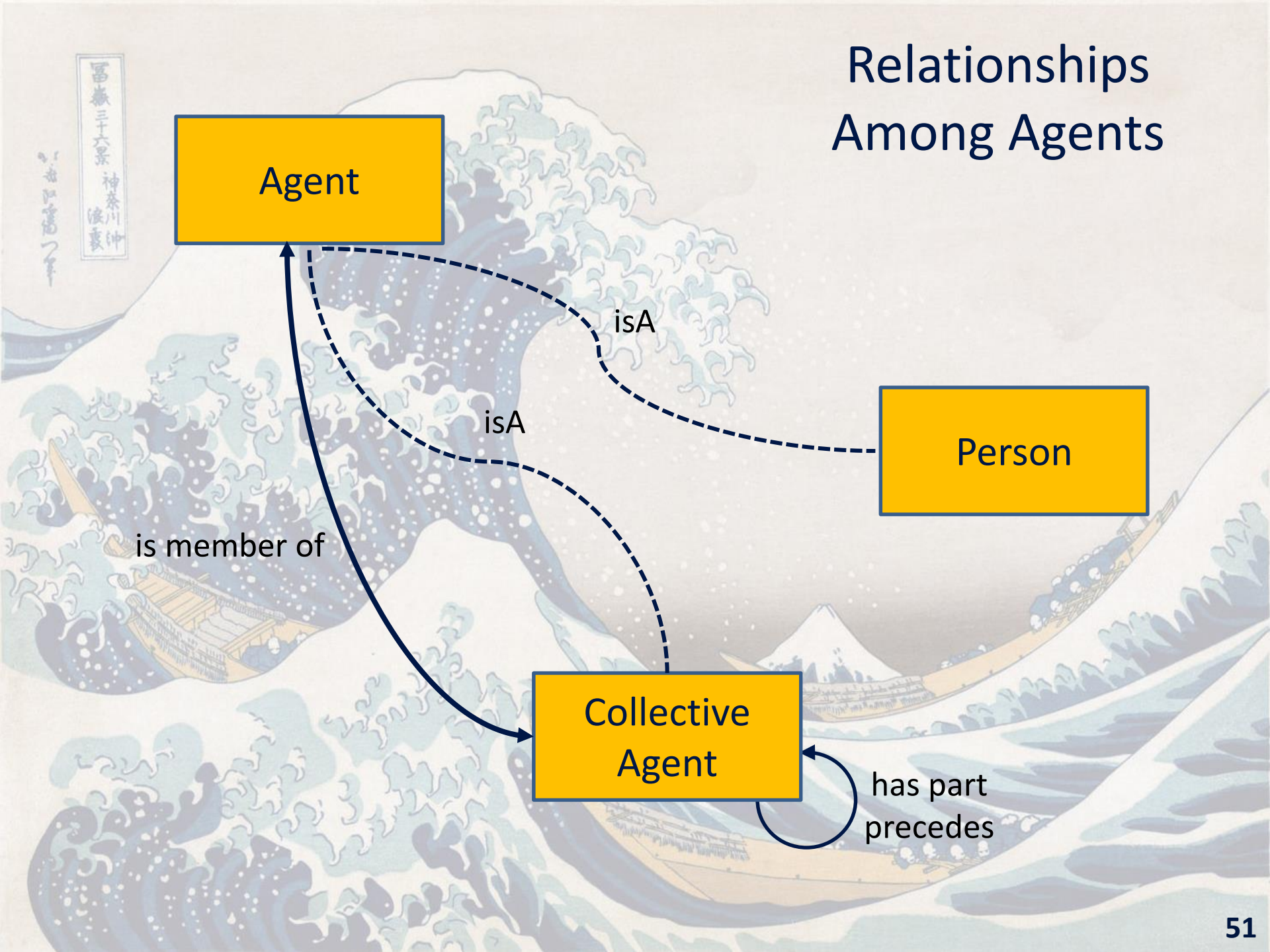
Collective Agent

is member of

isA

isA

has part precedes



Representative Expression

- ❖ If representative of the work (such as the original expression), this serves as the basis of the Work description
 - Includes important attributes used to identify the work:
 - language
 - intended audience
 - medium of performance
 - key
 - scale

Manifestation Statement

- ❖ A generalized attribute:
 - How the resource represents itself
 - Transcribed information
 - Specific to the *Manifestation* entity
 - Could have sub-types, such as Statement of Responsibility

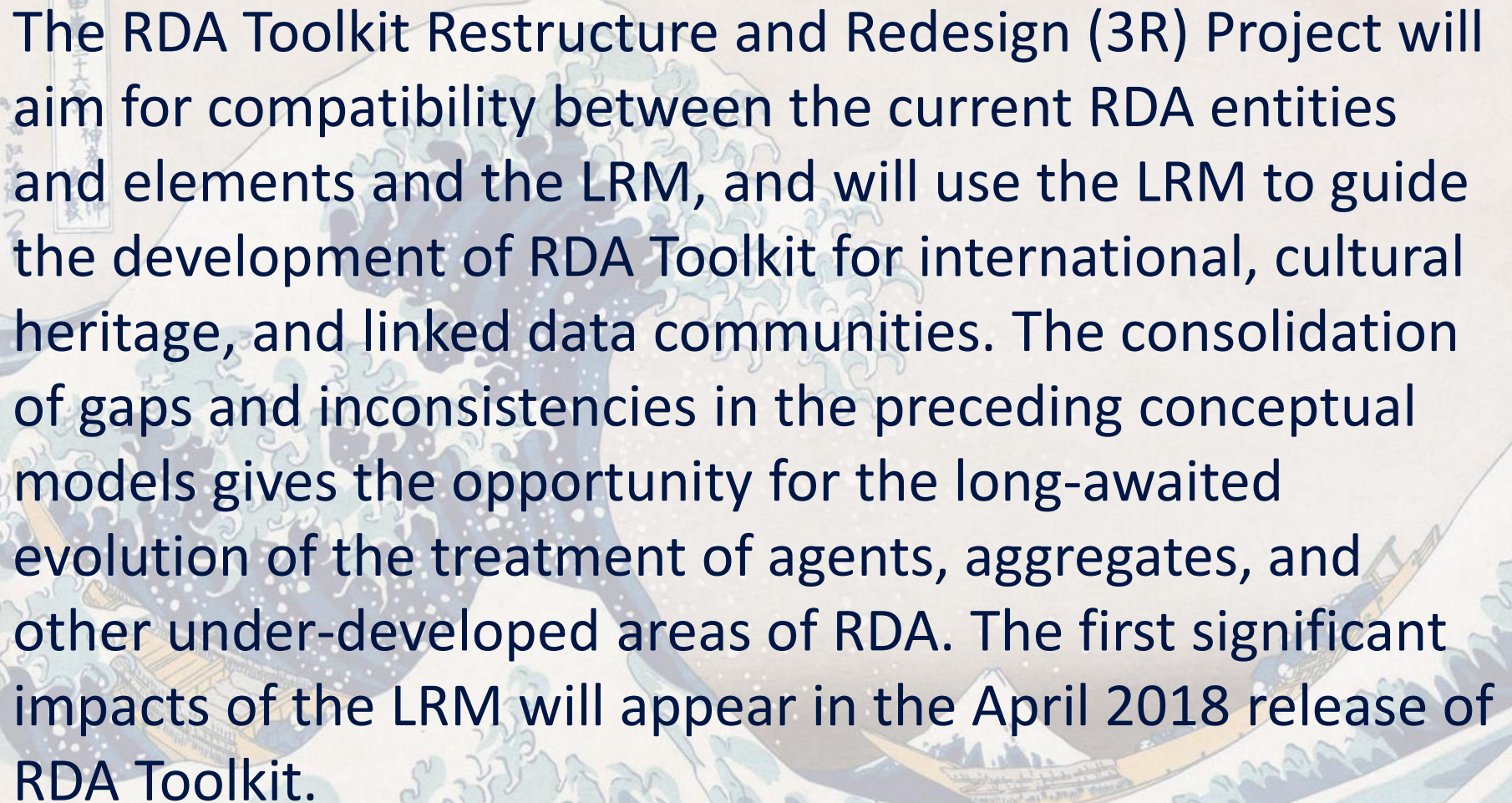
What's Next?

❖ Latest version – “Revised after world-wide review”

- Released August 2017
- Endorsed by the IFLA Professional Committee

❖ ILFA-LRM will be incorporated into RDA through the RDA Toolkit Restructure and Redesign (3R) project

- June 13, 2018 – Initial rollout of new Toolkit
- April 2018 release of RDA Toolkit – IFLA-LRM changes incorporated



The RDA Toolkit Restructure and Redesign (3R) Project will aim for compatibility between the current RDA entities and elements and the LRM, and will use the LRM to guide the development of RDA Toolkit for international, cultural heritage, and linked data communities. The consolidation of gaps and inconsistencies in the preceding conceptual models gives the opportunity for the long-awaited evolution of the treatment of agents, aggregates, and other under-developed areas of RDA. The first significant impacts of the LRM will appear in the April 2018 release of RDA Toolkit.

RDA Steering Committee

<http://www.rda-rsc.org/ImplementationLRMinRDA>

IFLA-LRM & RDA

- ❖ RDA will refine *Res* by creating element subtypes and relationship designators
 - No need to model *Res* in RDA – it's inherent (Glennan)
- ❖ Three new entities
 - Collective agent
 - Nomen
 - Time-span
- ❖ Agent and Place added and consolidated
- ❖ Existing entities Person, Family, Corporate Body will become entity subtypes of Agent and Collective Agent

IFLA-LRM & RDA

- ❖ Significant redefinition of entity Person
- ❖ “The treatment of fictitious and non-human entities and alternative names of persons such as pseudonyms given in statements of responsibility will be developed in the context of the new Nomen entity so that resources continue to be found.” RSC
- ❖ May result in change of practice for some authority control systems

IFLA-LRM & RDA

- ❖ LRM allows attributes and relationships to be used interchangeably
- ❖ Supports full expansion of RDA 4-fold path for identifying related entities
 - Unstructured description
 - Structured description
 - Identifier
 - Linked data URI



IFLA-LRM & RDA

❖ New LRM attribute Manifestation statement

- “allows a clear distinction between data transcribed from a manifestation to reflect how it describes itself in an unstructured way, and data recorded from other sources.”

❖ New Nomen entity will support distinction between:

- Structured descriptions in the form of access points
- Identifiers associated with an entity



富嶽三十六景 神奈川 浪

Impact on Authorized Access Points?

- ❖ Works – emphasis on identifying the responsible agent and the preferred title
 - Remove sequencing instructions to allow RDA communities to provide different approaches
 - Each version of AAP is a Nomen string for the Work
- ❖ Likely move to creating AAPs for Manifestations
- ❖ Create generalized guidance to help catalogers make AAP choices
- ❖ Provide methods to compose AAPs
- ❖ Examples of different approaches

Kathy Glennan, *RDA Developments of Note*

IFLA-LRM & RDA

❖ Aggregates:

- “The LRM provides the first consolidated model of aggregates available to RDA”
- Will be a “broad area of enhancement”

❖ RSC will work with related standards groups on the impact of the LRM

IFLA-LRM & RDA

❖ Aggregates questions to resolve:

- What is a work? Title page?
- Collaborative work vs. aggregate work?
- Difference between aggregate work and whole/part work?
- How can RDA accommodate different communities' approaches to describing same resource?
 - Cataloging rare/special collections vs. general collections?

Kathy Glennan, *RDA Developments of Note*

For More Information

❖ *IFLA Library Reference Model (LRM)*

➤ <https://www.ifla.org/publications/node/11412>

❖ *Implementation of the LRM in RDA*

➤ <http://www.rda-rsc.org/ImplementationLRMinRDA>

❖ *RDA 3R Project*

➤ <http://www.rdatoolkit.org/3Rproject>

❖ *Kathy Glennan, RDA Developments of Note*

➤ <http://alcts.ala.org/ccdablog/wp-content/uploads/2017/01/IFLA-LRM-MW17.pdf>

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has Translation
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