Supplementary File S1

Narrative Licence Coder Manual (Schema Version 1.1)

Supplement to: Narrative Licence: An Evidence-Bounded Protocol for Multivocal Museum Storytelling from Reused Object Records

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S1. Purpose and Scope

This manual operationalises the decision procedure in Section 3.4.1 of the article, the secondary annotation dimensions in Section 3.7 and the coherence outcomes in Section 3.8. It is the instrument both annotators use independently for every sentence of the Condition B and Condition C outputs. Worked records in Section 7 were prepared by the authors to illustrate the rules; their candidate sentences are not model output and are not outcome data. Records used as worked examples are coded last, and the primary estimate is reported with and without them (Section 6).

S2. Coding Unit

The coding unit is one independently interpretable proposition. A sentence that contains several propositions is split before status is assigned. A unit that cannot be split without changing its meaning is coded at its least permissive status. Voice 0 (the TimeTravel description) is never a source of licence.

S3. Decision Procedure

Coders apply rules 1 and 2 to every unit, then rules 3 to 7 in order, stopping at the first rule that decides the status.

(1) Segment. One coding unit holds one proposition. Coordinated clauses, relative clauses and appositives are split. If splitting changes the meaning, the whole sentence is coded at its least permissive status.

(2) Map each content word. Every noun, verb, adjective and qualifier must map to (a) a value in a named, non-empty field, (b) that field's category noun or verb (for example 'material', 'findspot', 'dates', 'made', 'attributed'), or (c) a visible element of the image. Function words, the meta-nouns object, record, image, legend and inscription, and a closed list of glue verbs (is, reads, names, shows, records, gives, lists, states, marks) need no warrant. A field holding a placeholder string such as 'None' counts as empty.

(3) Absence. A unit that reports an empty field in a fixed absence note (for example 'How the object was made is not recorded') is ATTESTED by the empty field; it speaks about the record, not the object.

(4) Inscriptions. Expanding abbreviations, translating, or attributing meaning or purpose to a legend is NOT LICENSED, even where the expansion is standard in the relevant discipline. A literal reading, which reproduces the quoted characters with their recorded position, type and language, proceeds to rule 5.

(5) ATTESTED applies if every content word maps to (a) or (b), every recorded qualifier (for example 'about', 'probably', 'possibly', 'named in inscription') is kept verbatim, and no slash-joined value is reduced to one of its parts. A slash-joined value such as 'Found/Acquired' or 'Excavated/Findspot' records alternatives and must be kept whole; an ampersand-joined value such as 'Named in inscription & portrayed' records both facts and may be split, each part keeping its wording.

(6) INFERRED applies if at least one content word maps only to (c) and the unit (i) reports visible object or pictorial type, shape, colour, count, arrangement, posture or a visible motif, (ii) names no identity, date, function or meaning that the fields do not supply, and (iii) carries an explicit marker such as 'The image shows'. A visual unit without the marker is coded INFERRED-unmarked; it is withheld at the gate and, if

found in released text, counts in the numerator of the released unlicensed rate. Objects visible in the frame that are not the recorded object are never described.

(7) NOT LICENSED applies otherwise, including purpose, symbolism, significance, causation, emotion, audience response, unrecorded events, and any content whose only source is Voice 0.

(8) Release. ATTESTED and marked INFERRED units pass the release gate; all other units are entered on the withheld list with the field or source that would have been needed to license them. Public prose uses only released units but need not use all of them.

(9) Replacement. A withheld unit may be replaced by a new candidate unit that restates only licensed content. In Condition C the model proposes replacements; coders classify them under rules 1 to 8, and each replacement is logged with a link to the unit it replaces.

S4. Secondary Annotation Dimensions

These dimensions are recorded for every unit. They do not change the release status. Agreement is reported separately for each.

Dimension	Codes	Decision rule
Uncertainty	kept / dropped / added / not applicable	Compare every qualifier in the licensing field with the unit. 'Dropped' = a recorded qualifier is absent; 'added' = the unit hedges where the field does not.
Transformation	none / function shift / category shift	Function shift: the field value is kept but given an unrecorded historical, cultural or narrative role (a findspot becomes a journey). Category shift: the value is moved to another category ('Found/Acquired' rendered as 'found'; a culture label rendered as a people).
Interpretive dependency	none / internal / external	Internal: the unit's meaning depends on another unit in the same output. External: it depends on knowledge outside the record and image.

S5. Coherence-Break Codes

Coded once per output, blind to condition where the format allows.

Code	Definition	Example
Dangling reference	A pronoun or definite noun phrase whose referent was withheld or never introduced.	'Its owner…' after the sentence introducing an owner was withheld.
Unsupported topic jump	Consecutive units on unrelated fields with no neutral transition, such that a reader cannot tell what the second unit is about.	A mintmark sentence followed directly by a culture-label sentence that begins 'They…'.
Orphaned connective	A connective whose antecedent proposition was withheld, or a relational connective without a licensed relation.	'Therefore, it was hidden…' with no licensed preceding claim.

Readability and retention are computed per output: word count, Flesch reading-ease score, and the proportion of candidate units released. These are descriptive measures.

S6. Agreement and Adjudication

Annotators train on records outside the 48-record analysis set. The worked records in Section 7 are an exception that coders will have seen; records used as worked examples are therefore coded last, and the primary estimate is reported with and without them. Annotators code independently and lock their labels before discussion. Agreement is reported as raw percentage agreement, Cohen's kappa, a three-class confusion matrix and class-specific agreement for release status, and separately for each secondary dimension and coherence code. A third pass resolves disagreements while preserving both original labels.

S7. Worked Records

S7.1. Record 534 (Roman Imperial copper-alloy coin; inscription-rich)

The full ledger, released gallery stop and withheld list are given in Section 3.4.2 and Table 2 of the article (unit numbers below follow Table 2). Secondary dimensions for the units that illustrate them:

Unit	Unit text	Dimension	Code
1	This copper-alloy object dates to about 324–325.	Uncertainty	kept ('about')
2a	It is Roman.	Transformation	category shift (culture label shortened)
4c	… as Caesar.	Interpretive dependency	external (numismatic expansion)
6b	… shows it was struck in London.	Transformation	category shift (mintmark to place of production)
8	The design symbolised security and imperial protection.	Interpretive dependency	external
9a	It was excavated in the Warsop hoard.	Transformation	category shift (field label reduced)
10	Its owner buried it for safekeeping in troubled times.	Transformation	function shift (hoard findspot to narrative of motive)

S7.2. Record 5376 (Tang dynasty glazed earthenware; non-coin, non-Roman)

Source packet. Production date '618-906; 800-825 (probably (Rawson 1992))'; Find spot 'Found/Acquired: China'; Materials 'earthenware'; Technique 'glazed'; Inscription empty; Subjects 'flower'; Assoc name empty; Culture 'Tang dynasty'; Section 'Tang dynasty'; Place 'China'. The record has no object-type field.

Image (checked by the authors). A round lidded box photographed in a display case. The top of the lid has a blue ground with small five-petalled white flowers with amber centres; the sides are amber with white spots. Parts of other objects are visible at the edges of the frame.

Voice 0 (not a source of licence). The dataset description calls the box 'sancai' ware, describes its glaze as yellow and mottled white, states that the base is unglazed, and identifies the flowers as plum blossom. None of these is licensed: 'sancai', 'unglazed base' and 'plum blossom' appear in no field, the base is not visible, and the description does not mention the blue lid that the image shows.

#	Unit	Warrant	Status	Secondary code
1a	This earthenware object is dated 618–906.	Materials; Production date, first value	ATTESTED	—

#	Unit	Warrant	Status	Secondary code
1b	The record also gives 800–825, marked ‘probably’ and attributed to Rawson (1992).	Production date, qualifier and attribution kept	ATTESTED	Uncertainty: kept
1c	The image shows a round lidded box.	Visible object type, marked (rule 6)	INFERRED	—
2	It was made in 800–825.	Qualifier ‘probably’ dropped (rule 5)	NOT LICENSED	Uncertainty: dropped
3	It is a sancai ware box.	Ware name appears only in Voice 0 (rule 7)	NOT LICENSED	Dependency: external
4a	The image shows small five-petalled flowers on the lid.	Visible motif, marked	INFERRED	—
4b	… plum blossoms.	Botanical identification not in any field	NOT LICENSED	Dependency: external
4c	The record lists flower among its subjects.	Subjects (replacement for 4b, rule 9)	ATTESTED	—
5a	It is glazed in yellow and mottled white.	Colour words from Voice 0; they do not match the visible lid	NOT LICENSED	Dependency: external
5b	The record gives its technique as glazed.	Technique	ATTESTED	—
5c	The image shows a blue lid with white flowers and amber sides with white spots.	Visible colours, marked (rule 6)	INFERRED	—
6	Its base is unglazed.	Not visible; Voice 0 only	NOT LICENSED	Dependency: external
7a	It was found in China.	Field label ‘Found/Acquired’ reduced to ‘found’ (rule 5)	NOT LICENSED	Transformation: category shift
7b	The record gives its findspot as ‘Found/Acquired: China’.	Find spot, verbatim (replacement for 7a, rule 9)	ATTESTED	—
8	The Tang people loved romantic nature themes.	Culture label generalised to a people; sentiment	NOT LICENSED	Transformation: category shift
9	No inscription is recorded for this object.	Inscription empty (rule 3)	ATTESTED	—
10	Beside it, a ribbed cup shows a similar glaze.	Another object in the frame (rule 6)	NOT LICENSED	—

Released gallery stop (69 words). ‘This earthenware object is dated 618–906. The record also gives 800–825, marked “probably” and attributed to Rawson (1992). The image shows a round lidded box. The record gives its technique as glazed. The image shows a blue lid with white flowers and amber sides with white spots. The record lists flower among its subjects. The record gives its findspot as “Found/Acquired: China”. No inscription is recorded for this object.’

Released unit 4a is not used in the stop because unit 5c already reports the flowers; under rule 8, public prose uses only released units but need not use all of them, and unused units remain in the ledger.

What this record adds. Unlike record 534, it shows a qualified date that must be carried with its attribution (unit 1b), a findspot label whose wording must not be reduced (unit 7), a Voice 0 description that does not

match the lid shown in the image (unit 5a), and a display photograph in which other objects are visible (unit 10). The stop is shorter than the 90–150-word target because the record licenses less; under the protocol a short stop is released rather than padded, and its length is recorded as a retention measure.

S8. Amendment Record

Schema version 1.0 was frozen on 5 September 2026. Version 1.1 (10 October 2026) was made in response to editorial and peer review, before any confirmatory generation. It made the following changes: the coding unit was redefined as one proposition, and the ordered decision procedure, including a replacement rule, was added (Section 3.4.1); worked examples were added (Section 3.4.2 and Supplementary File S1); the conditions under which a community-authored source class could be added were specified (Section 2.3); the pooled paired estimate was specified as the only confirmatory estimate, with stratum-level results descriptive (Section 3.3); coherence-protecting composition rules were specified (Section 3.6); three secondary annotation dimensions were added, and records used as worked examples are coded last with the primary estimate reported with and without them (Section 3.7); and the outcome definitions were restated over coding units, with INFERRED-unmarked units counted with NOT LICENSED units, and coherence breaks, readability and retention were added as secondary outcomes (Section 3.8). The field-to-licence map (Table 1), the sample, the conditions and the primary outcome measure are otherwise unchanged.