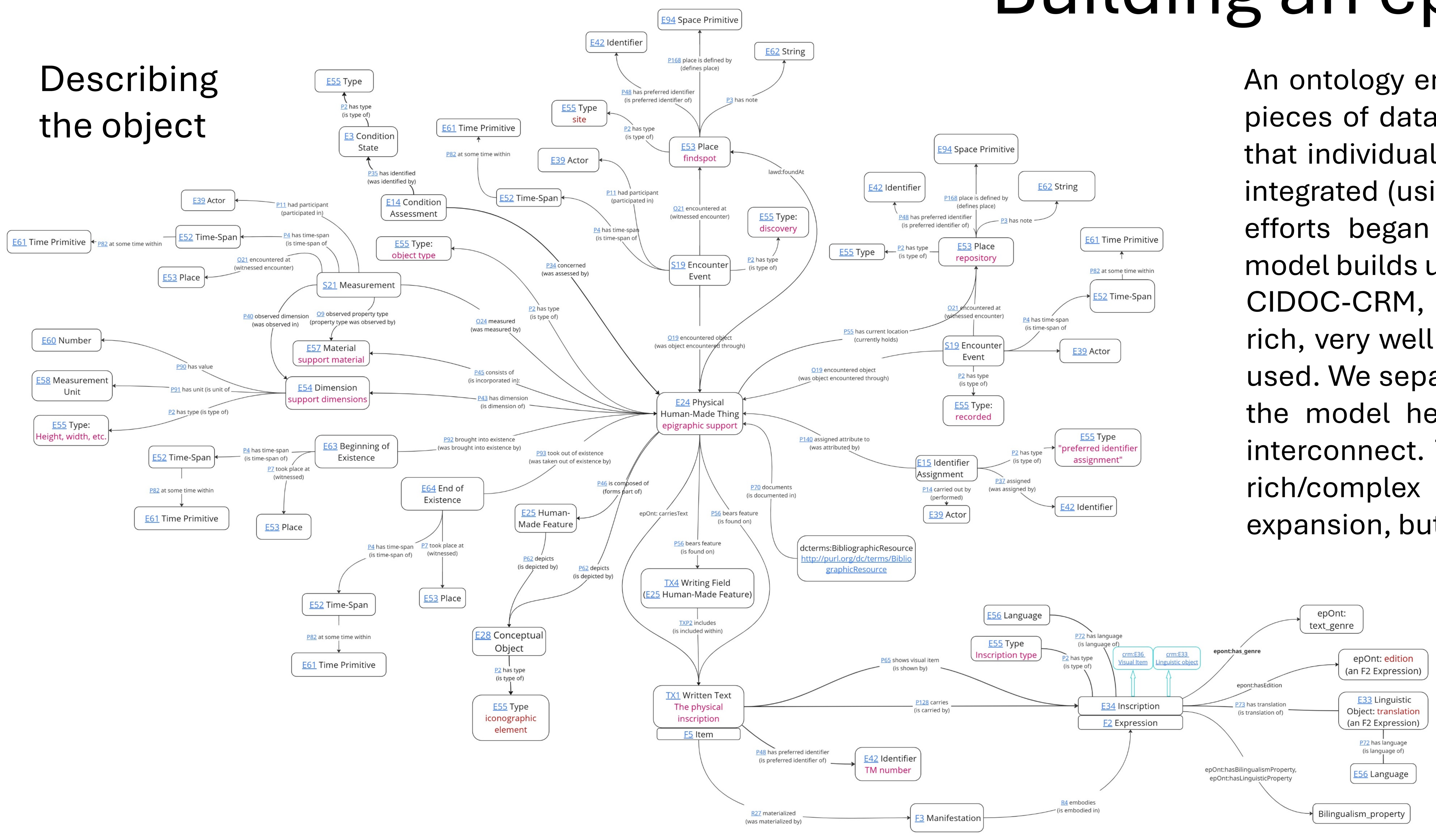
Building an epigraphic ontology

Describing the object



An ontology enables us to tell a computer how the different pieces of data that we have fit together. In turn, this means that individual pieces of data from different projects can be integrated (using the standard RDF language). Several earlier efforts began this process (EpOnt, CRMtex, EpNet). This model builds upon those efforts, and prioritises the use of CIDOC-CRM, which is conceptually rich, very well documented, and widely used. We separate out different parts of the model here, but all these graphs interconnect. The model is deliberately rich/complex to allow for future expansion, but can be simplified.

A simplified model is illustrated lower right. Note this is all work-in-progress. All suggestions very welcome!

'Magenta' text highlights standard epigraphic concepts

Key earlier efforts / reference models:

Modelling epigraphy: https://zenodo.org/records/4639508

EPNet https://romanopendata.eu/sparql/doc/epnet.owl

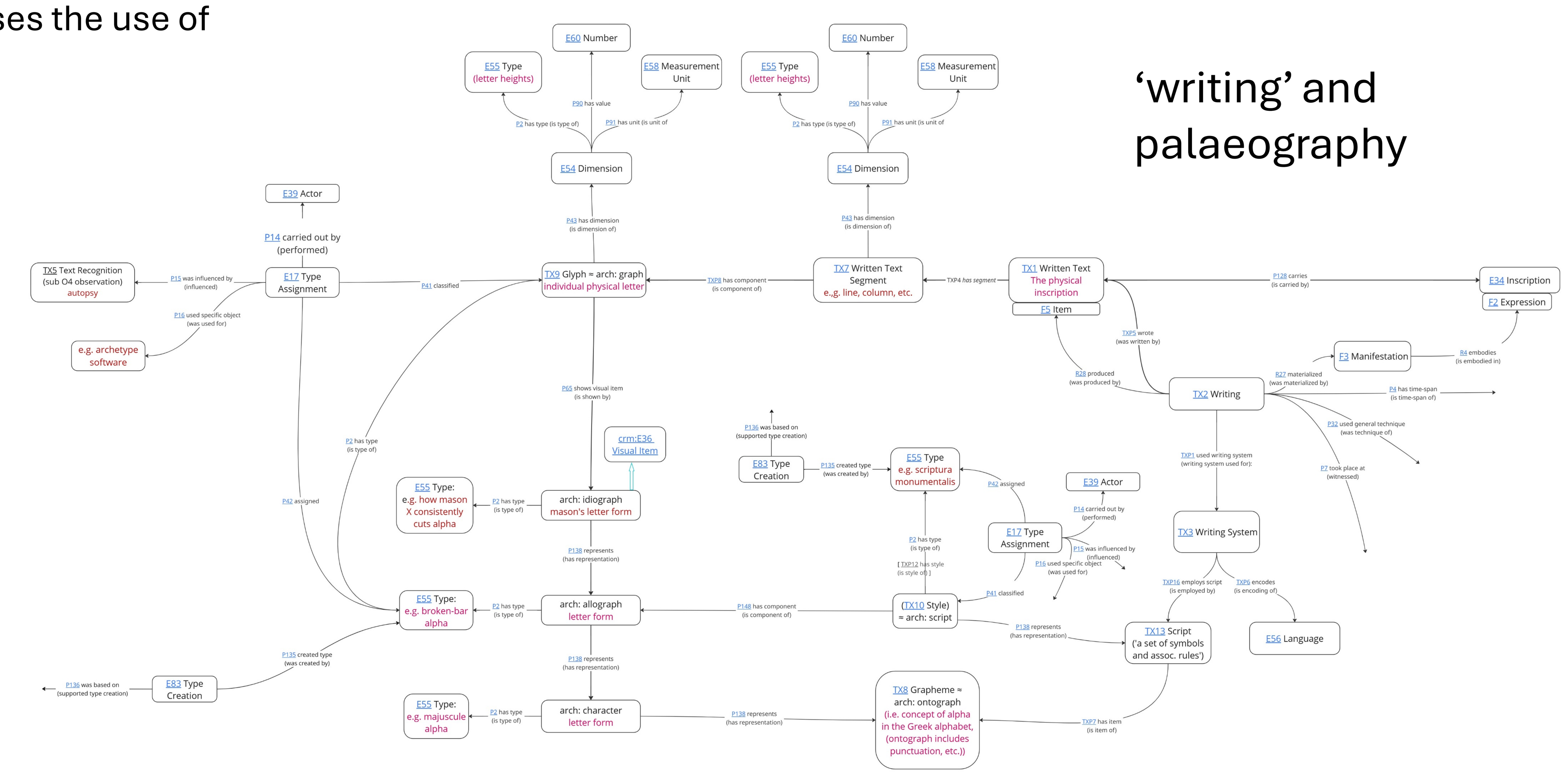
CRMtex: https://www.cidoc-crm.org/extensions/crmtex/html/CRMtex_v2.0.html

CIDOC-CRM: https://cidoc-crm.org/html/cidoc_crm_v7.1.3.html

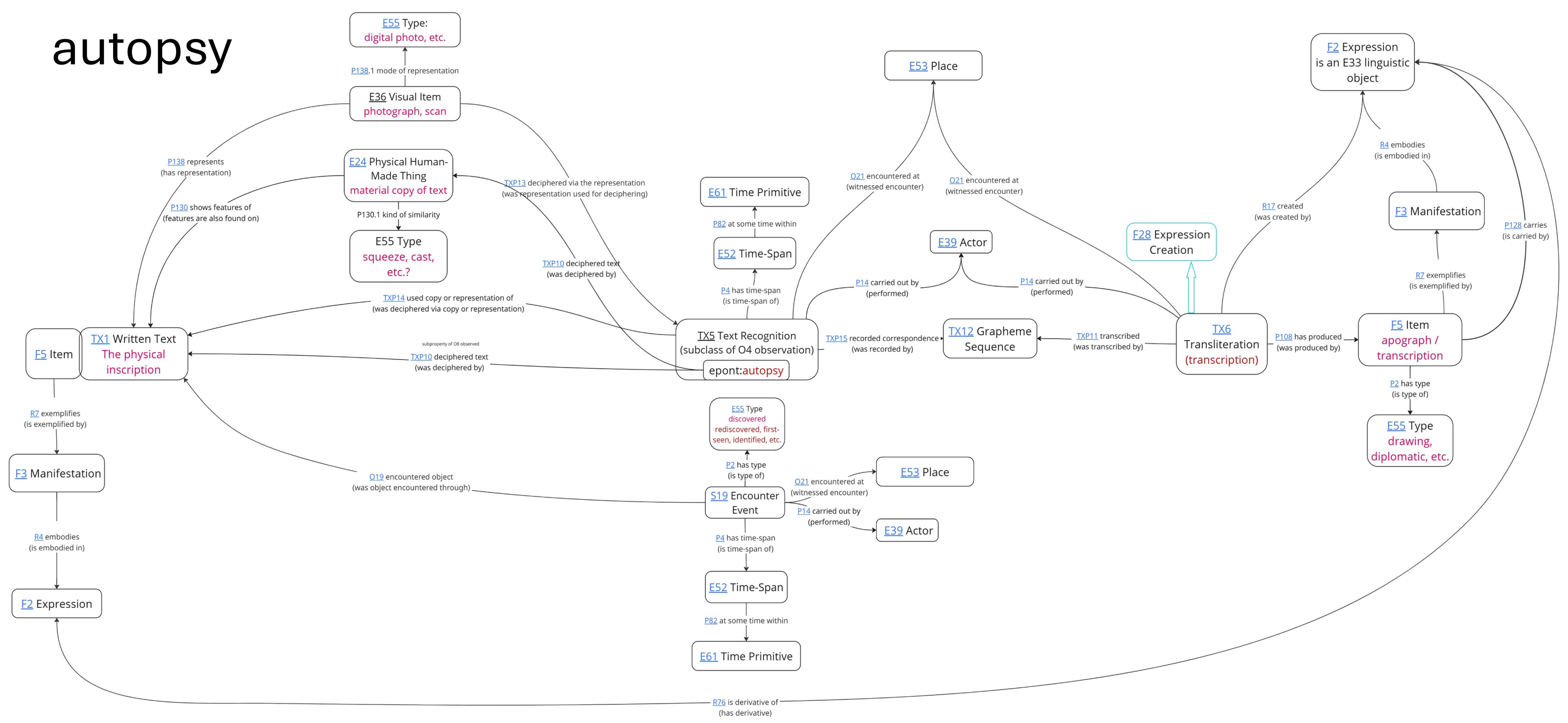
CRMsci: http://www.cidoc-crm.org/extensions/crmsci/versions/2.0/

Archetype: https://doi.org/10.5281/zenodo.5771601

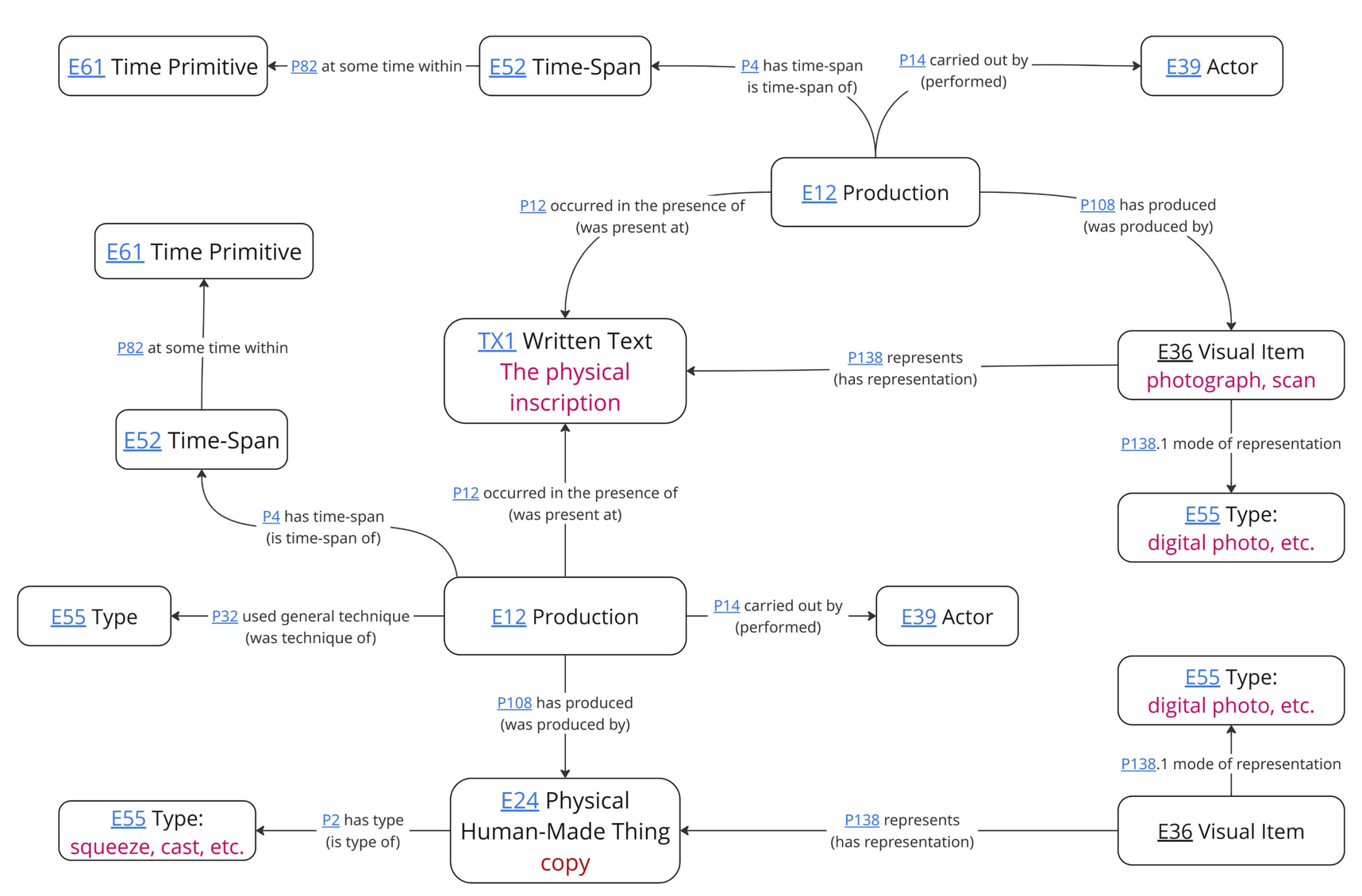
'writing' and palaeography



autopsy



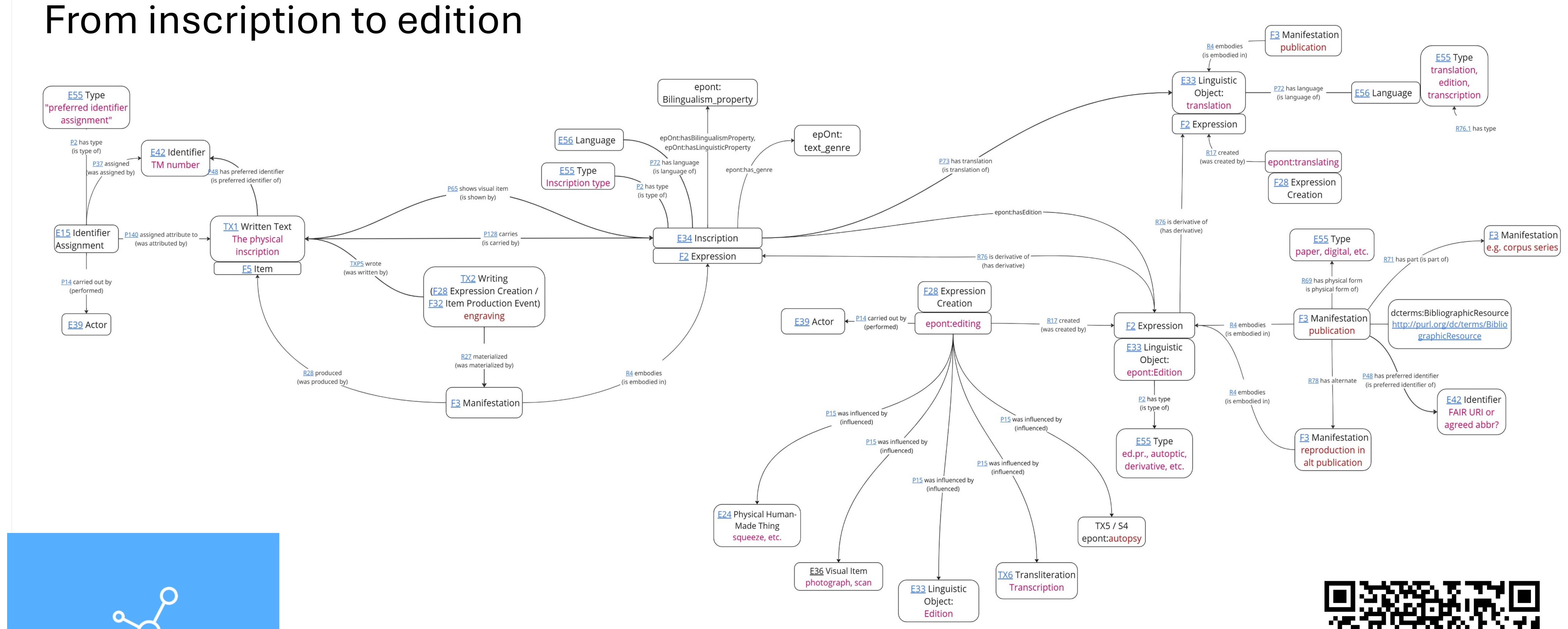
Making copies



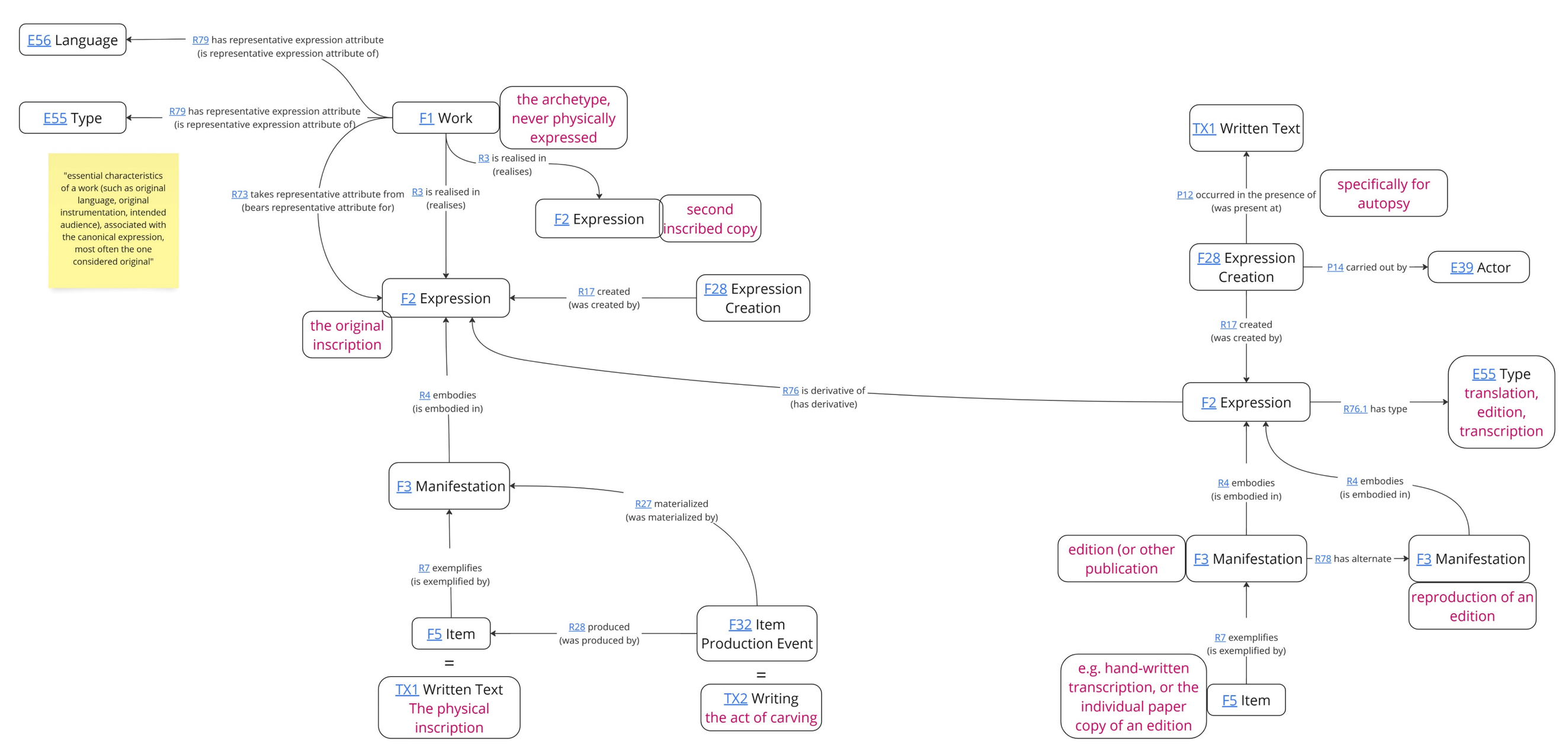
Some key properties, and mapping to EpiDoc

Modal (Classes)	epidoc	domain	proposed class/path	notes
Object/Support		E24 Physical Human-Made Thing		
Object Type	<objectType>		P2 has type: E55 type	
Object Date			P92 (was brought into existence by): E63 beginning of existence: P4 has time-span: E52 Time-span: P82 at some time within: E61 time primitive	
Current Location	<msIdentifier><repository>		P55 has current location : E53 Place	
Dimensions	<support><dimensions>		P43 has dimension: E54 Dimension	
Material	<material>		P45 consists of : E57 Material	
Object condition	<condition>		P34 (was assessed by): E14 Condition Assessment: P35 has identified: E3 Condition State : P2 has type : E55 type	
Preferred identifier	<msIdentifier><idno>		P48 has preferred identifier: E42 Identifier	
Findspot	<provenance>		O19 (was object encountered through) : S19 Encounter event : O21 encountered at : E53 Place	
Epigraphic Field	<layoutDesc>		P56 bears feature : TX4 writing field	
Inscription (as physical inst.)		TX1 Written Text		
Preferred identifier	<publicationStmt><idno>		P48 has preferred identifier: E42 Identifier	
Letter heights	<handNote><dimensions>		TXP4 has segment: TX7 Written text segment: P43 has dimension: E54 dimension	
Language	<textLang>		P72 has language: E56 Language [BUT, not clear what the correct domain is here: TX1, E34 (or F2 expression), or the path via TX2	
Letter forms	<handNote>		TXP4 has segment : TX7 written text segment : TXP8 has component :TX9 glyph : P65 shows visual item : arch: idiograph/allograph/character : P2 has type : E55 type	
Execution Technique	<layout><rs>		TXP5 (was written by) : TX2 writing : P32 used general technique : E55 type [NB TO BE REFINED]	
Inscription date	<origDate>		TXP5 (was written by): TX2 Writing : P4 has time-span: E52 time-span: P82 at some time within : E61 Time primitive : P82a begin of the begin / P82b end of the end	
Dating evidence	<origDate evidence="">		TXP5 (was written by): TX2 Writing : P4 has time-span: E52 time-span: P140 (was attributed by) : E13 Attribute assignment : P17 was motivated by : E55 type	
Place of origin	<origPlace>		TXP5 (was written by): TX2 Writing : P7 took place at : E53 Place	
Inscription as text (nonphysical)		F2 Expression or E34 Inscription		
inscription type	<textClass>		P2 has type : E55 type	
Language	<textLang>		P72 has language : E56 Language	
genre	?		epont: has_genre : epont: text-genre	
bilingualism features	?		epont: has_linguistic_property : epont: Bilingualism property [???]	
autopsy and provenance		TX1 Written Text		
Observation	<provenance>		O19 (was object encountered through) : S19 Encounter event [has place, time, actor, type, etc.]	
autopsy	<provenance type="observed" subtype="autopsied">		TXP10 (was deciphered by) : TX5 text recognition = epont: autopsy	
Transcription			TXP10 (was deciphered by) : TX5 text recognition = epont: autopsy : TXP 15 recorded correspondence : TX12 grapheme sequence : TXP11 transcribed : TX6 transliteration : P108 ha:	
Reproduction (creation)			P12 (was present at) : E12 production : P108 has produced : E24 physical human-made thing i.e. TX1 Written text	
Reproduction (relation)			P130 (features are also found on): TX1 Written text : P130.1 kind of similarity : E55 type	
image	<facsimile>		P138 (has representation) : E36 Visual item : P138.1 mode of representation : E55 type	
Editing		F2 Expression or E34 Inscription		
Edition	<div type="edition">		F2 Expression: R76 (has derivative): F2 Expression = E33 Linguistic Object : R4 (is embodied in) : F3 Manifestation	
Translation	<div type="translation">		F2 Expression: R76 (has derivative): F2 Expression = E33 Linguistic Object : R4 (is embodied in) : F3 Manifestation or E34 Inscription: P73 has translation : E33 Linguistic Object	

From inscription to edition

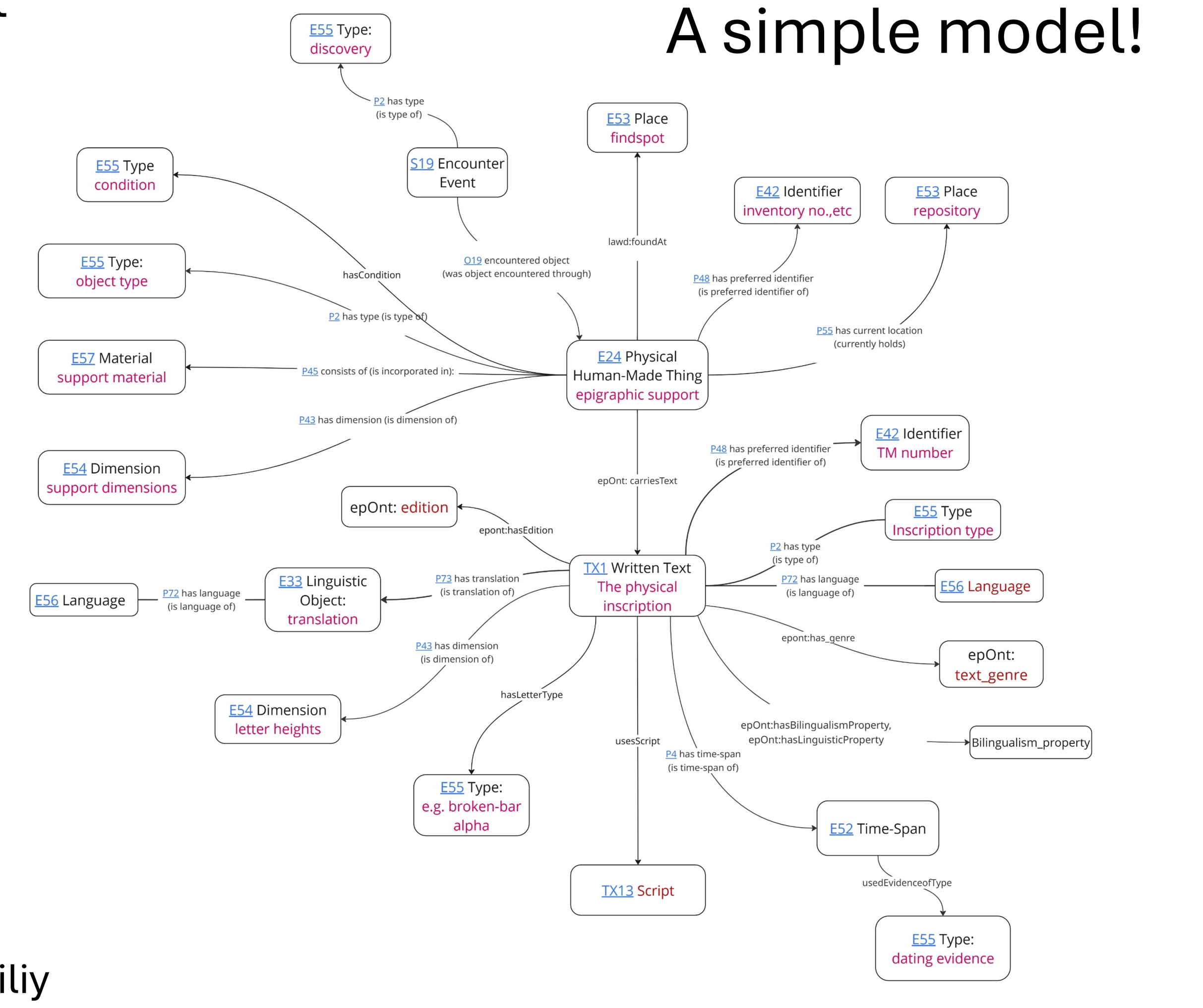


Modelling the relationship of inscription text to edition text



We propose using LRMoo (integration of FRBR with CIDOC) to model the relationship of inscription text, editions, translations, etc.
https://cidoc-crm.org//extensions/lrmoo/html/LRMoo_v1.0.html

A simple model!



FAIR Epigraphy

DFG Deutsche Forschungsgemeinschaft German Research Foundation

UKRI Arts and Humanities Research Council

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Scan the QR code to visit a MIRO board to view these graphs and links more easiliy