## ISSUE 404: Modification of scope notes and ranges for E81-P123-P124

### E81 Transformation

Subclass of:  E63 Beginning of Existence

E64 End of Existence

Scope note:

This class comprises the events that result in the simultaneous destruction of one or more than one E18 Physical Thing and the creation of one or more than one E18 Physical Thing that preserves recognizable substance and structure from the first one(s) but has fundamentally different nature or identity.

Although the old and the new instances of E18 Physical Thing are treated as discrete entities having separate, unique identities, they are causally connected through the E81 Transformation; the destruction of the old E18 Physical Thing(s) directly causes the creation of the new one(s) using or preserving some relevant substance and structure. Instances of E81 Transformation are therefore distinct from re-classifications (documented using E17 Type Assignment) or modifications (documented using E11 Modification) of objects that do not fundamentally change their nature or identity. Characteristic cases are reconstructions and repurposing of historical buildings or ruins, fires leaving buildings in ruins, taxidermy of specimen in natural history.

Examples:

* the death and mummification of Tut-Ankh-Amun (transformation of Tut-Ankh-Amun from a living person to a mummy) (E69, E81, E7)
* The death and petrification of the people of Pompeii during the eruption of Vesuvius in the first century B.C (E69, E81, E7)
* The transformation of the Dominicaner Kerk building in Maastricht from a church to a stable for the French cavalry in 1795 (following Napoleon’s invasion)
* The transformation of the Dominicaner Kerk building in Maastricht building from printing house to a bookshop in 2006

In First Order Logic:  
  E81(x) ⊃ E63(x)  
  E81(x) ⊃ E64(x)

Properties:  
P123 resulted in (resulted from): E18 Physical Thing  
P124 transformed (was transformed by): E18 Physical Thing

### P123 resulted in (resulted from)

Domain:  E81 Transformation  
Range:  E18 Physical Thing  
Subproperty of: E63 Beginning of Existence. P92 brought into existence (was brought into existence by): E77 Persistent Item  
Quantification: many to many, necessary (1,n:0,n)

Scope note: This property identifies the E18 Physical Thing or things that are the result of an E81 Transformation. New items replace the transformed item or items, which cease to exist as units of documentation. The physical continuity between the old and the new is expressed by the link to the common Transformation.

Examples:

* the transformation of the Venetian Loggia in Heraklion into a city hall (E81) resulted in the City Hall of Heraklion (E22)
* the death and mummification of Tut-Ankh-Amun (E81) resulted in the Mummy of Tut-Ankh-Amun (E22 and E20)
* The death and the carbonization by the intense heat of a 300 °C gas cloud (E69) of the people of Pompeii resulted in petrified and later preserved in plaster bodies (E22).
* The transformation of the Dominicaner Kerk building in Maastricht into a stable (E81) resulted in Stable for the French Cavalry (E22)
* The transformation of the Dominicaner Kerk building in Maastricht into a bookstore (E21) resulted in the Selexyz Dominicanen bookstore (E22)

In First Order Logic:  
  P123(x,y) ⊃ E81(x)  
  P123(x,y) ⊃ E18(y)  
  P123(x,y) ⊃ P92(x,y)

### P124 transformed (was transformed by)

Domain: E81 Transformation

Range: E18 Physical Thing

Subproperty of: E64 End of Existence. P93 took out of existence (was taken out of existence by): E77 Persistent Item

Quantification: one to many, necessary (1,n:0,1)

Scope note: This property identifies the E18 Physical Thing or things that have ceased to exist due to a E81 Transformation.

The item that has ceased to exist and was replaced by the result of the Transformation. The continuity between both items, the new and the old, is expressed by the link to the common Transformation.

Examples:

* the transformation of the Venetian Loggia in Heraklion into a city hall (E81) transformed the Venetian Loggia in Heraklion (E22)
* the death and mummification of Tut-Ankh-Amun (E81) transformed the ruling Pharao Tut-Ankh-Amun (E21)
* The death and the petrification of the people of Pompeii during the eruption of Vesuvius transformed the people of Pompeii (E21)
* The transformation of the Dominicaner Kerk building in Maastricht into a stable for the French cavalry (E91) transformed the Dominicaner Kerk building in Maastricht.
* The transformation of the Dominicaner Kerk building in Maastricht into a bookstore transformed the Dominicaner Kerk building in Maastricht.