### 294: E55 Type relations

The following are working definitions, SdS will be editing them.

#### AP29 appears in

Domain: E55 Type  
Range: E4 Period  
Subproperty:   
Quantification: many-to-many (0,n:0,n)

Scope note: This property associates a kind of object (documented as an instance of E55) to an instance of E4 Period for indicating that objects of this kind have been generated within this period. The generation of such objects may be the result of human, biological, geological or other processes.

This property makes a weak statement with regards to the distribution of the class of object in the archaeological record, but also in geological or paleontological observations: If the genesis of an object of this type can plausibly be assumed to fall within the genesis of the context in which it was found, then the statement made with this property would support reasoning, ceteris paribus, that the genesis period of the find context forms part of or overlaps with one of the instance of E4 Period in which the respective object type has appeared.

Stronger claims can be made using ‘typical for’ and ‘restricted to’ properties.

#### AP30 restricted to

Domain: E55 Type   
Range: E4 Period  
Subproperty: appears in  
Quantification: many-to-many (0,n:0,n)

Scope note: This property associates a kind of object (documented as an instance of E55) to an instance of E4 Period for indicating that objects of this kind have exclusively been generated in this period.

This property makes a strong statement concerning the distribution of the kind of object in the observation record: If the genesis of an object of this type can plausibly be assumed to fall within the genesis of the context in which it was found, then the statement made with this property would support reasoning, ceteris paribus, that the genesis period of the find context actually forms part of the related instance of E4 Period, or at least overlaps with it.

In contrast, objects from previous periods may appear in a context because they are still in use, and objects from later periods may have been pushed into an older context.

Weaker claims can be made using the properties ‘typical for’ and ‘appears in’.

In First Order Logic:

[…]

AP30(x,y) ∧ AP30(x,z) ⇒ P132(y,z)

#### AP31 typical for

Domain: E55 Type   
Range: E4 Period  
Subproperty: appears in  
Quantification: many-to-many (0,n:0,n)

Scope note: This property associates a kind of object (documented as an instance of E55 Type) to an instance of E4 Period for indicating that objects of this kind have been generated in this period in significantly higher numbers and wider distribution, than in other periods.

This property makes a moderate statement concerning the distribution of the kind of object in the observation record: If a sufficient number of objects of this type are found in some context, and their genesis can plausibly be assumed to fall within the genesis of the find context, then the statement made with this property would support reasoning, ceteris paribus, that the genesis period of the find context is likely to forms part of the related instance of E4 Period, or at least overlaps with it. “Sufficient number” means that the density of objects of this kind in the find context is compatible with the general density this kind of object had in the respective period in comparable contexts and deposition history.

A stronger claim can be made using ‘restricted to’ while a weaker claim is made using ‘appears in'.