

# All the single ladies?

Thoughts on collecting and analyzing metal-work data from diverse sources

Pieterjan Deckers



*“the systematic recording and study of metal-detected artefacts (...) yields **a greater gain of knowledge about the past than is possible under a restrictive scheme.** (The) balance between the **point of diminishing returns for the knowledge gained** and the gravity of information lost [under a permissive scheme] will depend on many factors. Nonetheless, the **example of PAS** teaches us that (...) permissive schemes bring us much closer to a representative sample of (...) past material culture.”* (Deckers et al. 2018, 329)

*The PAS premise:* PAS is often seen as the benchmark for evaluating permissive approaches to hobby detecting.

However, in most permissive contexts, PAS is not the reality (yet). This fundamentally affects research practice.



# Metalwork research in practice

Metalwork related to a set of figurative moulds from Viking-Age Ribe

*Medieval Archaeology*, 65/1, 2021

Assembling the Full Cast: Ritual Performance, Gender Transgression and Iconographic Innovation in Viking-Age Ribe

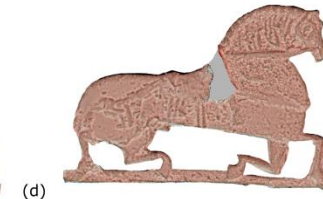
By PIETERJAN DECKERS<sup>1</sup>, SARAH CROIX<sup>2</sup> and SØREN M SINDBÆK<sup>3</sup>



10 mm



10 mm



10 mm



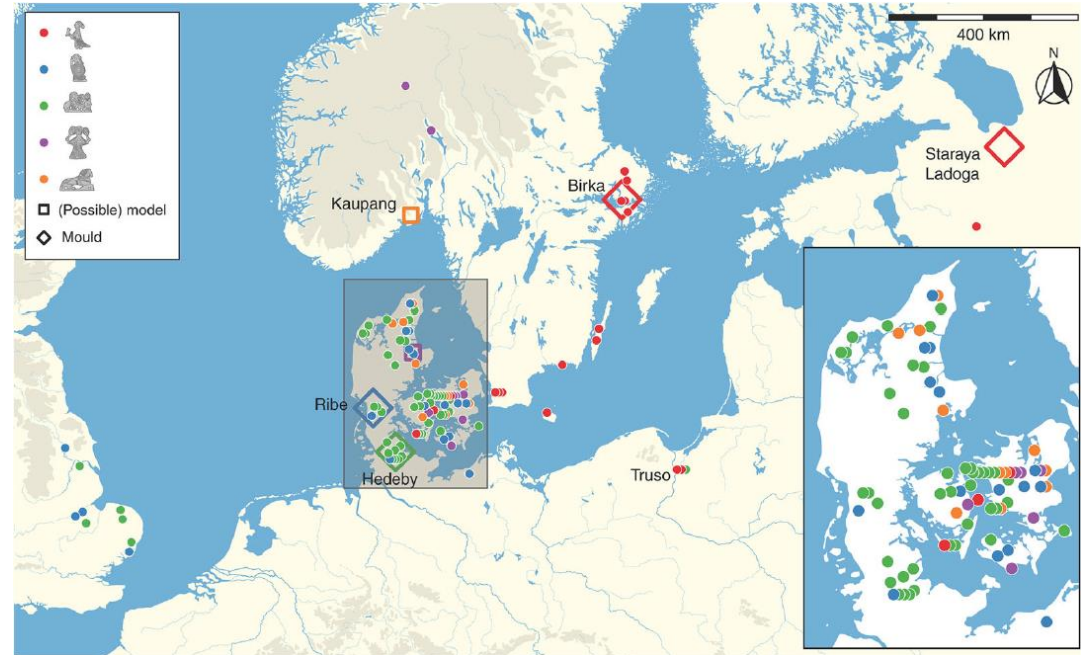
(c)

(g)

# Metalwork research in practice

Questions for a case study in data collection

- intensive data collection, completed in 2020
- 209 relevant artefacts; a significant increase compared to previous corpora
- Was this a worthwhile exercise?
  - From an academic perspective!



How accessible and qualitative is metalwork data?

What is the importance of ephemeral data? Is it productive to collect it?

What does this mean for our efforts to record data and collaborate with finders?

# Deconstructing the dataset

Composition of the data

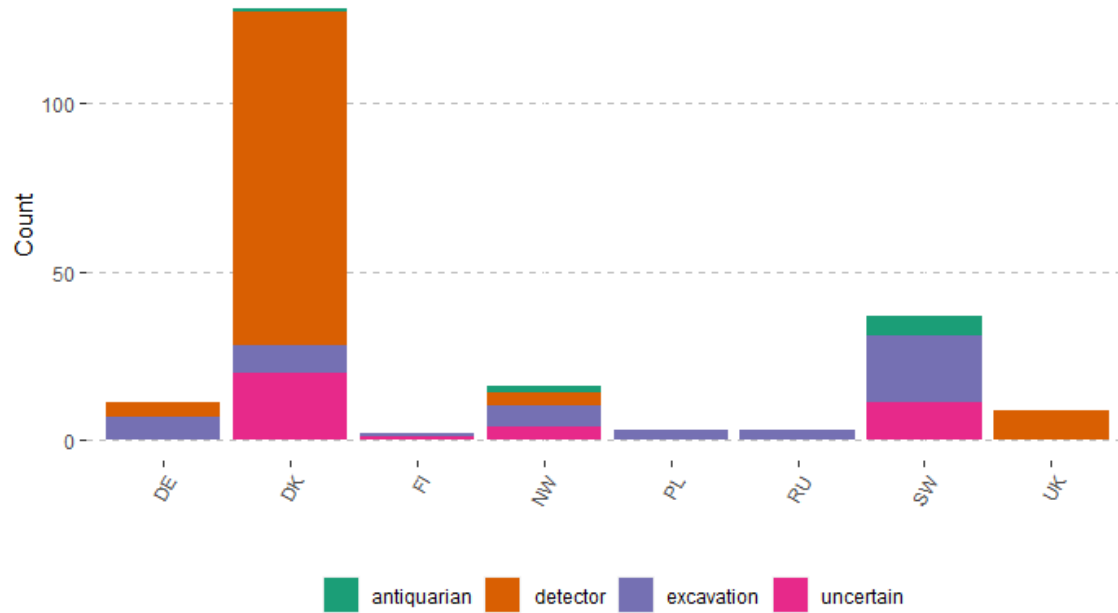
An analysis of the published record

- year of earliest record  
– *NOT the find date!*
- nature of earliest record
- nature of current record

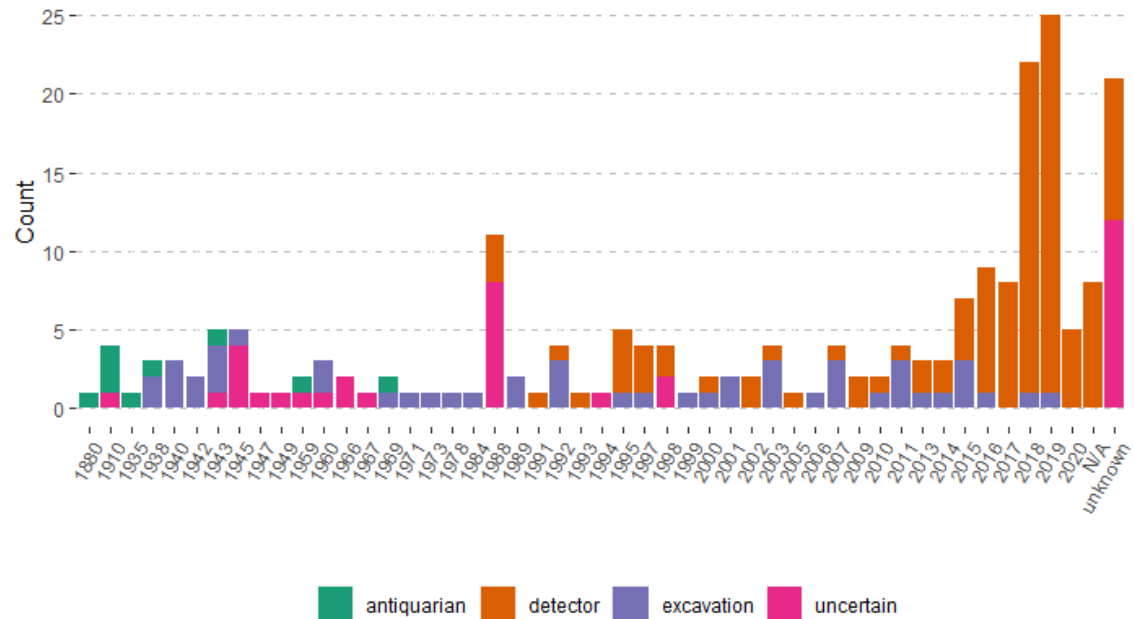
Observations

- numerical importance of hobby detector finds
- Impact of detector finds starts in early '80s, but strong rise since 2015
- Note DK <> SW; UK

### Finds provenance by country



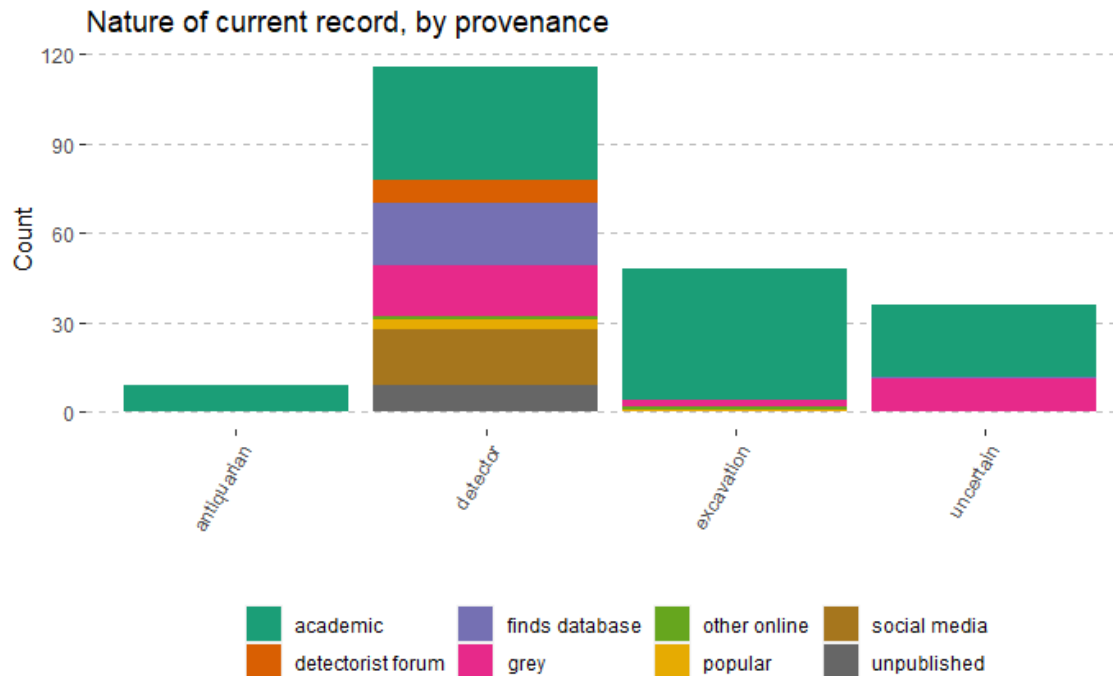
### Finds provenance by year of publication



# Deconstructing the dataset

Where do the data originate?

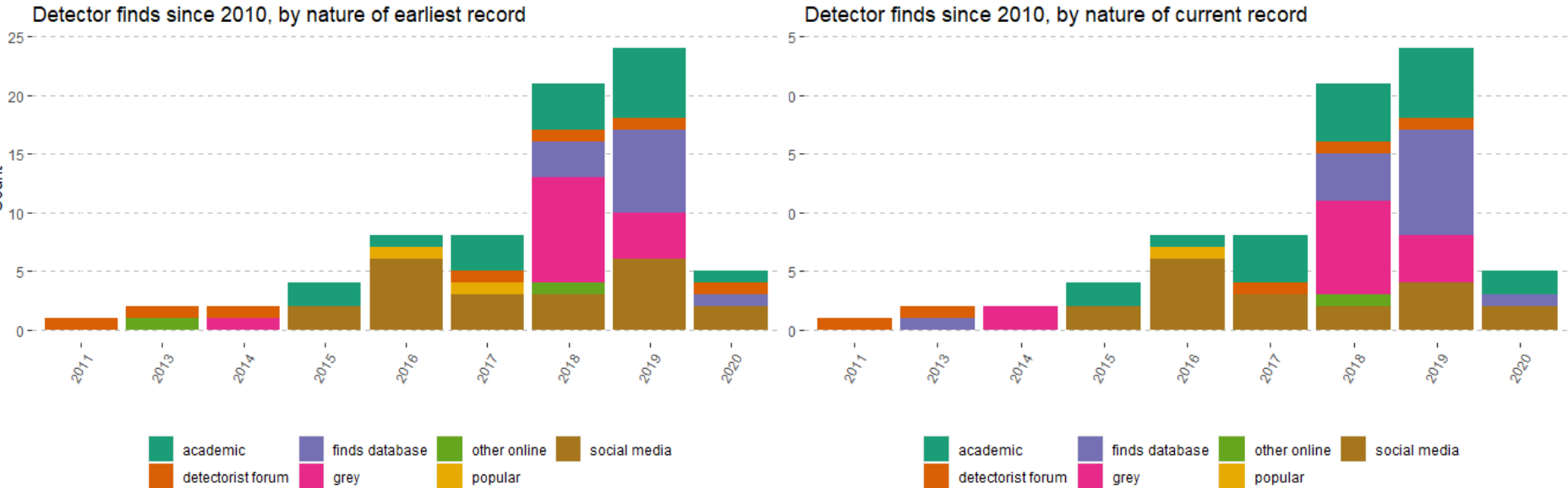
- Detector data is highly dispersed
- Detector data are often only available through sub-optimal, ephemeral sources
  - 10 out of 12 records w/o approximate location are detector finds from social media and detector fora/databases; despite efforts to locate



# Deconstructing the dataset

Where do the data originate?

- Detector data is highly dispersed
- Detector data are often only available through low-quality, ephemeral sources
  - 10 out of 12 records w/o location are detector finds from social media, detector finds from social media, detector databases; despite efforts to locate
- Detector data appear 'stuck': many finds remain unavailable in optimal sources





## Source types

### Dealing with diversity

- A democratization of data publishing?
- Scientific data are *made*:
  - Intentionally
  - In a portable medium
- Some sources are suboptimal
- But: perspective!

*“any object can be considered as a datum as long as (1) it is treated as potential evidence for one or more claims about phenomena, and (2) it is possible to circulate it among individuals”*

*“the physical characteristics of the medium significantly affect the ways in which data can be disseminated, and thus their usability as evidence. In other words, when data change medium, their scientific significance may also shift.”*


Leonelli 2015, What Counts as Scientific Data? A Relational Framework, *Philosophy of Science* 82, 810-821

<https://www.facebook.com/groups/329154183827681/permalink/4248325281910532>

8 August 2021 · 🌐

Det er med vikinge kærlighed i ❤️ vi ligger dette vikingefund op til beundring for alle 🙏 Vores første Valkyrie nogensinde fundet på jomfrujord i Syddanmark 🙌🏻

See translation



👍❤️🙏 Claus Feveile and 244 others 38 comments

👍 Like    💬 Comment    📧 Send

View 31 previous comments    All comments ▼



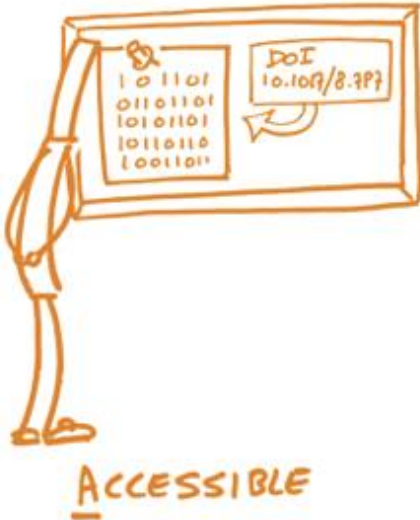
# Source types

Are finds records 'FAIR'?

## FAIR DATA PRINCIPLES



How hard is it to find the source, and finds records within it?



What obstacles exist to access the source?



How easily can I extract information for my own purposes?



How easily can I convey this information to others, and lead others to the original source?

# Source types

Are finds records 'FAIR'?

<i>source type</i>	<i>findable</i>	<i>accessible</i>	<i>interoperable</i>	<i>reusable</i>
<b>finds database (notably DIME, PAS)</b>	centralized, systematized, single finds easy to find (although depending on quality and validation of input)	no barriers for most purposes	digital, structured, completeness and reliability depending on data standards and validation	easily citable, often CC licence (quality of image depending on user or validation)
<b>academic literature</b>	dispersed but strongly referenced; not always systematized (i.e. often dispersed references to single finds)	depending on library access and online availability	(mostly) analog, not always structured; complete, reliable	easily citable, images may be copyrighted
<b>grey (incl. <i>Danefæ</i>)</b>	depending on references, online findability or personal connections	depending on (online) availability or personal connections	may be analog, not always structured; complete, reliable	easily citable, images may be copyrighted
<b>popular literature (e.g. <i>Skalk, The Searcher</i>)</b>	dispersed, typically not online, few references	depending on local library access or personal connections	analog, unstructured, may be incomplete or unreliable	citable, images may be copyrighted
<b>detector forum/ database</b>	relatively easy: somewhat centralized	may depend on user access	digital, not always well-structured, may be incomplete or unreliable	difficult to cite (persistence?), no clear licensing
<b>blogs and other online sources (institutional and hobbyist)</b>	dispersed, depending on search engine hits	no barriers (but not persistent)	digital, unstructured, may be incomplete or unreliable	difficult to cite, not persistent, not always clear licensing
<b>social media (i.e. Facebook)</b>	challenging (finding dispersed groups, varied terminology and language, finds data dispersed across posts and comments, ...)	may depend on user access (e.g. closed groups on FB)	digital, unstructured, often incomplete, may be unreliable	difficult to cite or even unretrievable for reader (persistence, accessibility?), privacy issues, restrictive terms of use
<b>Unpublished (professional archaeologists, finders)</b>	depending on personal connections	depending on personal connections	complete and reliable (depending on contact)	not retrievable by reader

Increasing effort  
Decreasing usability?



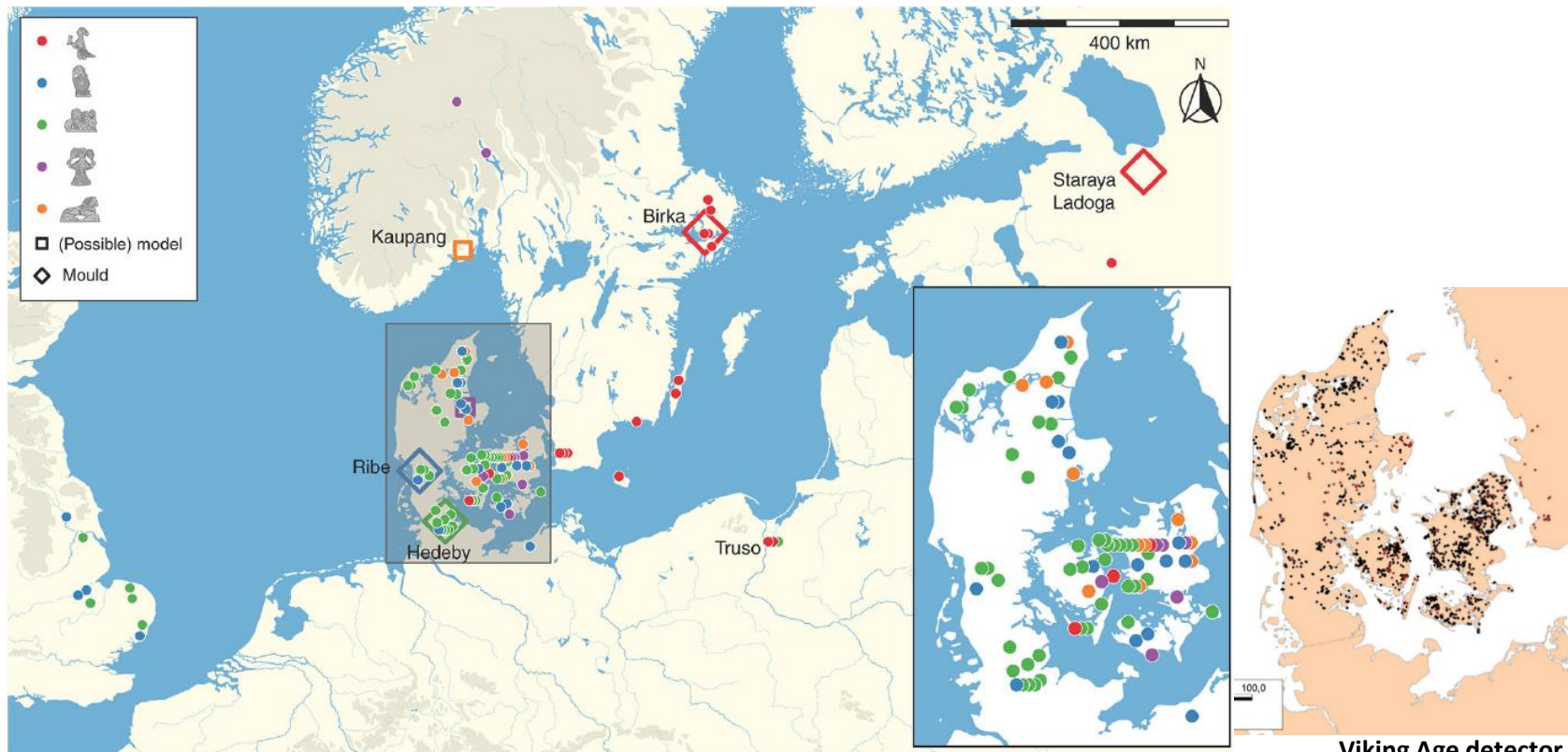
# The more the merrier?

Data to knowledge

Given the effort and lower quality, is it productive to collect data from sub-optimal sources?

Knowledge from metalwork finds?

- Local/interpretive: the find in its context
- Spatial: distribution, regionality
  - !Detector finds as baseline for interpretation
- **Typological**



Viking Age detector findspots (Feville 2015)

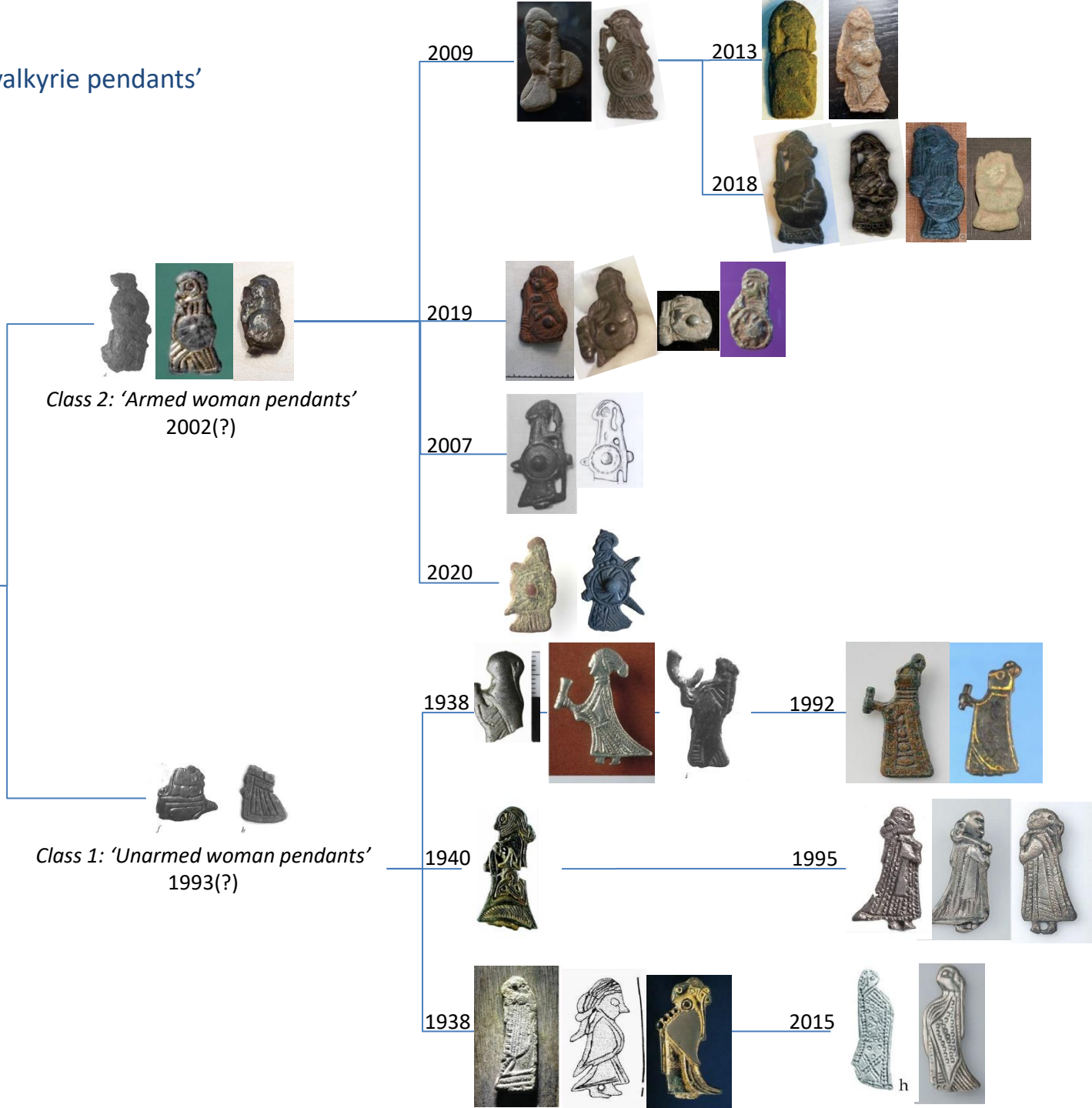
# Increasing knowledge?

A provisional classification of 'valkyrie pendants'

'Valkyrie pendants'  
1938



(Class 3: 'Woman-and-rider pendants')





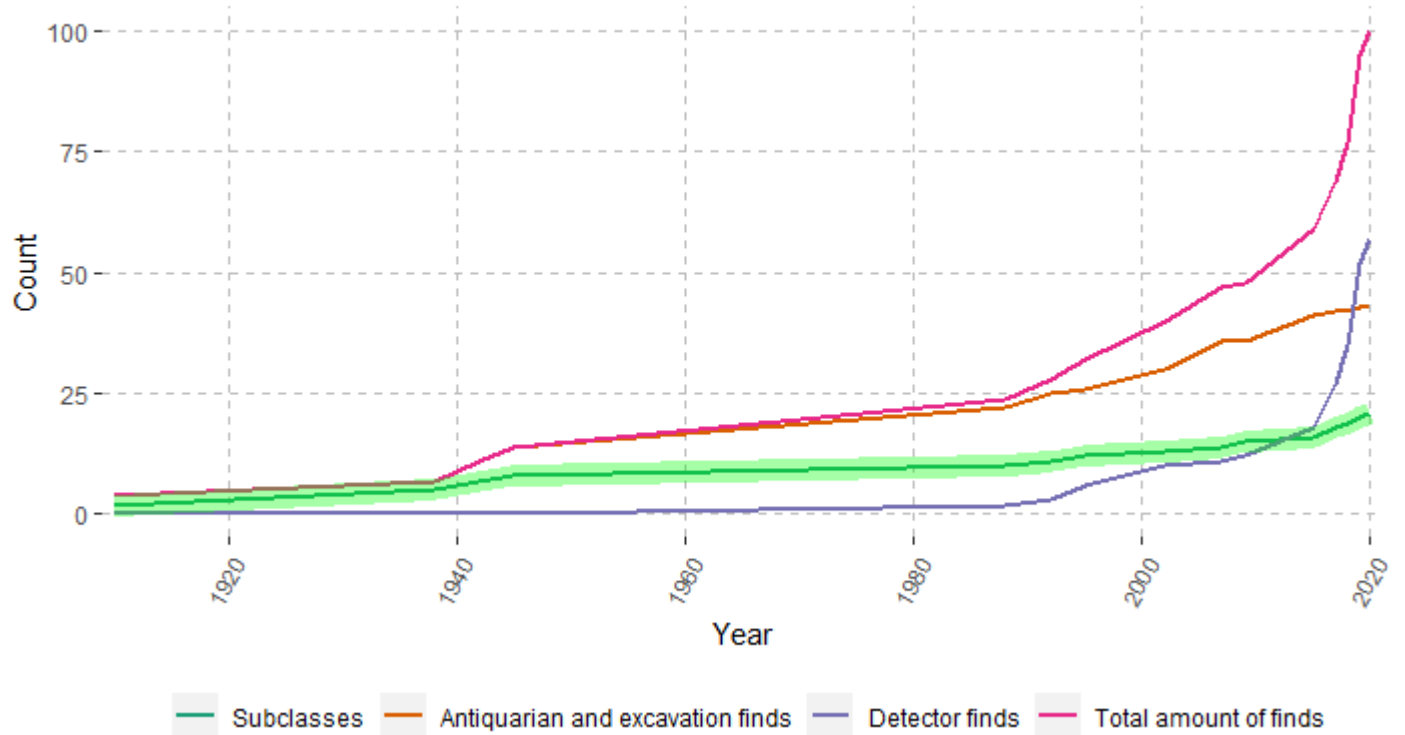
# Increasing knowledge?

New finds and morphological diversity: when could new (sub)classes have been identified?

- Noticeable decrease in marginal return
- Suboptimal data has a limited return on investment
  - 11 finds from social media (8%) >> 2 subclasses (10%)



Valkyrie pendants (class 1-2) and horse brooches: cumulative number of finds and possible subclasses



# Conclusions

How to move forward?

## **Metalwork data is strongly dispersed and partially inefficient to include in research**

Accept that there will always be suboptimal data

- Some of it is on its way to full recording, some will remain 'floating culture'
- Create an environment in which this is loss of information is acceptable (the PAS premise)

Expand pathways to guide unpublished and suboptimal data to full recording?

- Structurally assess the copyright, privacy, research ethics associated with this

Focus on fulfilling the knowledge potential of metalwork data > collaboration!

- Provide tools for collaborative knowledge creation
- Make academic data FAIR for others!
  - Reference typologies
  - Finds databases