golden agents

The Montias Database Exploring 17th-Century Dutch Domestic Interiors Digitally

Leon van Wissen, University of Amsterdam (I.vanwissen@uva.nl) 21 March 2023, Frick Art Reference Library

Introduction

Golden Agents project (2016-2022)

- interactions between various branches of creative industries
- interactions between **producers** and **consumers** of creative goods
 - through estate/probate inventories

→ To gain insight into cultural growth in Amsterdam, 1570 - 1750

Approach

- Linking heterogeneous datasets from GLAM + research through 'Linked Open Data'
- Cf. 'FAIR' data: transparency + verifiability

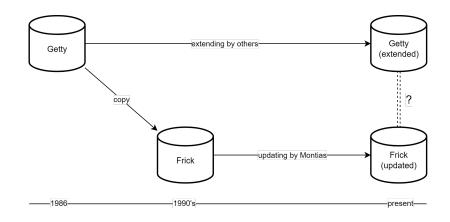






Background

John Michael Montias's data at The Getty & The Frick



Problem

- 1. The two archives have **diverged** and are **'out of sync'**: unclear how they overlap
- 2. We cannot easily **inspect/verify the origin** of the data

Solution

Reconciling the data, bringing them back to their material context

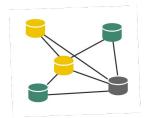




Digitization initiatives by archives

- Original material kept in the Amsterdam City Archives
 - Scanning
 - **X** Gemeente
 - **X** Amsterdam
 - **X** Stadsarchief

- Crowdsourcing the Notarial Archives
 - Indexing: Document types, Dates, Persons and Locations
 - Handwritten text recognition (HTR) with Transkribus
 https://transkribus.eu/r/amsterdam-city-arc
 hives/



Layers / Data silos

Amsterdam City Archives

- (0) The scanned original document
- (1) Document types, Dates, Person and Location names
- (2) The HTR'ed text of the original document

John Michael Montias

- (3a) Montias's data from the Frick Art Gallery
- (3b) Montias's data from the Getty Provenance Index

Golden Agents

- (4) Automatic object detection
- (5) Abraham Bredius' notes kept in the RKD Netherlands Institute for Art History

Combining visual + textual material

Layer o

Scanning by the City Archives of Amsterdam

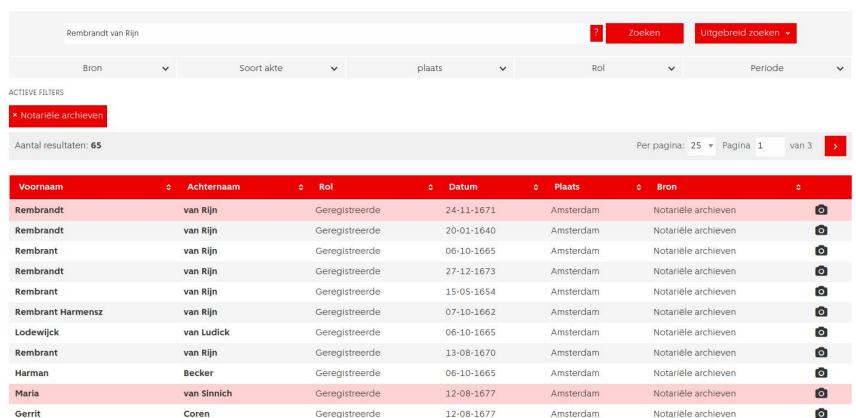


Excerpt from the Notarial Archive, Amsterdam City Archives https://archief.amsterdam/archief/5075

Layer 1

Crowdsourced indexing of the Notarial Archives

Indexen



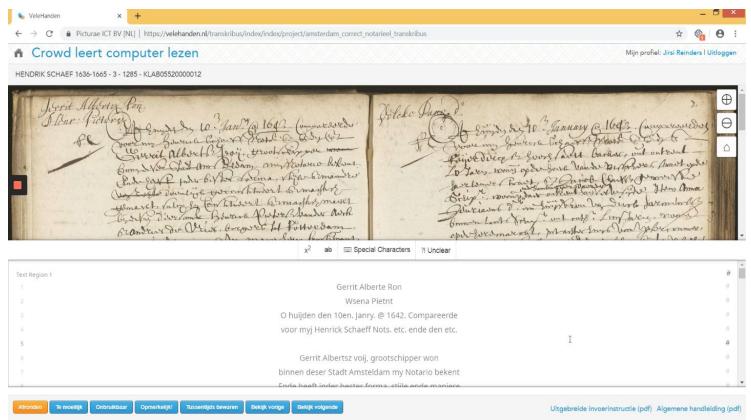
Excerpt from the Index on the Notarial Archive, Amsterdam City Archives https://archief.amsterdam/indexen/persons

Layer 2

Crowdsourced transcription of the Notarial Archives

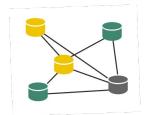
(to train computers using artificial intelligence)





2396 NOTD00264 - Page 110 ... Viertien ellen sijn linnen Vijffenveertigh ellen slijtingh Linnen Een groene laeckense spree Een groen taeffelkleet met biebiens Een groen behangsel met sijde franje Den Root Jujde behaeijsel met sijde franje Een eijde Rock Een Machatier Rock Een swarte Laeckense mantel Een swarte greijne pij Een spiegel van een en een guart ell Ende een spiegel van een halff ell Een schilderij van Mosis Een schilderij van Josepe Lie Een schilderij van de geboort Christie acht kant Een schilderij van Susanna Een schilderij vande Harders Twee kleijne achtkante schilderijtjens Een schilderij van mosis daer een glas voor is Een schilderij van een branje appel Twee vierkante Landschapjens Een schilderij van Loth Een ... elo Leliloday van Molis e Day Folildry van Joforol, eld Lelilary vand alboort (Fri lti Q Don Levild Dring van Lufama. ele Lelibery vande Bardeto e Dr. Toulddery vay molis dade Dryglaboore is eldy Solildring boy Dry Oranje aprole o Don Louddrin van Lote,

Excerpt from Transkribus Read&Search, Amsterdam City Archives https://transkribus.eu/r/amsterdam-city-archives/



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https://www.gettv.edu/research/tools/provenance /search.html

New problem

John Michael Montias's data at The Getty & The Frick

Problem

Data are not easily 'linkable' to the City Archives' scans or other content providers

Solution

- Creating a user interface
- Adding additional entry points to the data

https://research.frick.org/montias/







The Montias Database of 17th Century Dutch Art Inventories

[anon.] A B C D E F G H I I K L M N O P O R S T U V W X Y Z Inventory Keywords --select a year to browse-- v Deutgens, Willem Albertsz.





In this demo A single book (1648-1665) from one notary

NA 2408
Jacob de Winter
https://archief.amsterdam/archief/5075/2408

Data sources

- Open data Amsterdam City Archives
- The Frick's Digital Art History Lab (DAHL): https://github.com/frickdahl/montias-data base-datasets
- A dump of the Getty Provenance Index STAR-database
- Golden Agents project (open) data

Status

- Proof of concept, shows the potential of data-linkage
- Contains errors/mistakes
- Not complete
- Updated and extended version of earlier work

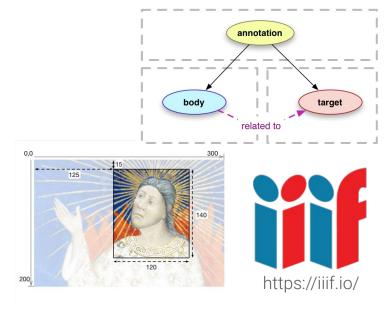
Technique/specification (1/2) International Image Interoperability Framework (IIIF)

Image API

- Standardized entry point to show/download images
- Adopted standard in Digital Heritage

Presentation API

- Metadata + annotations
- Whole image or fragments
- Classifications, tags, comments, etc.
- Creating meaningful collections





Data representation

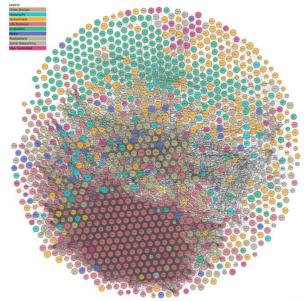
- 'Semantic web': exchange of machine-readable metadata
- Everything is linkable with a unique identifier: a URI (or: permalink)
- Standardized vocabularies, e.g. Dublin Core

Relations to other authority files:

- Notary Network biographical data on Amsterdam notaries
- Wikidata
- AAT
- Etc



The Linked Open Data Cloud



Data processing & linking

Montias's inventories

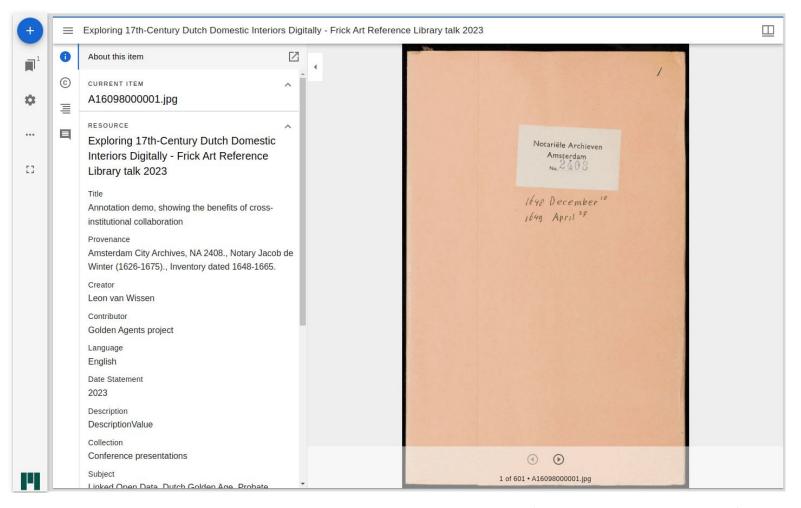
- Inventory number (layer 0)
- Date (layer 1)
- Owner(s) (layer 1)

Montias's items

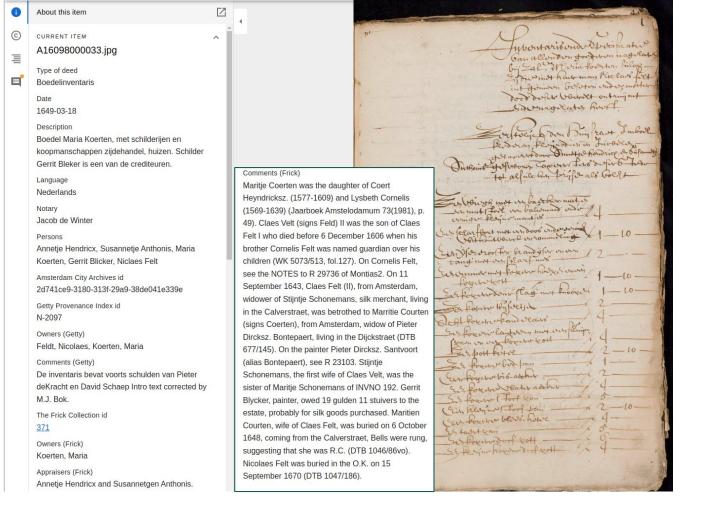
- Transcription (layer 2)
 - String matching, partial overlap or 'fuzzy'

Challenges

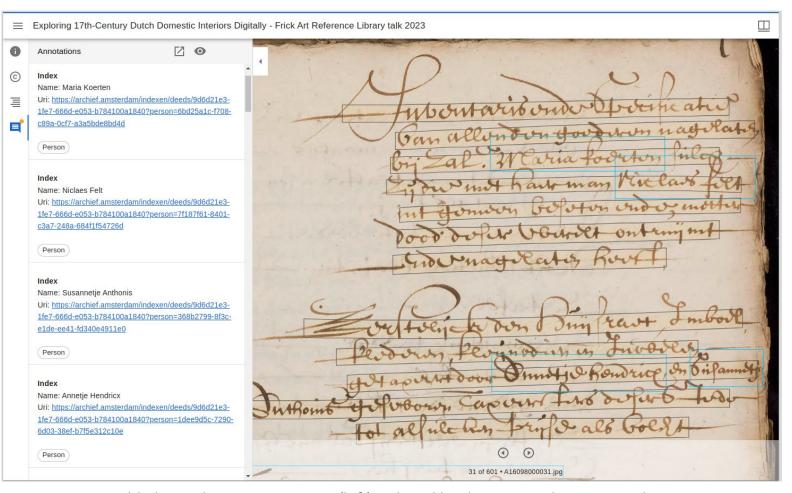
- Non-standardized names
 - Data consistency
- Inventory numbers have changed
- All data sources are 'incomplete' and have only a part of the entire archive available



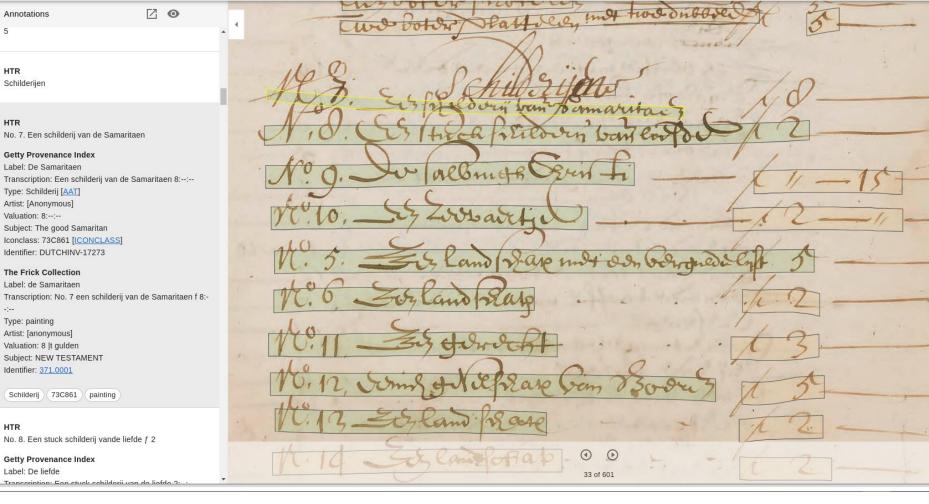
Example of the IIIF-manifest loaded into the IIIF-viewer Mirador (https://projectmirador.org/)



Metadata of the inventory: (1) Amsterdam City Archives, (2) Frick, (3) Getty



Highlighting the person names (left) indexed by the Amsterdam City Archives (including permalink) on the scan (in blue)



© =

目

Showing Text + Montias data on paintings interlinked (=green) on the scan



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Data enrichment

Even more connections!



Layer 4 Automatic (textual) object recognition

Potentially do **automatically** what previous researchers did **manually**

 Opportunity to go beyond Monatias' initial research interests

Beyond paintings into...

- porcelain,
- silverware,
- o books,
- linen,
- o bonds,
- o etc.









Object recognition in text (in blue): Portraits (*Twee kontrefeijtsels van zalr. Egbert Roelofsz ende Anna Cornelis*), other objects, and bonds (right), page 399

Layer 5 Abraham Bredius's notes

Kept in the Netherlands Institute for Art History (RKD)

Abraham Bredius (1855-1946) belonged to the first generation of art historians that looked into Dutch archives.

Extra information:

- Signals inventories about/of artists
- Additional life facts on artists

Crowdsourcing project:

https://rkd.nl/en/projects-publications/ projects/916-bredius-notes

https://github.com/knaw-huc/golden-agent s-bredius/





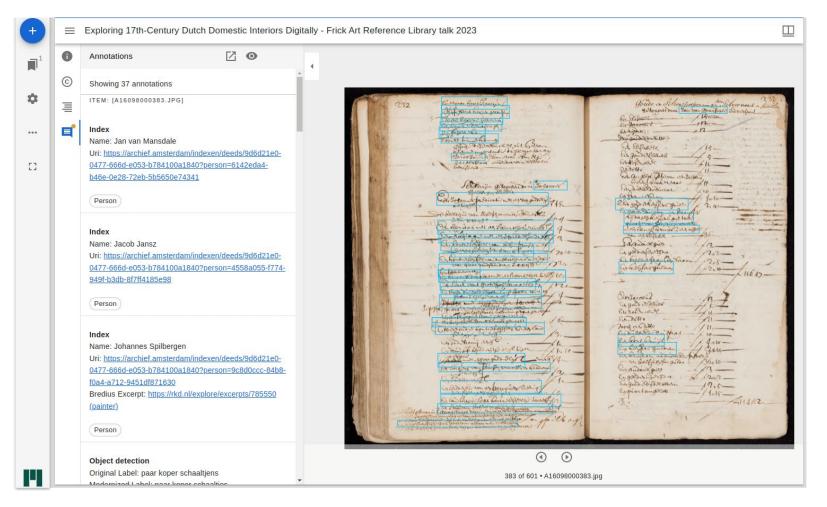
◀ RKDexcerpts

collapse all - share download \precedure

20 april 1660 takeet Lan Spilbergen Schilder, en paar Slechte Schilderyen Nor. J. de Winter . Austerban

Archive archief Abraham Bredius Type aantekening Number archival reference: 0380.498_0002_01.C10 Start date 1660-04-20 End date 1660-04-20 Keyword person Jan Spilbergen (painter) Place subject Amsterdam (city) Keyword taxatie (no translation); painting Comment taxatie van schilderijen Overige vindplaatsen: Notarieel Archief, notaris Jacob de Winter Kwalificatie namen: Jan Spilbergen, schilder Permalink https://rkd.nl/explore/excerpts/785550

Illustration number 0001713378 archival reference 0380.498_0002_01.C10, Amsterdam (city), 1660-04-20



Example where Abraham Bredius found/identified a painter: Johannes Spilbergen

Future possibilities

New data

• Extending prototype/tool to compare the entire legacy of John Michael Montias and others

New technique

• Combine textual object detection with visual object detection

New research

• Using state-of-the art techniques, to uncover households and art production and consumption on an even larger scale

Contact



Golden Agents

www.goldenagents.org

Online demo

https://lvanwissen.github.io/fricktalk-2023/

Code + data

https://github.com/LvanWissen/fricktalk-2023

Leon van Wissen

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