Reading Scientific Papers

More effectively

Steppe Sisters

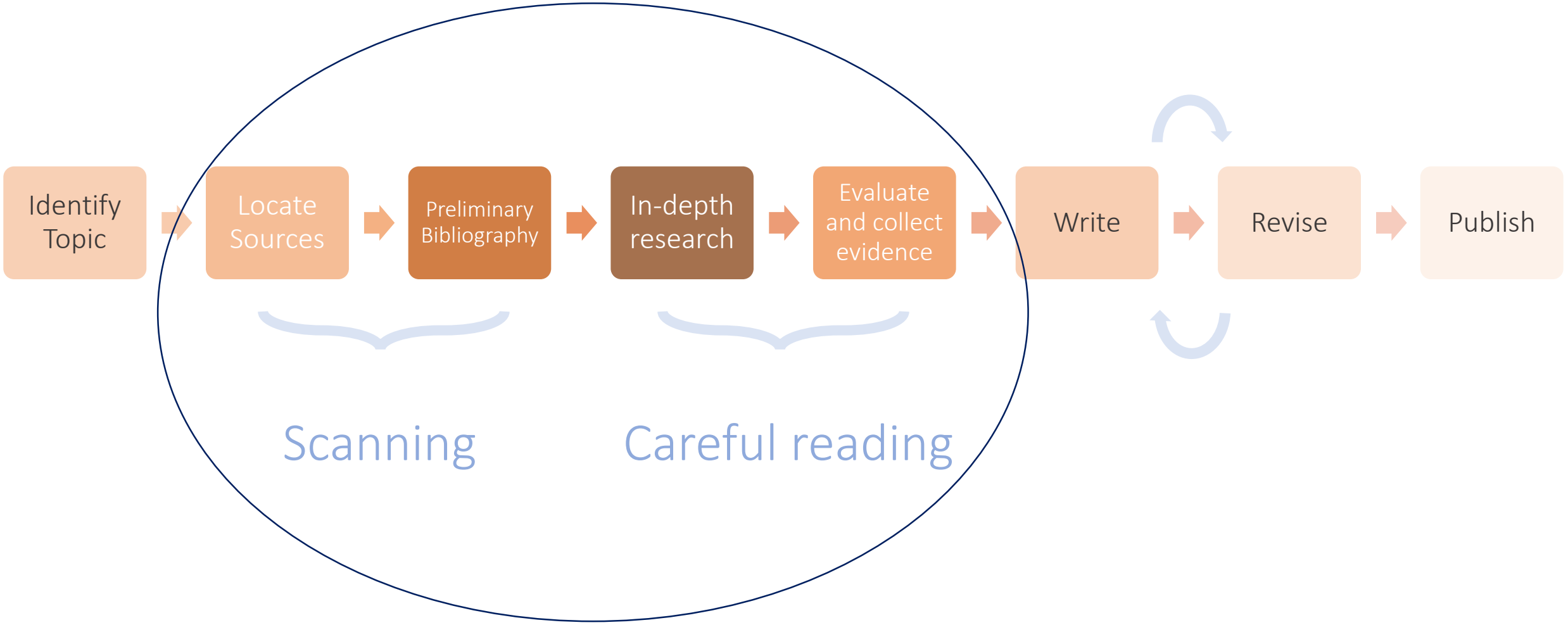
NYU ISAW

Mariana Castro
Mariana.castro@nyu.edu
PhD candidate | ISAW-NYU

Research Stages vs Reading Time

How can I make this stage more *efficient*?

+ more time writing
+ more time to find other topics
+ more research output



Workshop

1.Search

2.Read

3.Organize

4.Translate

1.1. Which search engines should I be bookmarking?

Google Scholar

Library Genesis

NYU | LIBRARIES

Central Asia in Antiquity – Online

News, conferences, publications, exhibitions, and resources

www.zendy.io

АРХЕОЛОГИЯ СРЕДНЕЙ АЗИИ
ARCHAEOLOGY OF CENTRAL ASIA

CAAL
Central Asian Archaeological Landscapes

Библиотека
/ Расширенный список литературы к монографии. См. также: обновления и файлы.
Список постоянно в работе и регулярно обновляется. При отсутствии ссылки на источник текста — OCR автора сайта.
Пагинация: (1/2) — переход со с. 1 на с. 2; (1/2/3) — со с. 1 на с. 3, с. 2 пропущена (напр., рисунок, в web-версии смещённый).
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JSTOR

www.forms.gle/DTRA7avy4Hh8YjVv9

Or www.qrcodescan.in

Or

1.2. How to search for the right article?

1. Use AND to combine keywords
2. Use truncation (an asterisk) and wildcards (usually a question mark or exclamation point)
    1. child* and education
    2. globali?ation and analysis
3. Use different keywords + (OR)
    1. (teen* or adolescen*) and (girl* or female)
4. Talk to a librarian

1.3. Note the relevance of the source

1. Start with the most recent articles
2. Look at bibliographies
3. Count citations

[BOOK] Inner Asia and the spatial politics of empire: **archaeology**, **mobility**, and culture contact

W Honeychurch - 2014 - Springer

This book has been a collaborative effort in many ways and I wish to thank those who helped to make it a reality. My colleagues in the field, Chunag Amartuvshin, Joshua Wright, and A. …

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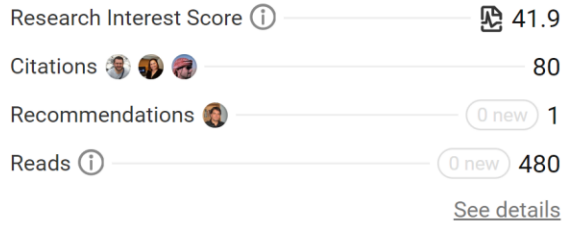
Article

Saharan trade in the Roman period: Short-,medium-and long-distance trade networks

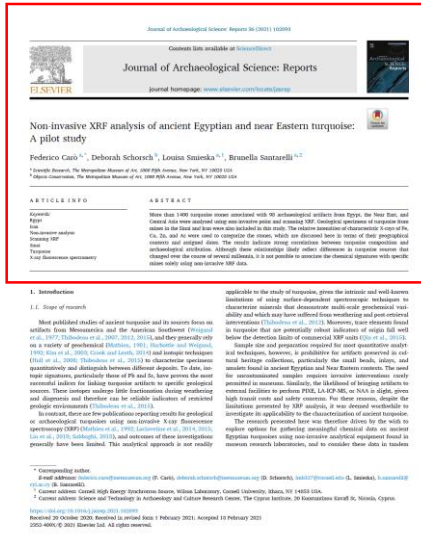
November 2012 · Azania Archaeological Research in Africa 47:409-449 · Follow journal

DOI: 10.1080/0067270X.2012.727614

Andrew Ian Wilson



2.1. Where to start?



Journal of Archaeological Science: Reports 36 (2021) 102893

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journal homepage: www.elsevier.com/locate/jasrep

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Federico Carò [a,*], Deborah Schorsch [b], Louisa Smieska [a,1], Brunella Santarelli [a,2]

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ARTICLE INFO

Keywords:
Egypt
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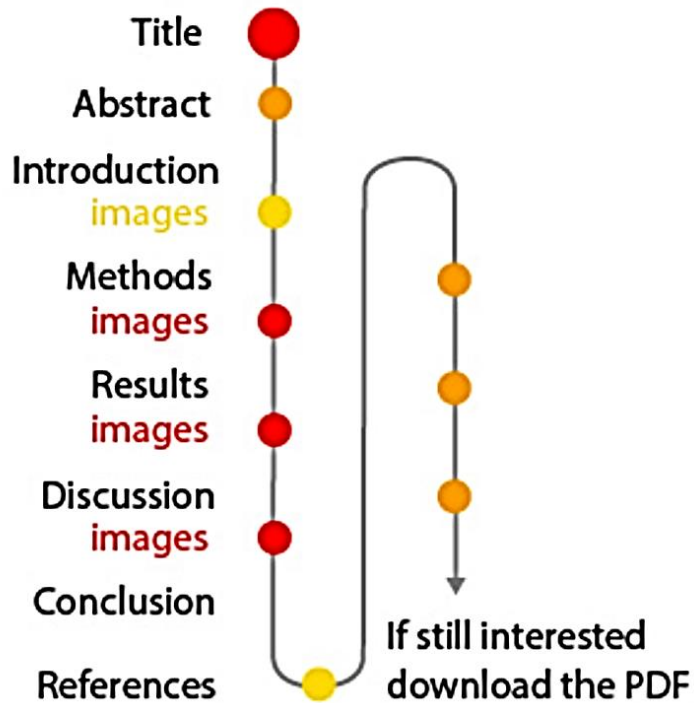
How scientists scan journal papers when they first see them



(from presentation by Lucia Franco, ELSEVIER 2010)

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Most published studies of ancient turquoise and its sources focus on artifacts from Mesoamerica and the American Southwest (Weigand et al., 1977; Thibodeau et al., 2007, 2012, 2015), and they generally rely on a variety of geochemical (Mathien, 1981; Harbottle and Weigand, 1992; Kim et al., 2003; Crook and Leuth, 2014) and isotopic techniques (Hull et al., 2008; Thibodeau et al., 2015) to characterize specimens quantitatively and distinguish between different deposits. To date, isotopic signatures, particularly those of Pb and Sr, have proven the most successful indices for linking turquoise artifacts to specific geological sources. These isotopes undergo little fractionation during weathering and diagenesis and therefore can be reliable indicators of restricted geologic environments (Thibodeau et al., 2015).

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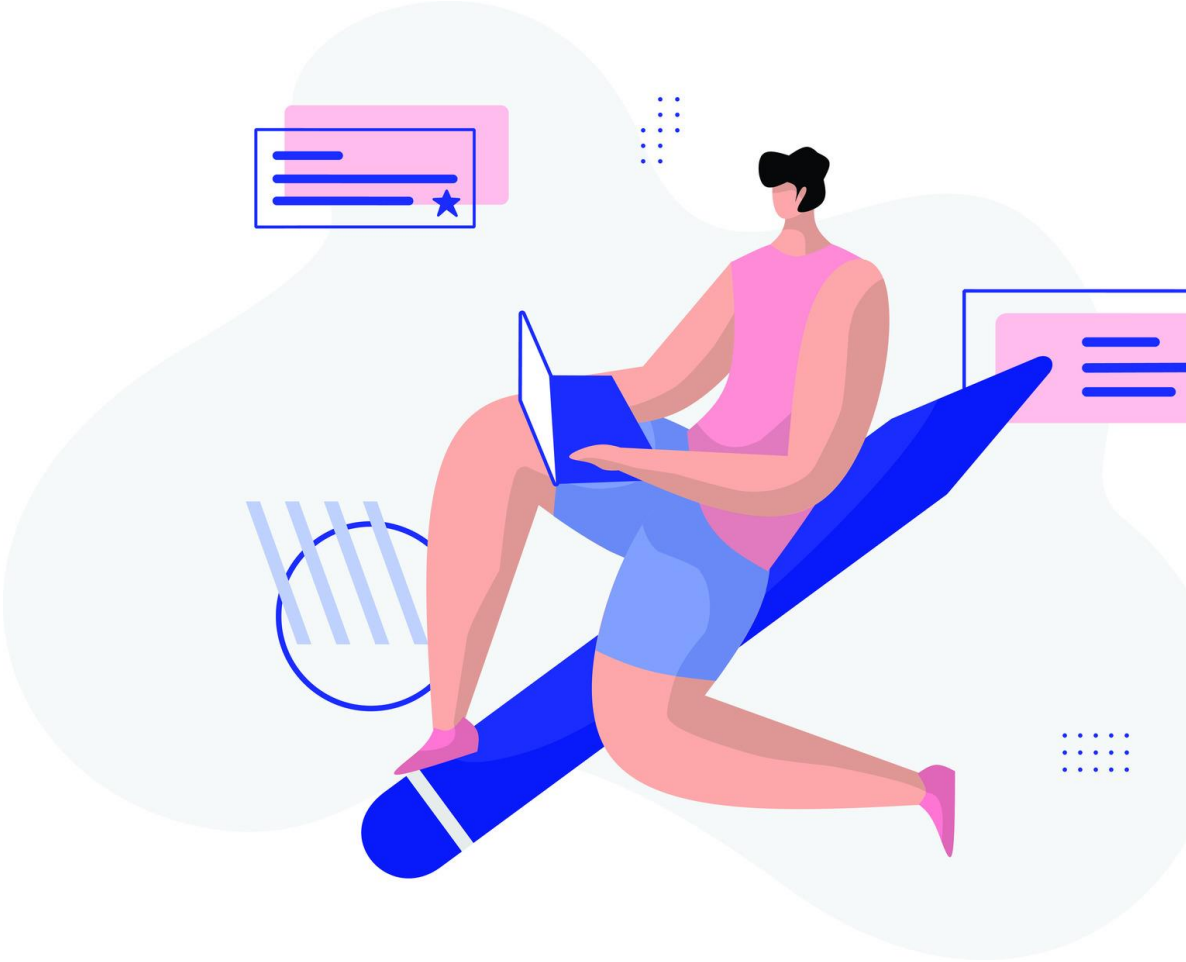
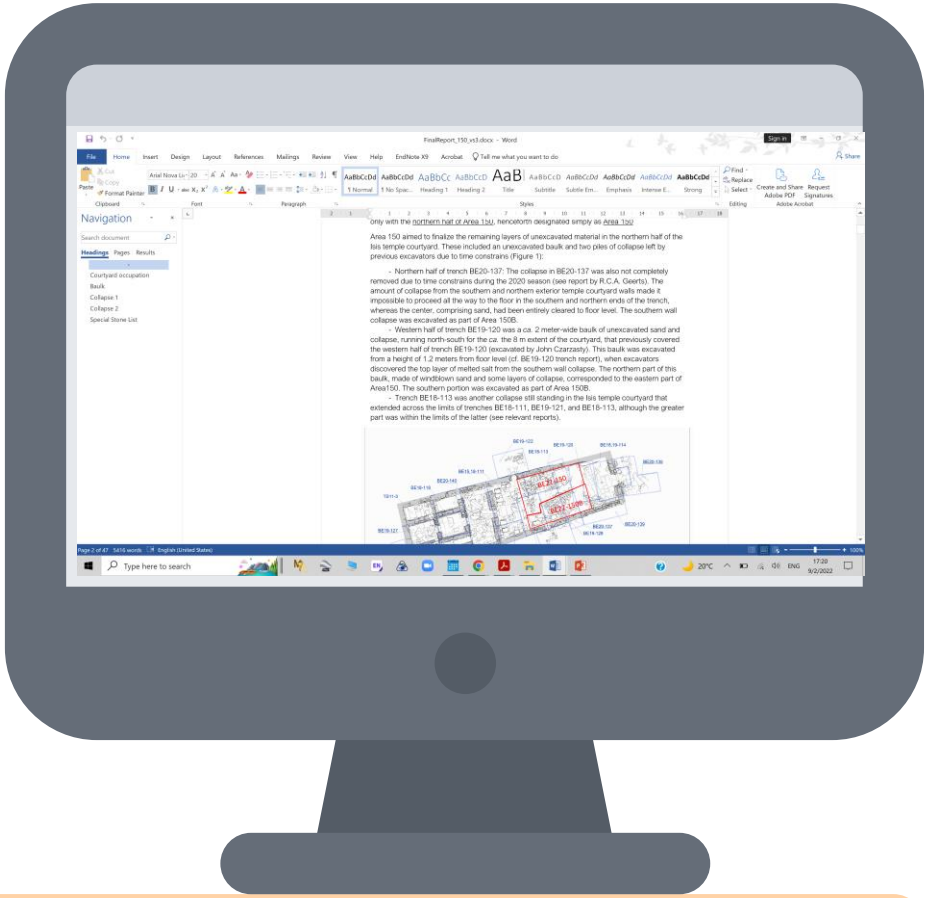
2.2. How to read more effectively?

- Ask specific questions, be critical, and TAKE NOTES

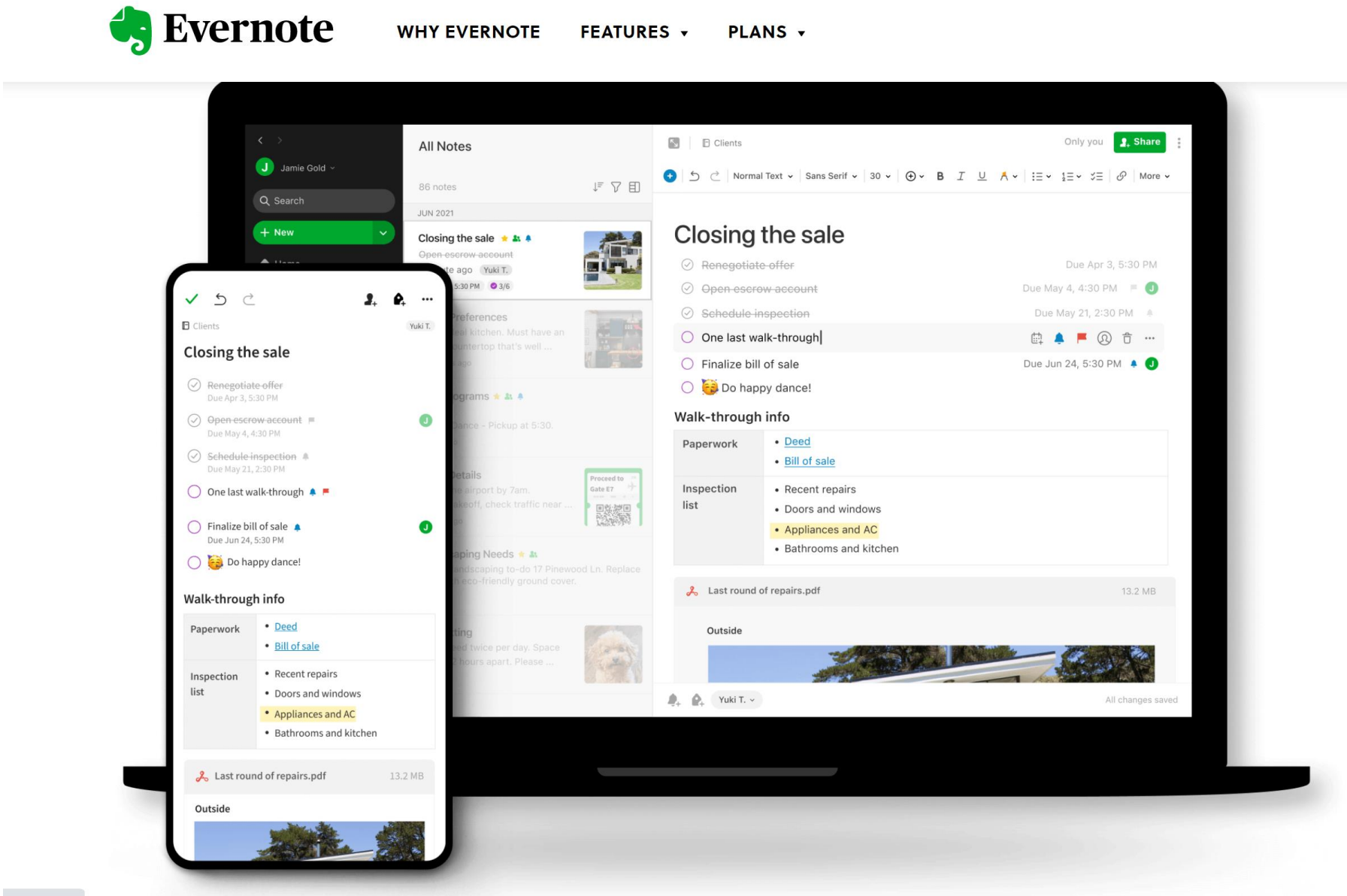
1. What is the research aiming to investigate/prove/establish/describe or interpret?
2. What is the main argument?
3. What evidence is used to support the main argument? Is it convincing?
4. Are the findings unusual or do they support other research in the field? How is the author's understanding different or unique?
5. What are the implications of the results/arguments?
6. What research could be carried out to answer any further questions?
7. What is the sample size? When does the author use the word "significant"?





- Organize and declutter your desktop

- Systematize notetaking



1 Urban Settlements Themes and Questions

12:03

M4A
Cities and Settlement 1

What was a Roman city
How do they fit in their context
How many people lived in them

- Italy, Greece, Asia Minor, Levant, Nile Valley, Tunisia - Most densly populated
  - ↳ Relative experience what it meant to be in a city
  - ↳ Rural population accounted for majority

cities = places of exchange and market (supported by rural economy)

Moses Finley - City as economic center/ consumer city - OVERSIMPLISTIC VIEW (ignores Long de

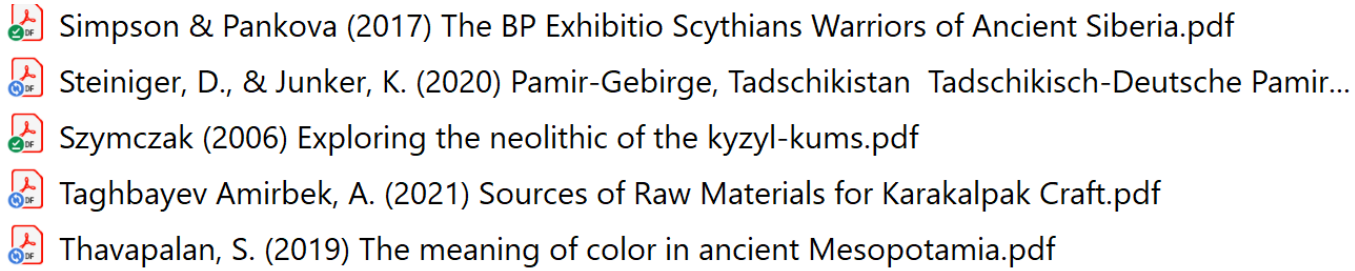
Instead — cities are immersed in larger contexts

City seats of administration, government, religion, defense (see Auezzano relief) nucleation but with available infrastructure, display of POWER AND IDENTI

Many cities already existed before Rome's occupation
Greek writers emphasize cities as the poleis = The people, More than the infrastru

3.1. How to organize your digital library

- Computer folders by theme/keyword
  - Author (Date) Title



- Back-up system
- Reference Management App

EndNote X9 - [My EndNote Library.enl]

File Edit References Groups Tools Window Help

APA 6th Copy | Quick Search | Show Search Panel

My Library

- All References (1712)
- Configure Sync...
- Recently Added (0)
- Unfiled (37)
- Trash (39)
- **Turquoise**
  - Elite Networks (24)
  - Iran (21)
  - Khorezm (21)
  - KK (18)
  - KK Geology (27)
  - KK Mines (23)
  - Medieval Sources (21)
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  - PrimarySources (19)
  - Scientific Analyses (31)
  - Sites (23)
  - Trade and Networks (24)
  - Turquoise (264)
  - Turquoise and Buddhism (84)
  - Turquoise Egypt (22)
  - Value, Distance, and the Exotic (24)
- **Comps**
  - Hellenistic East (139)
  - Interaction, Exchange, Mobility (115)
  - Landscape Archaeology (105)
- **Organize** (25)
- **Nomadic Material Culture** (69)
- **Curatorial** (18)
- **Digital Humanities** (347)

Author	Year	URL	Title	Rating
Винорадова, Н. М.; Кутимов, Ю. Г.	2018		Погребальные памятники эпохи бронзы в Южном Таджи...	
Воробьева, М. Г.	1958		Керамика о городища Кюзели-Гыр	
Воробьева, М. Г.	1959		Раскопки архаического поселения близ Дингильдже	
Воробьева, М. Г.	1973	http...	Дингильдже: усадьба середины I тысячелетия до н. э. в д...	
Борозна Н. Г.	1975		Некоторые Материалы Об Амулетах-Украшениях Населе...	
Гулямов, Я. Г.; Исламов, У.; Аскаров, А.	1966		Первобытная культура и возникновение орошаемого зе...	
Иванов, П. П.	1932		К истории развитии горного промысла в Средней Азии. К...	
Кащей, Олеся Анатольевна; Недашковский, ...	2020		Забытые древности долины реки Угам	
Кожомбердиев, И.	1977		Материалы для археологической карты	
Корнюшин, Г. И.	1980		Археологические находки в Кызылкумах	
Королькова, Е. Ф.	2006		Властители степей. Санкт-Петербург, 2006 (часть 2).	
Макеев, П. С.	1933		Очерк Релбефа Кызыл-кумов	
Макеев, П. С.	1933		Об источниках воды в кызыл-кумах	
Мамедов, Э.	1968		Опыт географического анализа древнего расселения чел...	
Мандельштам, А. М.	1975		Памятники кочевников кушанского времени в Северной ...	
Манылов, Ю. П.	1974		Бирюзовые выработки VI-V вв. до н. э. в Хорезме	
Манылов, Ю. П.	1985		Об археологических работах в Тамдынском районе Наво...	
Манылов, Ю. П.	1987		Исследования в Кызылкумах	
Массон, М. Е.	1953		К истории горного дела на территории Узбекистана	
Менчинская, Таисия Ивановна	1981		Бирюза	
Мирасланов, М. М.; Мавлянова, Н. Г.	2017		Изменение Геологической Среды в Центрально-Кызылку...	
Нуртаев, Д. Б.	2021		Новые Данные О Минералого-Геохимических и Геологич...	
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Пругер, Е. Б.	1989		Место Кызылкумов в истории добычи и распространени...	
Пругер, Е. Б.; Дресвянская, Г. Я.	1978		Средневековый горный промысел Нуратау	
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Рапопорт, Ю. А.; Неразик, Е. Е.; Левина, Л. М.	2000		В низовьях Окса и Яксарта. Образы древнего Приаралья	
Рузанов, В. Д.	2016		К ВОПРОСУ О СЫРЬЕВОЙ БАЗЕ МЕТАЛЛУРГИИ ФЕРГАНО-...	
Салтовская, Е. Д.	1975		Некоторые новые материалы о «ферганских кочевниках»	

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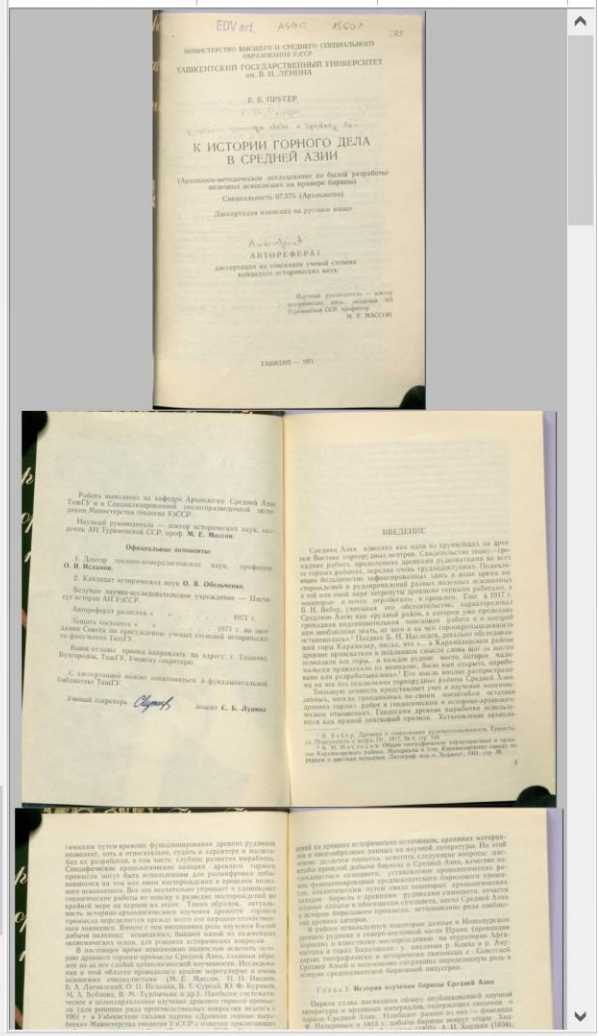

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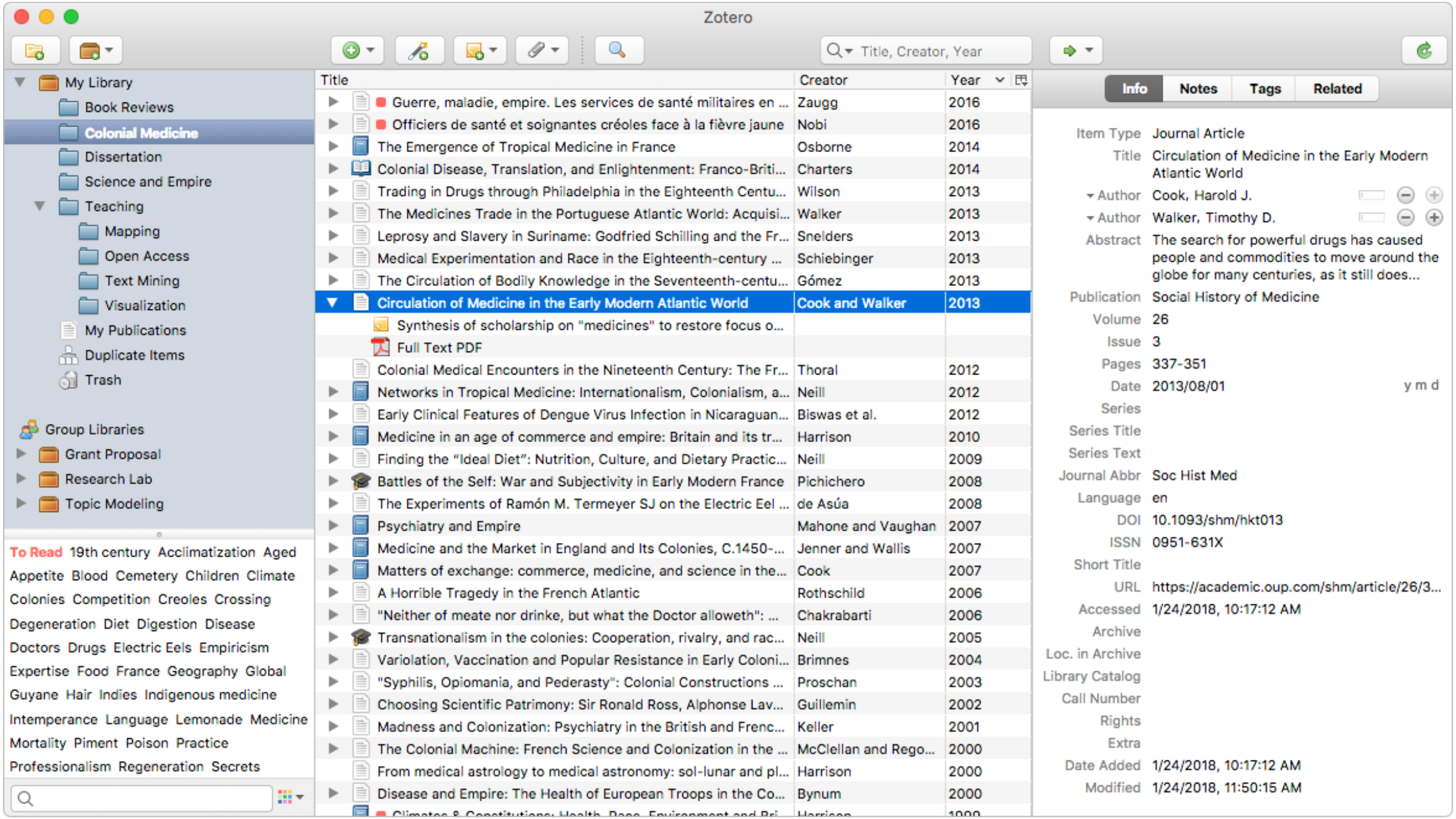
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Non-invasive XRF analysis of ancient Egyptian and near Eastern turquoise: A pilot study

Federico Carò [a,*], Deborah Schorsch [b], Louisa Smieska [a,1], Brunella Santarelli [a,2]

[a] Scientific Research, The Metropolitan Museum of Art, 1000 Fifth Avenue, New York, NY 10028 USA
[b] Objects Conservation, The Metropolitan Museum of Art, 1000 Fifth Avenue, New York, NY 10028 USA

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ABSTRACT

More than 1400 turquoise stones associated with 98 archaeological artifacts from Egypt, the Near East, and Central Asia were analyzed using non-invasive point and scanning XRF. Geological specimens of turquoise from mines in the Sinai and Iran were also included in this study. The relative intensities of characteristic X-rays of Fe, Cu, Zn, and As were used to categorize the stones, which are discussed here in terms of their geographical contexts and assigned dates. The results indicate strong correlations between turquoise composition and archaeological attribution. Although these relationships likely reflect differences in turquoise sources that changed over the course of several millennia, it is not possible to associate the chemical signatures with specific mines solely using non-invasive XRF data.

1. Introduction

1.1. Scope of research

Most published studies of ancient turquoise and its sources focus on artifacts from Mesoamerica and the American Southwest (Weigand et al., 1977; Thibodeau et al., 2007, 2012, 2015), and they generally rely on a variety of geochemical (Mathien, 1981; Harbottle and Weigand, 1992; Kim et al., 2003; Crook and Leuth, 2014) and isotopic techniques (Hull et al., 2008; Thibodeau et al., 2015) to characterize specimens quantitatively and distinguish between different deposits. To date, isotopic signatures, particularly those of Pb and Sr, have proven the most applicable to the study of turquoise, given the intrinsic and well-known limitations of using surface-dependent spectroscopic techniques to characterize minerals that demonstrate multi-scale geochemical variability and which may have suffered from weathering and post-retrieval interventions (Thibodeau et al., 2012). Moreover, trace elements found in turquoise that are potentially robust indicators of origin fall well below the detection limits of commercial XRF units (Qin et al., 2015).

Sample size and preparation required for most quantitative analytical techniques, however, is prohibitive for artifacts preserved in cultural heritage collections, particularly the small beads, inlays, and amulets found in ancient Egyptian and Near Eastern contexts. The need for uncontaminated samples requires invasive interventions rarely

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