

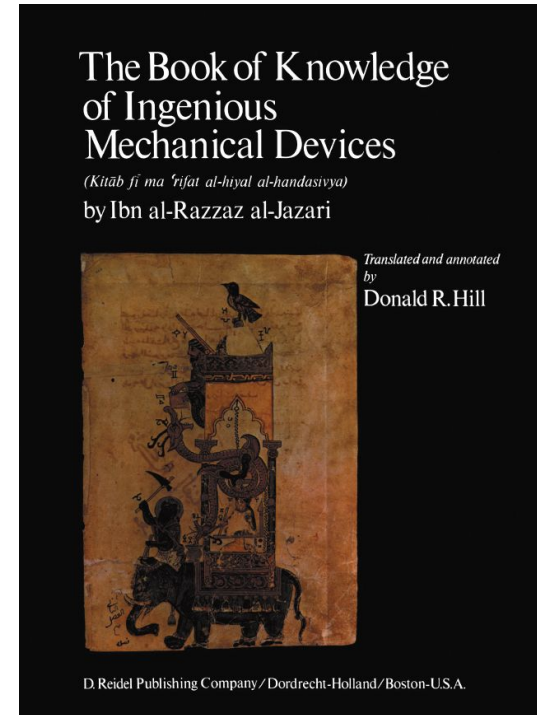
# **Building Wikidata One Branch of Knowledge at a Time: A Case of al-Jazari, Automaton and the History of Robotics (work-in-progress)**

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SWIB2020 2020-11-27

# My first encounter with al-Jazari @AUC Libraries

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Jazarī, Ismā‘īl ibn al-Razzāz, active 1181-1204. **The book of knowledge of ingenious mechanical devices**; translated [from the Arabic] and annotated by Donald R. Hill. Dordrecht ; Boston : Reidel, [1974]



# How did I get here? My research's paths.

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- STEAM (STEM + Arts) -> subtopic on robotics
- Outline of robotics in Wikipedia
- Wikidata Scholia ->robotics-> automaton
  - Finding: al-Jazari was not linked to 'automaton' in Wikidata
- My mission: to link al-Jazari to 'automaton' in Wikidata

Donald Hill's  
translation and  
revision (1989)

Donald Hill's  
translation  
(1974)

Original  
manuscript  
(1206)

al-Jazari (Q81627)

Islamic scholar, engineer

Islamic technology

Automaton

Robotics

**Islamic technology  
(no LCSH nor Q)**

I found these  
items instead:

Science in the medieval Islamic world  
(Q785426) (Wikipedia redirect from  
Islamic technology)

***Islamic world contributions to  
Medieval Europe (Wikipedia)***

**Islamic contributions  
to Medieval Europe  
(Q4115173)**

**Technology -> water clocks**  
[78] Studies in Medieval  
Islamic Technology: From  
Philo to Al-Jazari - From  
Alexandria to Diya Bakr",  
**Donald Routledge Hill and  
David A. King**, p.23, 1998,  
ISBN 978-0-86078-606-1

**Book of Knowledge of Ingenious Devices (Q50811566) the Ashmolean Museum, Oxford, UK**

**Painting** from MS Greaves 27 ([digital image from the book](#))

**Created: The book of knowledge of ingenious mechanical devices (1974) (Q102373928)**

D.A. King's In Memoriam to Hill includes all of his publications

**Created: The book of knowledge of ingenious mechanical devices (1989) (Q102229735)**

## TOOLS

Wikidata:  
**Reasonator**  
(al-Jazari)

Wikidata:  
**Scholia**  
(**automaton**)

**Translated by**  
**Donald Hill**  
(Q4451718)

**Iman Dagher (UCLA)** kindly created the Wikidata item with Arabic scripts and added subjects, then I added more information in Wikidata. Email discussions to authenticate the inception year 1206.

### Manuscript:

الجامع بين العلم والعمل النافع في صناعة الحيل

al-Jāmi' bayna al-'ilm wa-al-'amal al-nāfi' fi ṣinā'at al-ḥiyāl  
(Q102112338)

Added **MS. Greaves 27** (Bodleian Library, Oxford University) as a reference (Hill, 1974)

**al-Jazari**  
(Q81627)

Added - Field of work: **automaton** (Q787116) with some research & Iman's verification & PoB fixed

Contacted an **LC colleague** re: the railroad's Wikidata connected to this LC NAR. **n86057551**

Created the publisher's Wikidata:  
**National Hijra Council (Pakistan)**  
(Q102234590).

DM an **AMICAL colleague** in Pakistan to inquire about this publisher.

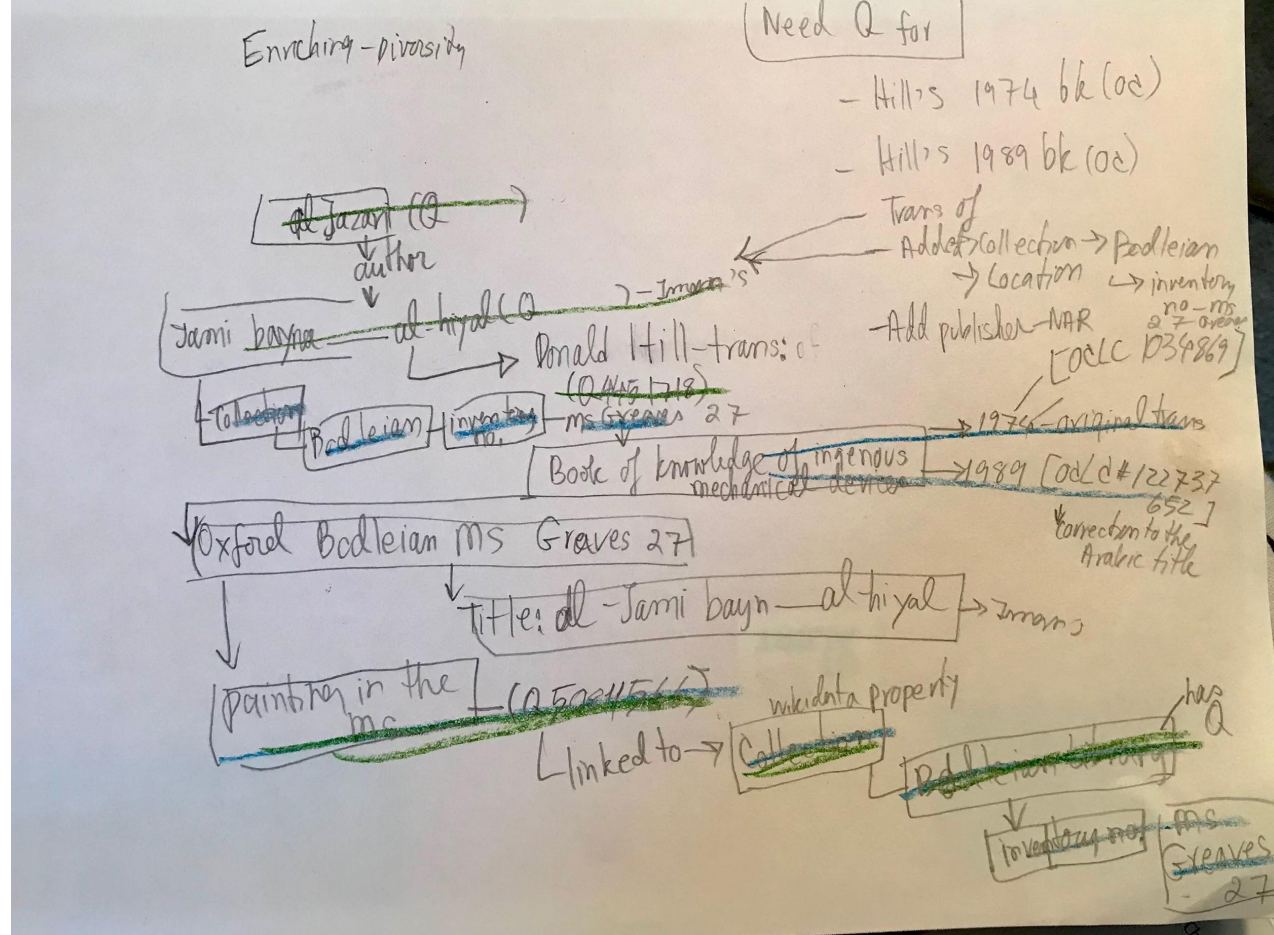
# GLAM & Wikidata/Wikibase Practices: Some Observations

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**Different approaches from creating cataloging or metadata records:**

- Work at the object level
- The goal is to build relationship among entities
- The work process -> sketch/map out the goal(s) you want to achieve, then create or edit Wikidata based on your goal(s)
  - Example. My goal: to link al-Jazari to the knowledge domain of robotics via the topic 'automaton'.
- You can work across the GLAM metadata silos

My recommendation:  
 sketch your ideas and  
 tasks needed inside  
 and outside Wikidata  
 (image: my early  
 sketch)





# Wikidata/Wikibase Facilitates Equity, Diversity and Inclusion in Cataloging & Metadata

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- **Ontology building in Wikidata is an inductive process (Schuster, 2017);** with the ability to add, modify and extend the existing knowledge domains.
  - Thus, this makes it possible to **diversify its knowledge domains**
- Wikidata/Wikibase facilitates **collaboration at the ‘record’ level by allowing multiple contributors per a Q item**
  - It facilitates the use of multiple expertise and voices across cultural, linguistic and geographical boundaries and across GLAM organizations



# Additional References

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- Donald Hill: [https://en.wikipedia.org/wiki/Donald\\_Hill](https://en.wikipedia.org/wiki/Donald_Hill)
- King, D.A. In memoriam: Donald Routledge Hill\* (1922–1994), *Arabic sciences and philosophy*, vol. 5 (1995), 297-302.
- MS. Greaves 27 (Bodleian Library, Oxford University). Title: al-Jāmi‘ bayn al-‘ilm wa-al-‘amal al-nāfi‘ fī šinā‘at al-ḥiyal:  
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- Schuster, Edmund W. Induction and the Ontology: The chance effect of a classic Western philosophy. Apr 20, 2017· <http://schuster.us.com/>
- Wikipedia. Outline of robotics->History of robotics  
[https://en.wikipedia.org/wiki/Outline\\_of\\_robotics#History\\_of\\_robotics](https://en.wikipedia.org/wiki/Outline_of_robotics#History_of_robotics)

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an internet of beings  
a shared reality  
collaborative learning  
human experience  
plurality is here

~Audrey Tang, Digital Minister, Taiwan  
Keynote, SWIB20

danke schön

شكراً

ขอบคุณค่ะ  
Thank you



THE UNIVERSITY OF  
TENNESSEE  
KNOXVILLE

