



An introduction to the  
International  
Image  
Interoperability  
Framework

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# IIIF: Two Core APIs



## **Image API**

“get pixels” via a simple, RESTful, web service



## **Presentation API**

Just enough metadata to drive a remote viewing experience

# IIIF: Two More APIs



## **Search API**

Search within an object, such as the full text of a book or newspaper



## **Authentication API**

To support login, and differential access to resources.

The story so far...

# Silos of non-interoperable content



Grain elevators, Caldwell, Idaho, by Lee Russell, 1941.  
<http://www.loc.gov/pictures/resource/fsac.1a34206/>

# Metadata

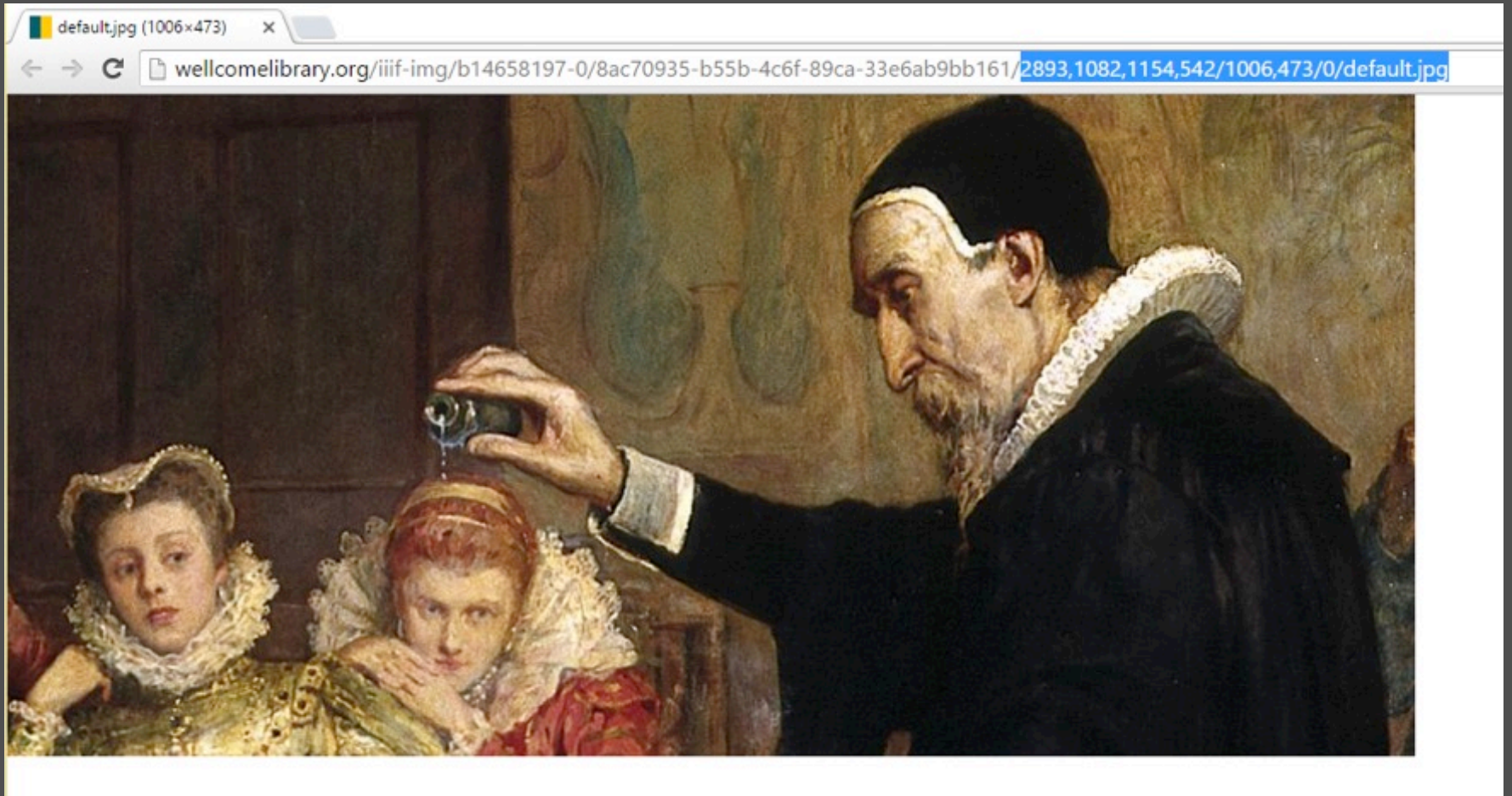
- We getting good at sharing descriptive metadata
- But it doesn't help us get pixels on screen
  - Read the pages
  - Look at the brush strokes
  - See the film grain
- IIIF provides
  - A model for describing digital representations of objects
  - A format for software - viewing tools, annotation clients, web sites - to consume and render the objects and the statements made about them

# The Image API



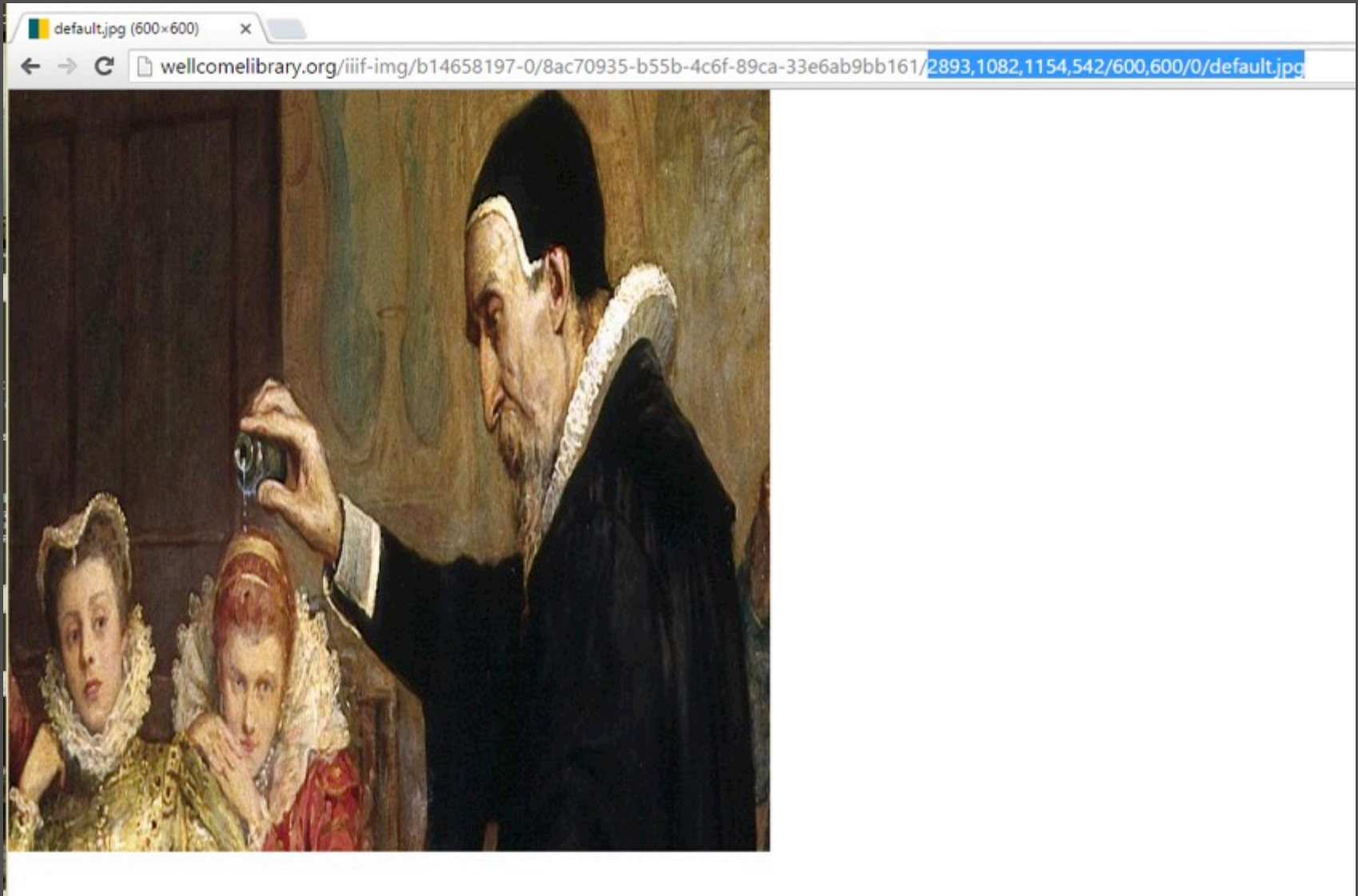


# The Image API

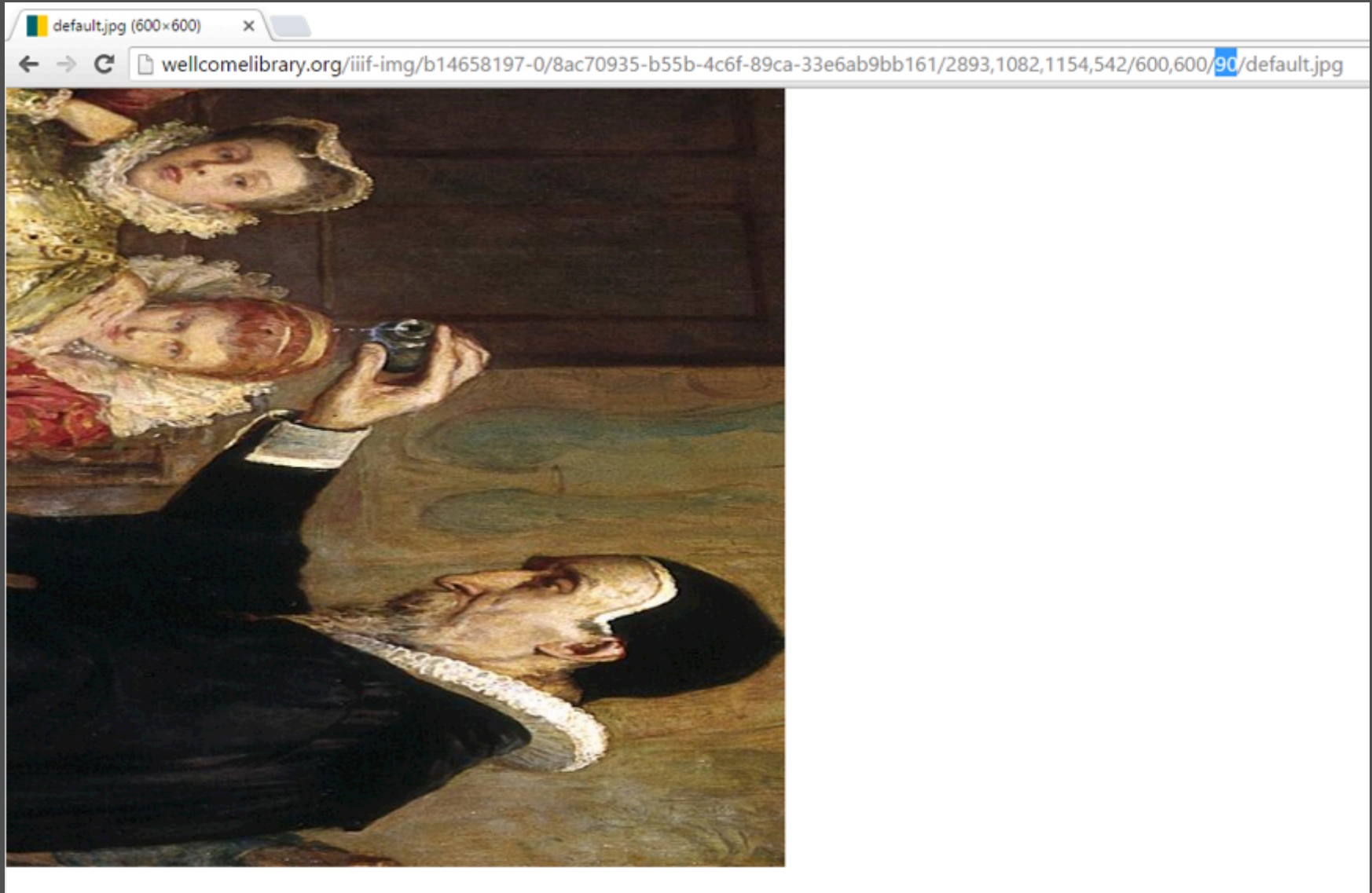




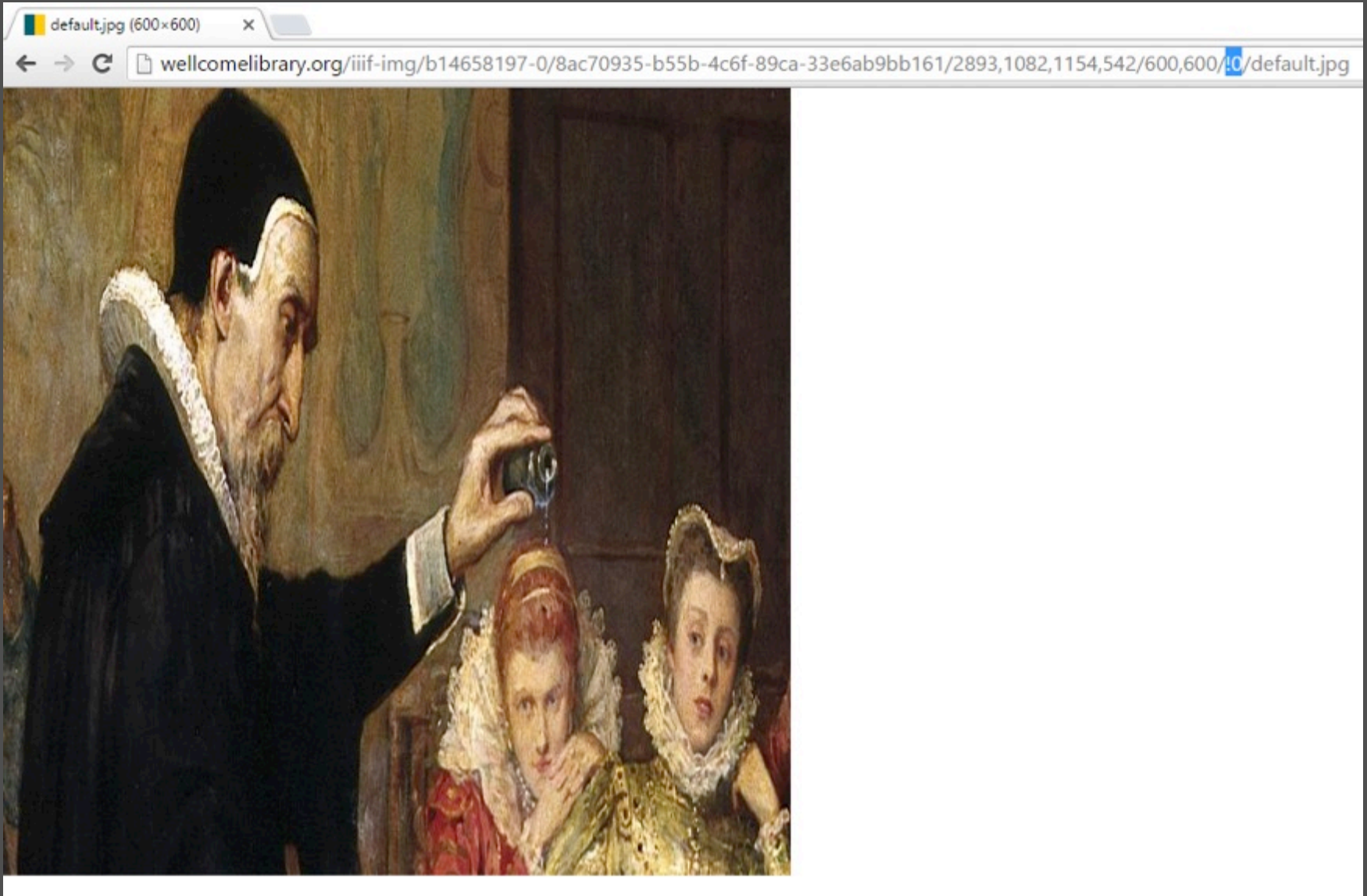
# The Image API



# The Image API



# The Image API







/full/87,/0/default.jpg



/full/174,/0/default.jpg



/0,0,8192,8192/256,/0/default.jpg



/8192,0,2937,8192/92,/0/default.jpg



/0,8192,8192,680/256,/0/default.jpg



/8192,8192,2937,680/92,/0/default.jpg



/0,0,4096,4096/256,/0/default.jpg



/4096,0,4096,4096/256,/0/default.jpg



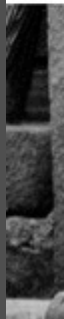
/8192,0,2937,4096/184,/0/default.jpg



/6400.4864.256.256/256./0/default.jpg



/6400.5120.256.256/256./0/default.jpg



/6400.5376.256.256/256./0/default.jpg



/6400.5632.256.256/256./0/default.jpg



/6400.5888.256.256/256./0/default.jpg

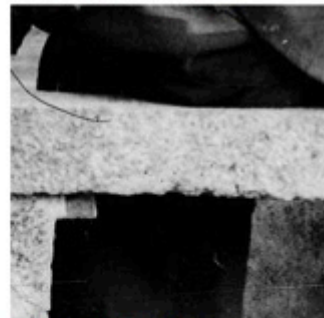
/6656.4864.256.256/256./0/default.jpg



/6656.5120.256.256/256./0/default.jpg



/6656.5376.256.256/256./0/default.jpg



/6656.5632.256.256/256./0/default.jpg



/6656.5888.256.256/256./0/default.jpg

/6912.4864.256.256/256./0/default.jpg



/6912.5120.256.256/256./0/default.jpg



/6912.5376.256.256/256./0/default.jpg



/6912.5632.256.256/256./0/default.jpg



/6912.5888.256.256/256./0/default.jpg

/7168.4864.256.256/256./0/default.jpg



/7168.5120.256.256/256./0/default.jpg



/7168.5376.256.256/256./0/default.jpg



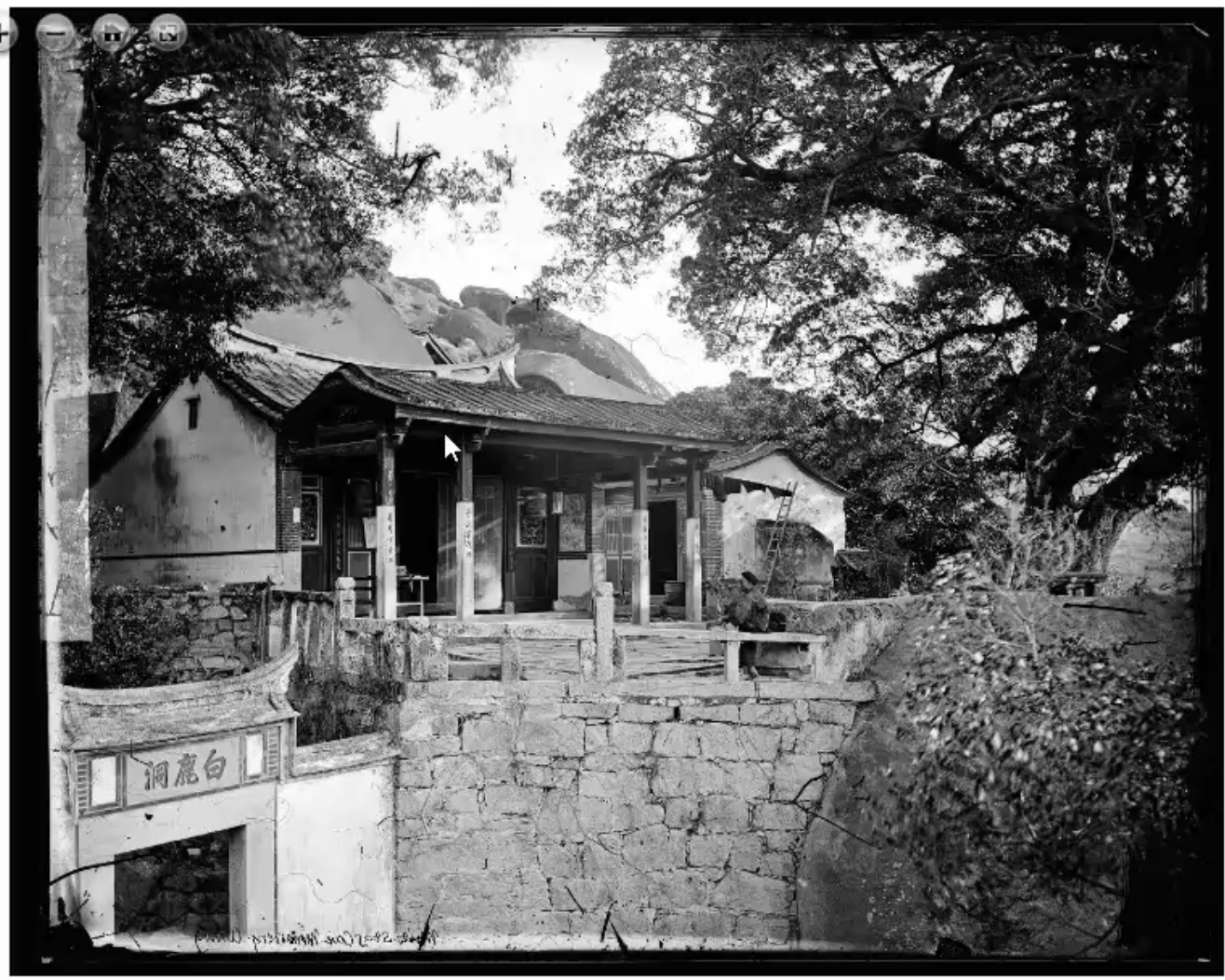
/7168.5632.256.256/256./0/default.jpg



/7168.5888.256.256/256./0/default.jpg

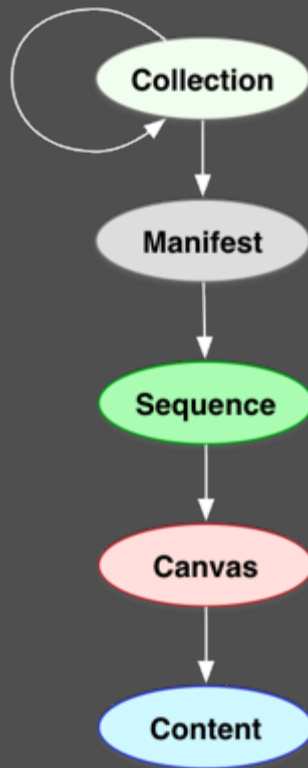


# OSD example





# The Presentation API



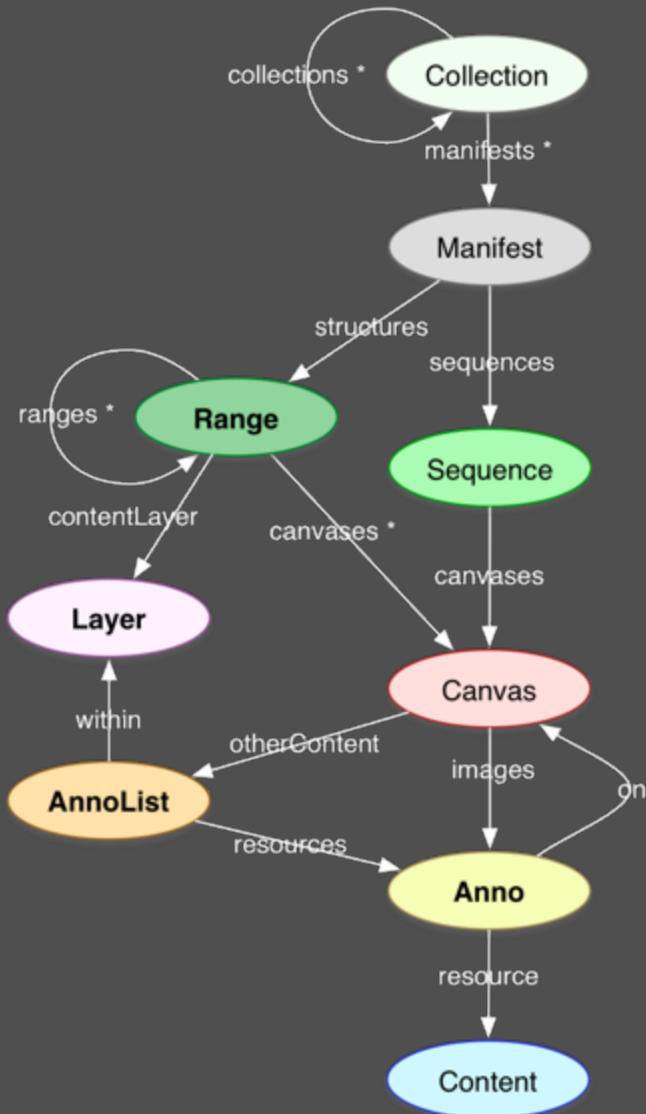
Structure

Properties

- Descriptive
- Rights
- Technical
- Linking

More to it than this however...

# The Presentation API



## More Structure!


- Ranges for Navigation (ToC)
- Layers for managing content


## Annotations!

- For linking resources
- For commentary
- For hotspots
- Managed in Lists

# The Presentation API



 Bookmark

 Change Layout



Add Item

# The Presentation API

A screenshot of a web browser window. The browser has two tabs: 'Mirador Viewer' and 'Digital Bodleian'. The address bar shows the URL 'mirador.stanford.edu/#deeeeada-cf49-406a-9075-c835aa697d7e'. The browser's toolbar includes navigation buttons (back, forward, home, refresh), a star icon for bookmarks, and various utility icons. Below the toolbar, there are three buttons: 'Bookmark', 'Change Layout', and 'Full Screen'. The main content area is dark gray and features a large white plus sign (+) in the center, with the text 'Add Item' centered below it. A mouse cursor is visible near the bottom right of the content area. At the bottom left of the browser window, a status bar displays the text 'Waiting for stacks.stanford.edu...'.

Mirador Viewer x Digital Bodleian x Stuart

mirador.stanford.edu/#deeeeada-cf49-406a-9075-c835aa697d7e

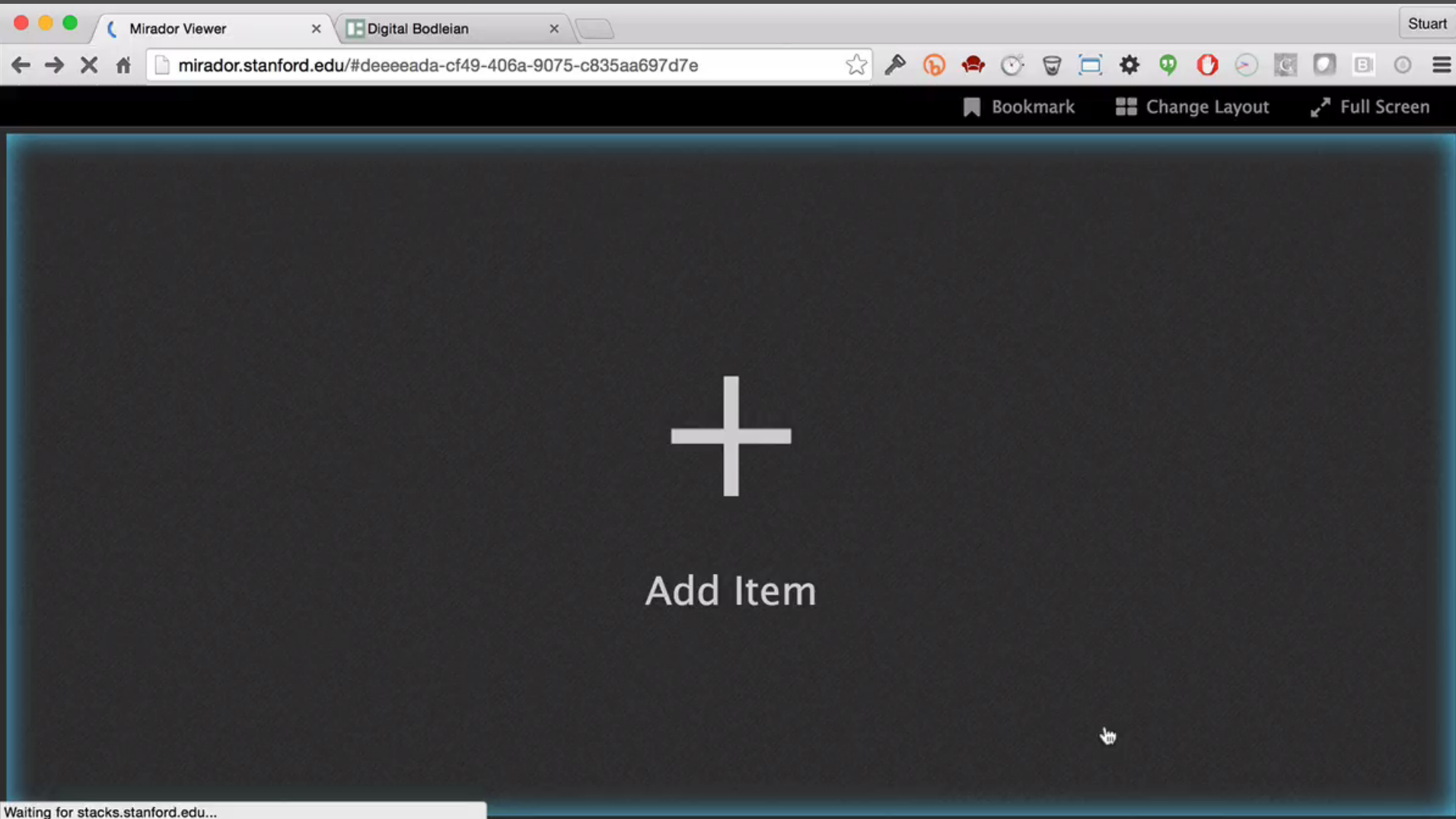
Bookmark Change Layout Full Screen

+

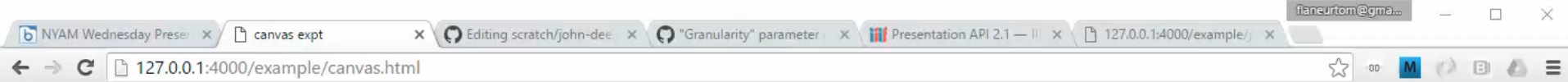
Add Item

Waiting for stacks.stanford.edu...

# The Presentation API



# The Presentation API



## Images

Drag the images up and down to change their z-order. Check the box to display them.

- Glenda Jackson (detail)
- Miranda Richardson (detail)
- Skulls (detail) (detail)
- Skulls (x-ray) (default)
- Skulls (x-ray, segment - cropped) (default)
- No Label (default)

## John Dee





# The Search API



## CONTENTS



## [Report of the Medical Officer of Health for St. Martin-in-the-Fields].

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Images



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... surface, as on Wimbledon Common, &c., filters through the loose soil, and finds its level in the gravel upon which London is built. This water always contained a larger quantity of saline matter than river water; therefore we must not condemn it for this alone. Too much it now contains organic matter, from the imperfect condition of the brick-work of the wells, their dirty and neglected condition, and their want of protection from the possibility of contamination. I hope the greater number of our London wells may still be preserved to us by proper means, and it is to be lamented that so large a supply of good drinking water should be sacrificed without an effort to preserve it. I find in the water from the **pump** in Covent Garden about 40 grains of solid matter per gallon, while the new river contains only 20; but I still prefer drinking the cool, fresh, and sparkling spring water to the mawkish fluid of the New River. There is no reason why water containing 40, or even 60, grains of some salts should be condemned. Our blood, also, contains a certain amount of salts, and may not be better supplied with

and even spirit drinkers, those best enjoy who merely mix the manufactured article with spring water.

If we go into the evidence against the use of **pump** water, from the positive injury to which it may be not simply charged, but from the verdict must be in its favour. At the time of cholera there was good reason to believe the disease was propagated by the use of the **pump** in Broad Street, and it is proved that a drain actually poured its contents into the well. Other similar cases are known. In the case of cholera or diarrhoea all water must be boiled whatever its source; and we may consider it an established rule, that in all such diseases no water should be drunk which has not been previously boiled. On the same principle, all persons suffering from bowel complaints should be very cautious of the water which they drink.

I am not aware that beyond this class of London wells are chargeable with positive health. Their condemnation is general.



MORE INFORMATION

Page 15

1 instance of 'pump' found



page 27 of 53

Previous result

12 results found for 'pump' Clear

Next result

Download options

Add to bookmarks

Embed

Full screen

# The Authentication API



The screenshot shows a digital archive interface. At the top, there is a navigation bar with icons for back, forward, and search, along with the text "Image Page of -" and a "Go" button. Below this, the main content area is titled "'Thalamus esp. intralamina'". On the left, there is a "CONTENTS" sidebar with a grid of six thumbnail images, each with a lock icon. A modal dialog is open in the center, titled "Archival material less than 100 years old". The dialog contains the following text:

**Archival material less than 100 years old**

This digitised archival material is free to access. By accepting Wellcome Library's terms and conditions, you agree to the following:

By viewing this and any subsequent archive material under 100 years old, I agree that I will use personal data on living persons for research purposes only. I will not use personal data to support decisions about the person who is the subject of the data, or in a way that causes substantial damage or distress to them.

[Read Full Terms and Conditions](#)

**Accept Terms and Open**

The dialog also has a "CLOSE" button with an 'X' icon. At the bottom of the interface, there are two buttons: "Download options" and "Add to bookmarks". In the bottom right corner, there is a "Full screen" button with a full-screen icon.



# The benefits of IIF

The four specifications together:

- Serve pixels
- Describe digital objects
- Search annotations
- Protect content that can't be open access



# The benefits of IIF

How would my institution benefit from IIF?

- Practical self interest
  - More and more client and server software developed by the community
  - Increasing support from commercial vendors



# The benefits of IIF

How would my institution benefit from IIF?

- Interoperability
  - The Universe of IIF is made up of web resources conforming to the same standard
  - This means you could create derived IIF resources - a manifest illustrating an exchange of letters between two people whose correspondence is held by different institutions, or digital reconstruction of a manuscript whose leaves are dispersed across the world



# The benefits of IIF

How would my institution benefit from IIF?

- Annotation
  - Your content is open to annotation by all
  - You can create curated annotations on your own content to drive discovery applications
  - You can link your IIF resources to others via annotation
  - If an annotation tool supports IIF, it can be used to annotate any collection exposed as IIF





An introduction to the  
International  
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Framework

Thank you!

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