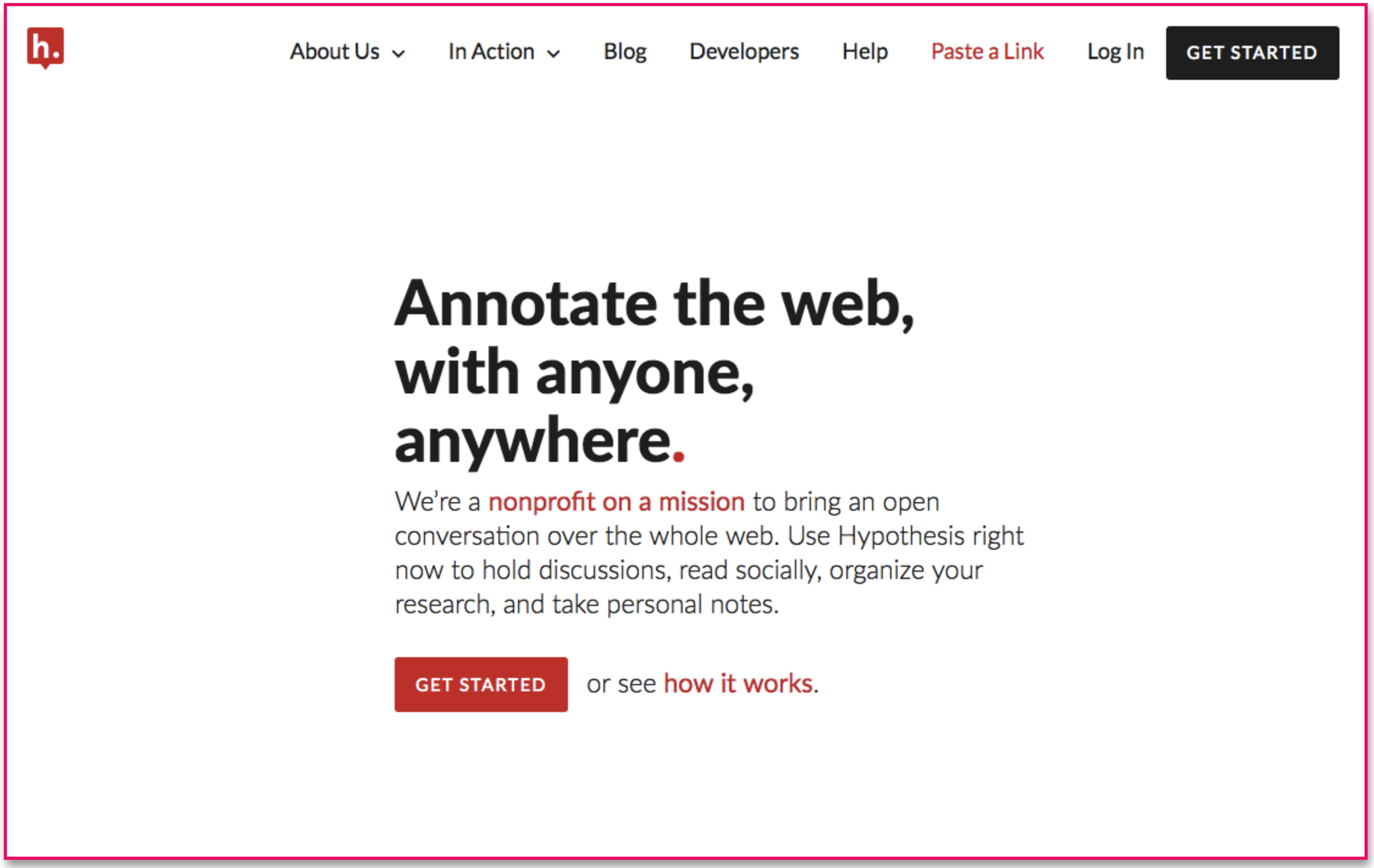
Web Annotation

The Web's Conversation Layer

Lyza Danger Gardner | lyza@lyza.com



hypothes.is

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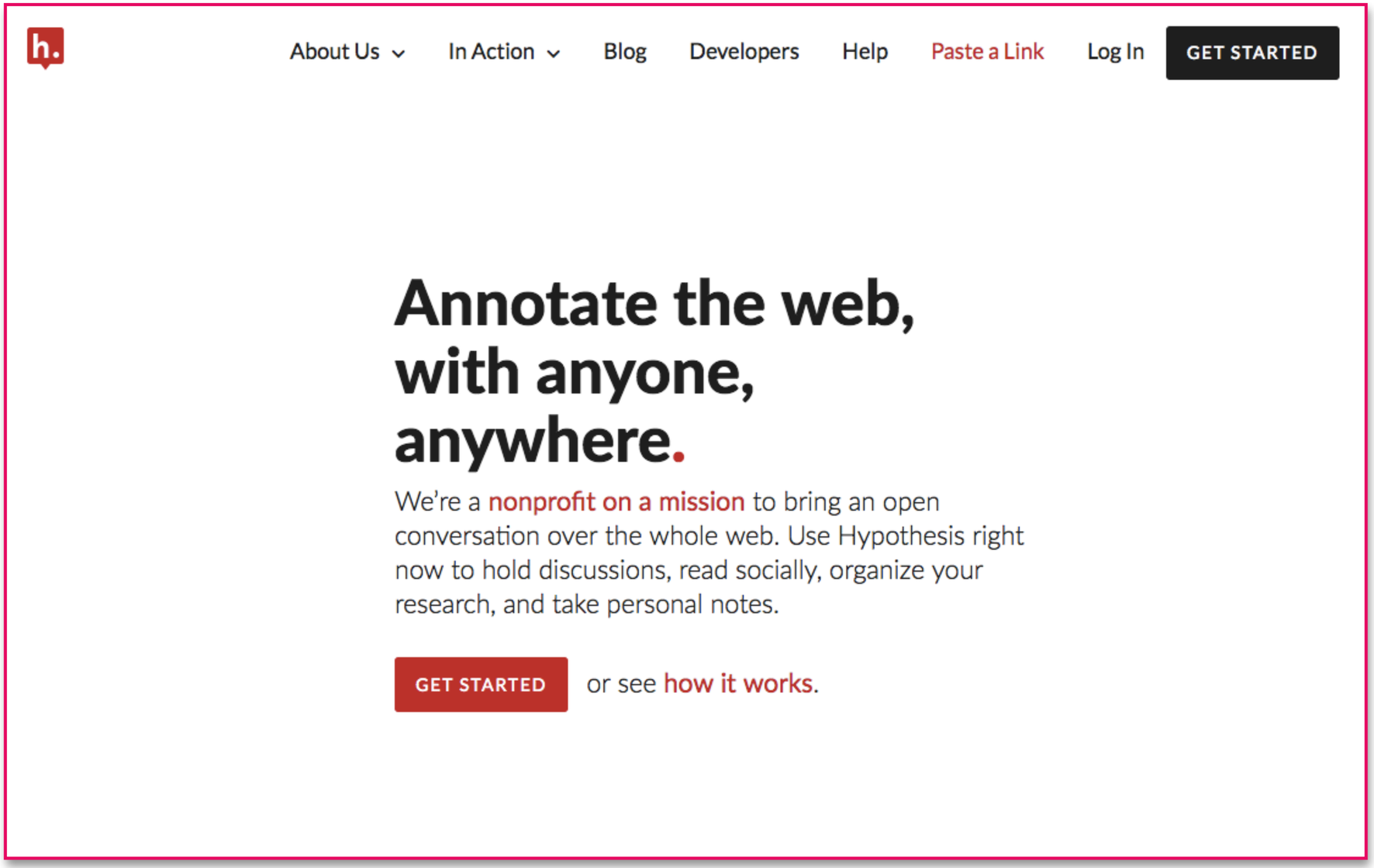

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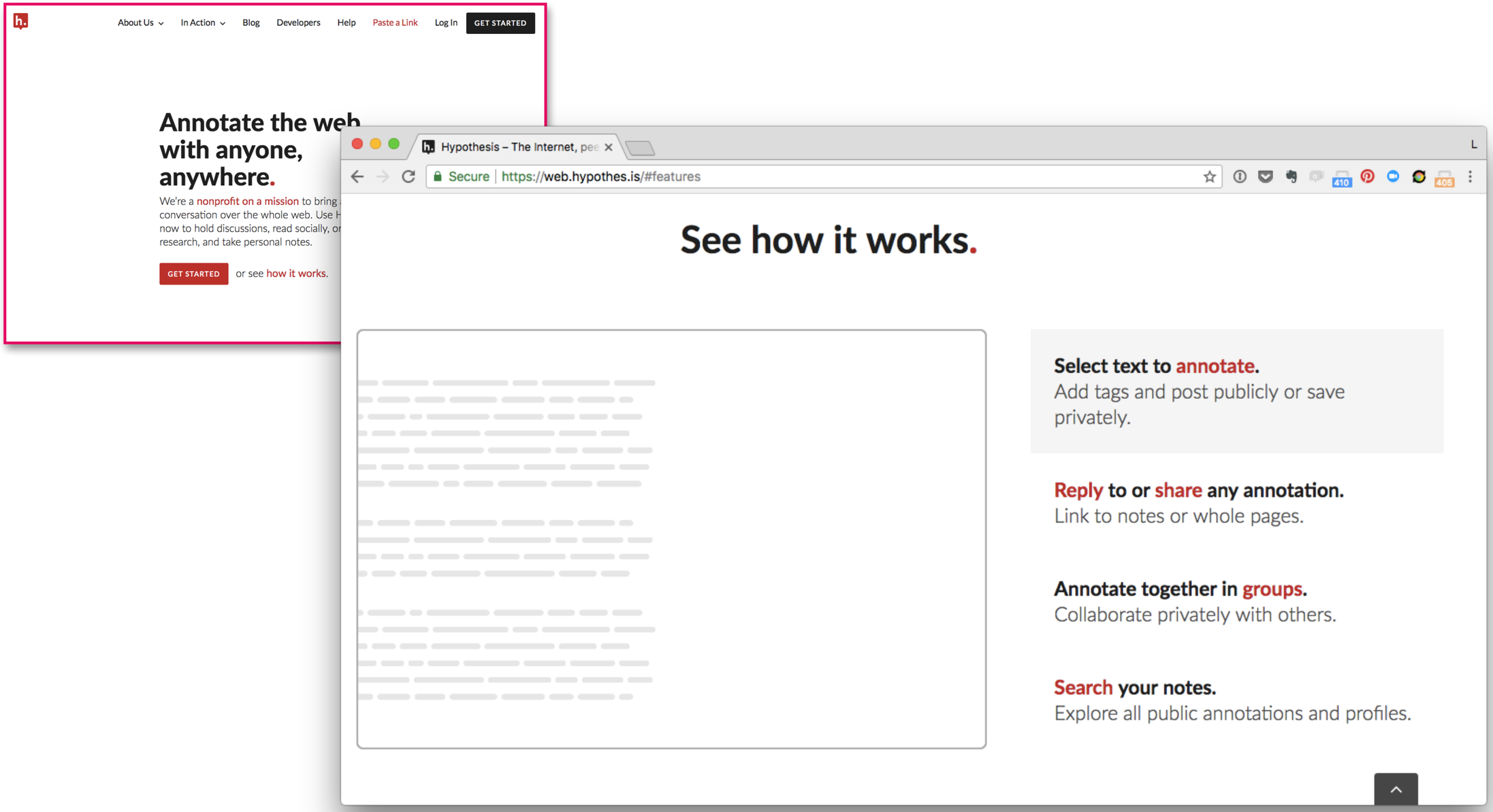
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Annotate the web with anyone, anywhere.
We're a nonprofit on a mission to bring
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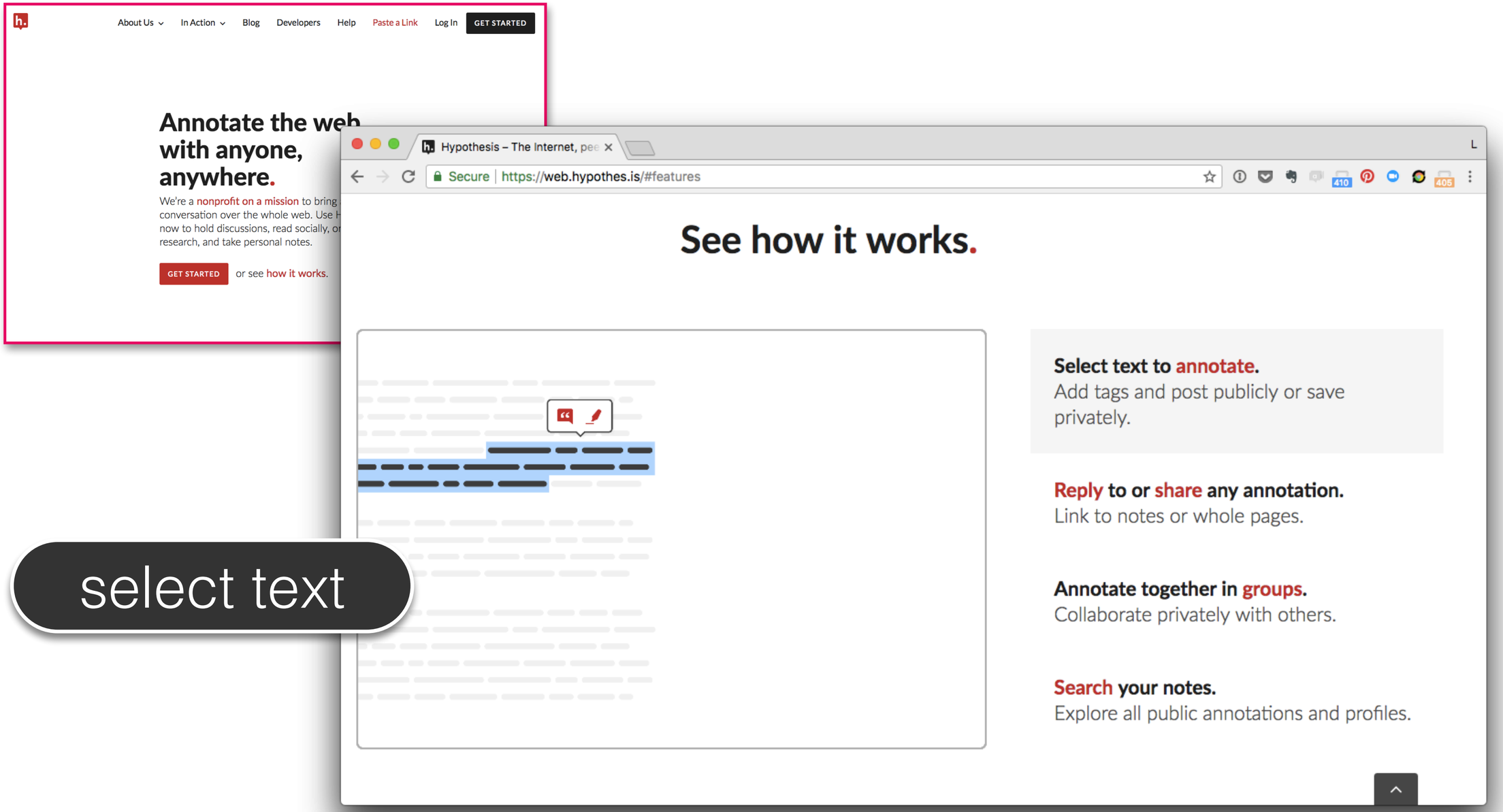
now to hold discussions, read socially, or
research, and take personal notes.
GET STARTED
or see how it works.
Hypothesis – The Internet, pee
Secure | https://web.hypothes.is/#features
See how it works.
Select text to annotate.
Add tags and post publicly or save privately.
Reply to or share any annotation.
Link to notes or whole pages.
Annotate together in groups.
Collaborate privately with others.
Search your notes.
Explore all public annotations and profiles.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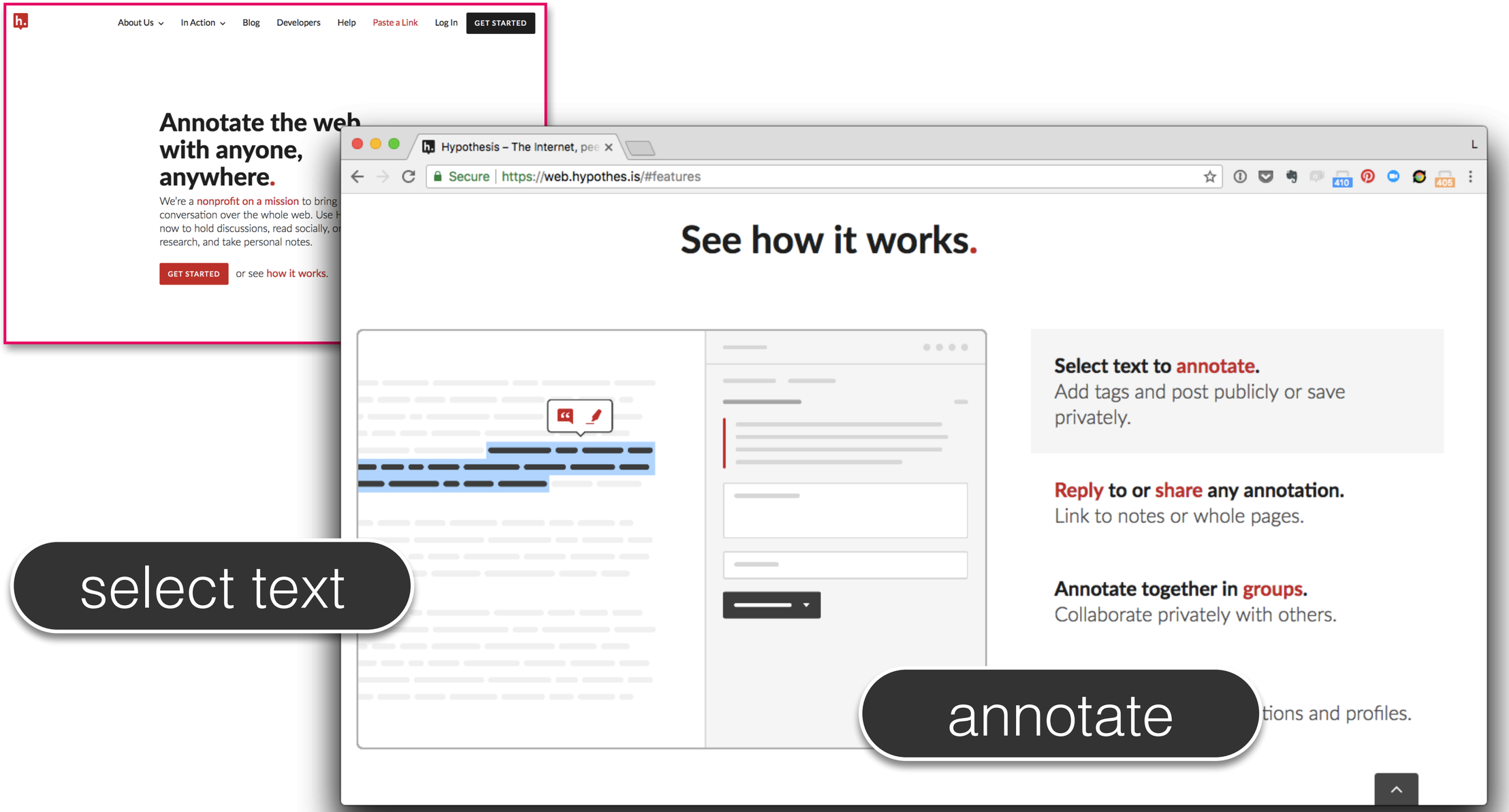
Search your notes.
Explore all public annotations and profiles.
select text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tions and profiles.
select text
annotate

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Web Annotation

Web Annotation

Web Annotation Standard

Web Annotation Standard

Web Annotation Standard

The Web

really quite intriguing

really quite intriguing

(but also a somewhat challenging journey)

From big, vast picture

TODAY

From big, vast picture

TODAY

From big, vast picture

---

to some detailed, uh, details

The Web

zoom level

universe *galaxies* *constellations* *planets* *humans*

The Web

Our Universe

zoom level

universe *galaxies* *constellations* *planets* *humans*

How would you draw the web?

How would you draw the web?

The web is furiously abstract

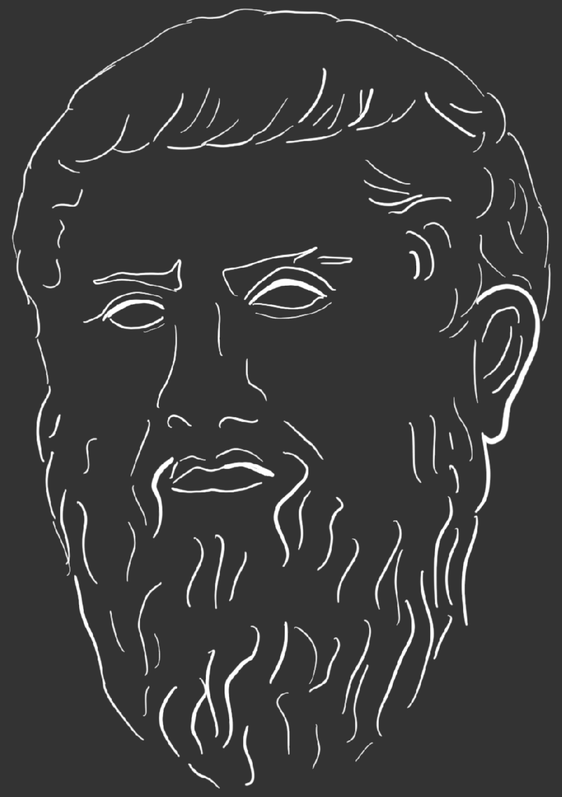
The web is furiously abstract

but we hold a shared understanding

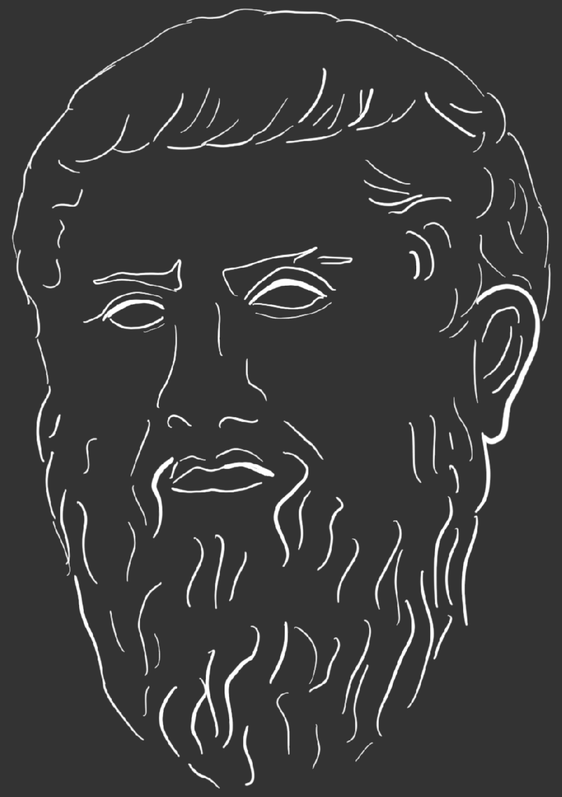
The web is furiously abstract

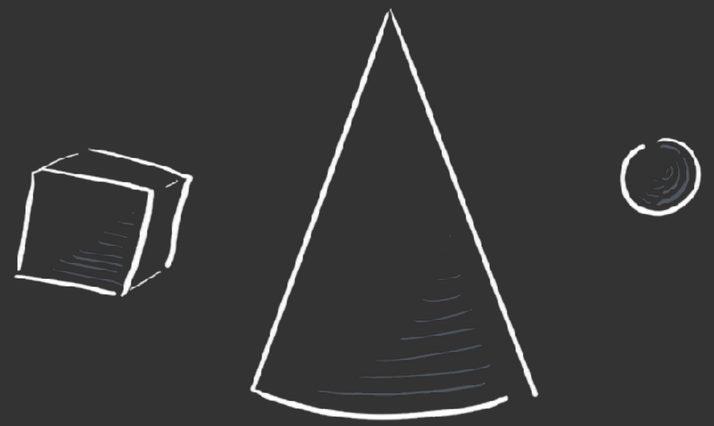
but we hold a shared understanding

Plato

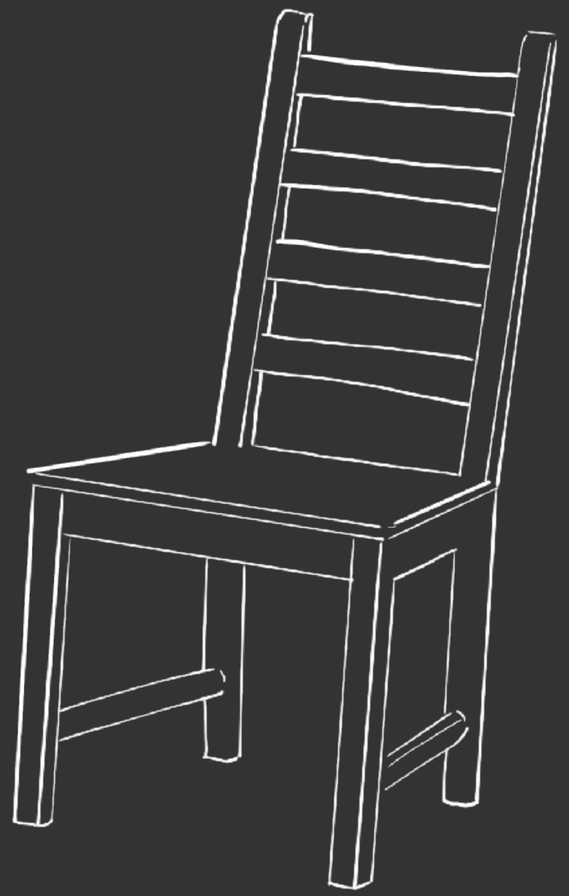


Plato

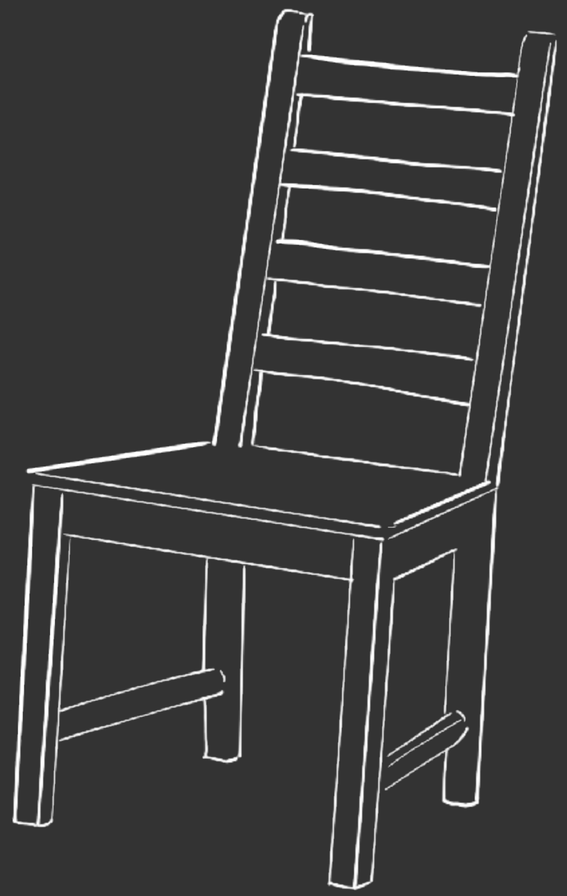




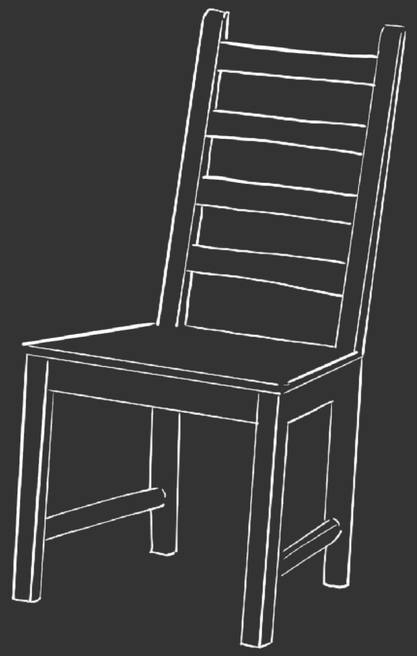
Theory of Forms



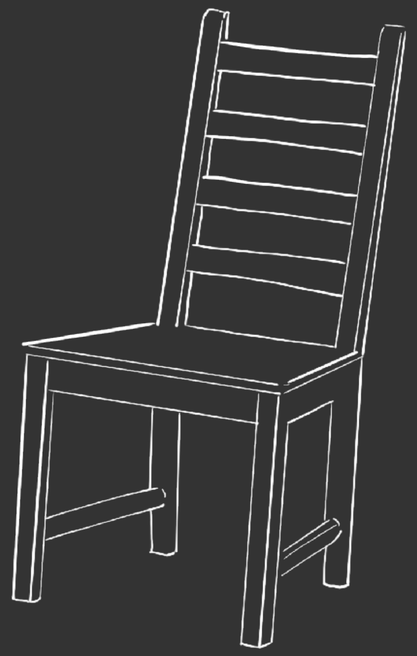
One True Chair

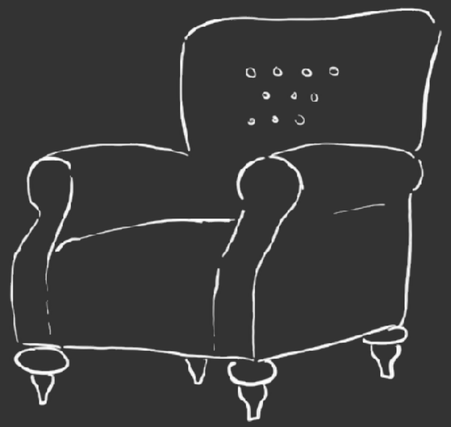


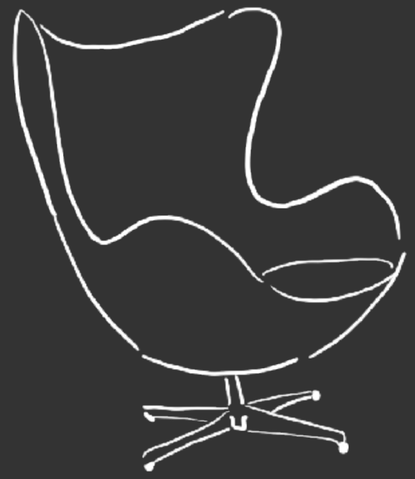
chairs in reality share chair-ness



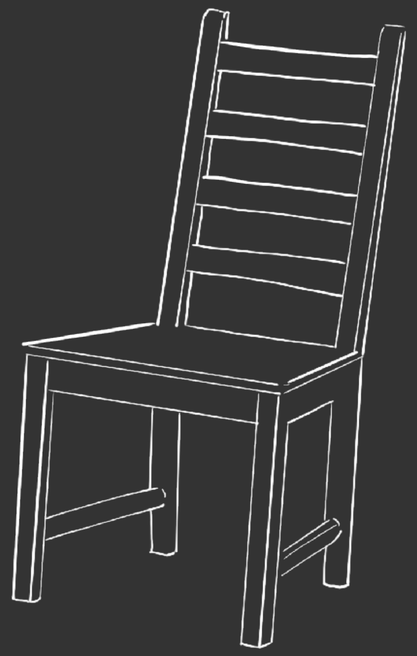
chairs in reality share chair-ness

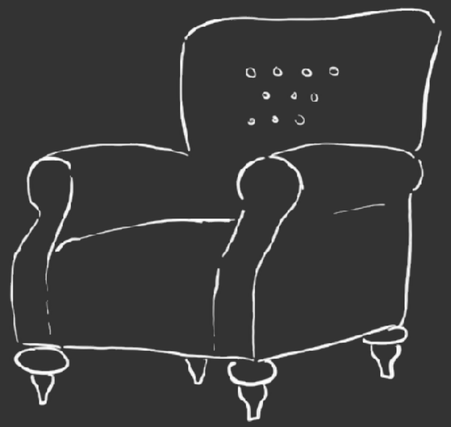


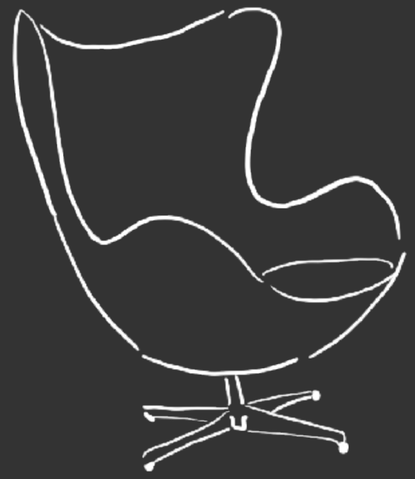




chairs in reality share chair-ness





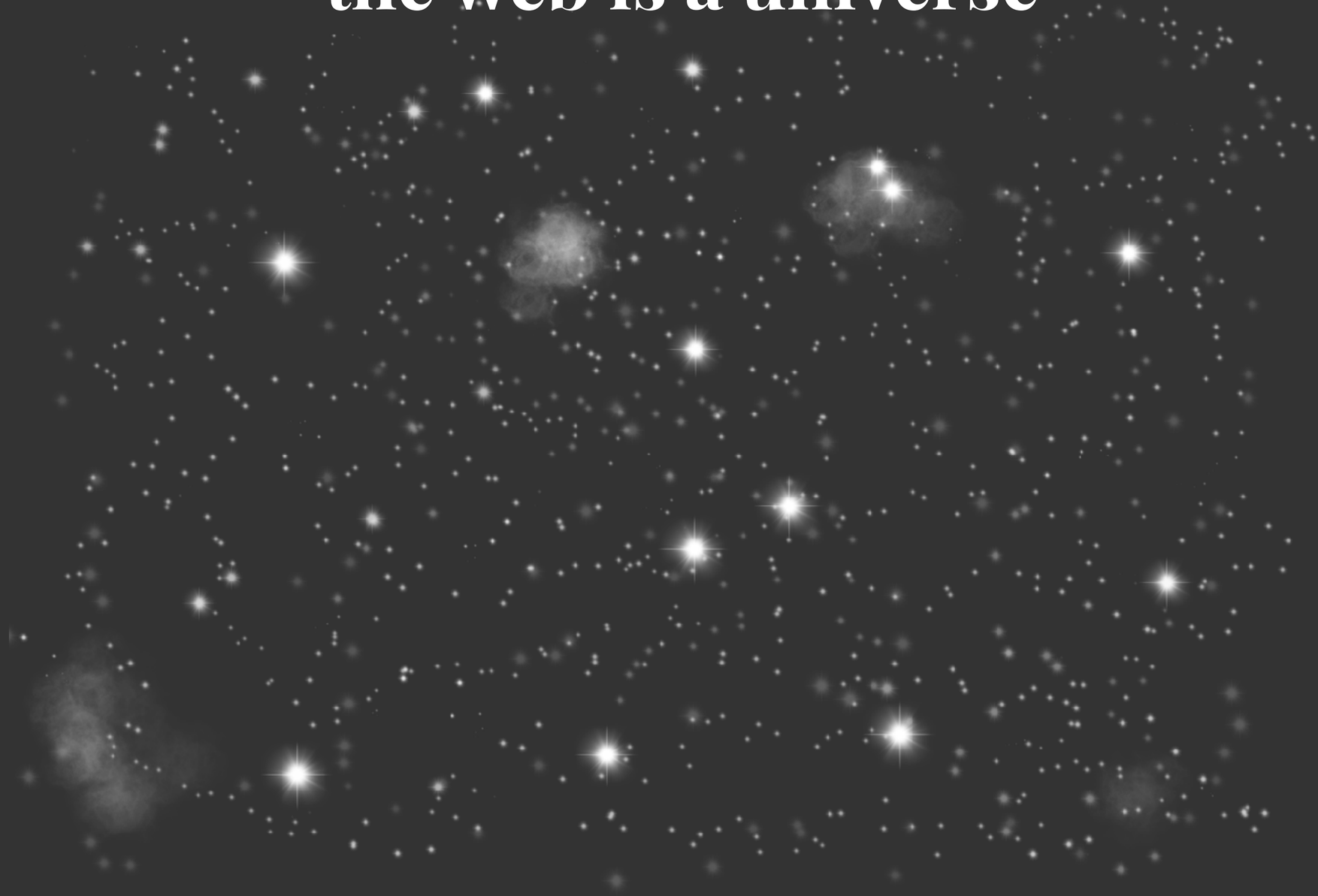


the web has web-*ness*

the web is a universe

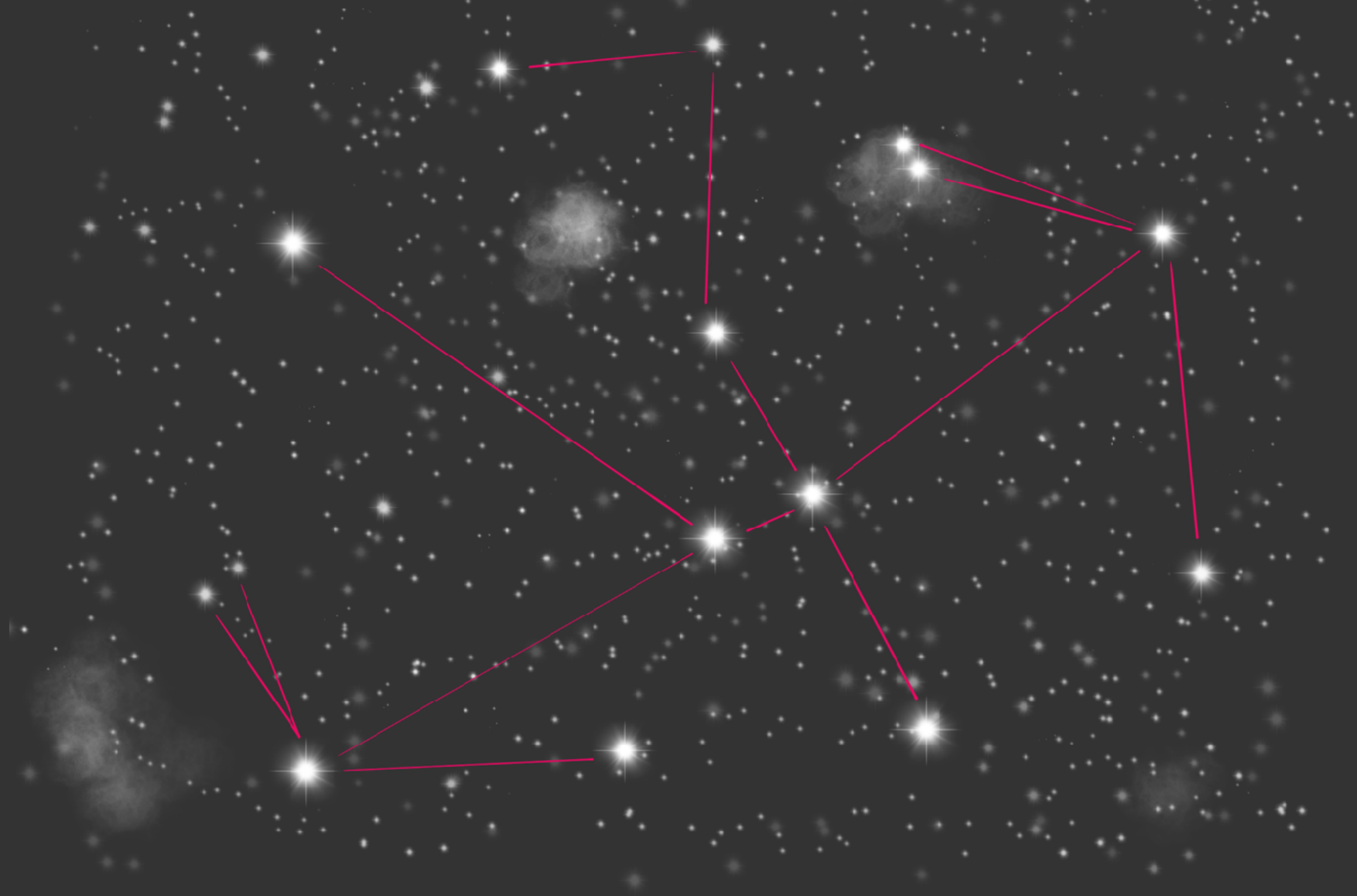
the web is a universe

the web is a universe



the Web is a connected universe

the Web is a connected universe



Of the web

Of the web

---

vs. on the web

The web is…

The web is…

noble

The web is…

noble *practical*

The web is…

noble practical ***ours***

The web is…

noble practical ours ***brilliant***

The web is…

practical ours brilliant ***flawed***

The web is…

urs brilliant flawed ***uncontrollable***

The web is…

flawed uncontrollable ***democratic***

The web is…

a vast, imperfect universe

Recurring, thematic tensions

in the web

As with the web

so with Web Annotations

Linked Data

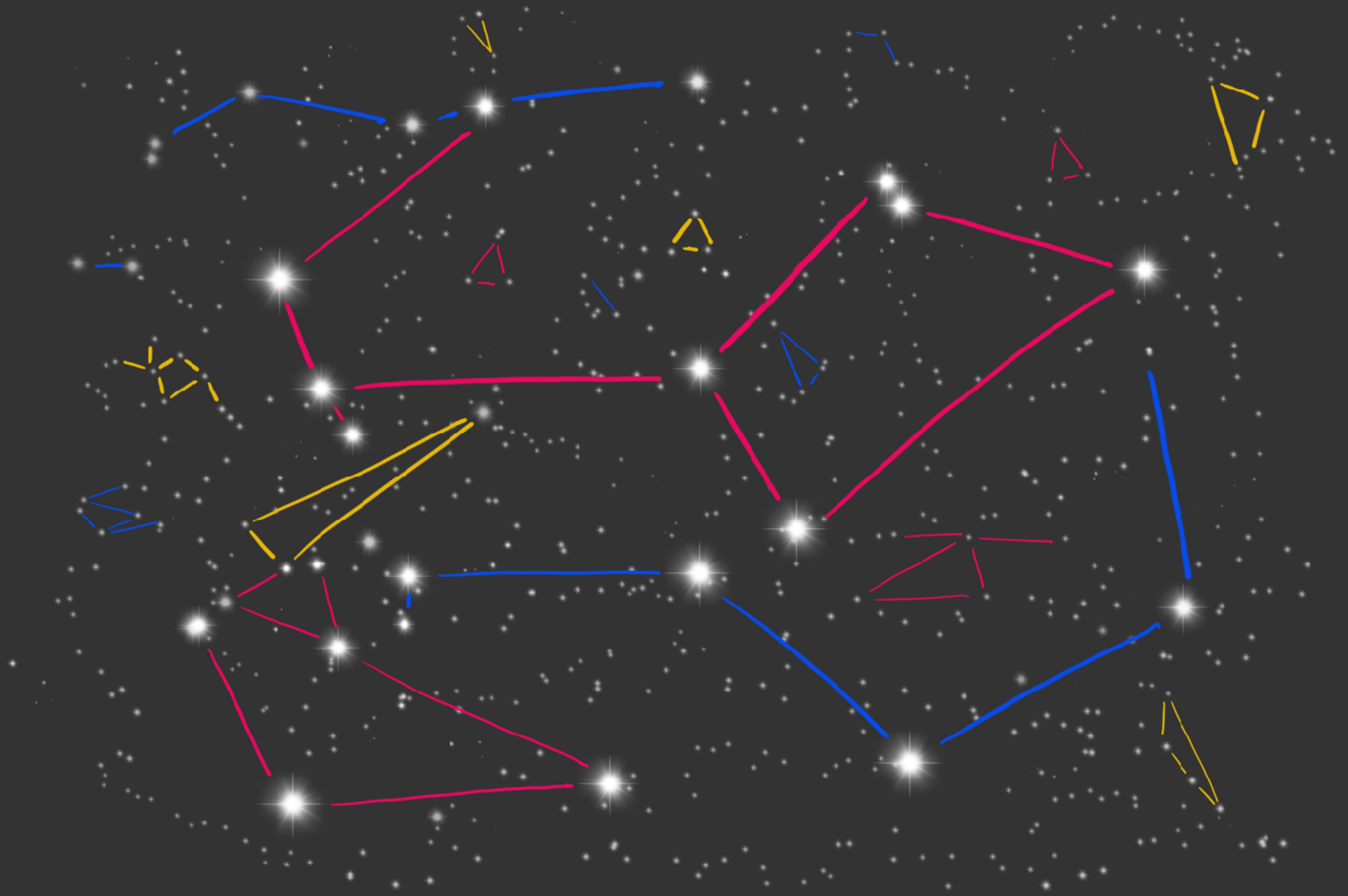
zoom level
universe
galaxies
constellations
planets
humans

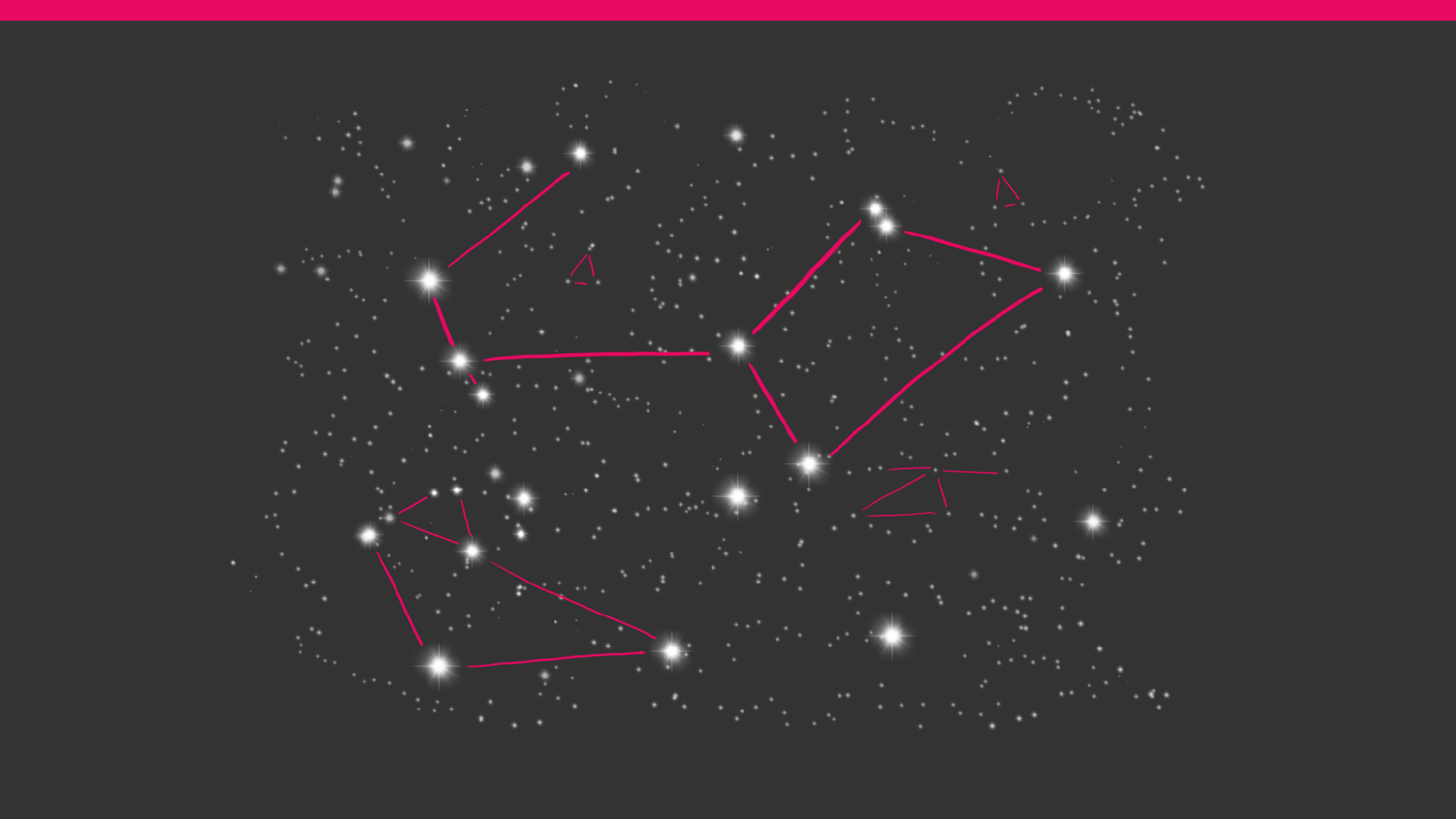
Linked Data

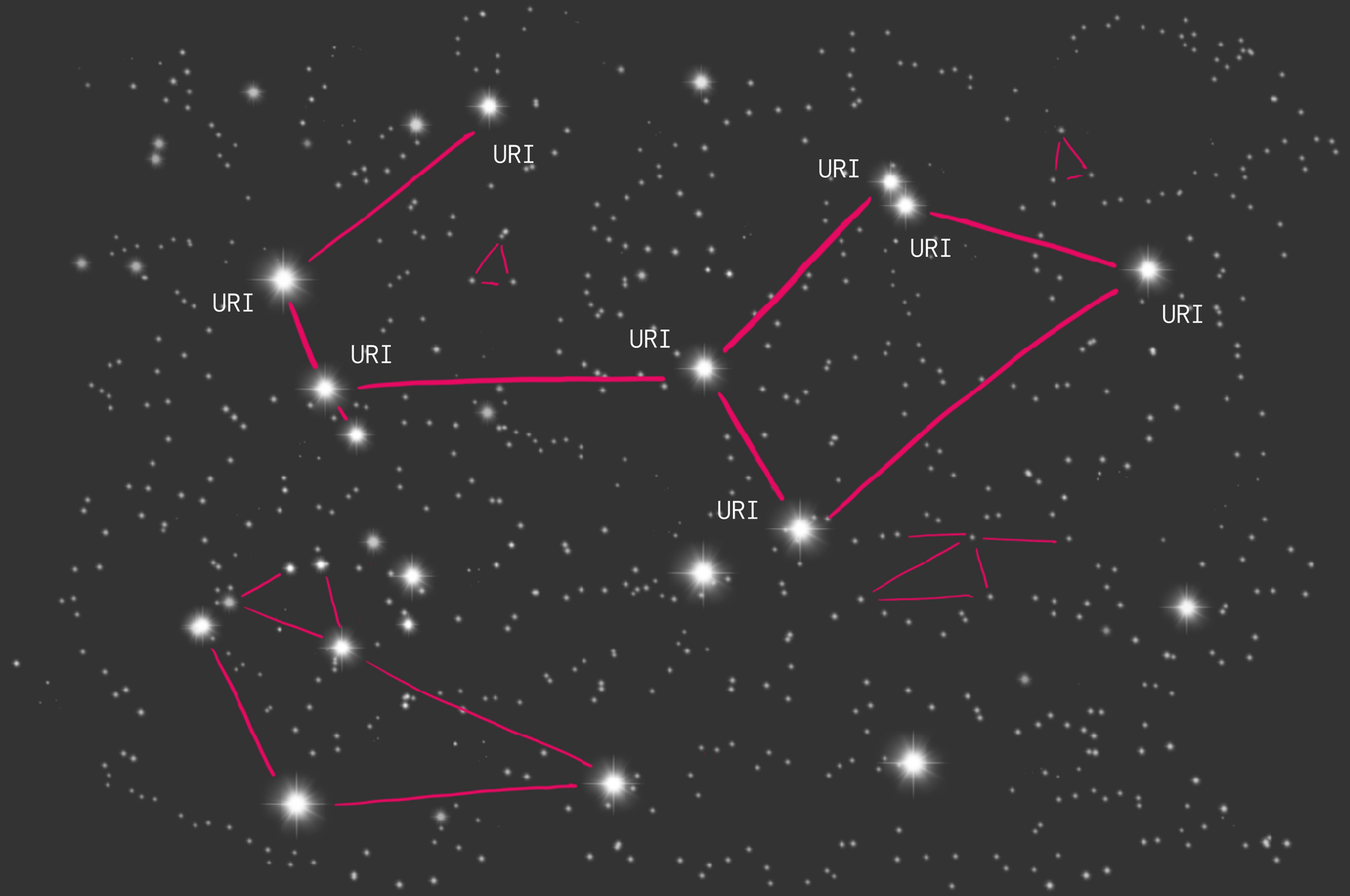
Galaxies of connections

zoom level

universe **galaxies** *constellations* *planets* *humans*



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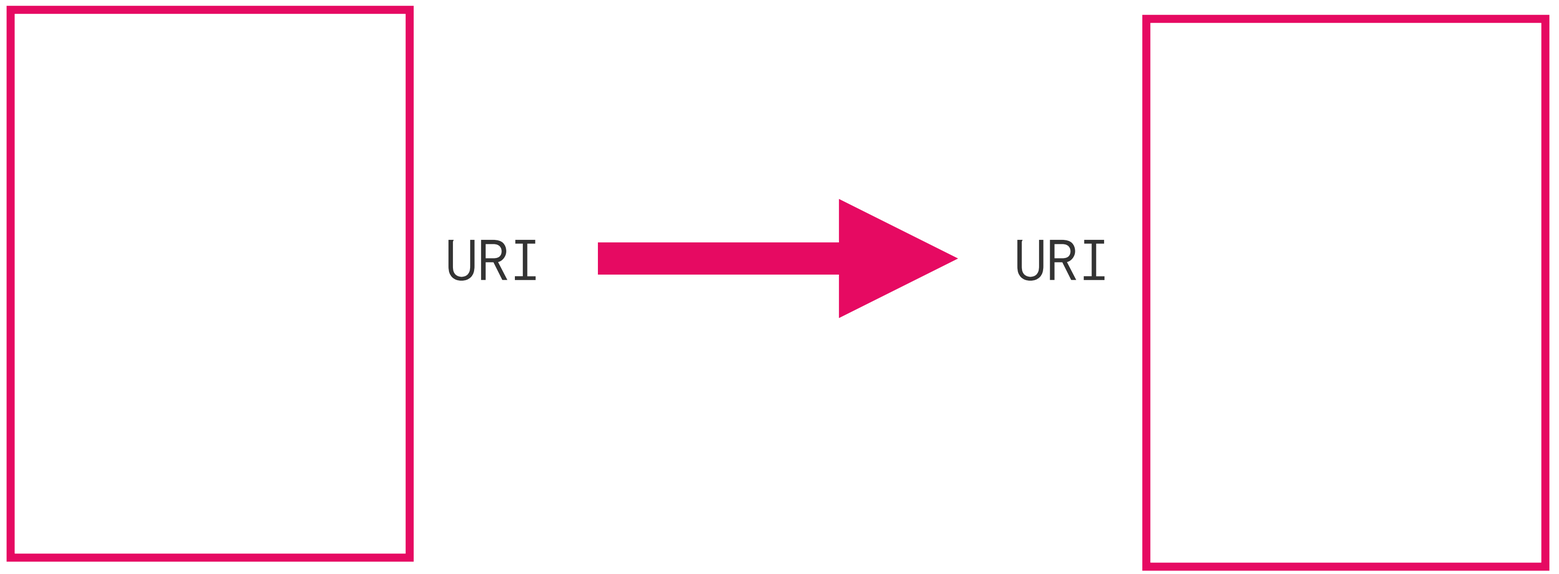
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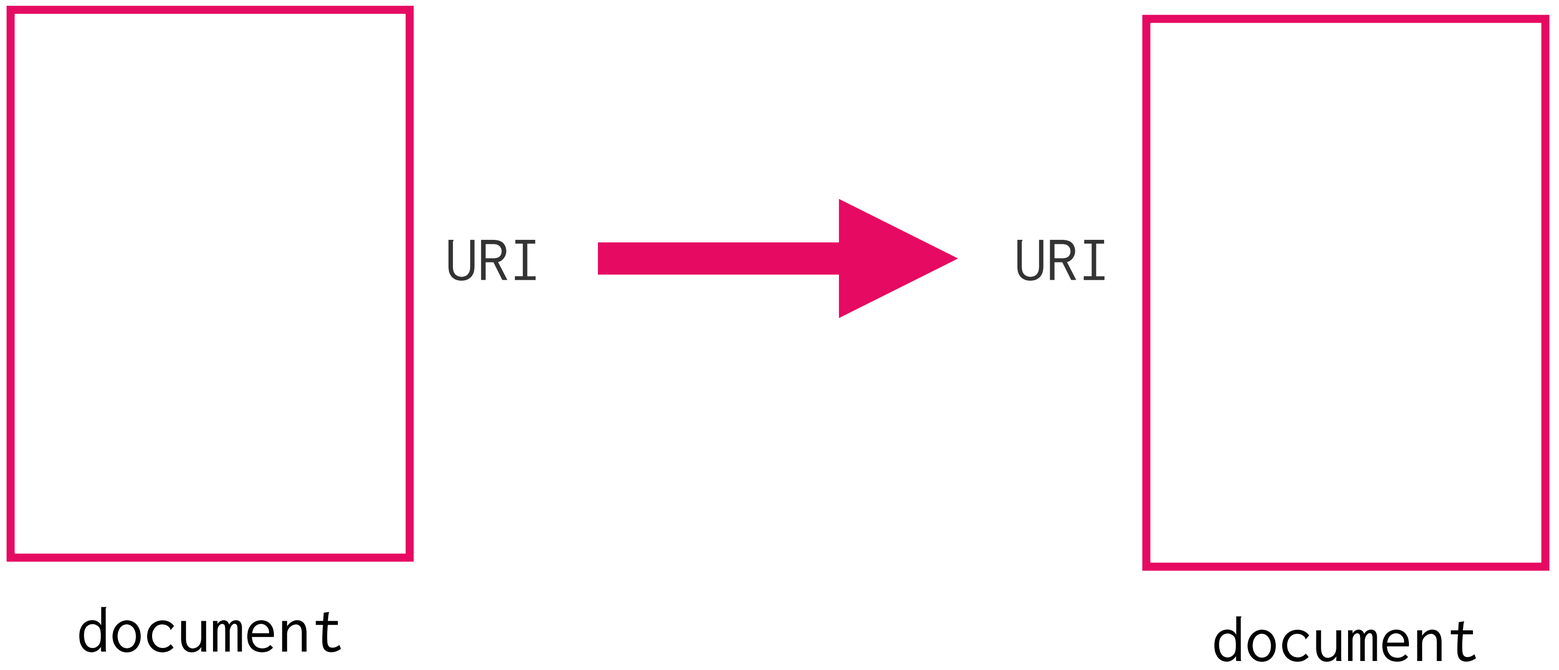

URI
URI
document
document

not just HTML documents, but…

people

not just HTML documents, but…

people ***places***

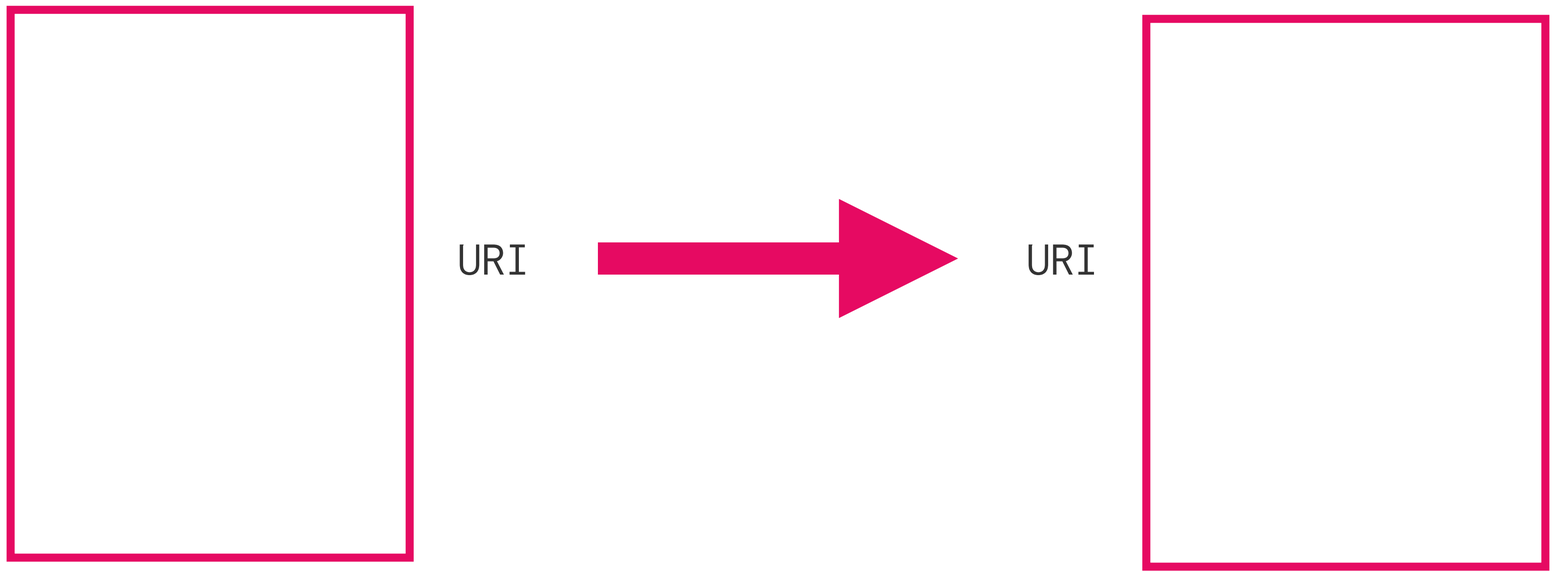
not just HTML documents, but…

people places ***books***

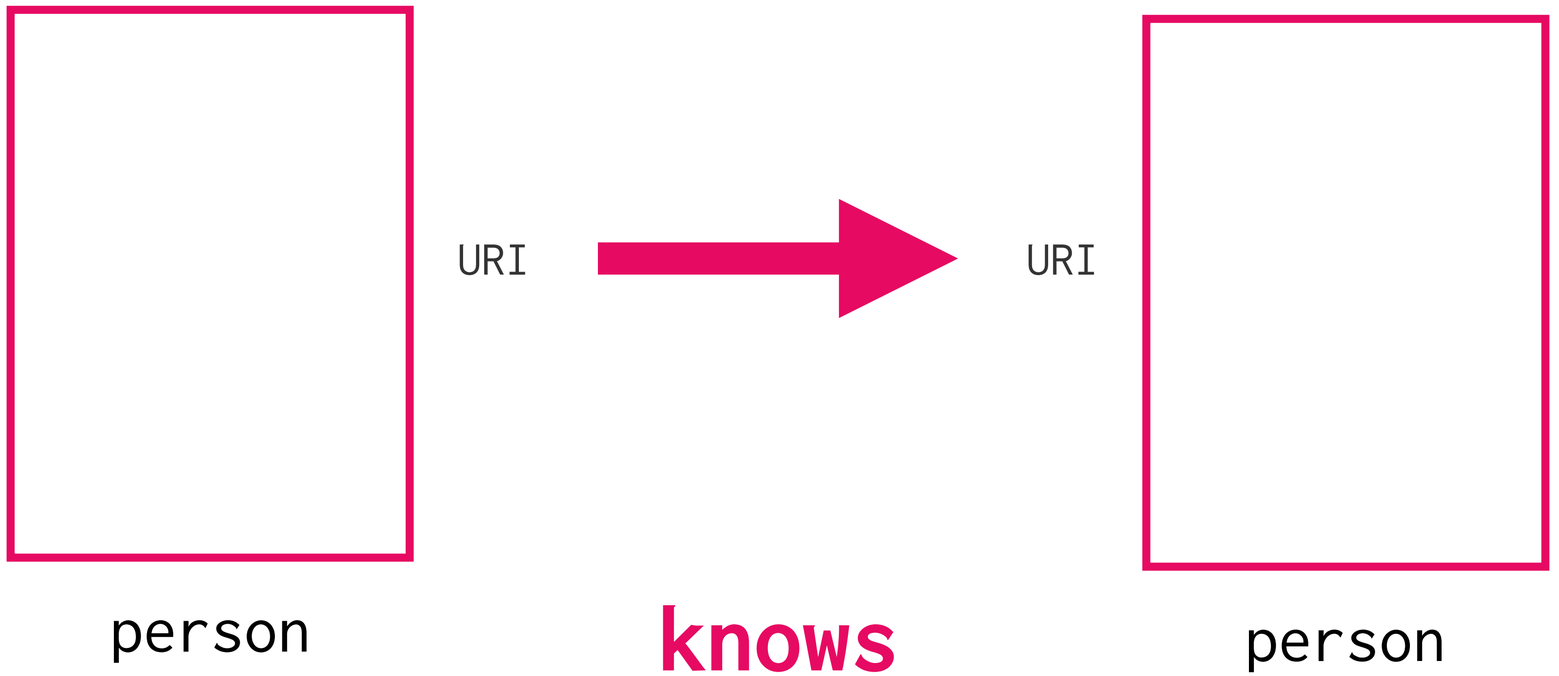
not just HTML documents, but…

people places books ***dinosaurs***

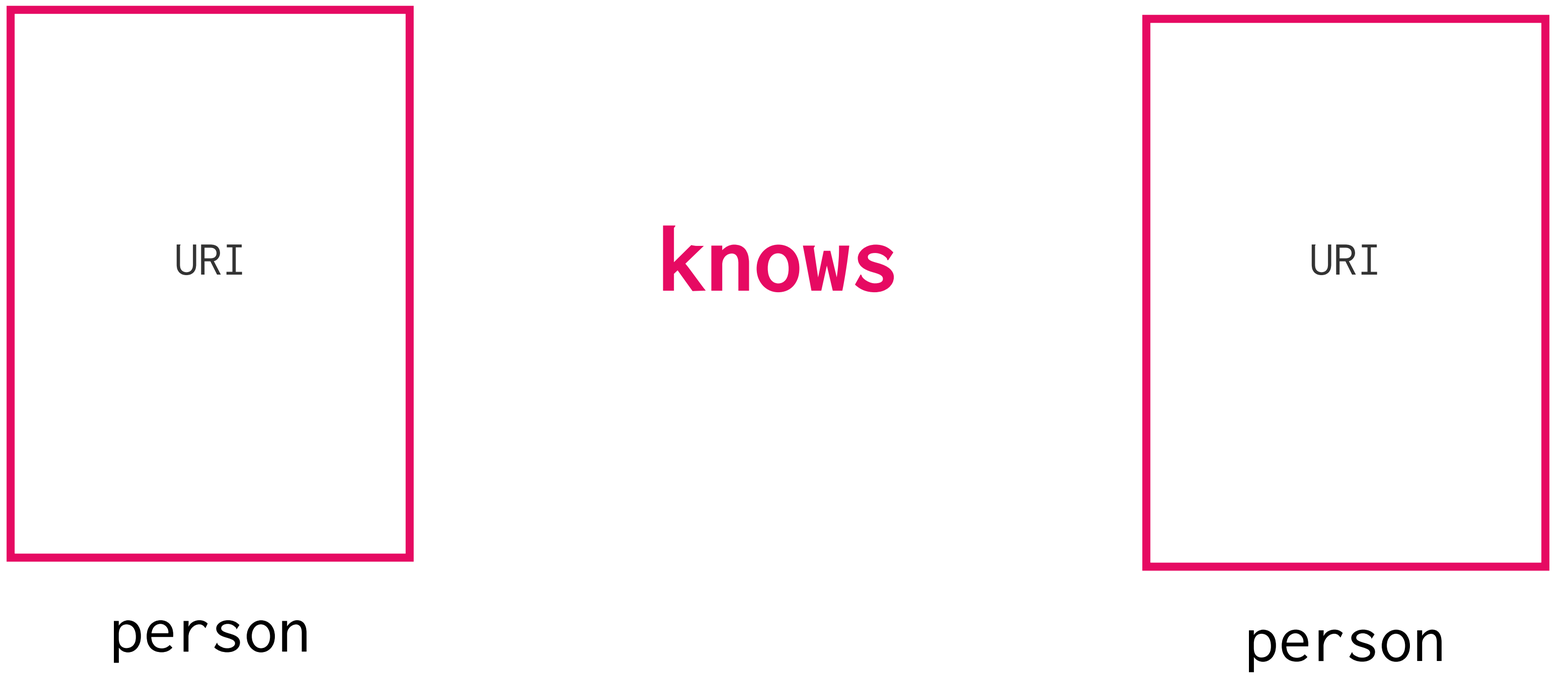
people



people

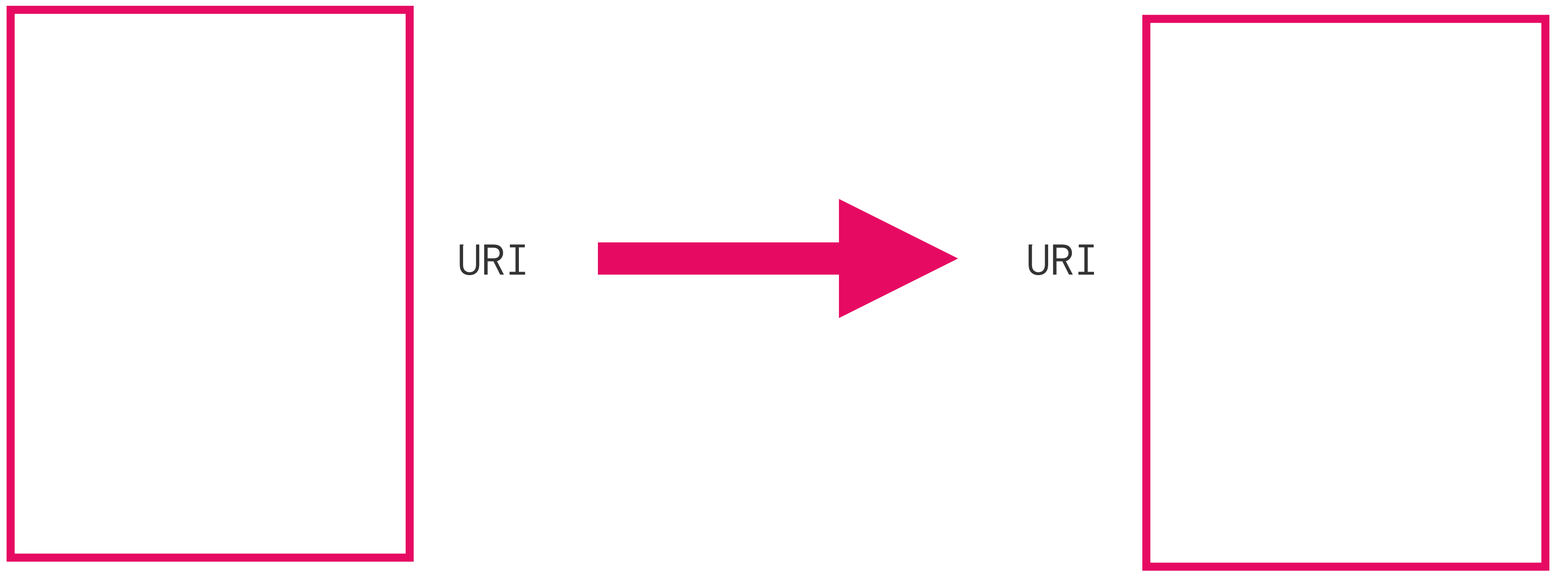


relationships

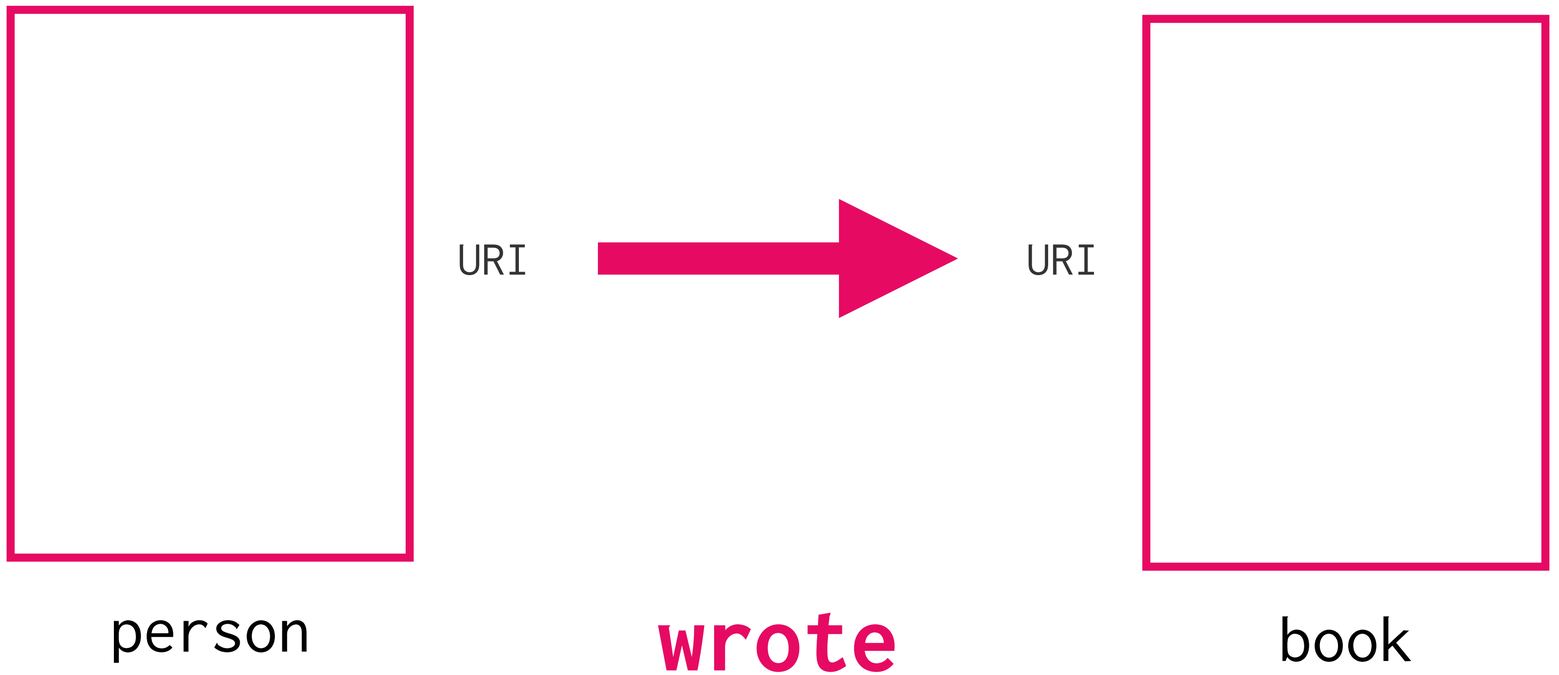


relationships

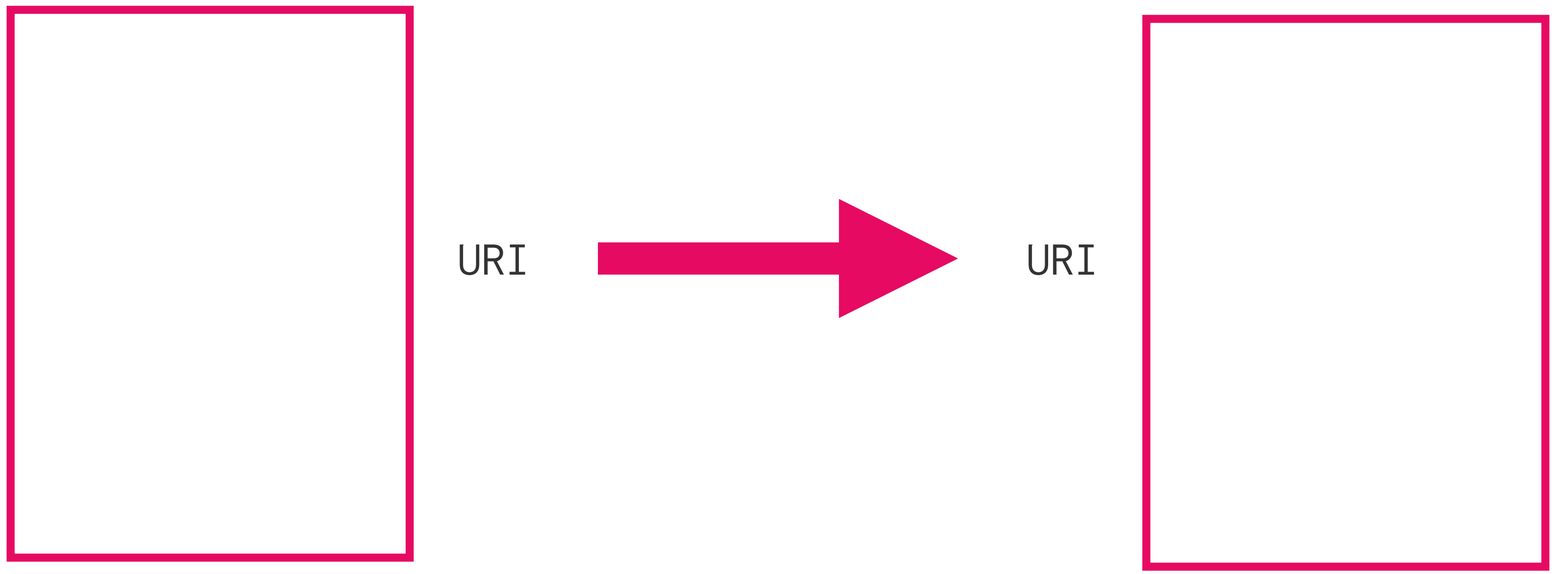
people and things



people and things



things and things



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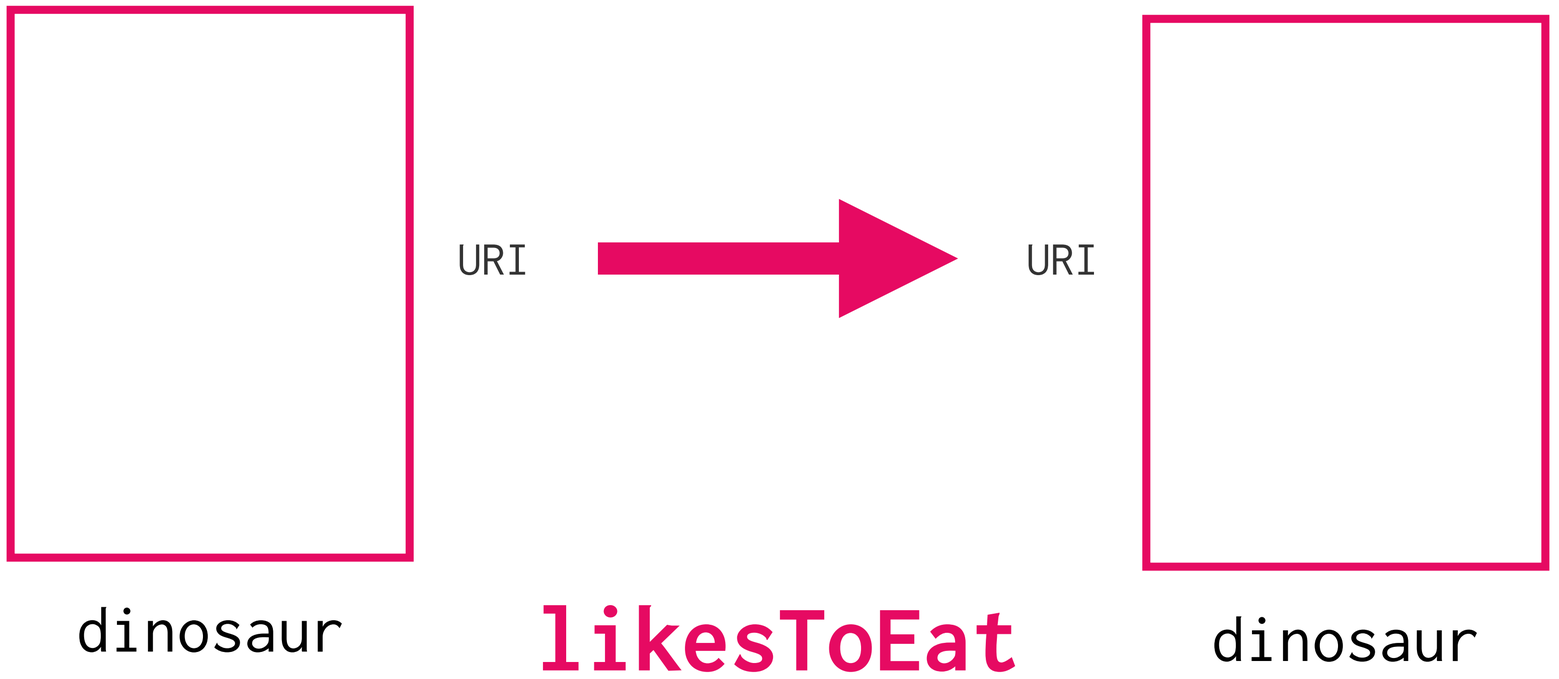

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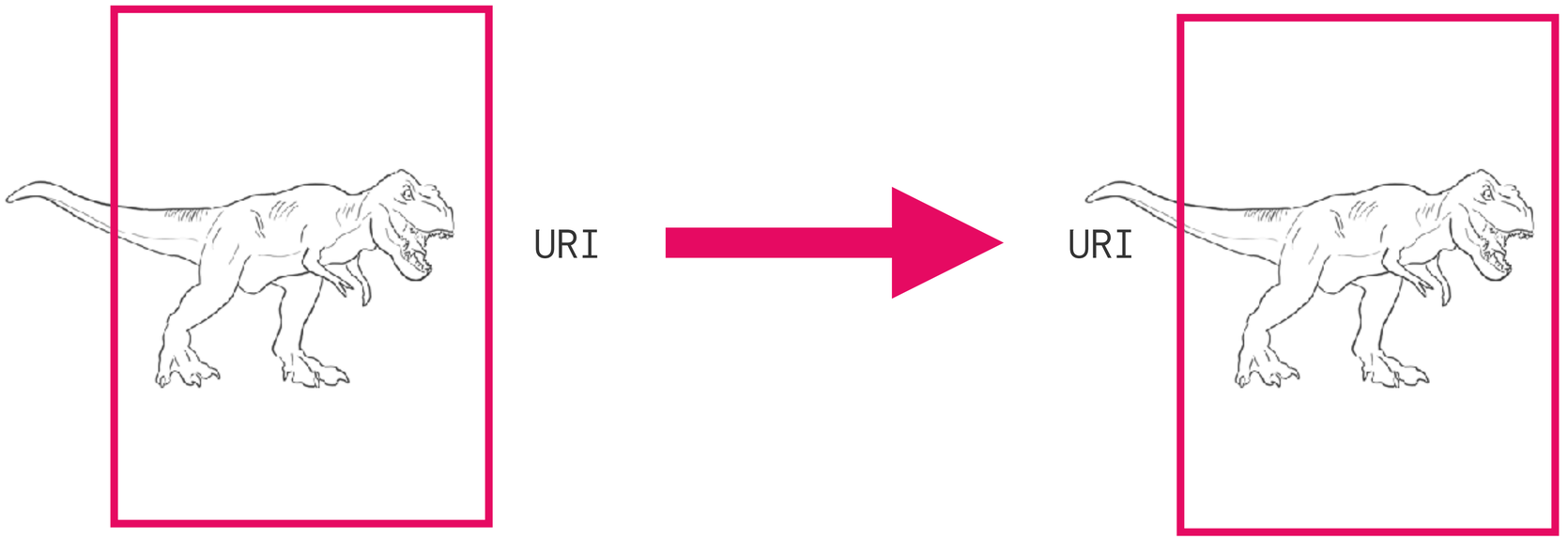
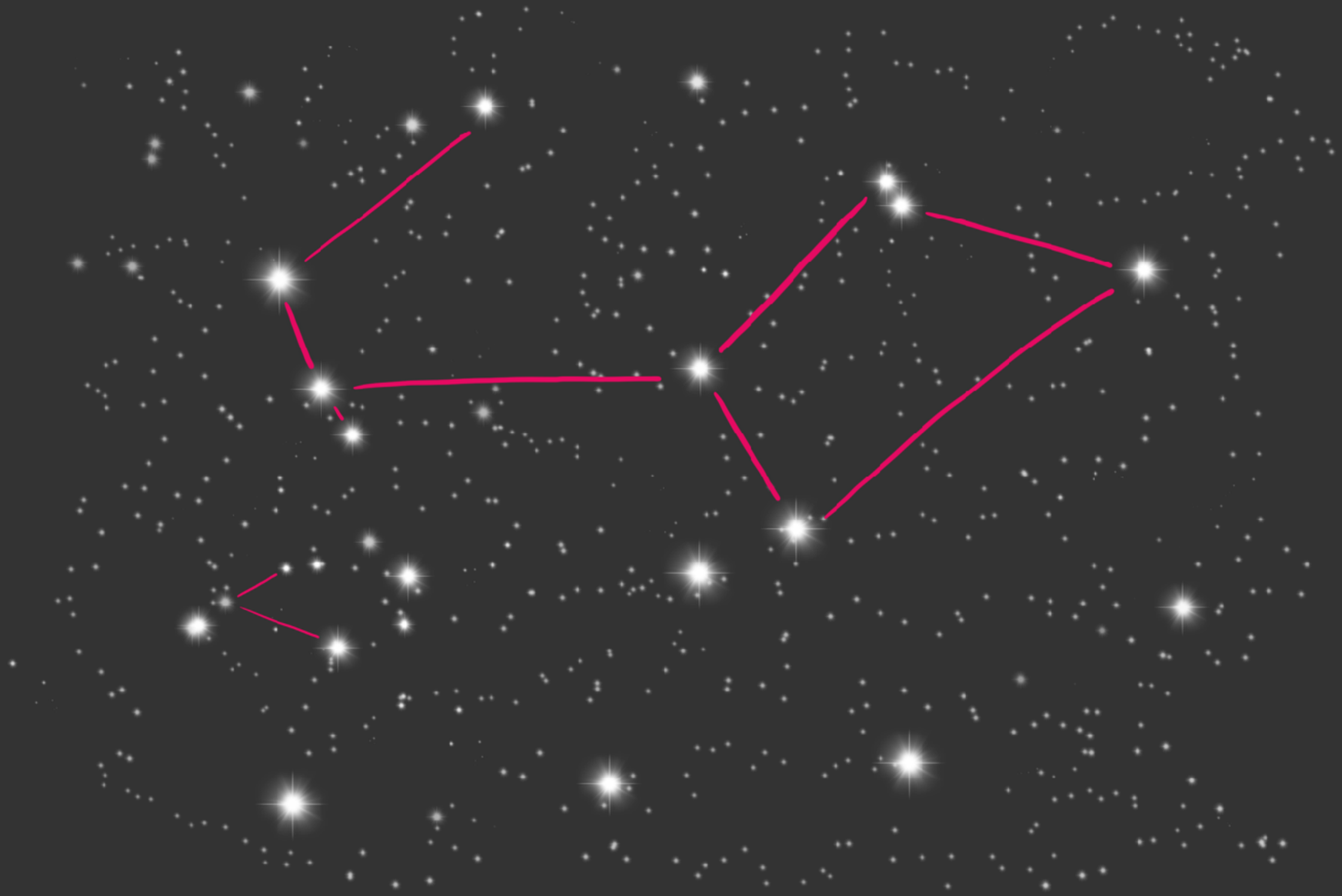
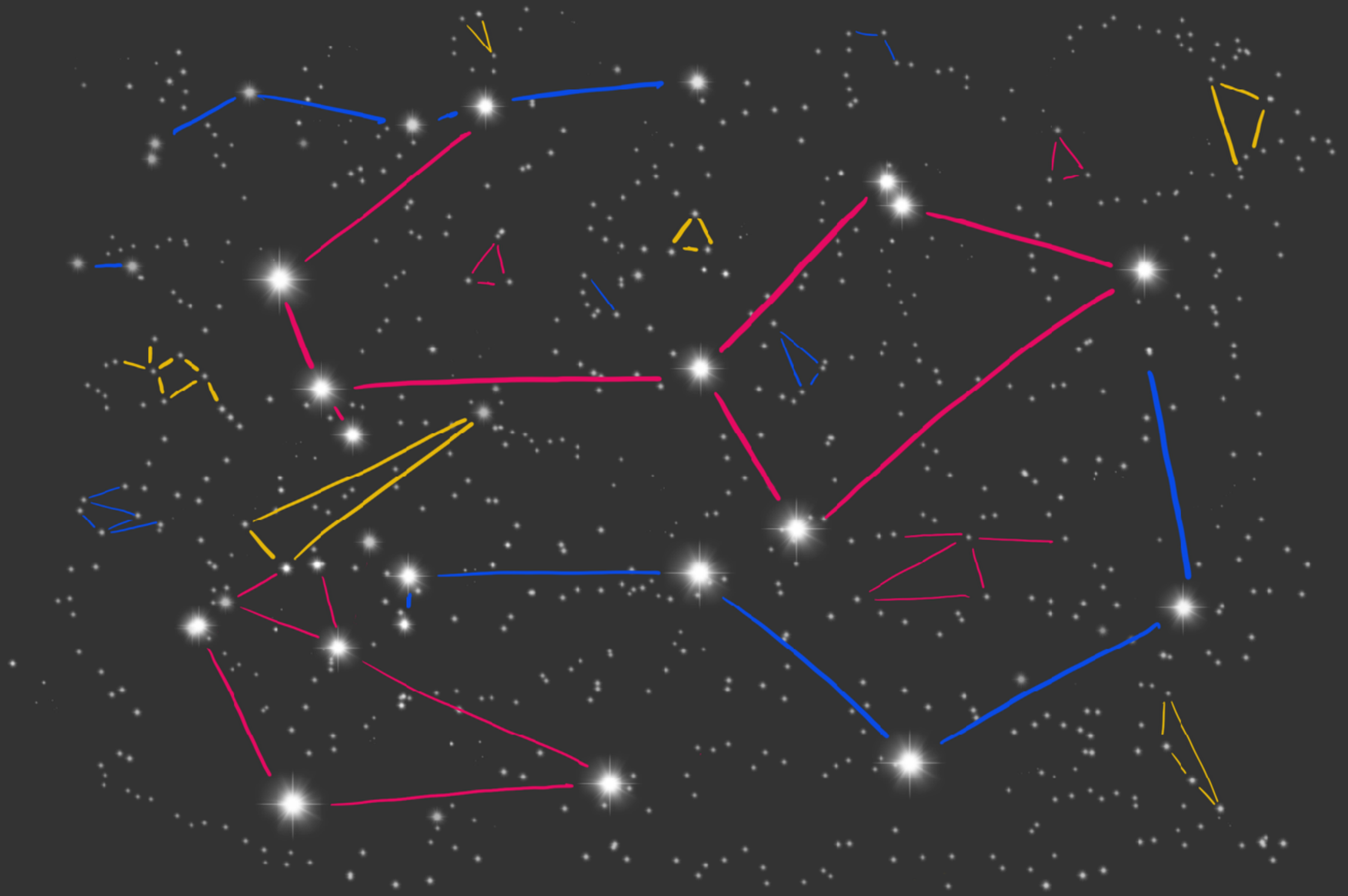


URI
relationship
URI
object
object

linked data





RDF

R

D

F

R *esource*

D *escription*

F *ramework*

RDF: Resource Description Framework

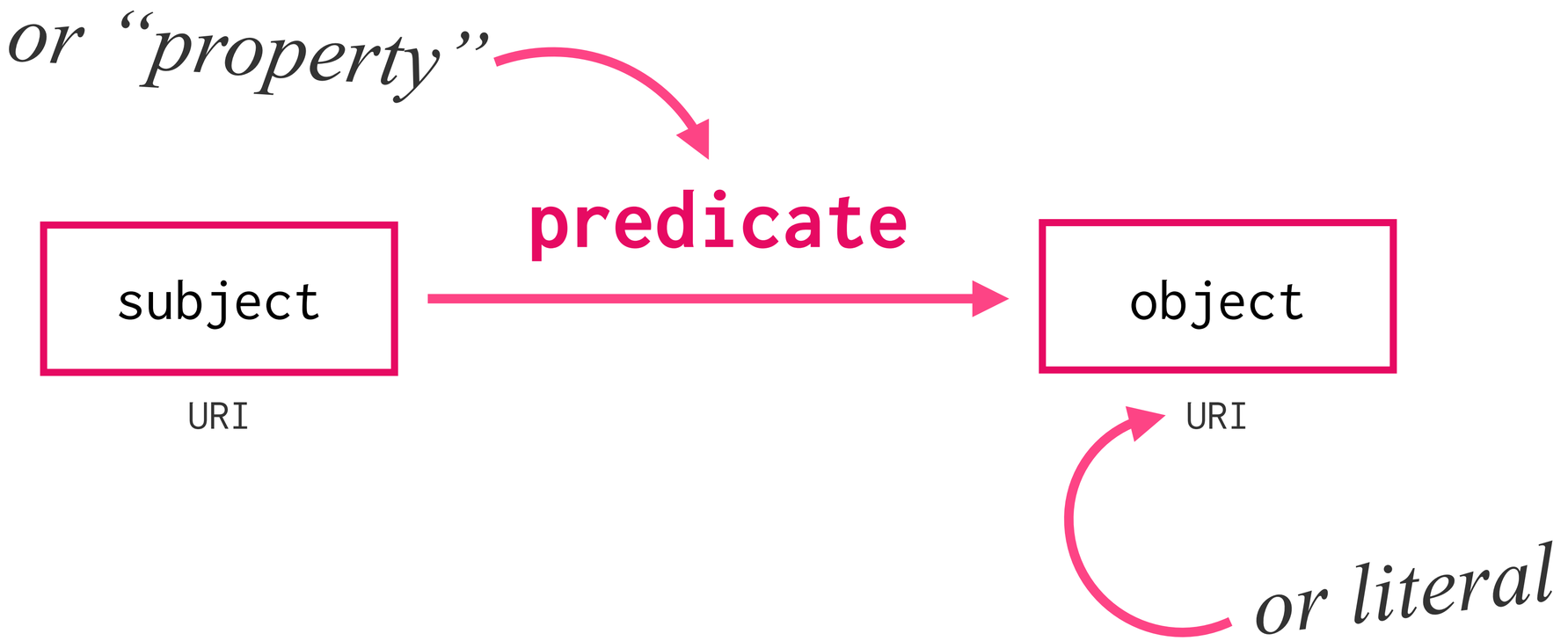
RDF Triples

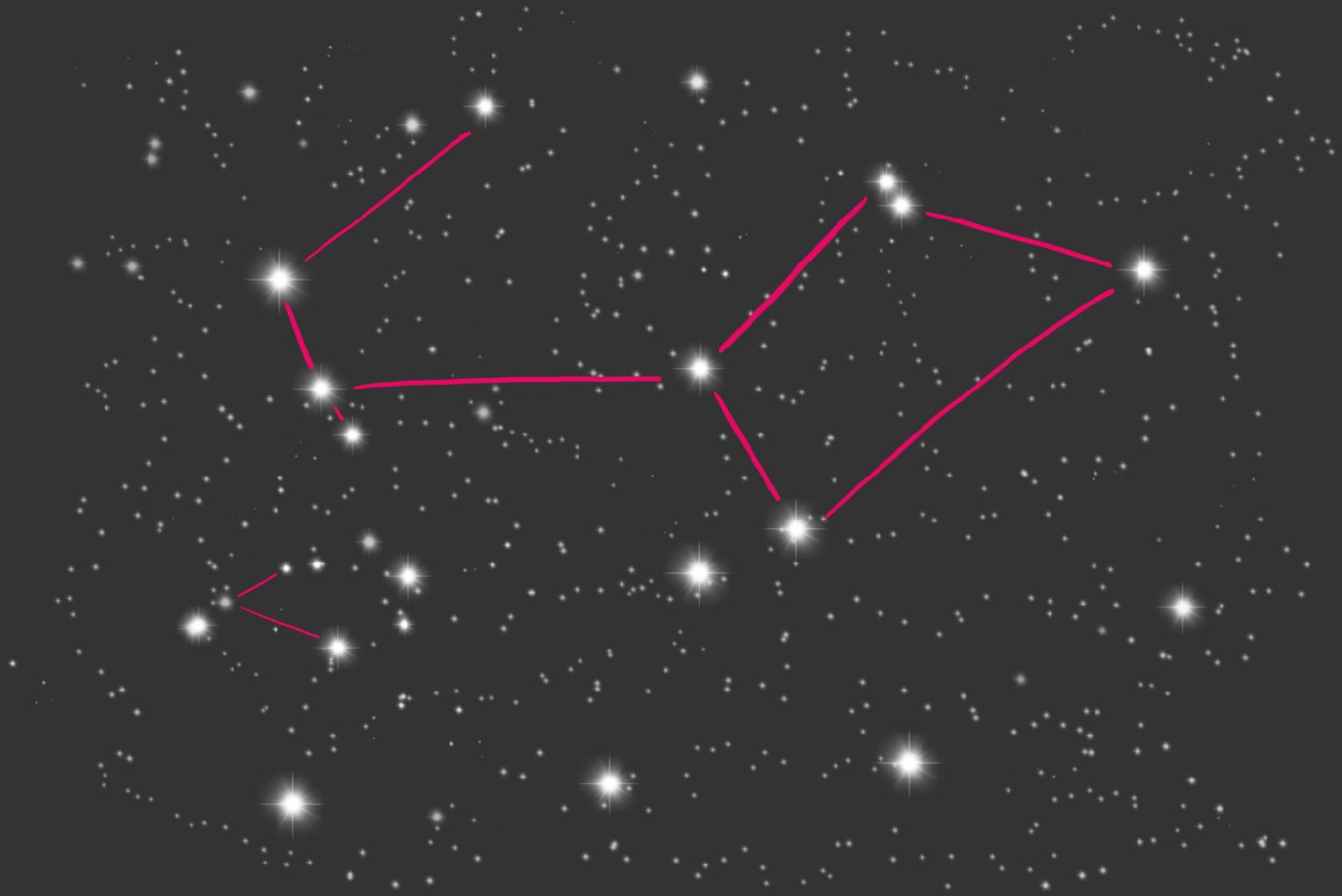
RDF Triples

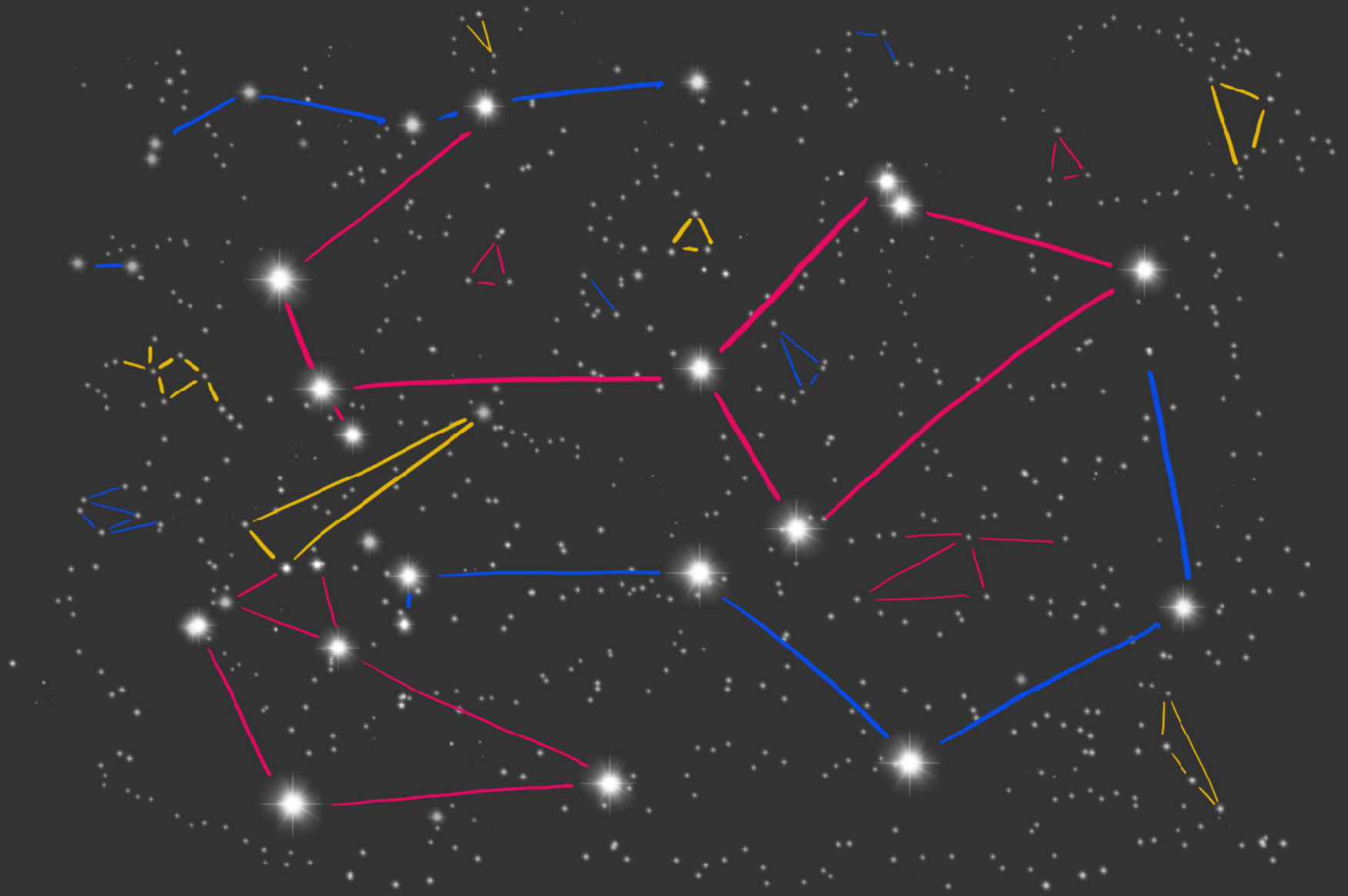
RDF Triples

RDF Triples

RDF Triples







Some HTML talking about myself

```
<div>
  <p>
    <span>Lyza Danger Gardner</span>,
    Email: <a href=“mailto:lyza@example.com”>lyza@example.com</a>,
    Phone: <a href=“tel:+1-503-555-1212“>+1 503.555.1212</a>
  </p>
</div>
```

Some HTML talking about myself

```
<div>
  <p>
    <span>Lyza Danger Gardner</span>,
    Email: <a href=“mailto:lyza@example.com”>lyza@example.com</a>,
    Phone: <a href=“tel:+1-503-555-1212“>+1 503.555.1212</a>
  </p>
</div>
```

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  <p>
    <span>Lyza Danger Gardner</span>,
    Email: <a href=“mailto:lyza@example.com”>lyza@example.com</a>,
    Phone: <a href=“tel:+1-503-555-1212“>+1 503.555.1212</a>
  </p>
</div>
```

RDF

RDFa

RDFa *ttributes*

Some HTML talking about myself

```
<div>
  <p>
    <span>Lyza Danger Gardner</span>,
    Email: <a href=“mailto:lyza@example.com”>lyza@example.com</a>,
    Phone: <a href=“tel:+1-503-555-1212“>+1 503.555.1212</a>
  </p>
</div>
```

F

O

A

F

Friend
Of
A
Friend

Some HTML talking about myself

```
<div>
  <p>
    <span>Lyza Danger Gardner</span>,
    Email: <a href=“mailto:lyza@example.com”>lyza@example.com</a>,
    Phone: <a href=“tel:+1-503-555-1212“>+1 503.555.1212</a>
  </p>
</div>
```

RDFa: FOAF

```
<div                                                    >
  <p>
    <span                    >Lyza Danger Gardner</span>,
    Email: <a                     href="mailto:lyza@example.com">lyza@example.com</a>,
    Phone: <a                      href="tel:+1-503-555-1212">+1 503.555.1212</a>
  </p>
</div>
```

RDFa: FOAF

```
<div vocab="http://xmlns.com/foaf/0.1/"                    >
  <p>
    <span                  >Lyza Danger Gardner</span>,
    Email: <a                   href="mailto:lyza@example.com">lyza@example.com</a>,
    Phone: <a                    href="tel:+1-503-555-1212">+1 503.555.1212</a>
  </p>
</div>
```

RDFa: FOAF

```
<div vocab=“http://xmlns.com/foaf/0.1/"                    >
  <p>
    <span                  >Lyza Danger Gardner</span>,
    Email: <a                   href=“mailto:lyza@example.com”>lyza@example.com</a>,
    Phone: <a                    href=“tel:+1-503-555-1212“>+1 503.555.1212</a>
  </p>
</div>
```

RDFa: FOAF

```
<div vocab=“http://xmlns.com/foaf/0.1/“ typeof="Person">
  <p>
    <span                    >Lyza Danger Gardner</span>,
    Email: <a                     href=“mailto:lyza@example.com”>lyza@example.com</a>,
    Phone: <a                      href=“tel:+1-503-555-1212“>+1 503.555.1212</a>
  </p>
</div>
```

RDFa: FOAF

```
<div vocab=“http://xmlns.com/foaf/0.1/“ typeof="Person">
  <p>
    <span                    >Lyza Danger Gardner</span>,
    Email: <a                     href=“mailto:lyza@example.com”>lyza@example.com</a>,
    Phone: <a                      href=“tel:+1-503-555-1212“>+1 503.555.1212</a>
  </p>
</div>
```

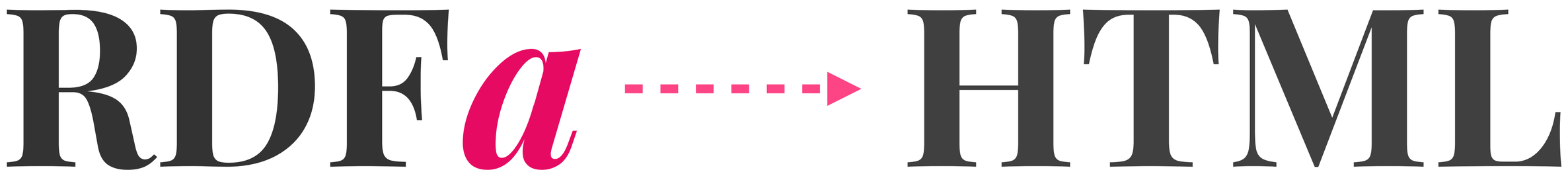
RDFa: FOAF

```
<div vocab="http://xmlns.com/foaf/0.1/" typeof="Person">
  <p>
    <span property=“name">Lyza Danger Gardner</span>,
    Email: <a property="mbox" href=“mailto:lyza@example.com”>lyza@example.com</a>,
    Phone: <a property="phone" href=“tel:+1-503-555-1212“>+1 503.555.1212</a>
  </p>
</div>
```

RDFa: FOAF

```
<div vocab="http://xmlns.com/foaf/0.1/" typeof="Person">
  <p>
    <span property=“name">Lyza Danger Gardner</span>,
    Email: <a property="mbox" href=“mailto:lyza@example.com”>lyza@example.com</a>,
    Phone: <a property="phone" href=“tel:+1-503-555-1212“>+1 503.555.1212</a>
  </p>
</div>
```

RDF*a*


RDFa
HTML

JSON

J

S

O

N

J*ava*

S*cript*

O*bject*

N*otation*

JSON

```
{
  "name": "Lyza Danger Gardner",
  "homepage": "http://www.lyza.com/",
  "picture": "http://twitter.com/account/profile_image/lyzadanger"
}
```

JSON

```
{
  "name": "Lyza Danger Gardner",
  "homepage": "http://www.lyza.com/",
  "picture": "http://twitter.com/account/profile_image/lyzadanger"
}
```

JSON

JSON-

JSON-LD

JSON LD

JSON

Linked Data

JSON

```
{
  "name": "Lyza Danger Gardner",
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  "picture": "http://twitter.com/account/profile_image/lyzadanger"
}
```

JSON-LD

```
{
  "@context": {
    "xsd": "http://www.w3.org/2001/XMLSchema#",
    "foaf": "http://xmlns.com/foaf/0.1/",
  },
  "@id": "http://me.lyza.com/",
  "@type": "foaf:Person",
  "foaf:name": "Lyza Danger Gardner",
}
```

JSON-LD

```
{
  "@context": {
     "xsd": "http://www.w3.org/2001/XMLSchema#",
     "foaf": "http://xmlns.com/foaf/0.1/",
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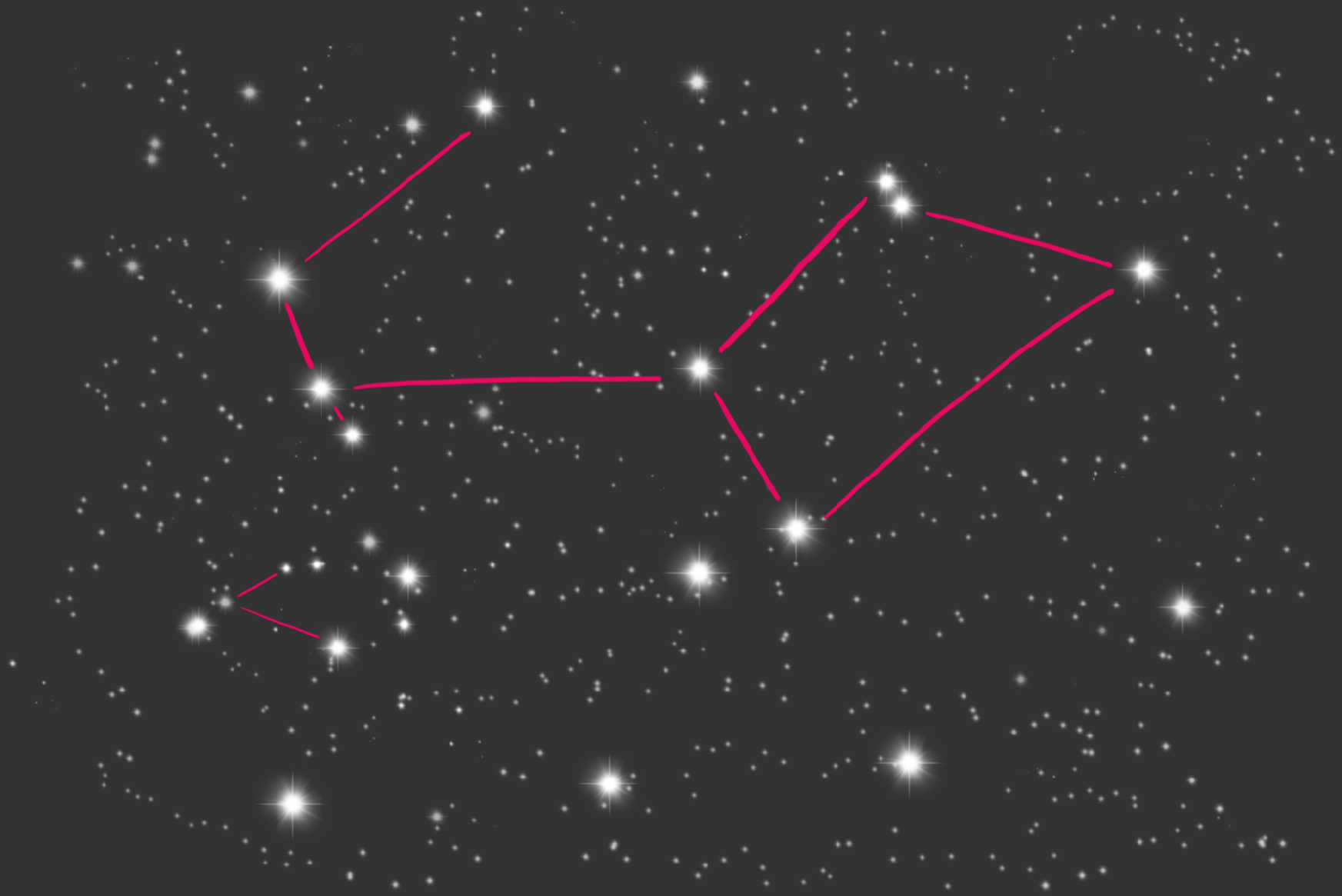
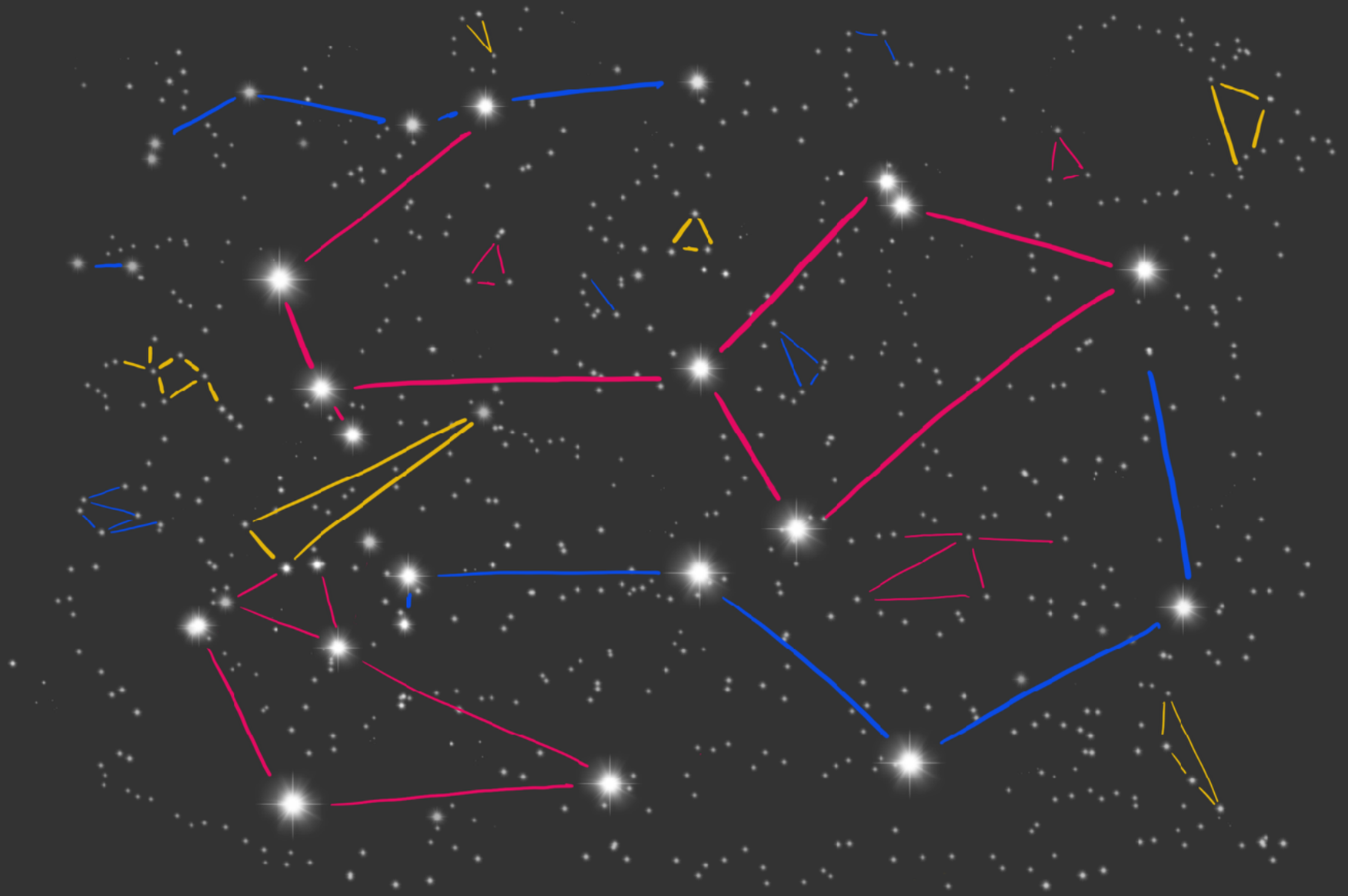
```

RDF*a* HTML

RDF*a* ⇢ HTML

JSON*LD* ⇢ JSON





Then *2001* *2009* *2010* *2011* *2014* *Now*

How did we get here?

Web Annotation Pre-History

zoom level

universe *galaxies* *constellations* *planets* *humans*

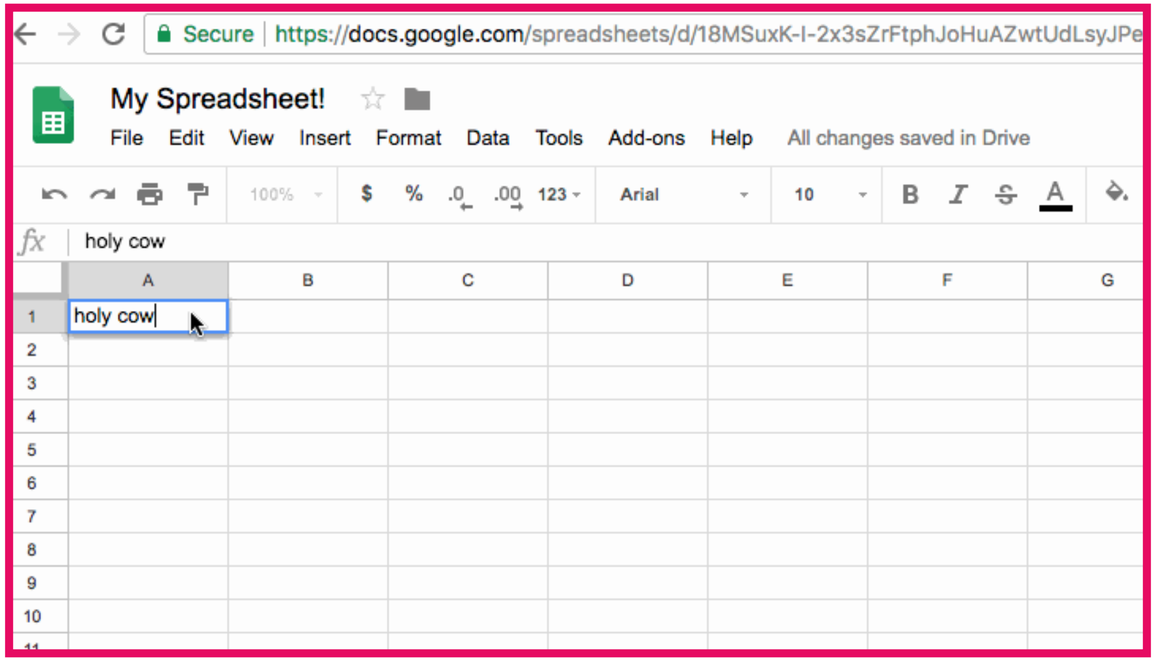
Web Annotation Pre-History

Constellations on the web

Web 2.0

Web 2.0

App-like Web Things



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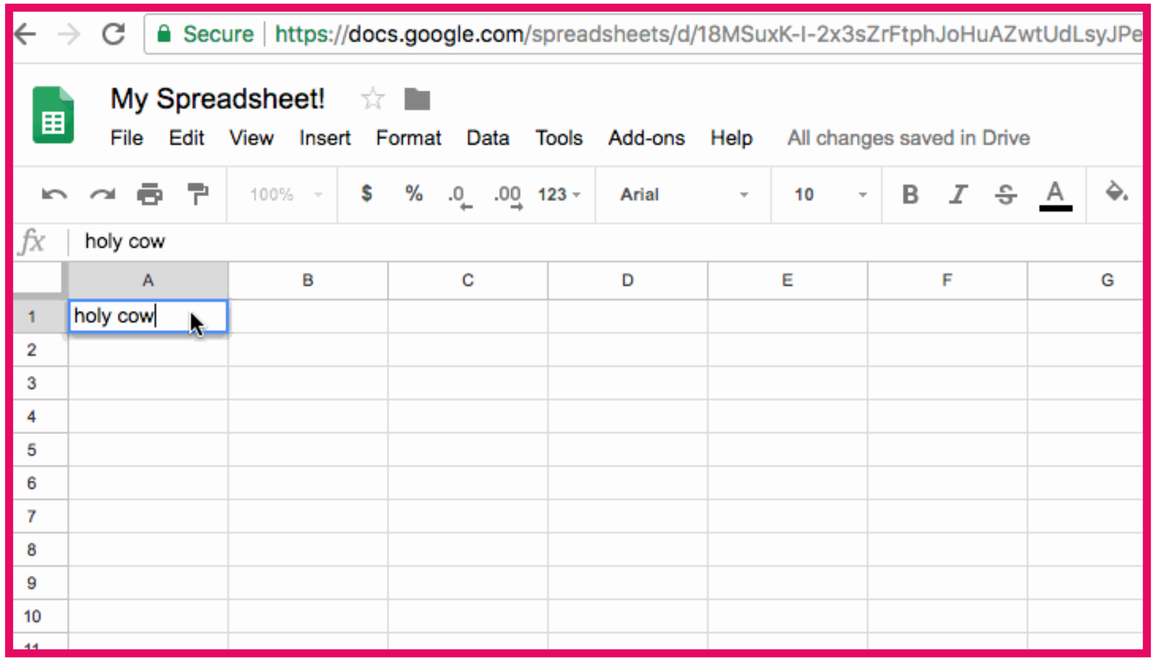

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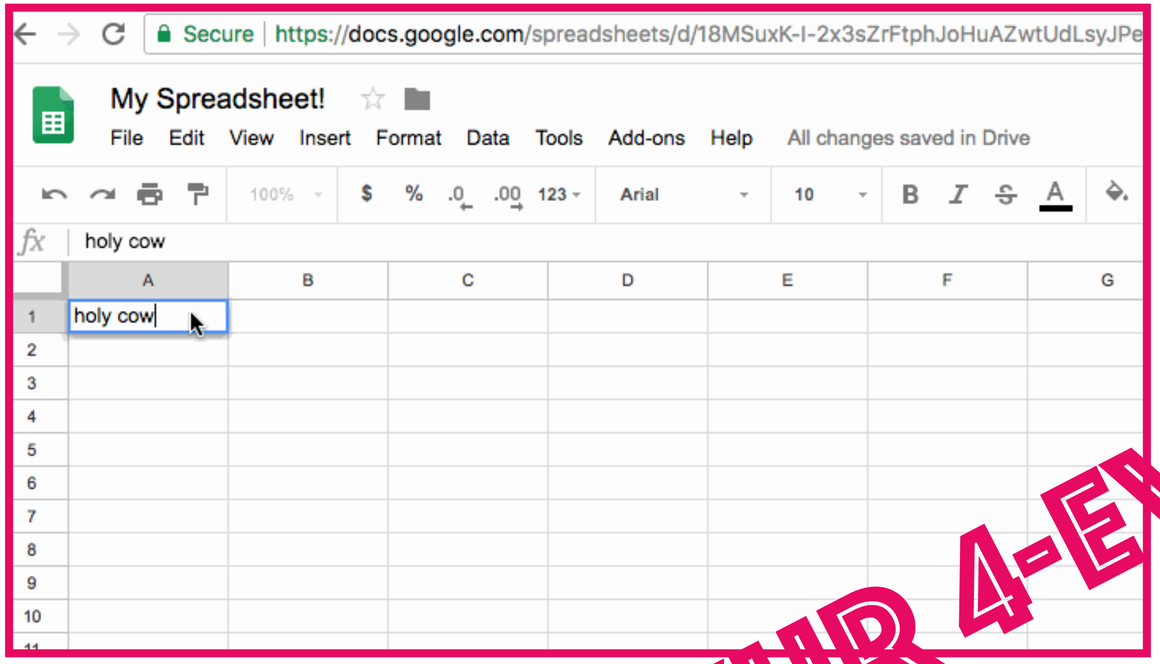


XHR 4-EVER!

https://www.flickr.com/photos/joi/2757536235/sizes/o/in/photostream/

Marc Andreessen

co-founder, Netscape

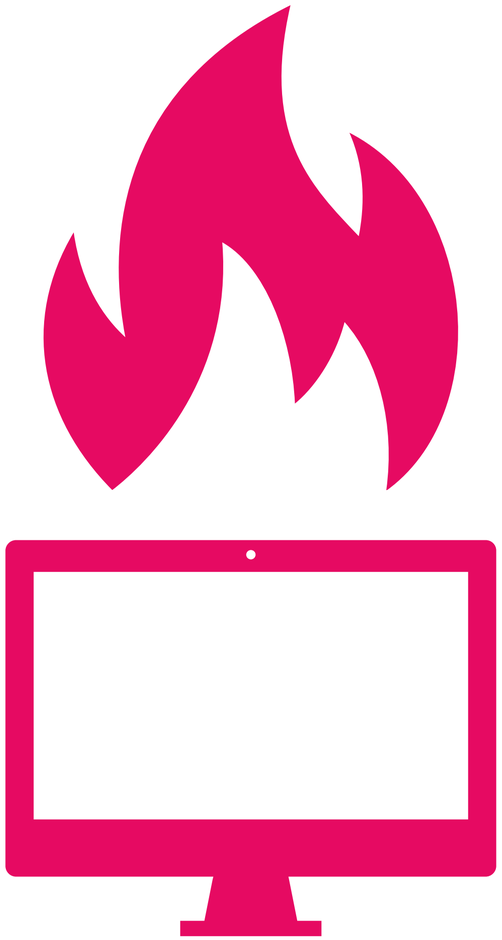
1990s 2001 2009 2010 2011 2014 2017

Early Netscape

technology not ready

but the desire was there...

but the desire was there...

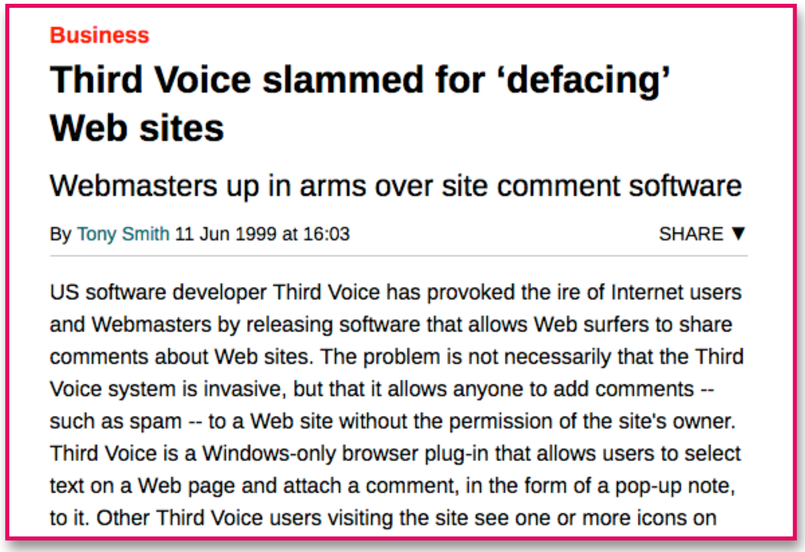


1990s 2001 2009 2010 2011 2014 2017

Third Voice

Third Voice

Third Voice



Business

Third Voice slammed for ‘defacing’ Web sites

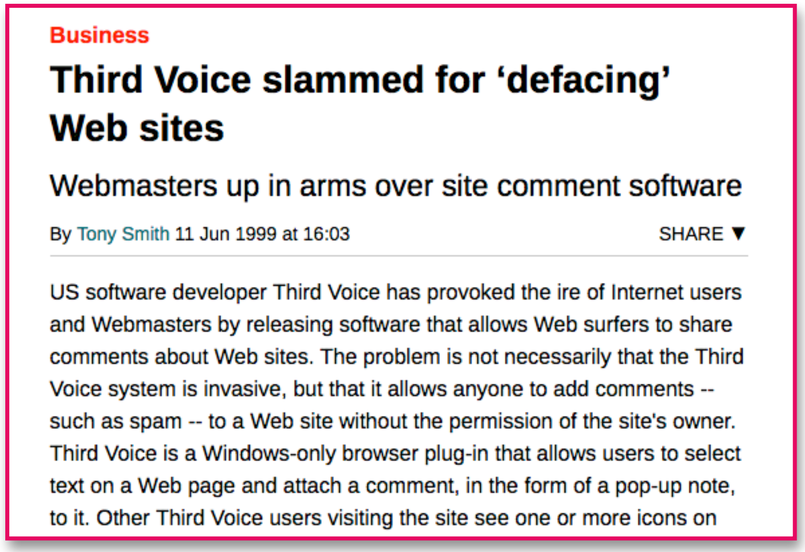
Webmasters up in arms over site comment software

By Tony Smith 11 Jun 1999 at 16:03 SHARE ▼

US software developer Third Voice has provoked the ire of Internet users and Webmasters by releasing software that allows Web surfers to share comments about Web sites. The problem is not necessarily that the Third Voice system is invasive, but that it allows anyone to add comments -- such as spam -- to a Web site without the permission of the site's owner. Third Voice is a Windows-only browser plug-in that allows users to select text on a Web page and attach a comment, in the form of a pop-up note, to it. Other Third Voice users visiting the site see one or more icons on

https://www.theregister.co.uk/1999/06/11/third_voice_slammed_for_defacing/

Third Voice



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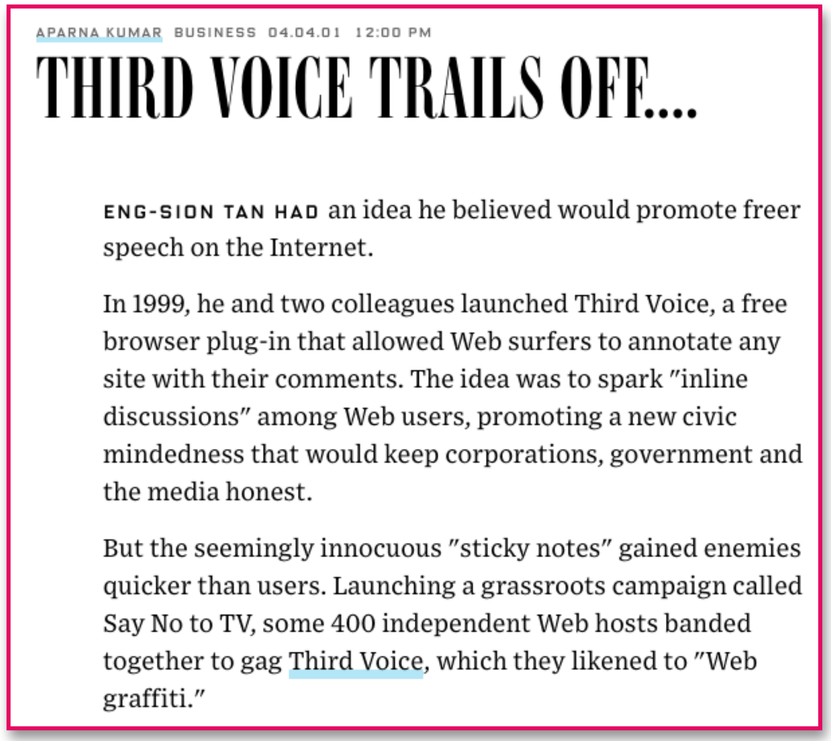


APARNA KUMAR BUSINESS 04.04.01 12:00 PM

THIRD VOICE TRAILS OFF....

ENG-SION TAN HAD an idea he believed would promote freer speech on the Internet.

In 1999, he and two colleagues launched Third Voice, a free browser plug-in that allowed Web surfers to annotate any site with their comments. The idea was to spark "inline discussions" among Web users, promoting a new civic mindedness that would keep corporations, government and the media honest.

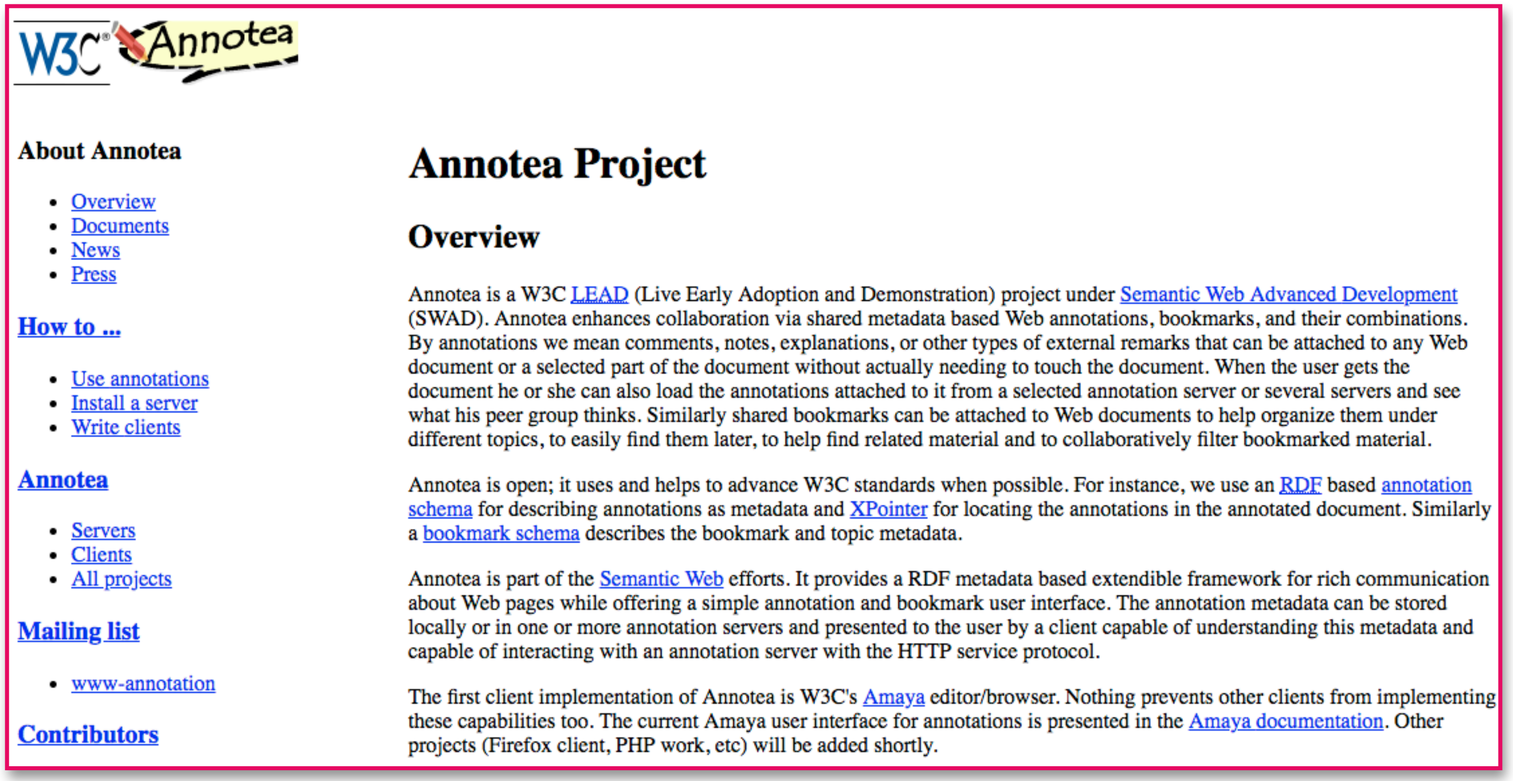
But the seemingly innocuous "sticky notes" gained enemies quicker than users. Launching a grassroots campaign called Say No to TV, some 400 independent Web hosts banded together to gag Third Voice, which they likened to "Web graffiti."

https://www.wired.com/2001/04/third-voice-trails-off/

1990s 2001 2009 2010 2011 2014 2017

W3C: Annotea

Annotea



W3C Annotea

About Annotea

- Overview
- Documents
- News
- Press

How to ...

- Use annotations
- Install a server
- Write clients

Annotea

- Servers
- Clients
- All projects

Mailing list

- www-annotation

Contributors

Annotea Project

Overview

Annotea is a W3C LEAD (Live Early Adoption and Demonstration) project under Semantic Web Advanced Development (SWAD). Annotea enhances collaboration via shared metadata based Web annotations, bookmarks, and their combinations. By annotations we mean comments, notes, explanations, or other types of external remarks that can be attached to any Web document or a selected part of the document without actually needing to touch the document. When the user gets the document he or she can also load the annotations attached to it from a selected annotation server or several servers and see what his peer group thinks. Similarly shared bookmarks can be attached to Web documents to help organize them under different topics, to easily find them later, to help find related material and to collaboratively filter bookmarked material.

Annotea is open; it uses and helps to advance W3C standards when possible. For instance, we use an RDF based annotation schema for describing annotations as metadata and XPointer for locating the annotations in the annotated document. Similarly a bookmark schema describes the bookmark and topic metadata.

Annotea is part of the Semantic Web efforts. It provides a RDF metadata based extendible framework for rich communication about Web pages while offering a simple annotation and bookmark user interface. The annotation metadata can be stored locally or in one or more annotation servers and presented to the user by a client capable of understanding this metadata and capable of interacting with an annotation server with the HTTP service protocol.

The first client implementation of Annotea is W3C's Amaya editor/browser. Nothing prevents other clients from implementing these capabilities too. The current Amaya user interface for annotations is presented in the Amaya documentation. Other projects (Firefox client, PHP work, etc) will be added shortly.

https://www.w3.org/2001/Annotea/

1990s 2001 2009 2010 2011 2014 2017

Google Sidewiki

Google Sidewiki

Friday, September 03, 2010

New Sidewiki “Sidebar” web element

We are very pleased to announce a new Sidewiki “sidebar” web element. Google Sidewiki allows visitors to your website to contribute helpful information and read other visitors’ insights alongside the pages of the website. The new web element is a Sidewiki button, which, when clicked, displays a fully functional Sidewiki sidebar to the left of the page content. This means that your visitors can see the Sidewiki content for your page even if they don’t have Google Toolbar or the Sidewiki Chrome extension installed.

You can choose from several different look and feels created by Google or even create a new custom one. Use our wizard to choose the desired look and behavior, embed the generated code in your page, and you’re done. Here's a sketch of what it looks like when a visitor is looking at the Sidewiki content.

http://googlecode.blogspot.com/2010/09/new-sidewiki-sidebar-web-element.html

1990s 2001 2009 2010 2011 2014 2017

Open Annotation Collaboration & Annotation Ontology

1990s 2001 2009 2010 **2011** 2014 2017

Open Annotation Community Group

1990s 2001 2009 2010 2011 2014 2017

Web Annotation Working Group (WAWG)

1990s 2001 2009 2010 2011 2014 2017

Web Annotation Standard

WAWG Output

3 Technical Reports (TRs)

Web Annotation Standard

Web Annotation Standard

- ***Web Annotation Model***
  what an annotation is and what its main parts are

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  how to express things about an annotation

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  what an annotation is and what its main parts are
- ***Web Annotation Vocabulary***
  how to express things about an annotation
- ***Web Annotation Protocol***
  how to exchange annotations between systems

WAWG Objectives

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- ***interoperability***
  centered on the URI, web foundations

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- ***interoperability***
  centered on the URI, web foundations
- ***generalized model***
  “orthogonal to the domain of interest”
- ***simple, inexpensive implementation***
  un-opinionated about specific technologies

Web Annotation Basics

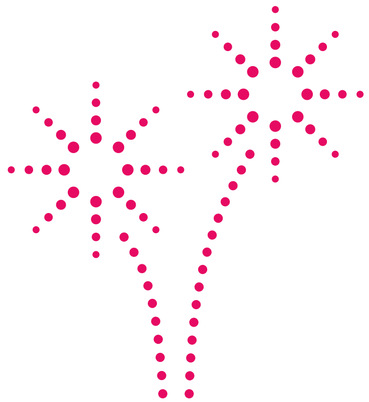
Web Annotation Basics

Zooming in on the standard

zoom level

universe *galaxies* *constellations* *planets* *humans*

Celebrate: there are specs!



Celebrate: there are specs!

?!

Web Annotation Definition

“

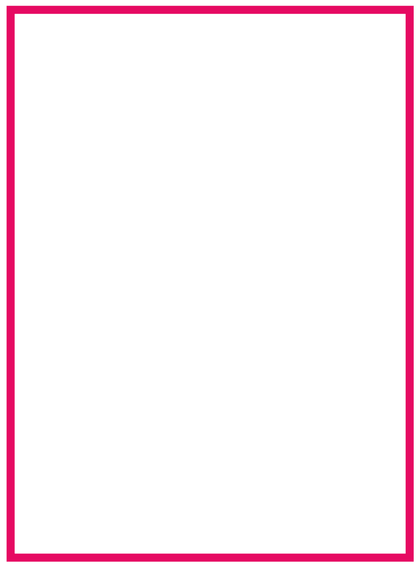
”

Web Annotation Definition

A set of connected resources, typically including a body and a target, where the body is related to the target.

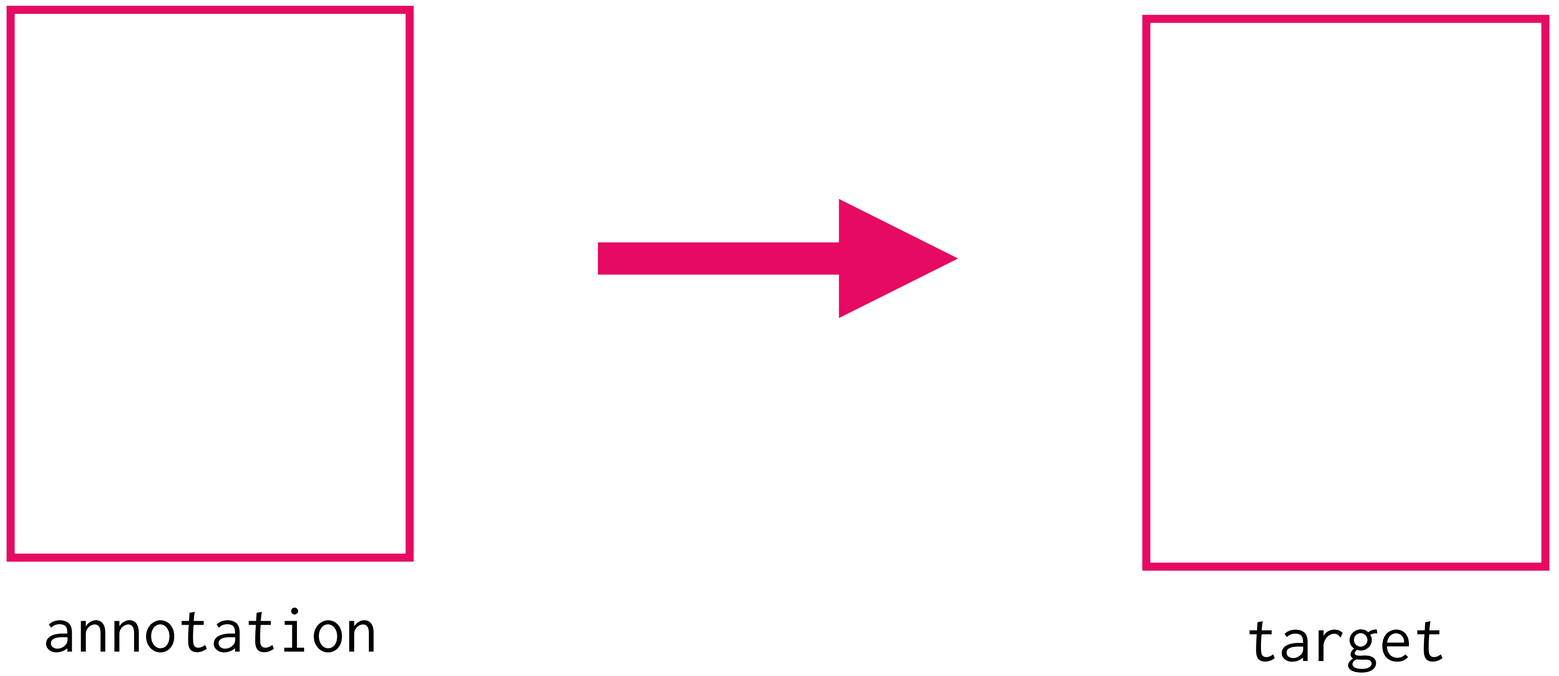
?!

Annotation

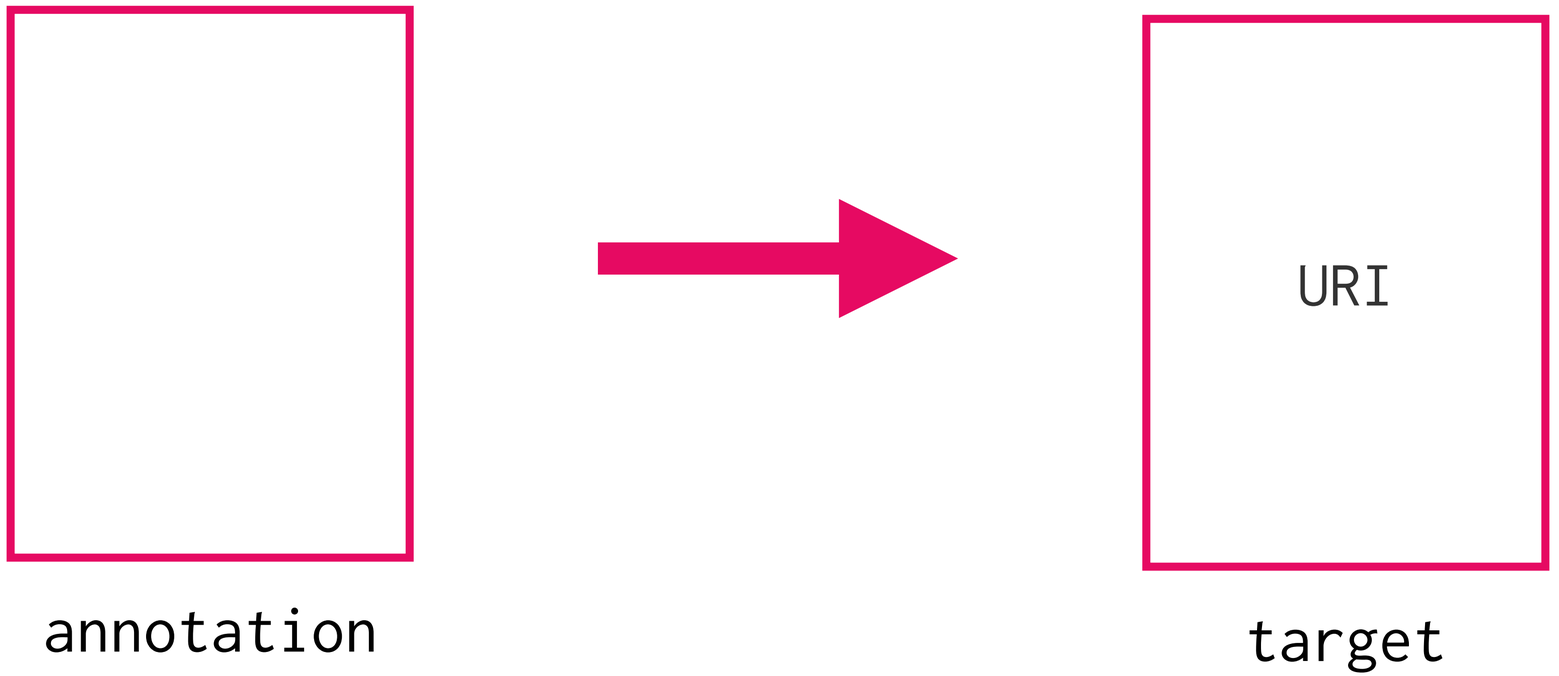


annotation

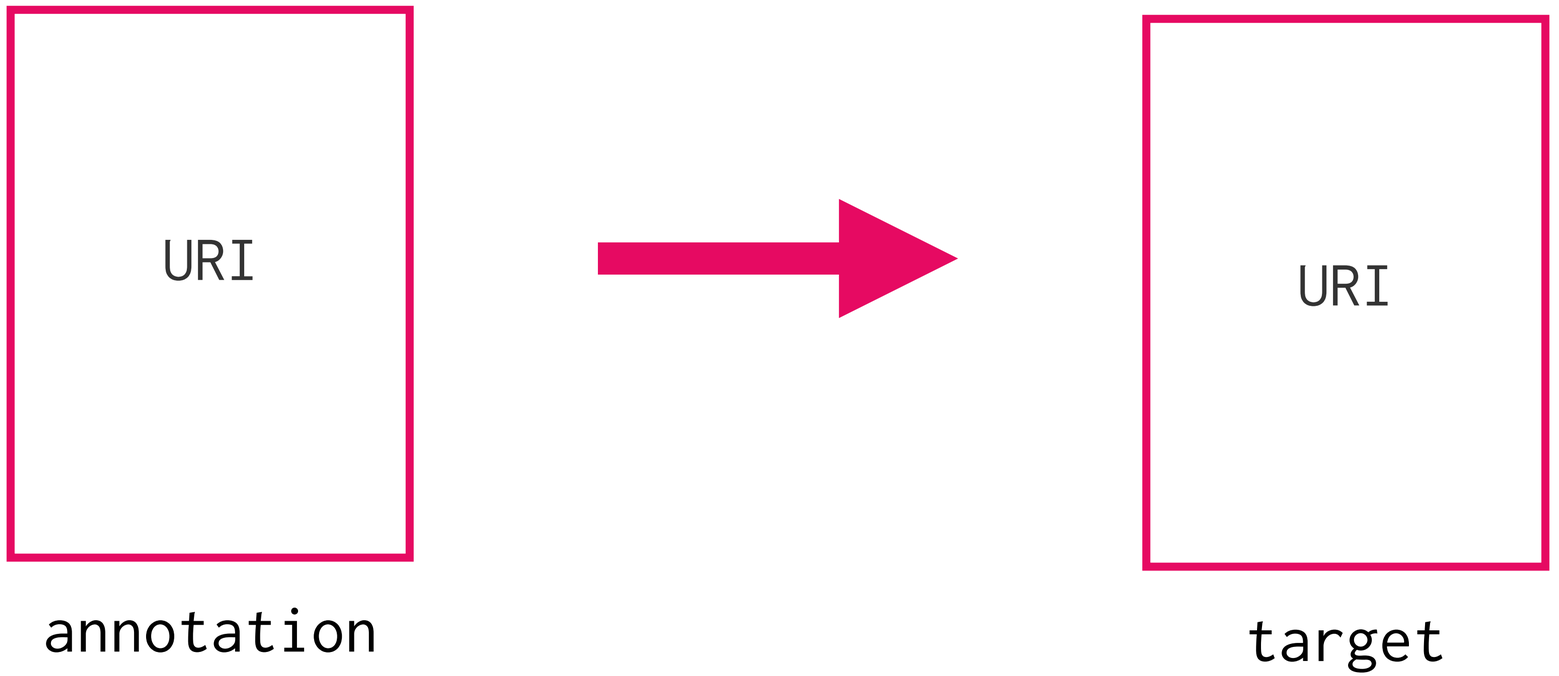
Annotation



Annotation



Annotation



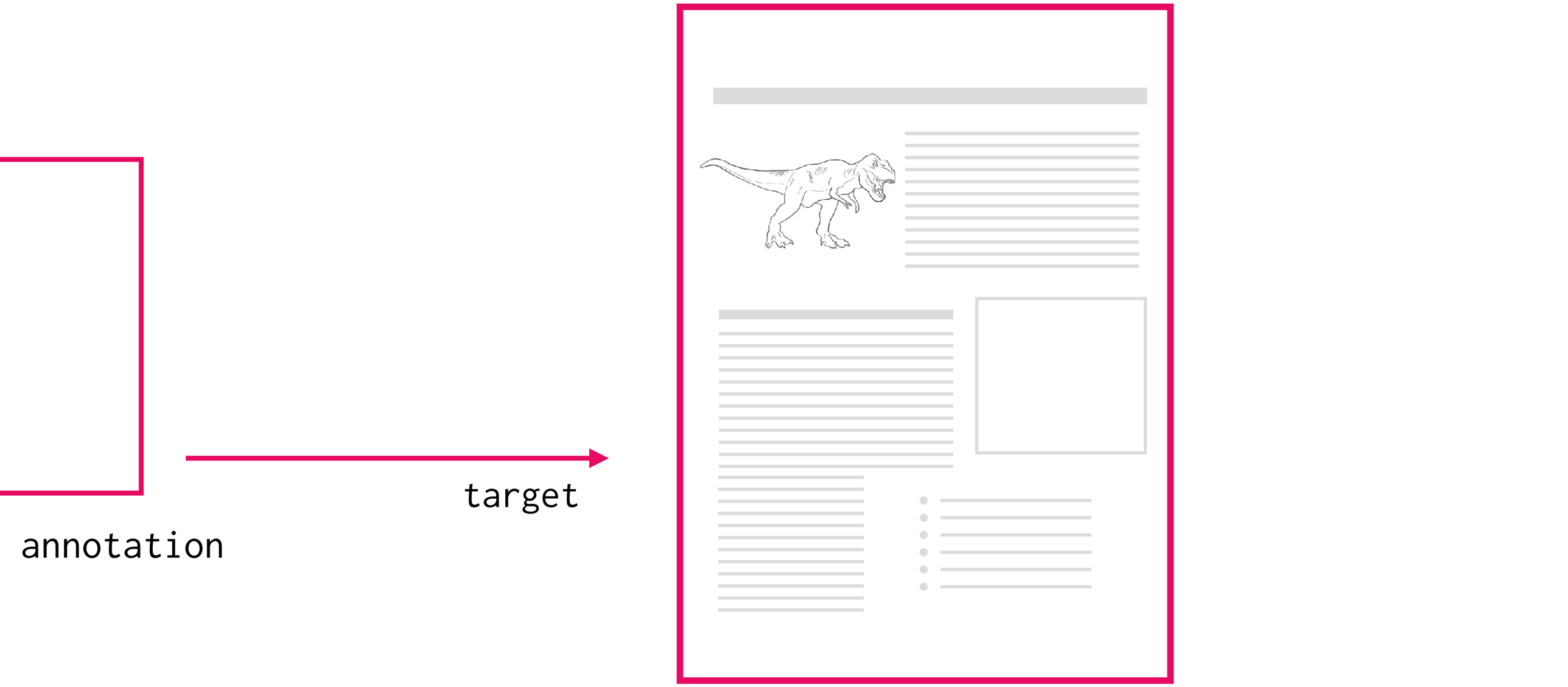
Can be as simple as a placeholder

annotation

target

Can be as simple as a placeholder

Annotation: Like a Bookmark



target

annotation

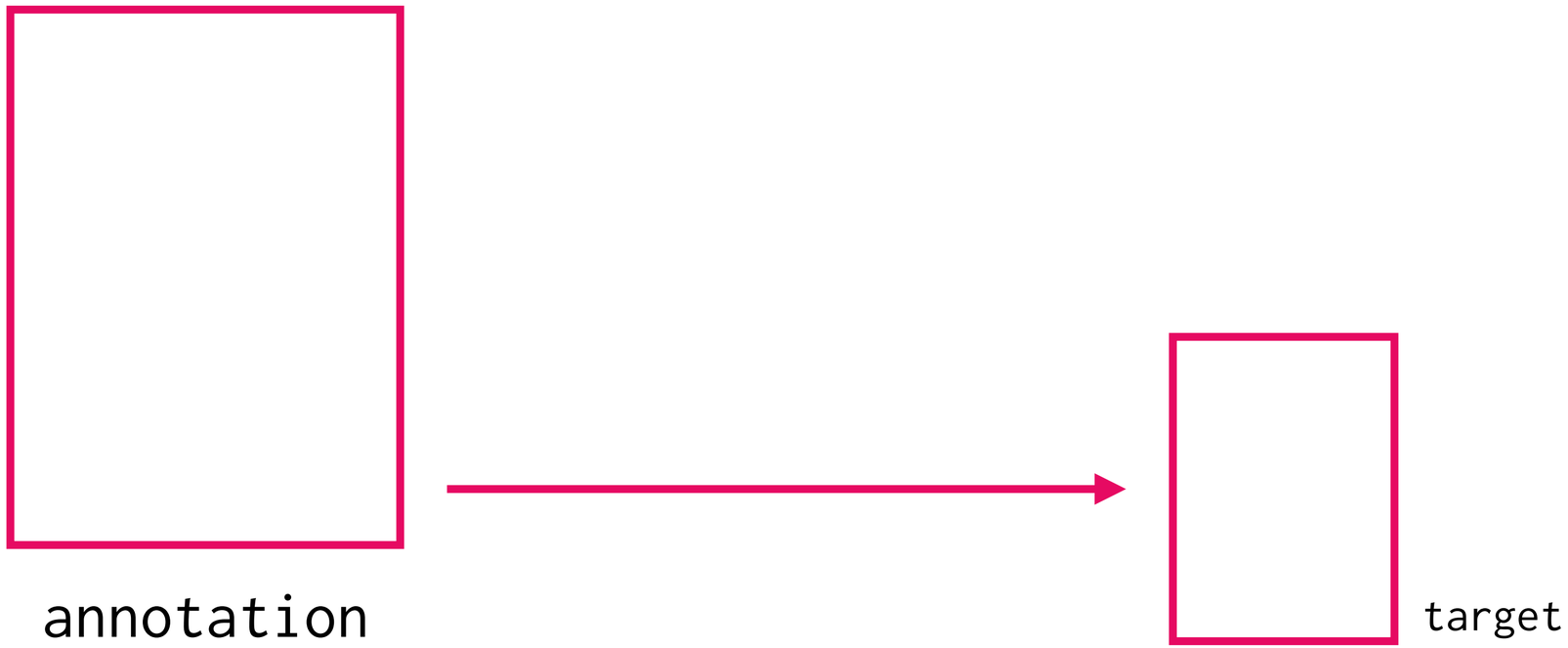
http://www.example.com/all-about-t-rex-diets

target

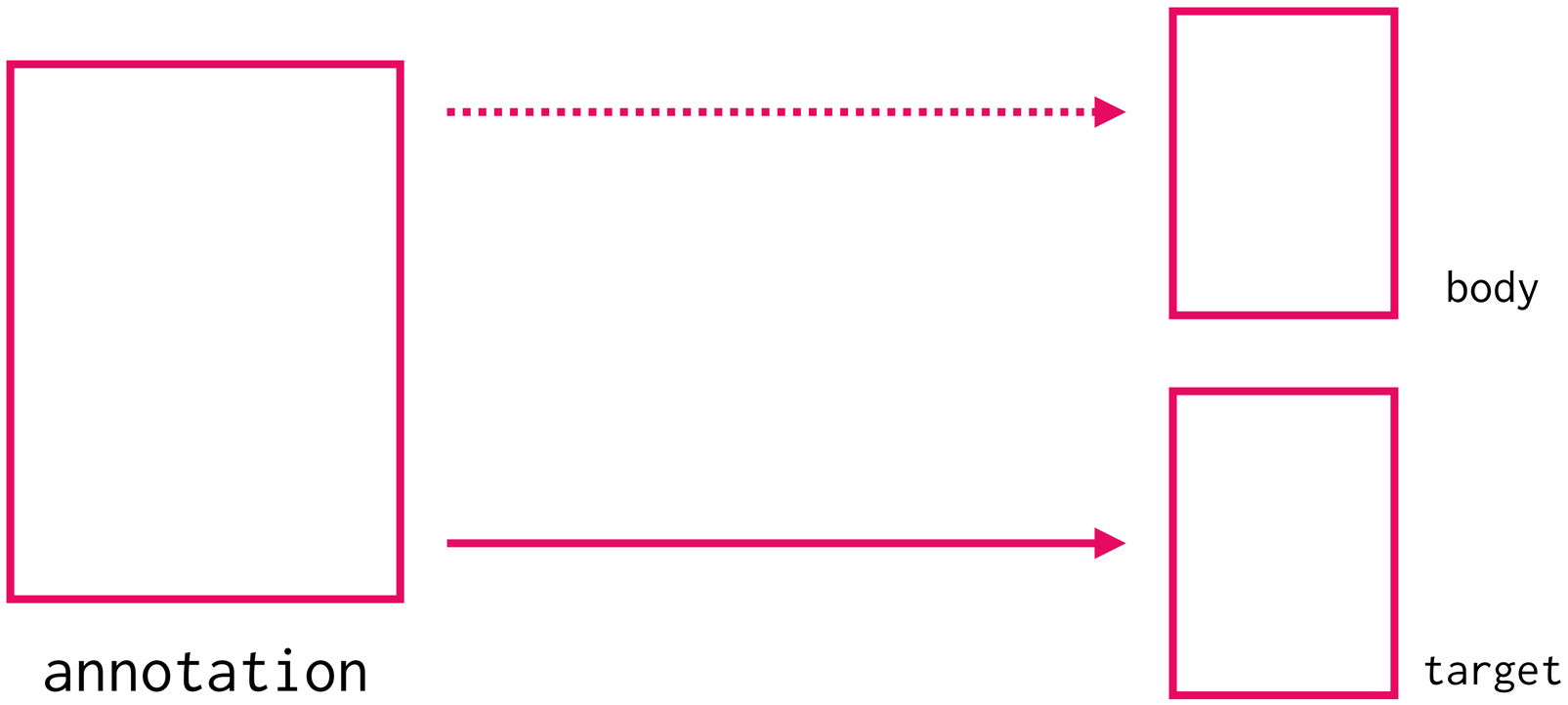
annotation

http://www.example.com/all-about-t-rex-diets

Annotation: Not just like a bookmark



Annotation: Not just like a bookmark



Annotation with a simple body

annotation

body

target

I never knew that T. rex was a cannibal before!

http://www.example.com/all-about-t-rex-diets

Annotation with a simple body

body

> *I never knew that T. rex was a cannibal before!*

target

http://www.example.com/all-about-t-rex-diets

Annotation with a simple body

body

> *I never knew that T. rex was a cannibal before!*

target

http://www.example.com/all-about-t-rex-diets

```
{
  "@context": "http://www.w3.org/ns/anno.jsonld",
  "id": "http://example.org/anno1",
  "type": "Annotation",
  "bodyValue": "I never knew that T. rex was a cannibal before!",
  "target": "http://www.example.com/all-about-t-rex-diets"
}
```

JSON-LD representation of simple annotation

```
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  "@context": "http://www.w3.org/ns/anno.jsonld",
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```

Richer metadata

more relationships

Formatting my opinion

“

”

Formatting my opinion

> This article is ***really*** wrong.
>
> There is just no way.

Richer annotation bodies

```
{
  "@context": "http://www.w3.org/ns/anno.jsonld",
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Richer annotation bodies

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{
  "@context": "http://www.w3.org/ns/anno.jsonld",
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  "type": "Annotation",
  "body": {
    "type": "TextualBody",
    "value": "<p>This article is <em>really</em> wrong.</p>
              <p>There is just no way.</p>",
    "format": "text/html"
  },
  "target": "http://www.example.com/all-about-t-rex-diets"
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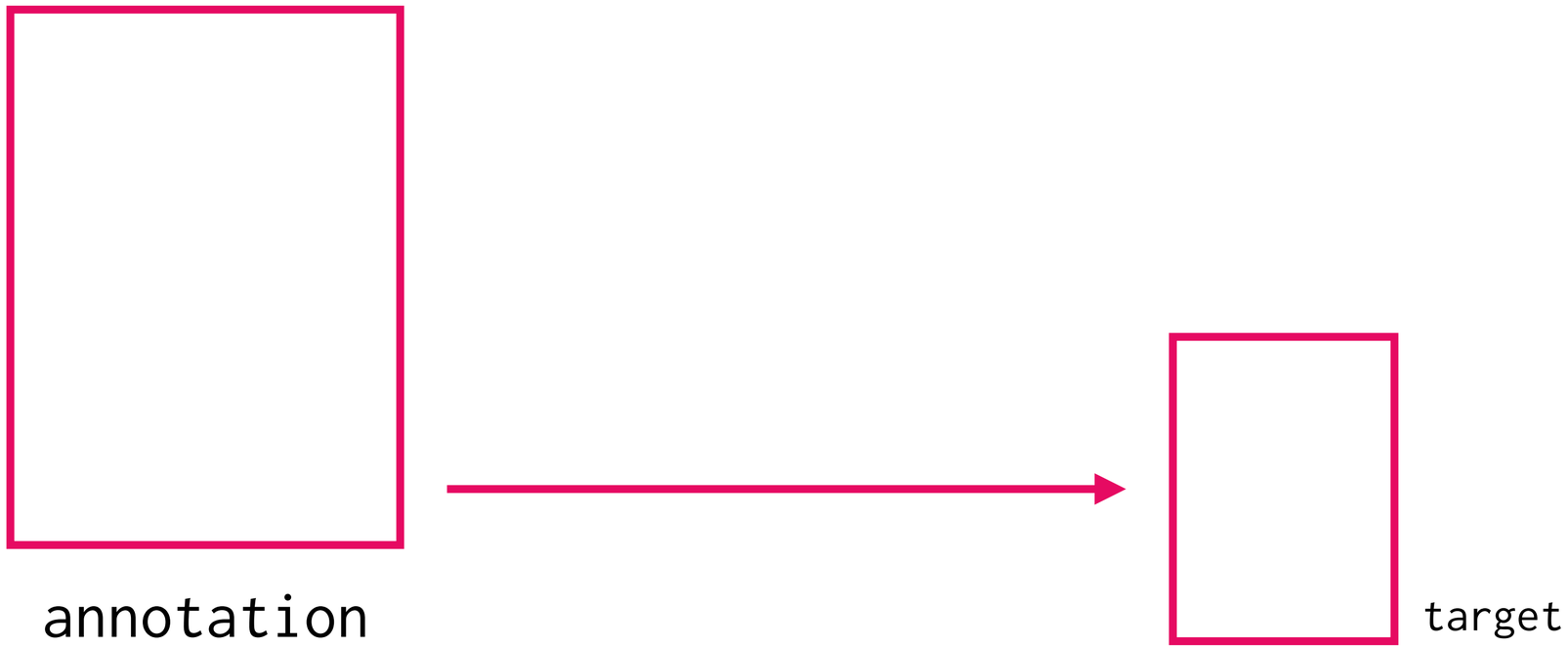
external resource as body



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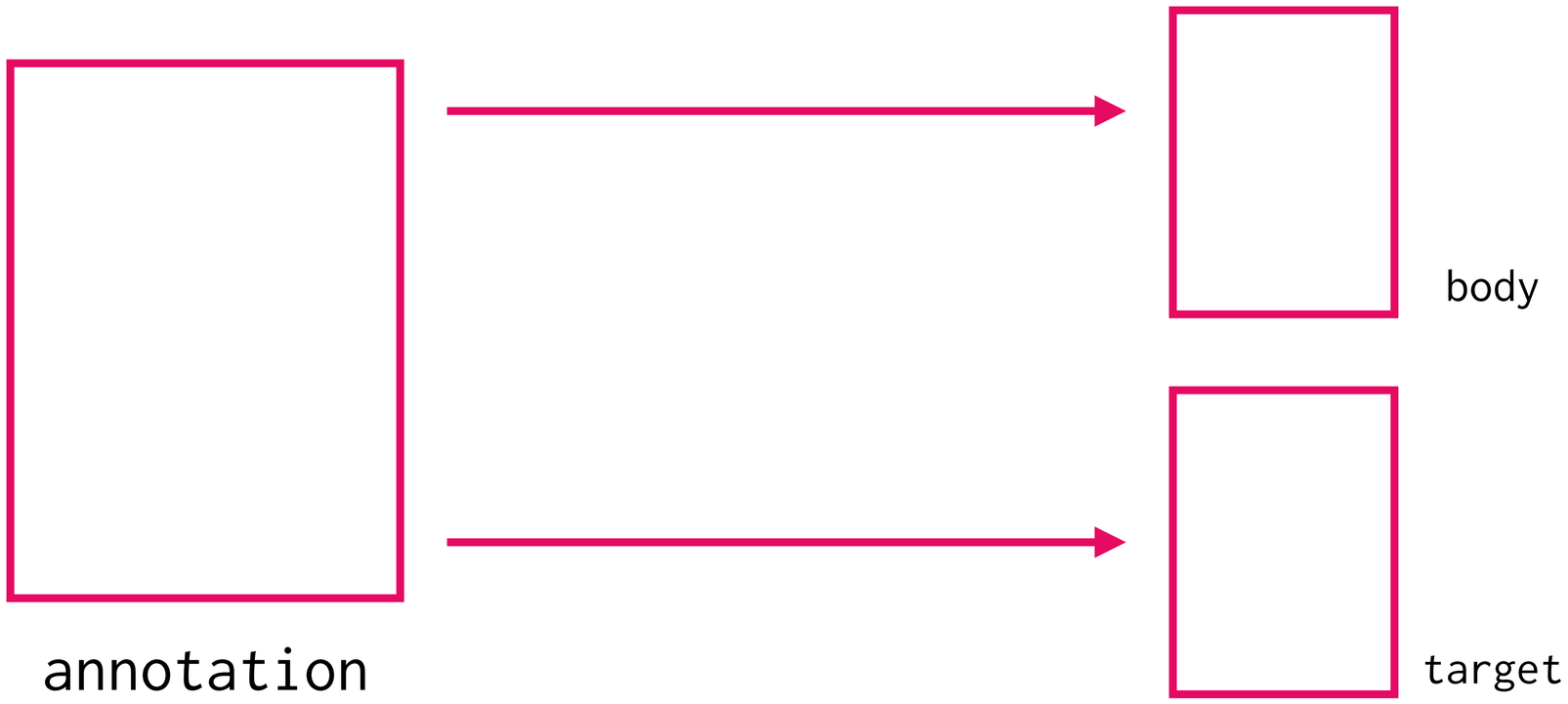
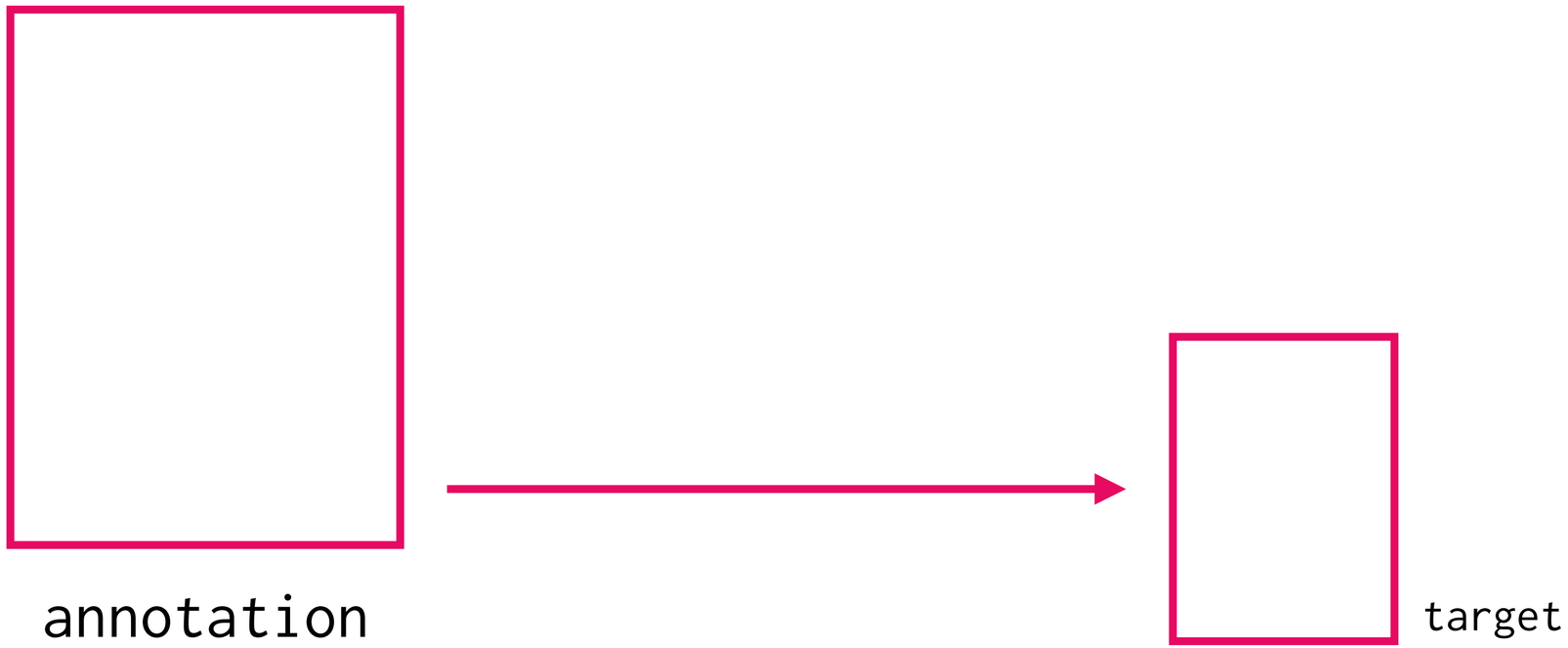
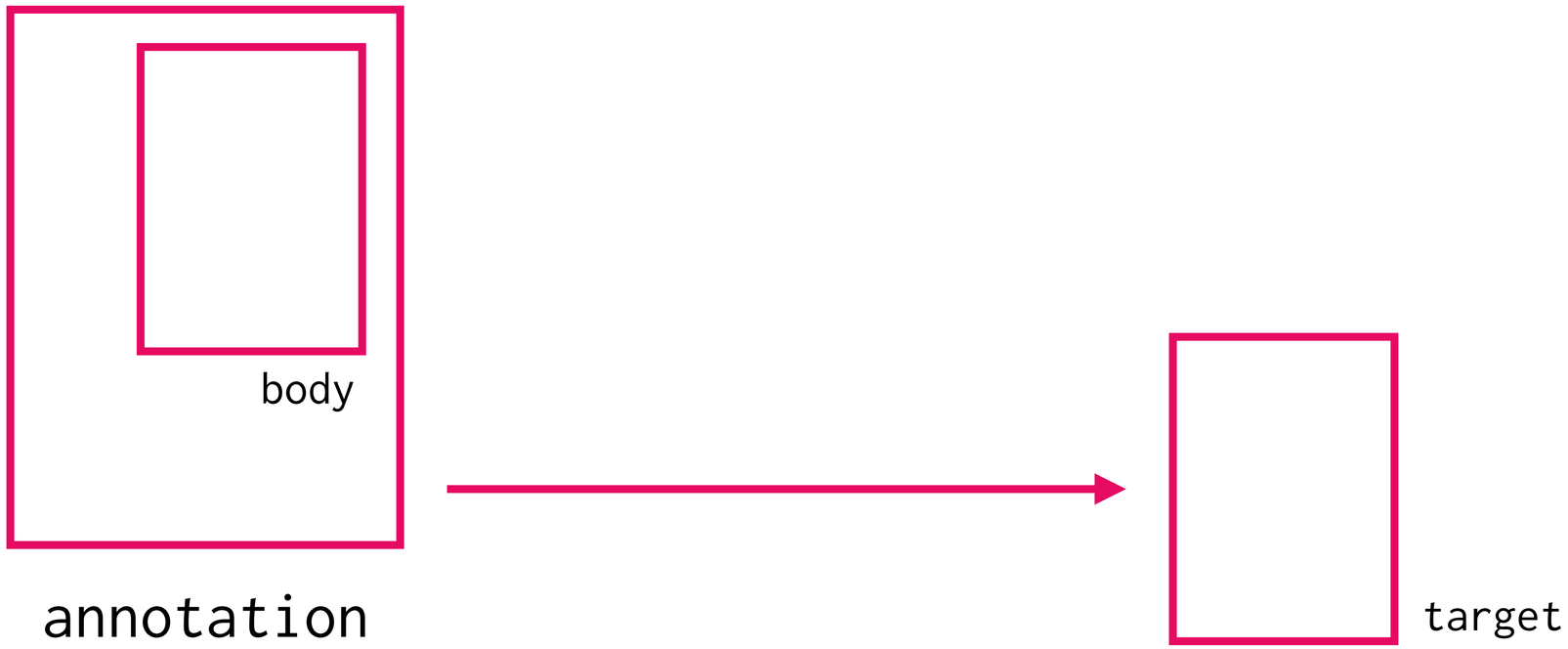


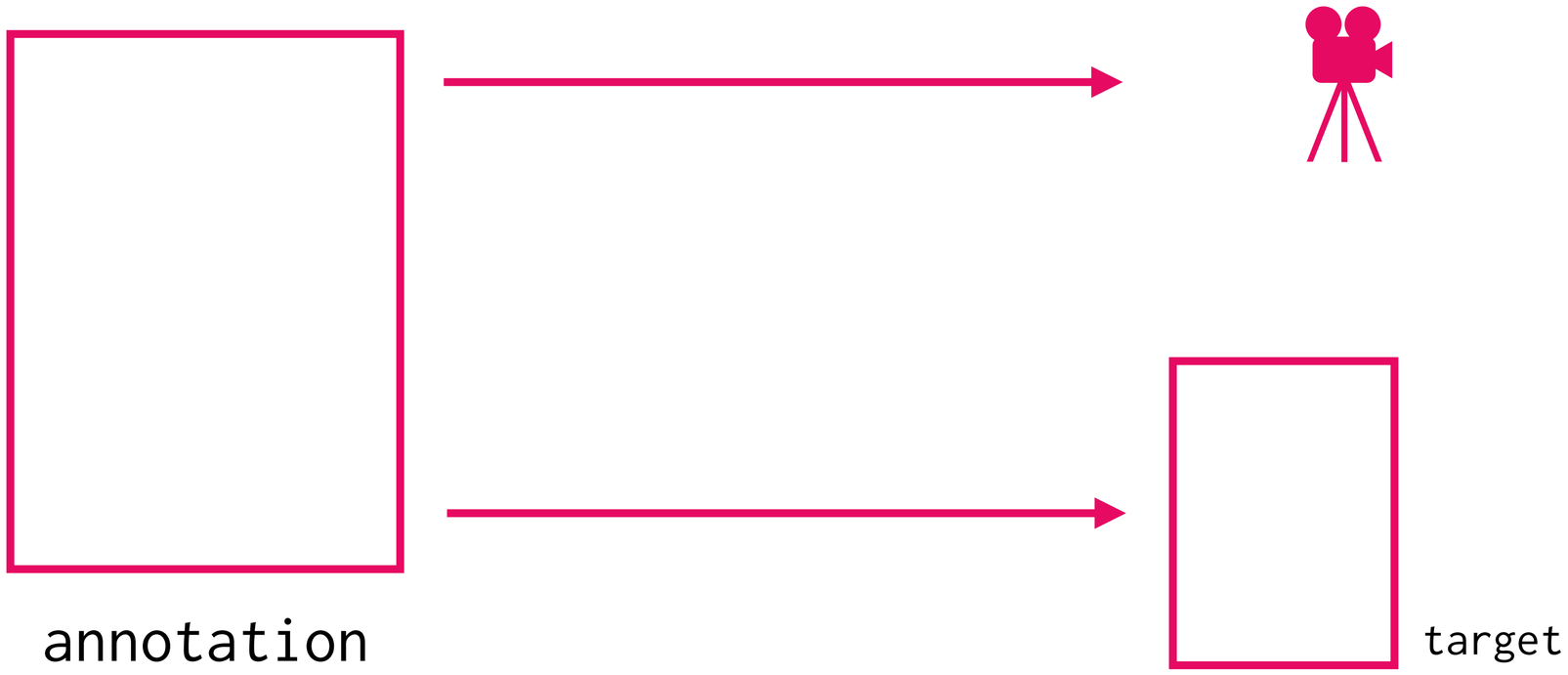
external resource as body



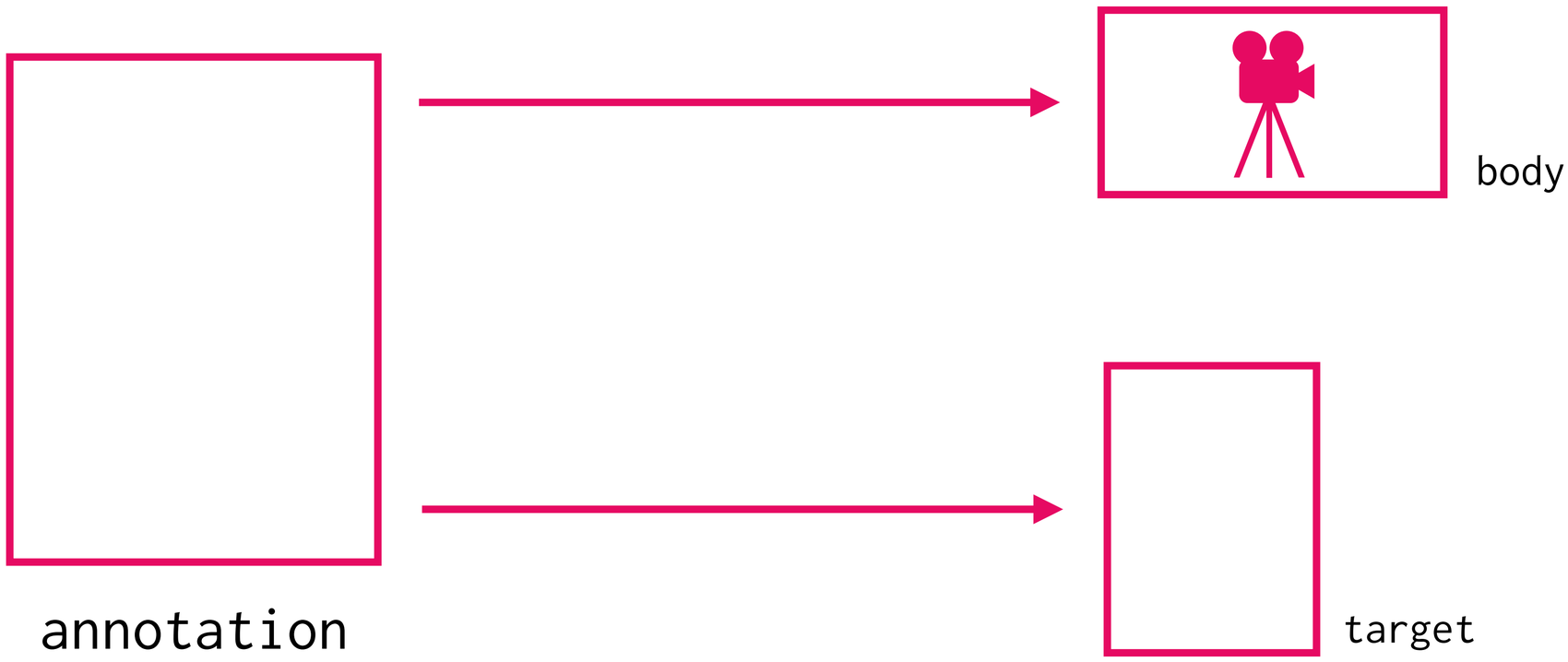
external resource as body



external resource as body



external resource as body



JSON-LD representation of simple annotation

```
{
  "@context": "http://www.w3.org/ns/anno.jsonld",
  "id": "http://example.org/anno1",
  "type": “Annotation",

  "target": "http://www.example.com/all-about-t-rex-diets"
}
```

JSON-LD representation of simple annotation

```
{
  "@context": "http://www.w3.org/ns/anno.jsonld",
  "id": "http://example.org/anno1",
  "type": “Annotation",
  "body": {
    "id": "http://example.org/in-defense-of-t-rex.mov",
    "type": "Video"
  },
  "target": "http://www.example.com/all-about-t-rex-diets"
}
```

JSON-LD representation of simple annotation

```
{
  "@context": "http://www.w3.org/ns/anno.jsonld",
  "id": "http://example.org/anno1",
  "type": “Annotation",
  "body": {
    "id": "http://example.org/in-defense-of-t-rex.mov",
     "type": "Video"
  },
  "target": "http://www.example.com/all-about-t-rex-diets"
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  "@context": "http://www.w3.org/ns/anno.jsonld",
  "id": "http://example.org/anno1",
  "type": “Annotation",
  "body": {
    "id": "http://example.org/in-defense-of-t-rex.mov",
    "type": "Video"
  },
  "target": "http://www.example.com/all-about-t-rex-diets"
}
```

Other body properties

motivation

Other body properties

motivation

Other body properties

motivation

- ★ *assessing*
- ★ *bookmarking*
- ★ *classifying*
- ★ *commenting*
- ★ *describing*
- ★ *editing*
- ★ *highlighting*
- ★ *identifying*
- ★ *linking*
- ★ *moderating*
- ★ *questioning*
- ★ *replying*
- ★ *tagging*

Other body properties

motivation

- ★ *assessing*
- ★ *bookmarking*
- ★ *classifying*
- ★ *commenting*
- ★ *describing*
- ★ *editing*
- ★ *highlighting*
- ★ *identifying*
- ★ *linking*
- ★ *moderating*
- ★ ***questioning*** ⇢
- ★ *replying*
- ★ *tagging*

The motivation for when the user intends to ask a question about the Target. For example to ask for assistance with a particular section of text, or question its veracity.

questioning motivation

```
{
  "@context": "http://www.w3.org/ns/anno.jsonld",
  "id": "http://example.org/anno1",
  "type": "Annotation",
  "motivation": "questioning",
  "body": {
    "id": "http://example.org/in-defense-of-t-rex.mov",
    "type": "Video"
  },
  "target": "http://www.example.com/all-about-t-rex-diets"
}
```

questioning motivation

```
{
  "@context": "http://www.w3.org/ns/anno.jsonld",
  "id": "http://example.org/anno1",
  "type": "Annotation",
  "motivation": "questioning",
  "body": {
    "id": "http://example.org/in-defense-of-t-rex.mov",
    "type": "Video"
  },
  "target": "http://www.example.com/all-about-t-rex-diets"
}
```

more body properties and relationships...

creator

more body properties and relationships...

creator ***modified***

more body properties and relationships...

---

creator modified ***audience***

more body properties and relationships...

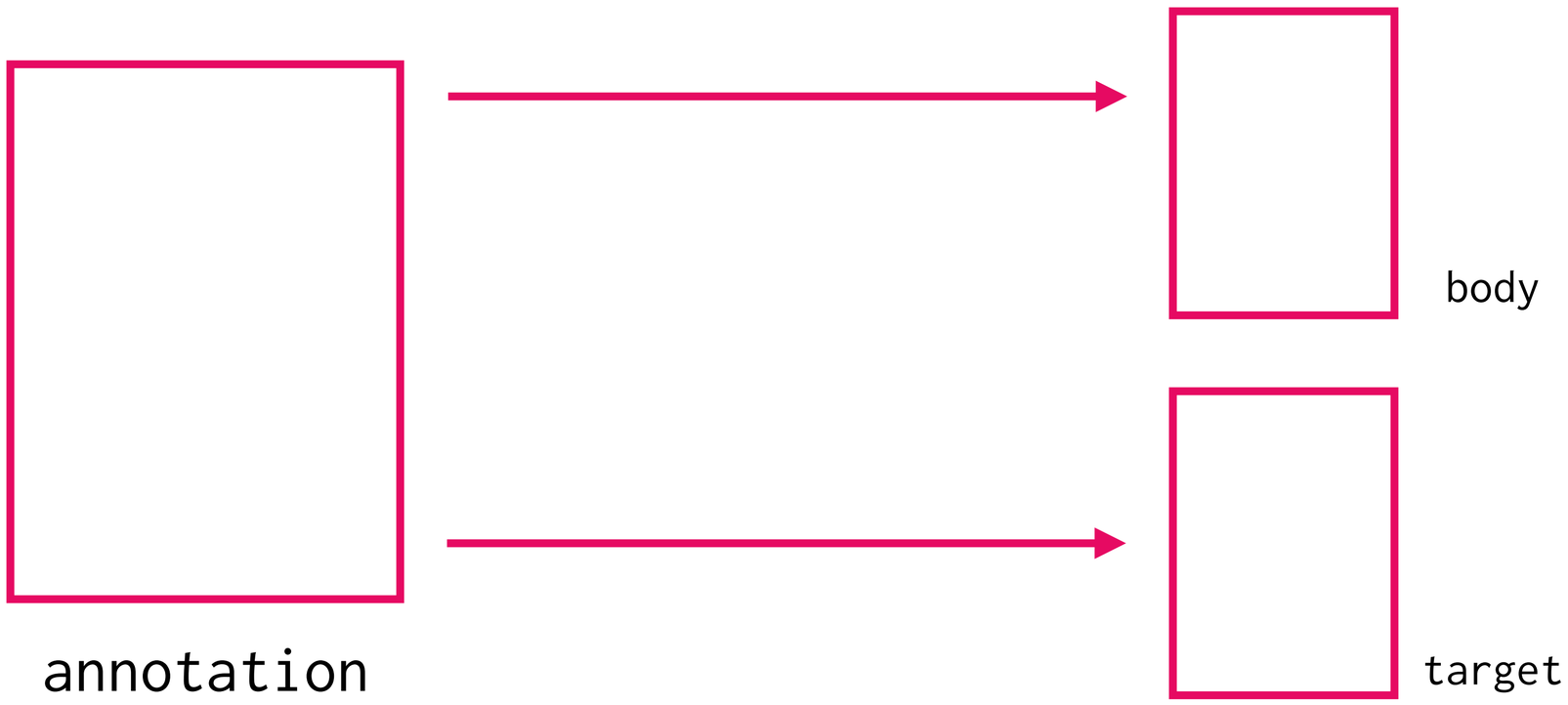
---

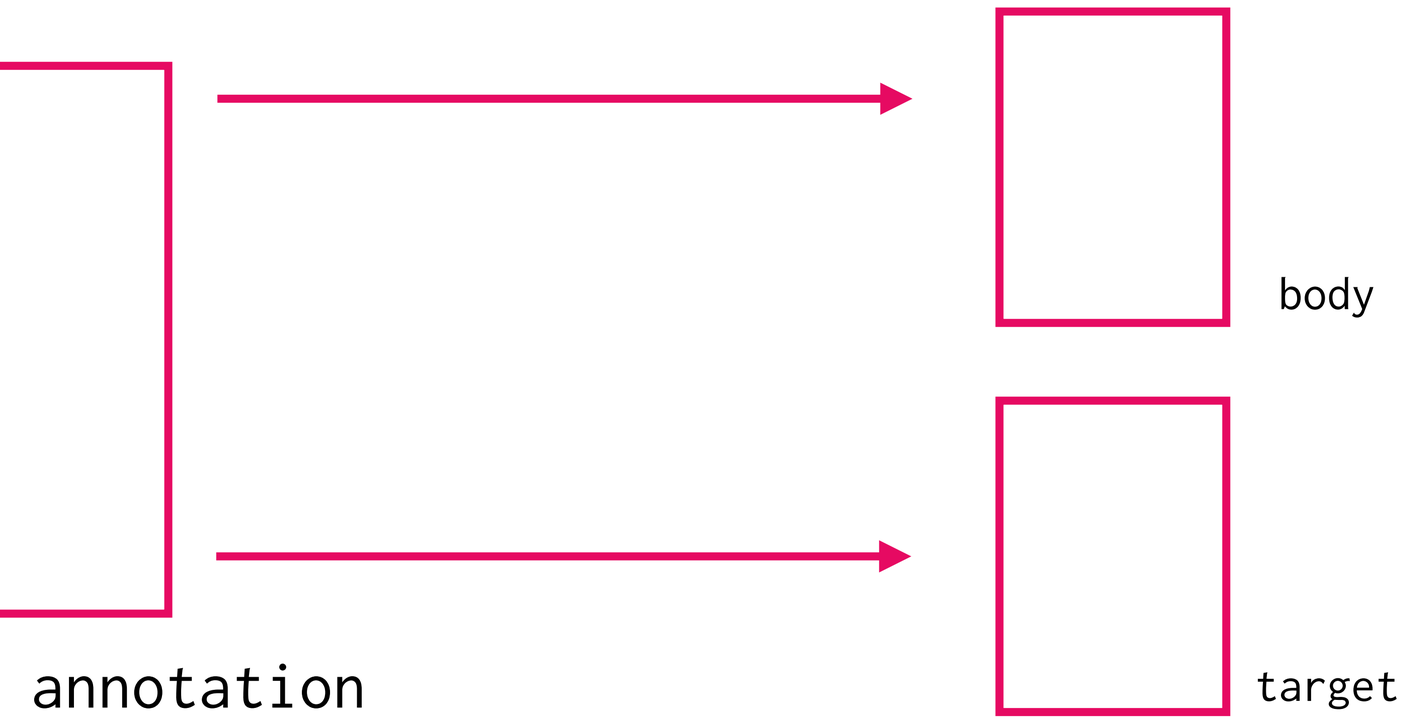
ator modified audience ***rights***

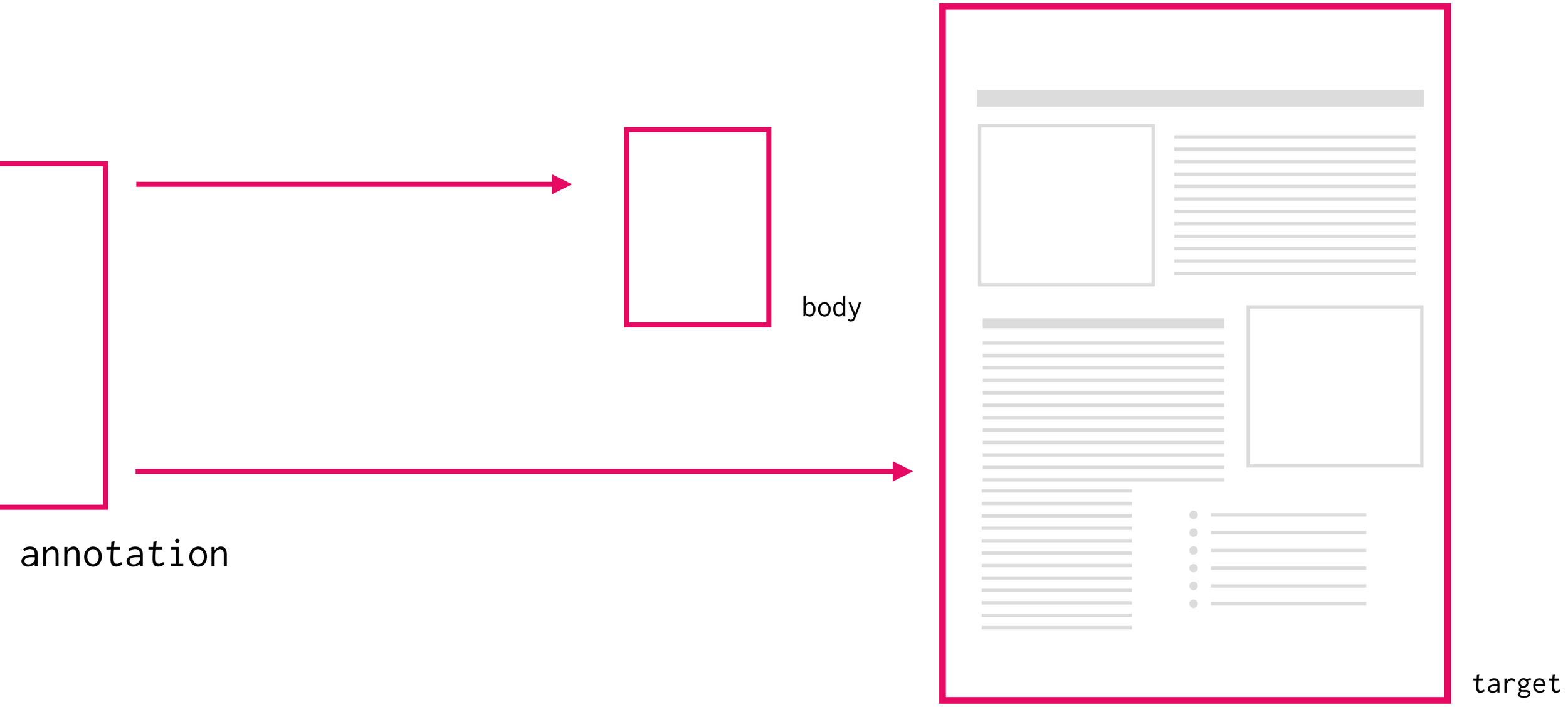
“There’s a lot here”

Resource Segments

Fragments, selectors and state


body
annotation
target

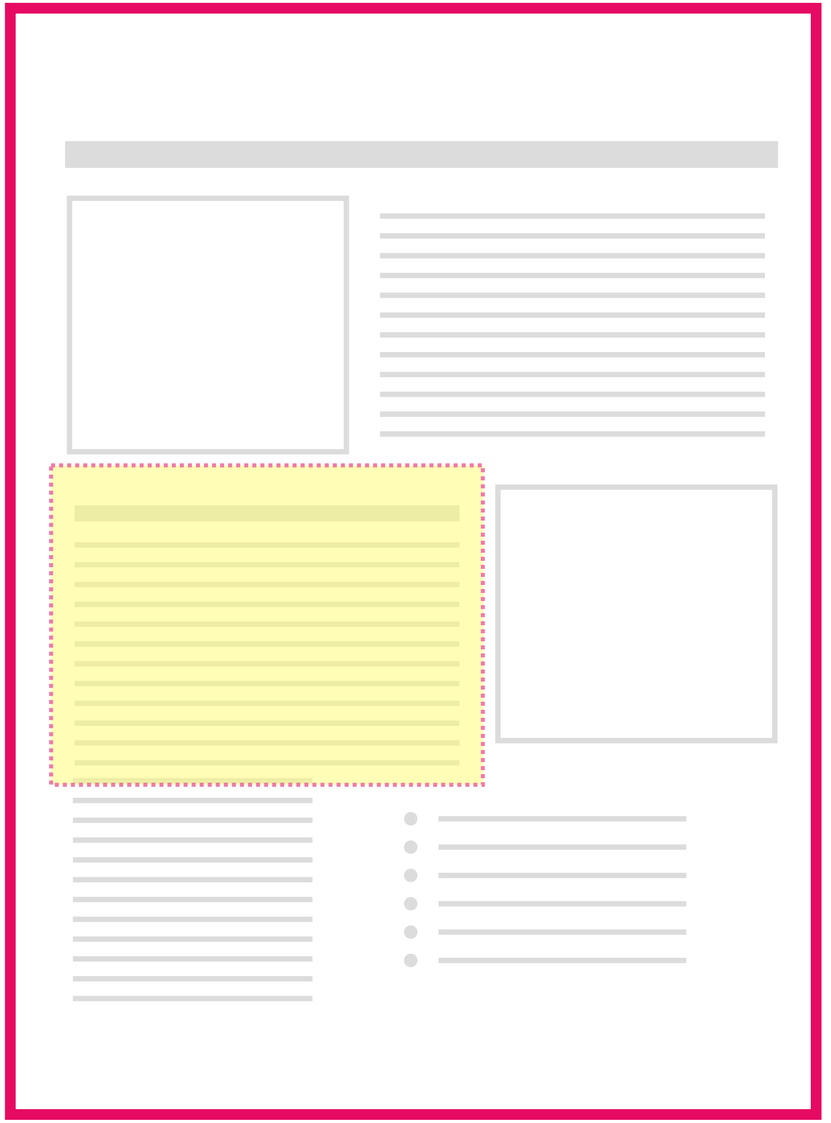

body
annotation
target


body
annotation
target
http://www.example.com/all-about-t-rex-diets

http://www.example.com/all-about-t-rex-diets

target

http://www.example.com/all-about-t-rex-diets



target

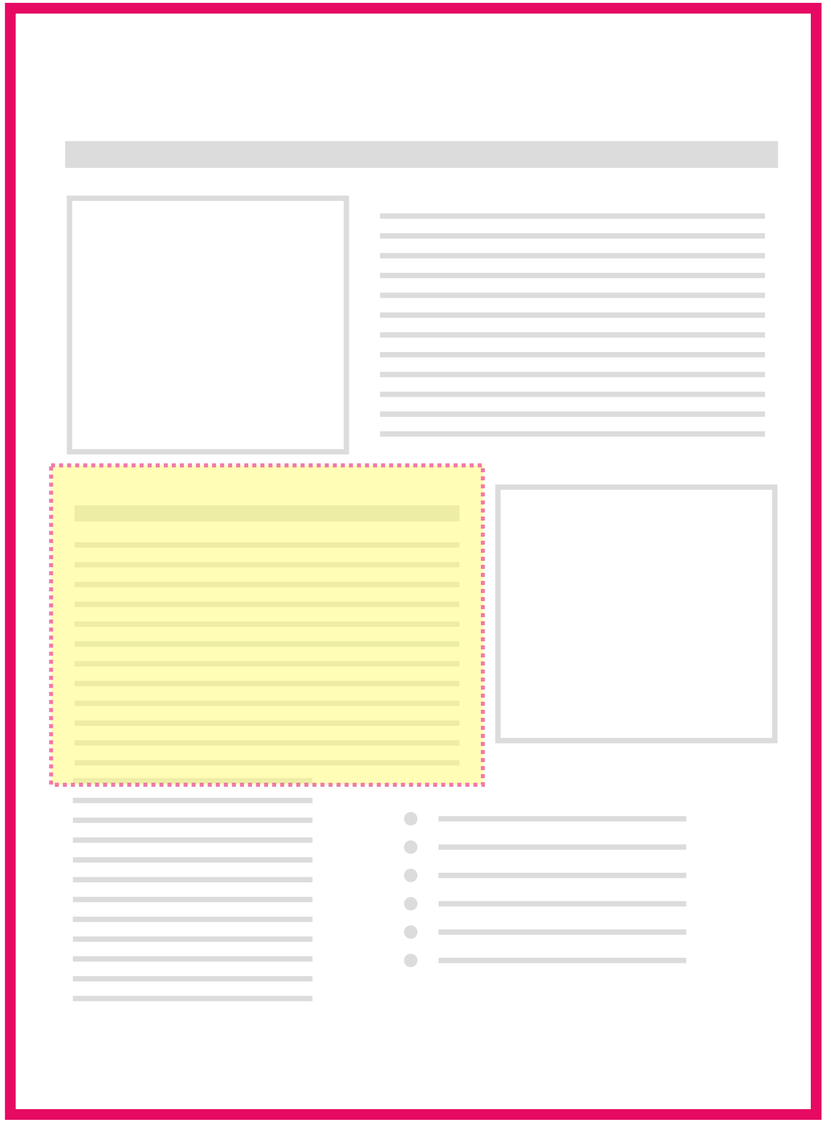
Selectors

Selectors

Selectors allow you to define resource segments

Fragments

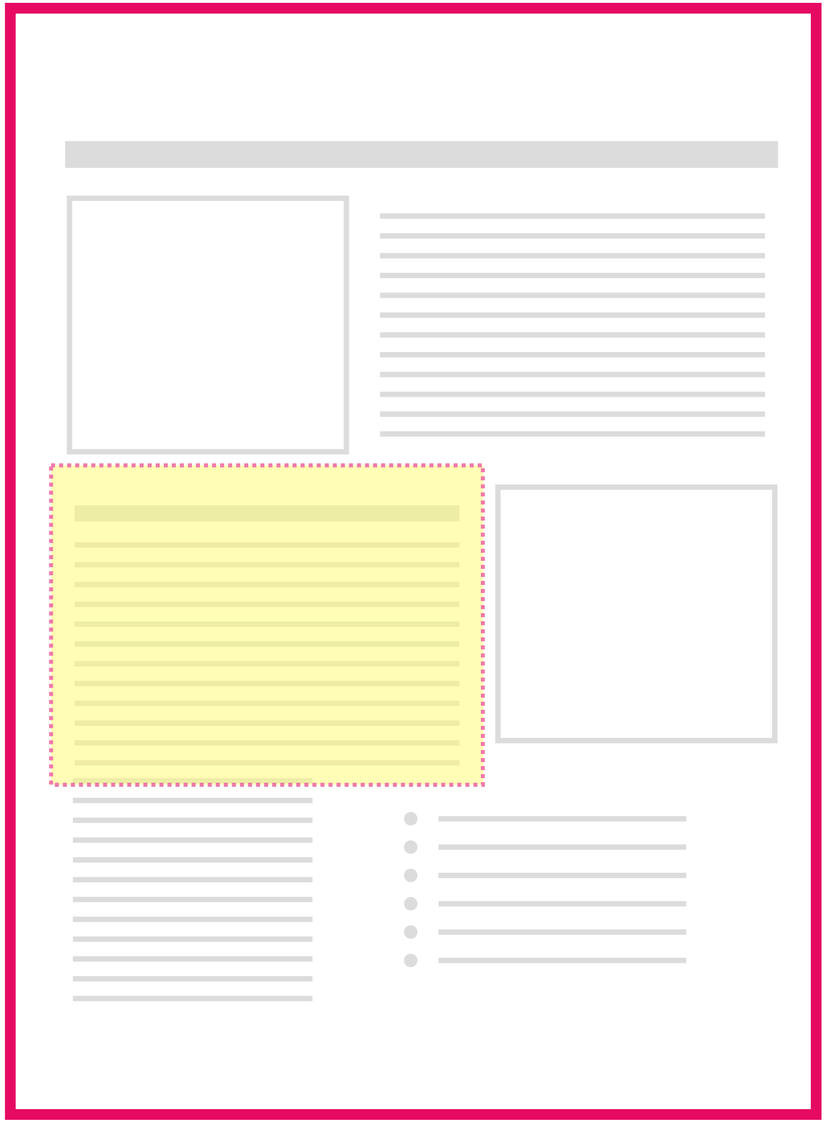
http://www.example.com/all-about-t-rex-diets#new-theories



target

Fragments

http://www.example.com/all-about-t-rex-diets#new-theories



target

```
{
  "@context": "http://www.w3.org/ns/anno.jsonld",
  "id": "http://example.org/anno1",
  "type": "Annotation",
  "motivation": "questioning",
  "body": {
    "id": "http://example.org/in-defense-of-t-rex.mov",
    "type": "Video",
  },
  “target": "http://www.example.com/all-about-t-rex-diets"
}
```

```
{
  "@context": "http://www.w3.org/ns/anno.jsonld",
  "id": "http://example.org/anno1",
  "type": "Annotation",
  "motivation": "questioning",
  "body": {
    "id": "http://example.org/in-defense-of-t-rex.mov",
    "type": "Video",
  },
  "target": {
    "source": "http://www.example.com/all-about-t-rex-diets",
    "selector": {
      "type": “FragmentSelector",
      "value": "new-theories"
      "conformsTo": "http://tools.ietf.org/rfc/rfc3236",
    }
  }
}
```

```
{
  "@context": "http://www.w3.org/ns/anno.jsonld",
  "id": "http://example.org/anno1",
  "type": "Annotation",
  "motivation": "questioning",
  "body": {
    "id": "http://example.org/in-defense-of-t-rex.mov",
    "type": "Video",
  },
  "target": {
    "source": "http://www.example.com/all-about-t-rex-diets",
    "selector": {
      "type": “FragmentSelector",
      "value": "new-theories"
      "conformsTo": "http://tools.ietf.org/rfc/rfc3236",
    }
  }
}
```

```
{
  "@context": "http://www.w3.org/ns/anno.jsonld",
  "id": "http://example.org/anno1",
  "type": "Annotation",
  "motivation": "questioning",
  "body": {
    "id": "http://example.org/in-defense-of-t-rex.mov",
    "type": "Video",
  },
  "target": {
    "source": "http://www.example.com/all-about-t-rex-diets",
    "selector": {
      "type": “FragmentSelector",
      "value": "new-theories"
      "conformsTo": "http://tools.ietf.org/rfc/rfc3236",
    }
  }
}
```

```
{
  "@context": "http://www.w3.org/ns/anno.jsonld",
  "id": "http://example.org/anno1",
  "type": "Annotation",
  "motivation": "questioning",
  "body": {
    "id": "http://example.org/in-defense-of-t-rex.mov",
    "type": "Video",
  },
  "target": {
    "source": "http://www.example.com/all-about-t-rex-diets",
    "selector": {
      "type": “FragmentSelector",
      "value": "new-theories"
      "conformsTo": "http://tools.ietf.org/rfc/rfc3236",
    }
  }
}
```

{
"@context": "http://www.w3.org/ns/anno.jsonld",
"id": "http://example.org/anno1",
"type": "Annotation",
"motivation": "questioning",
"body": {
"id": "http://example.org/in-defense-of-t-rex.mov",
"type": "Video",
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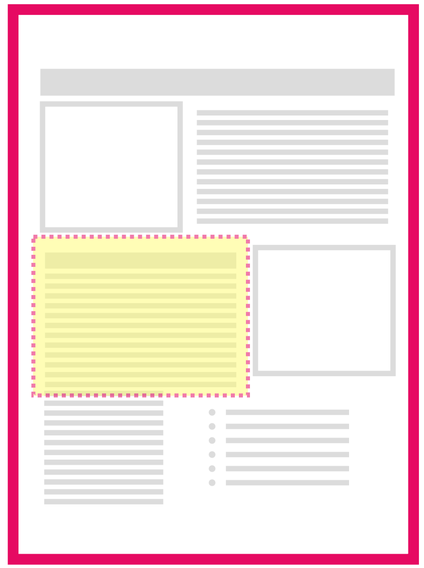
"target": {
"source": "http://www.example.com/all-about-t-rex-diets",
"selector": {
"type": “FragmentSelector",
"value": "new-theories"
"conformsTo": "http://tools.ietf.org/rfc/rfc3236",
}
}
}
http://www.example.com/all-about-t-rex-diets#new-theories

Fragments

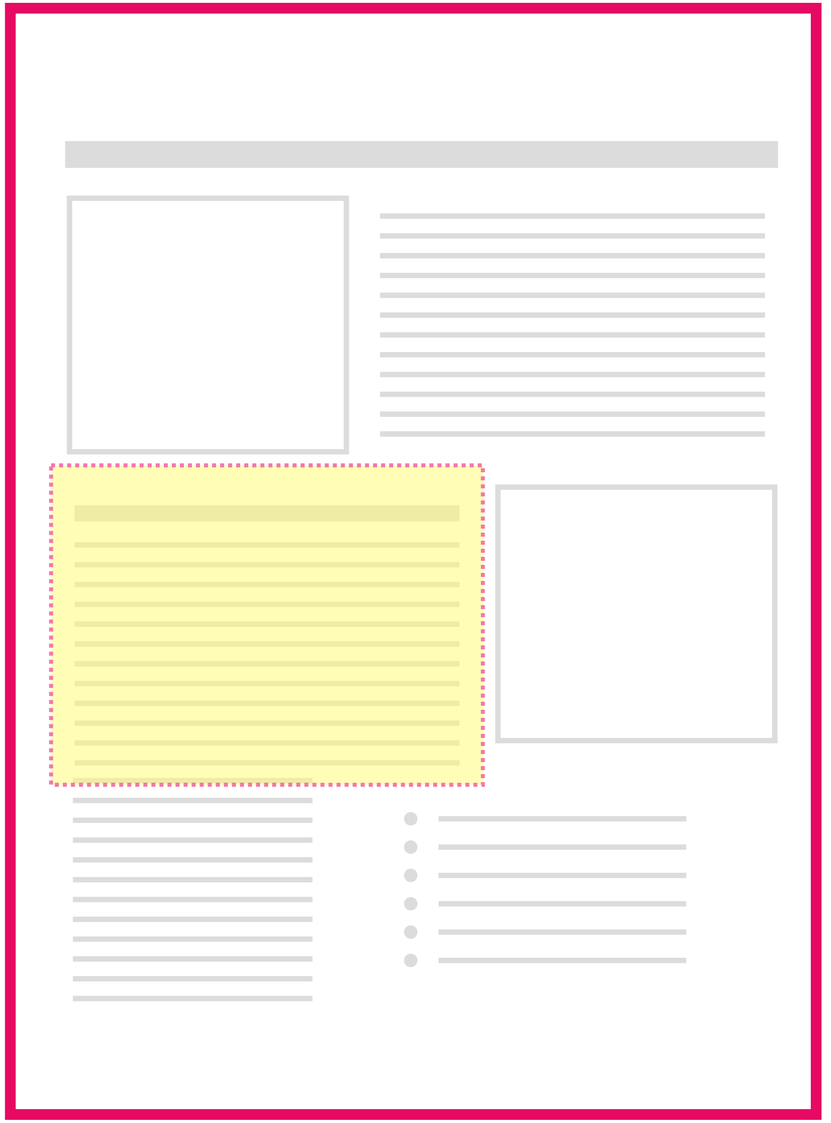
http://www.example.com/all-about-t-rex-diets *#new-theories*



target

Fragments

http://www.example.com/all-about-t-rex-diets#new-theories



target

```
{
  "@context": "http://www.w3.org/ns/anno.jsonld",
  "id": "http://example.org/anno1",
  "type": "Annotation",
  "motivation": "questioning",
  "body": {
    "id": "http://example.org/in-defense-of-t-rex.mov",
    "type": "Video",
  },
  "target": {
    "source": "http://www.example.com/all-about-t-rex-diets",
    "selector": {
      "type": “FragmentSelector",
      "value": "new-theories"
      "conformsTo": "http://tools.ietf.org/rfc/rfc3236",
    }
  }
}
```

```
{
  "@context": "http://www.w3.org/ns/anno.jsonld",
  "id": "http://example.org/anno1",
  "type": "Annotation",
  "motivation": "questioning",
  "body": {
    "id": "http://example.org/in-defense-of-t-rex.mov",
    "type": "Video",
  },
  "target": {
    "source": "http://www.example.com/all-about-t-rex-diets",
    "selector": {
      "type": “FragmentSelector",
      "value": "new-theories"
      "conformsTo": "http://tools.ietf.org/rfc/rfc3236",
    }
  }
}
```

Media Type Fragments

Media Type Fragments

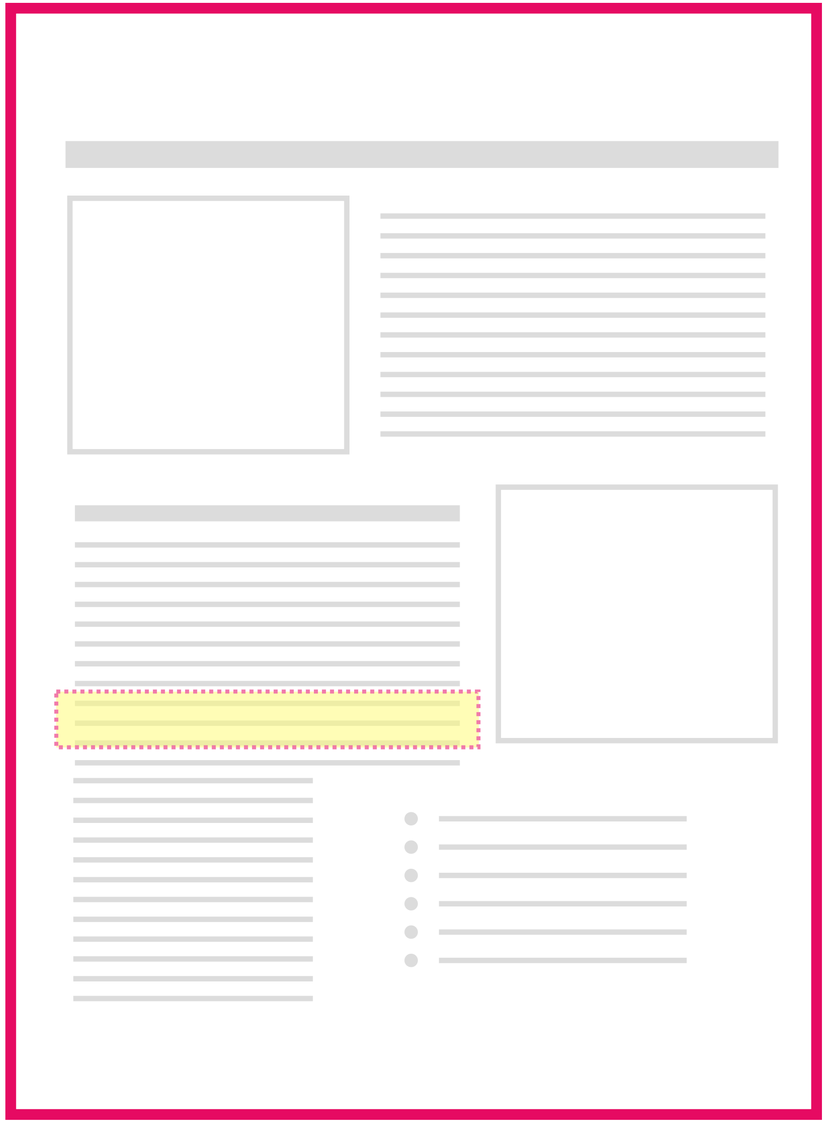
Name	Fragment Specification	Description
HTML	http://tools.ietf.org/rfc/rfc3236	[rfc3236] Example: `namedSection`
PDF	http://tools.ietf.org/rfc/rfc3778	[rfc3778] Example: `page=10&viewrect=50,50,640,480`
Plain Text	http://tools.ietf.org/rfc/rfc5147	[rfc5147] Example: `char=0,10`
XML	http://tools.ietf.org/rfc/rfc3023	[rfc3023] Example: `xpointer(/a/b/c)`
RDF/XML	http://tools.ietf.org/rfc/rfc3870	[rfc3870] Example: `namedResource`
CSV	http://tools.ietf.org/rfc/rfc7111	[rfc7111] Example: `row=5-7`
Media	http://www.w3.org/TR/media-frags/	[media-frags] Example: `xywh=50,50,640,480`
SVG	http://www.w3.org/TR/SVG/	[SVG11] Example: `svgView(viewBox(50,50,640,480))`
EPUB3	http://www.idpf.org/epub/linking/cfi/epub-cfi.html	[cfi] Example: `epubcfi(/6/4[chap01ref]!/4[body01]/10[para05]/3:10)`

https://www.w3.org/TR/annotation-model/#fragment-selector

Selectors and Segments

target

Selectors and Segments



target

Selectors

Selectors

- ***Fragment***
  media type fragment

Selectors

- ***Fragment***
  media type fragment
- ***XPath***
  document's DOM

Selectors

- ***Fragment***
  media type fragment
- ***XPath***
  document's DOM
- ***Text Quote***
  exact text selected, as well as preceding (prefix) and succeeding (suffix) text

Selectors

- ***Fragment***
  media type fragment
- ***XPath***
  document's DOM
- ***Text Quote***
  exact text selected, as well as preceding (prefix) and succeeding (suffix) text
- ***CSS***
  CSS selectors

target

target

target

State

target

State

target

Zooming to another plane

zoom level

universe *galaxies* *constellations* ***planets*** *humans*

Zooming to another plane

zoom level

Zooming to another plane

zoom level

Zooming to another plane

Web Annotation's themes and struggles

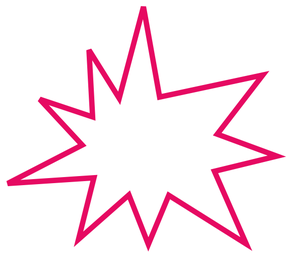
Power to the People?

Freedom vs. Control

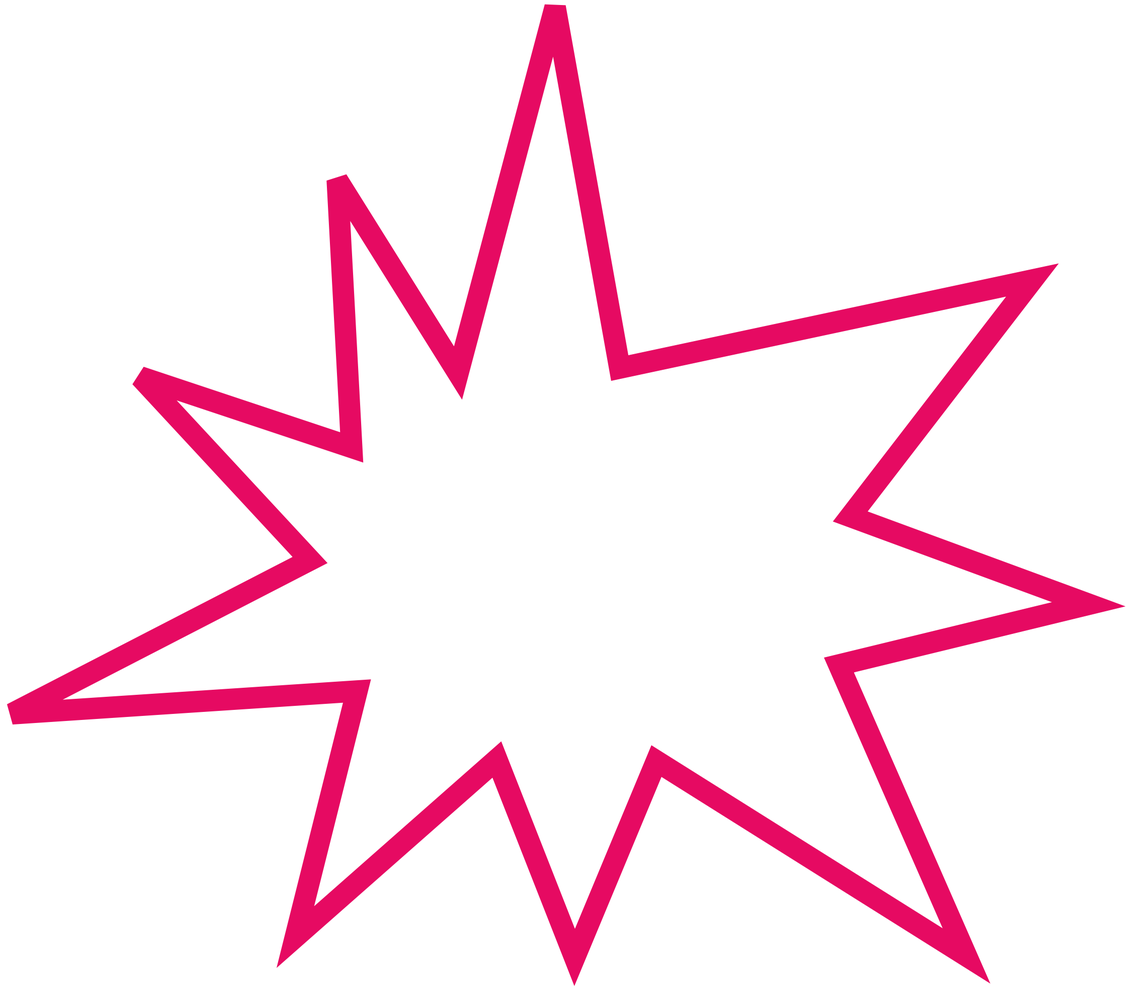
the web promises democracy and freedom

the web promises democracy and freedom

the web is an amplification platform



the web is an amplification platform



climatefeedback.org

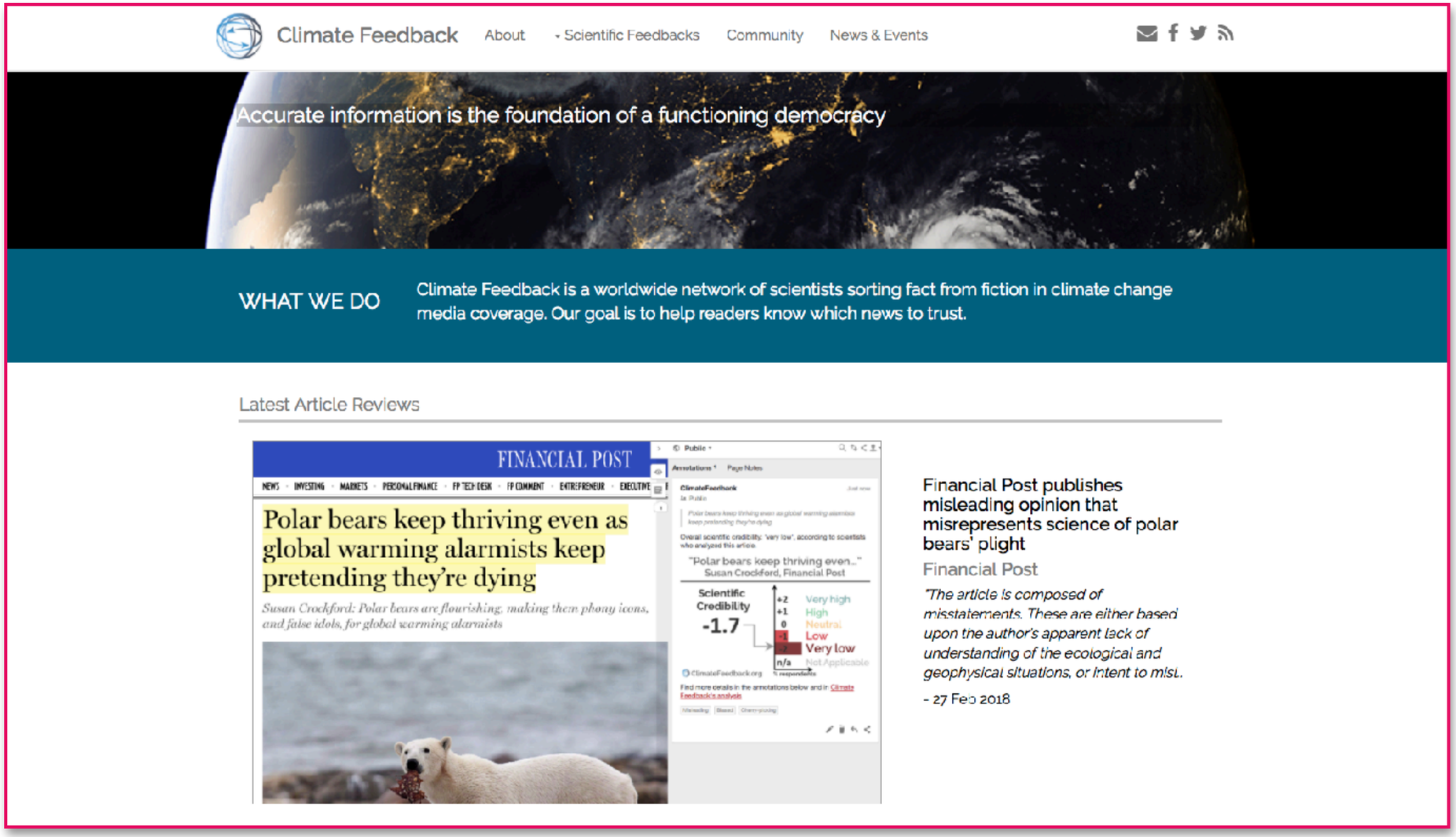
“

”

climatefeedback.org

“global network of scientists fact-checking climate change news”

climatefeedback.org



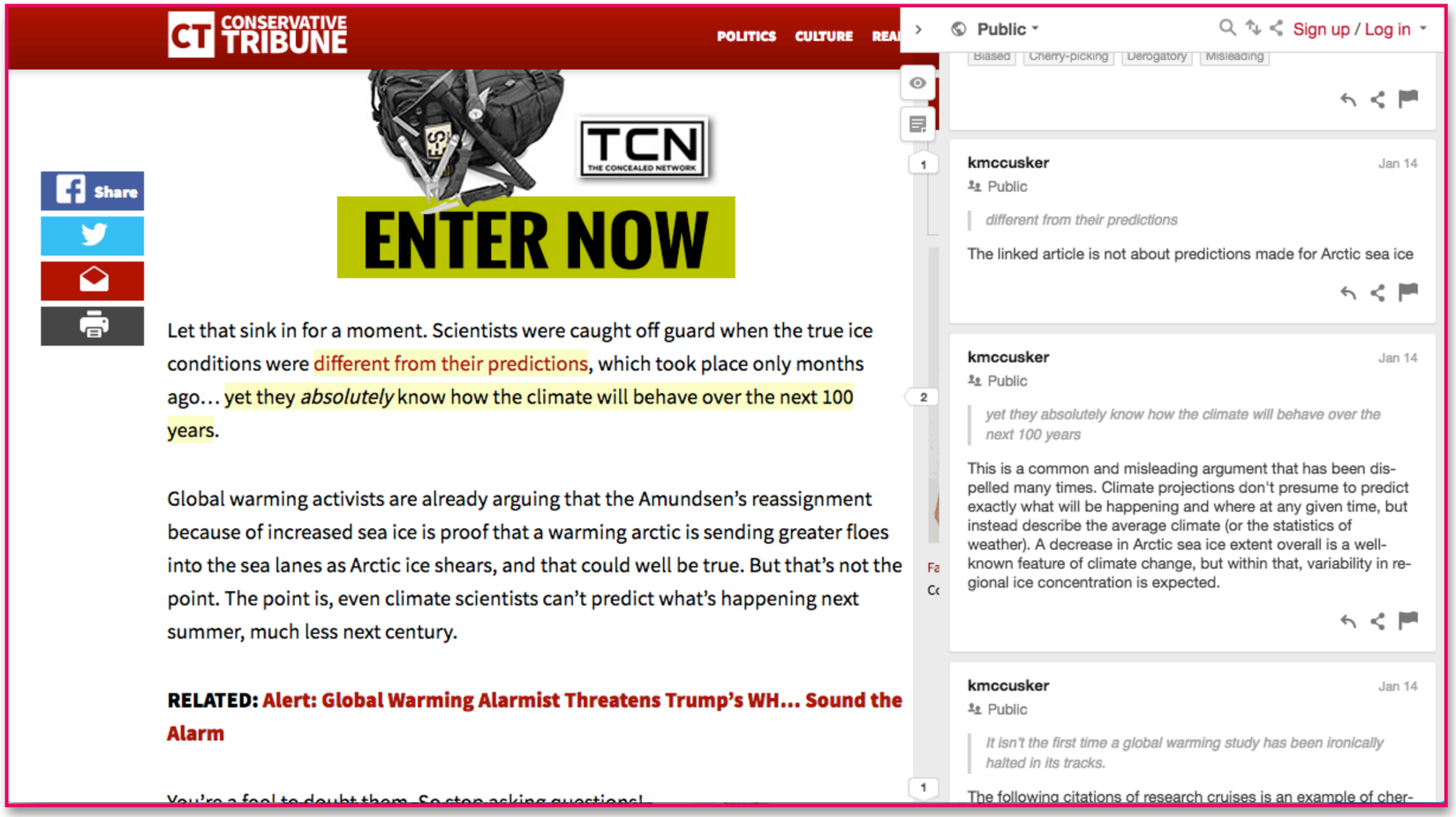
Annotation using hypothes.is

https://via.hypothes.is/https://conservativetribune.com/global-warming-study-cancelled/

Annotation using hypothes.is

https://via.hypothes.is/https://conservativetribune.com/global-warming-study-cancelled/

Annotation using hypothes.is



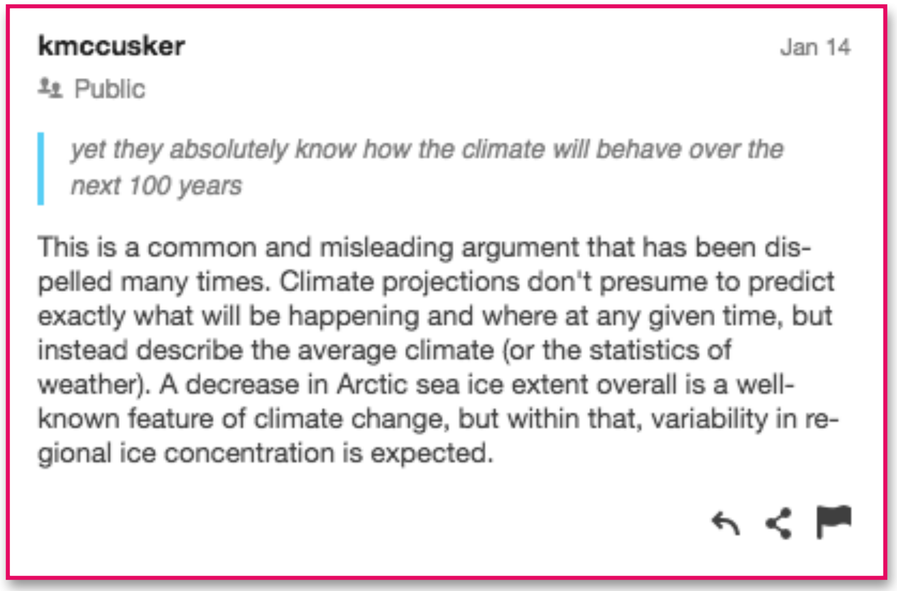
https://via.hypothes.is/https://conservativetribune.com/global-warming-study-cancelled/

Annotation using hypothes.is

https://via.hypothes.is/https://conservativetribune.com/global-warming-study-cancelled/

Bodies and Targets

annotation

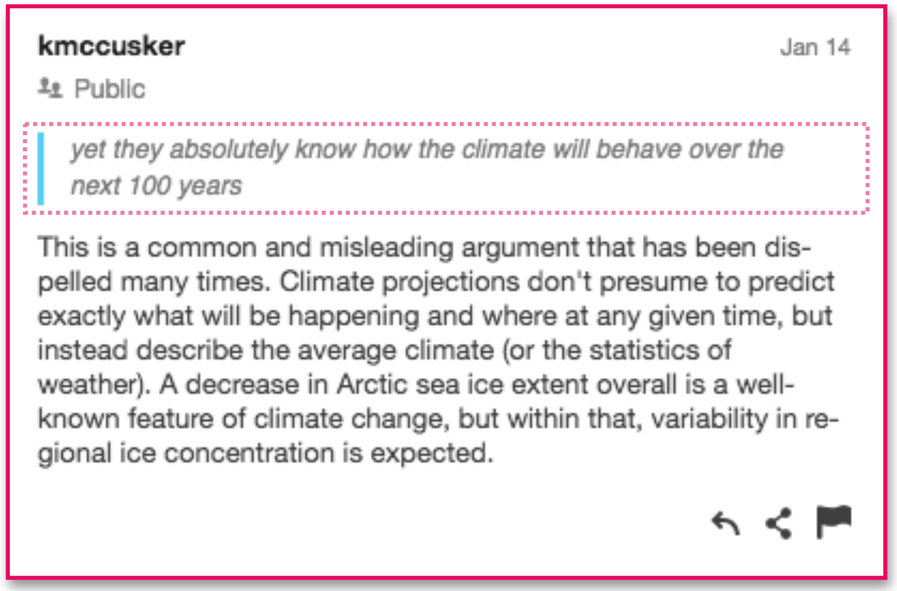


Bodies and Targets

annotation

target

https://conservativetribune.com/global-warming-study-cancelled/

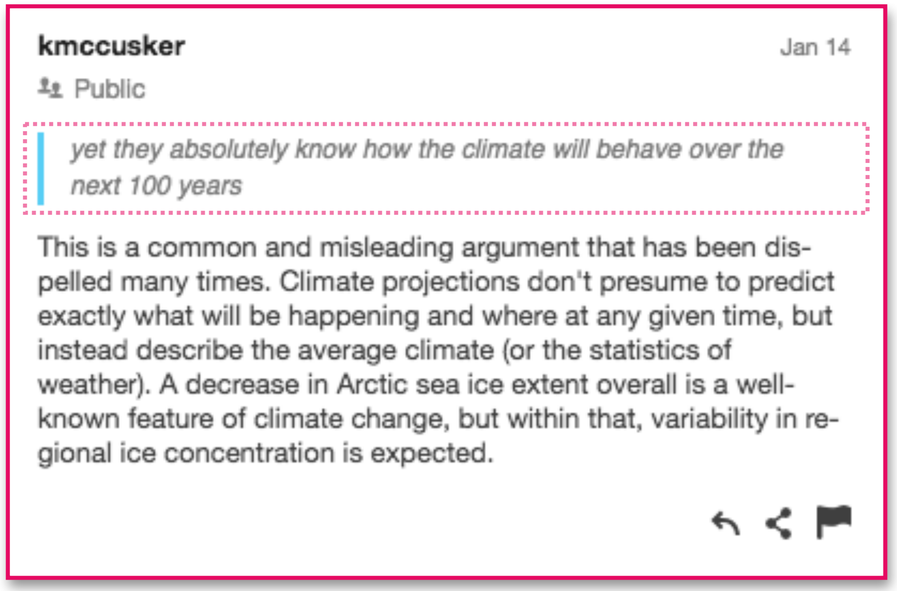


Bodies and Targets

annotation

target

https://conservativetribune.com/global-warming-study-cancelled/



refined by Selectors

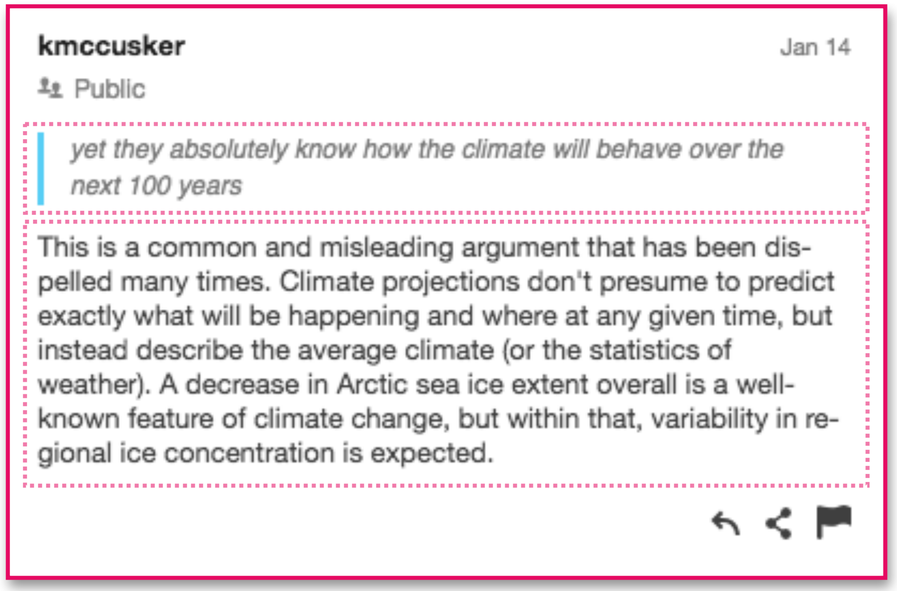
Bodies and Targets

annotation

target

https://conservativetribune.com/global-warming-study-cancelled/

body



refined by Selectors

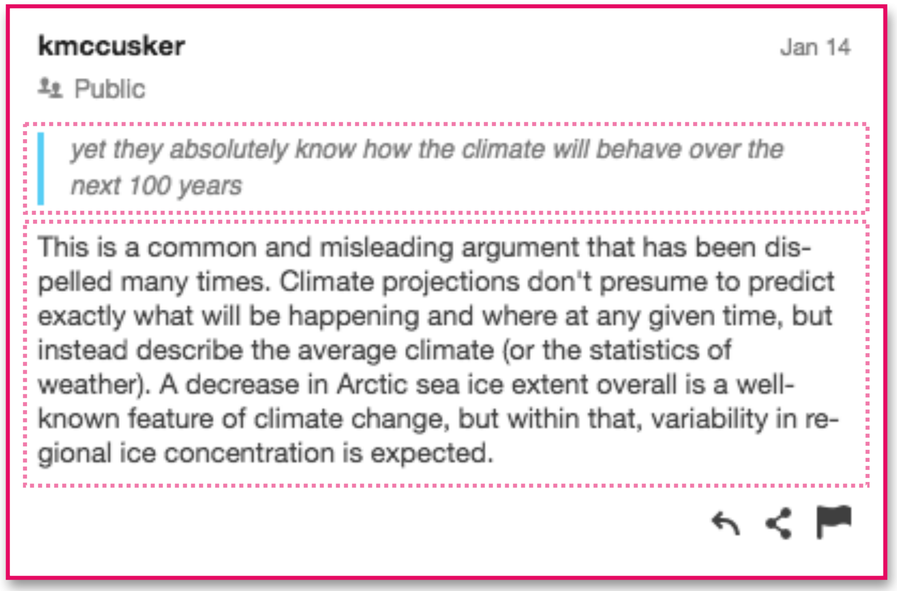
Bodies and Targets

annotation

target

https://conservativetribune.com/global-warming-study-cancelled/

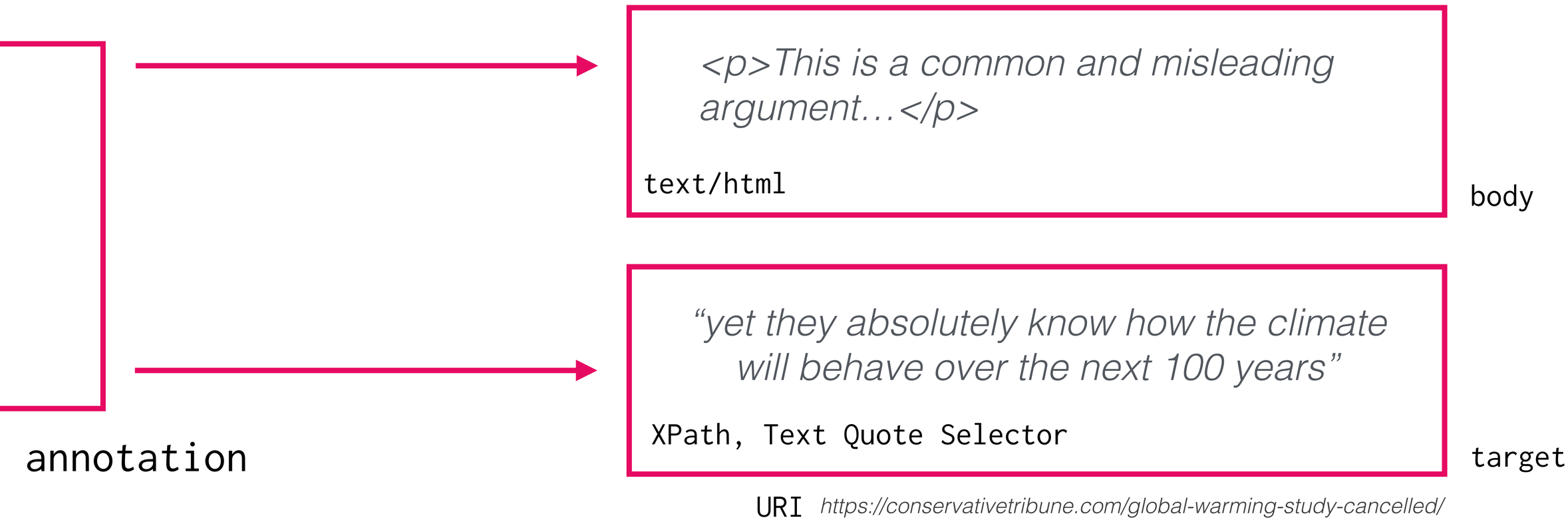
body



refined by Selectors

formatted as HTML

Bodies and Targets



Bodies and Targets

annotation *http://www.example/com/annotations/e498dd93*

body

* This is a common and misleading argument… *

text/html

target

“yet they absolutely know how the climate will behave over the next 100 years”

XPath, Text Quote Selector

URI *https://conservativetribune.com/global-warming-study-cancelled/*

Targeting another Annotation

annotation http://www.example/com/a

This is a common and mislea
argument…

text/html

“yet they absolutely know how the
will behave over the next 100 ye

XPath, Text Quote Selector

URI https://conservativetribune.com/global-warmi

Targeting another Annotation

annotation http://www.example/com/annotations/fcc983443

body

Allow me to retort.

text/html

annotation http://www.example/com/a

This is a common and mislea
argument…

text/html

“yet they absolutely know how the
will behave over the next 100 ye

XPath, Text Quote Selector

URI https://conservativetribune.com/global-warmi

Targeting another Annotation

annotation

http://www.example/com/annotations/fcc983443

body

* Allow me to retort. *

`text/html`

target

http://www.example/com/annotations/e498dd93

annotation

http://www.example/com/a

* This is a common and mislea argument… *

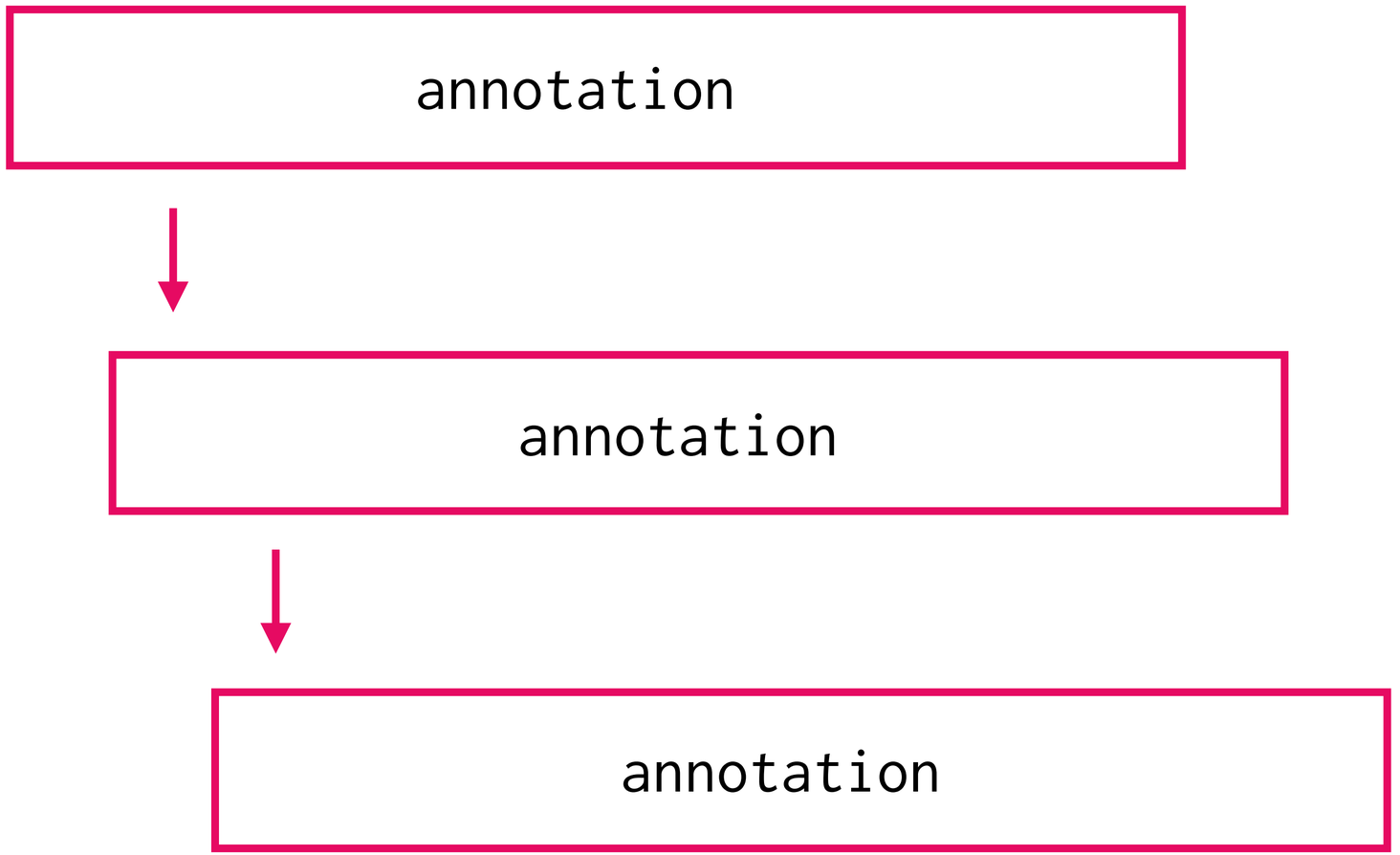
`text/html`

“yet they absolutely know how the will behave over the next 100 ye

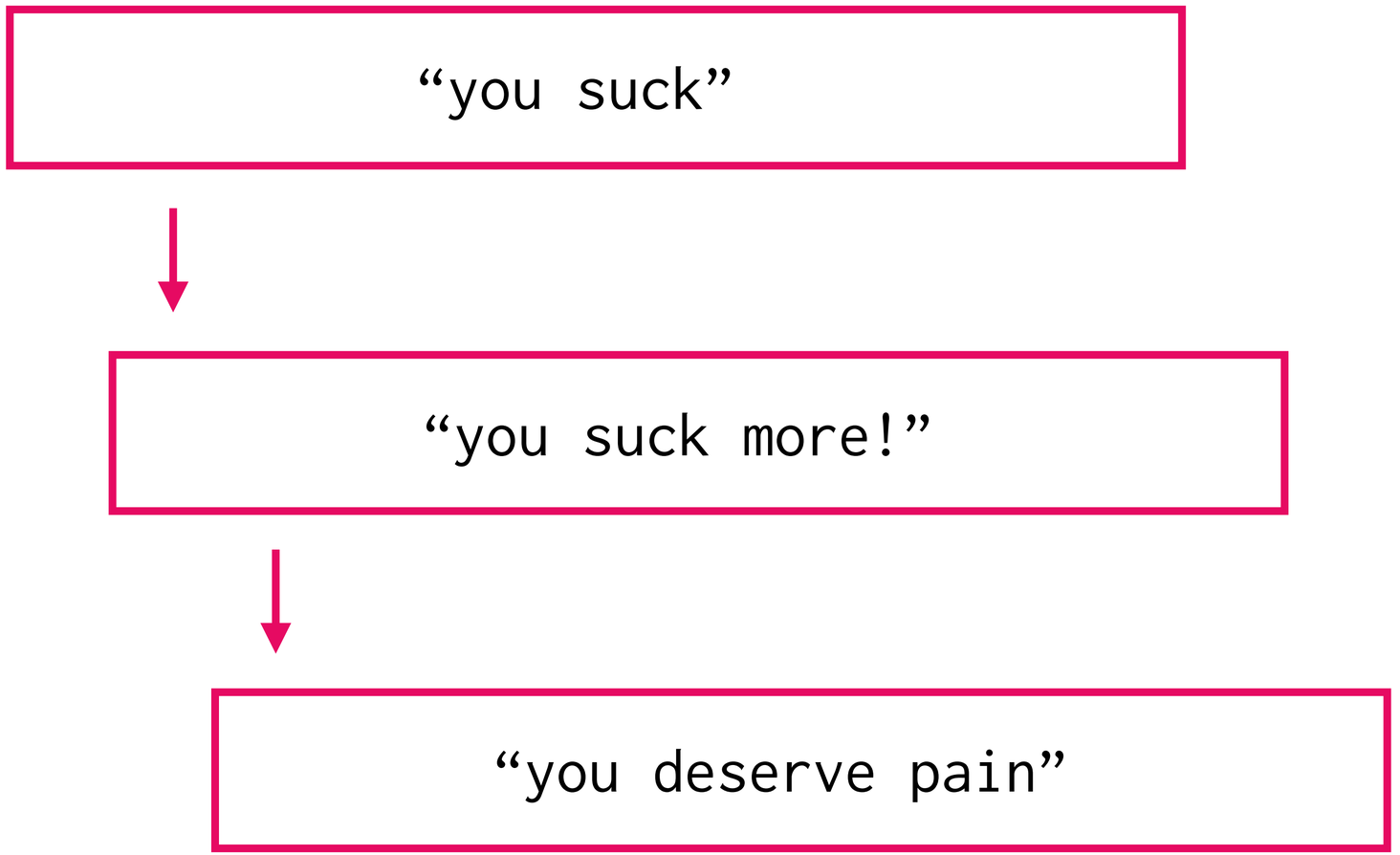
`XPath, Text Quote Selector`

URI *https://conservativetribune.com/global-warmi*

threaded replies

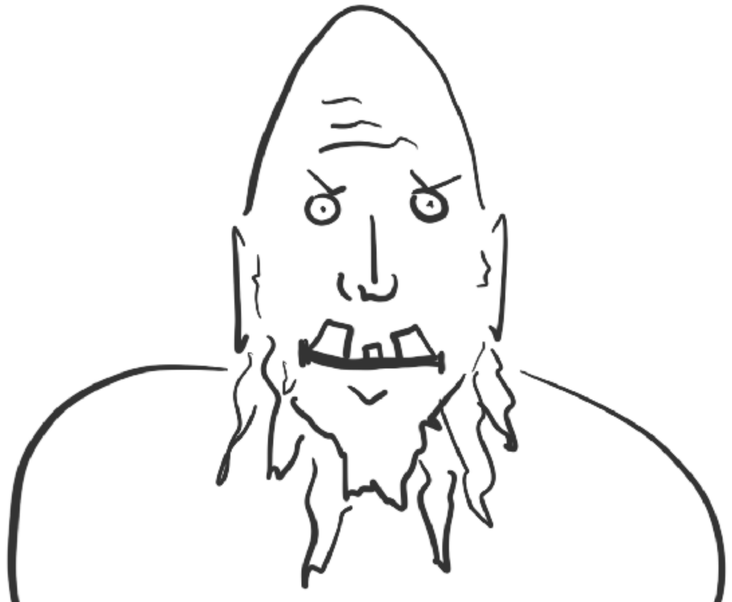


people can suck

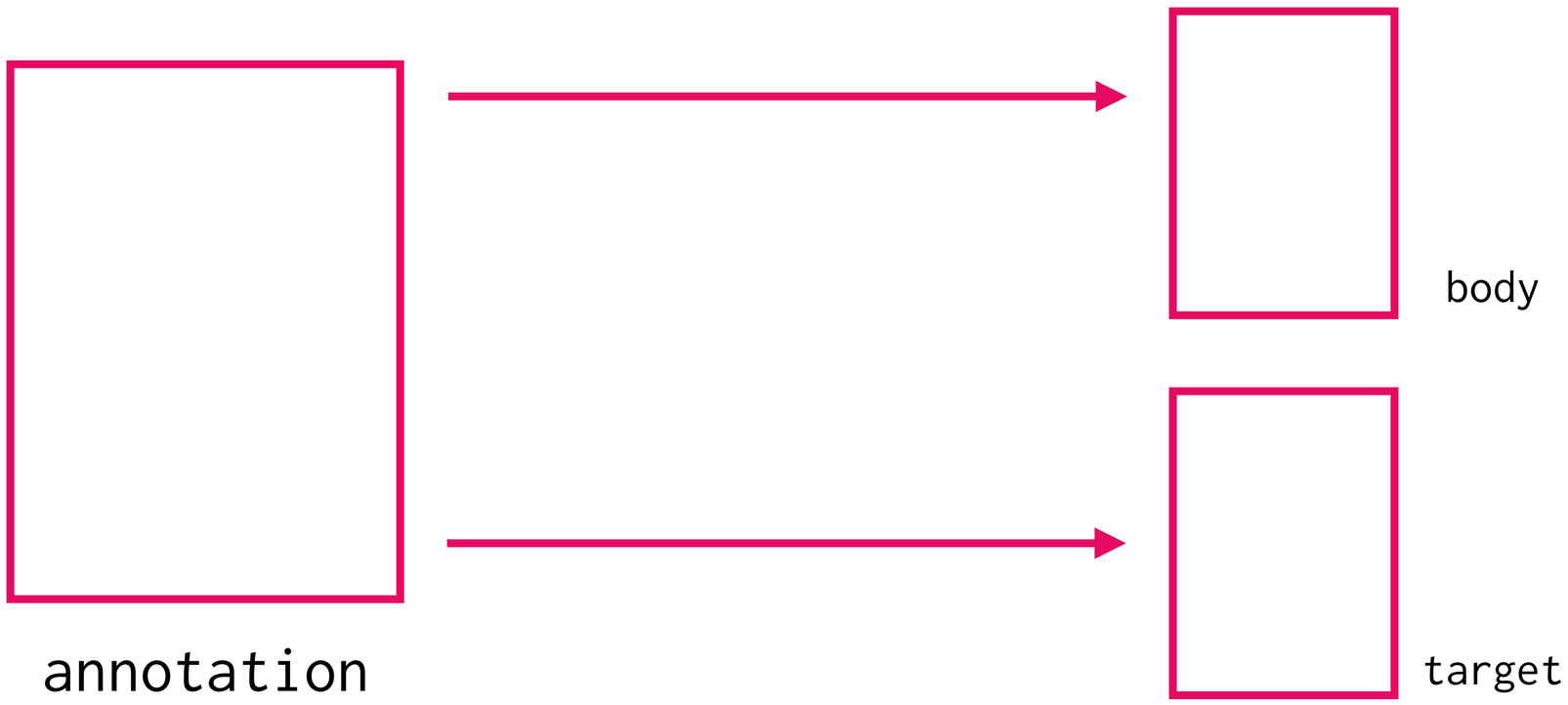


freedom vs. the trolls

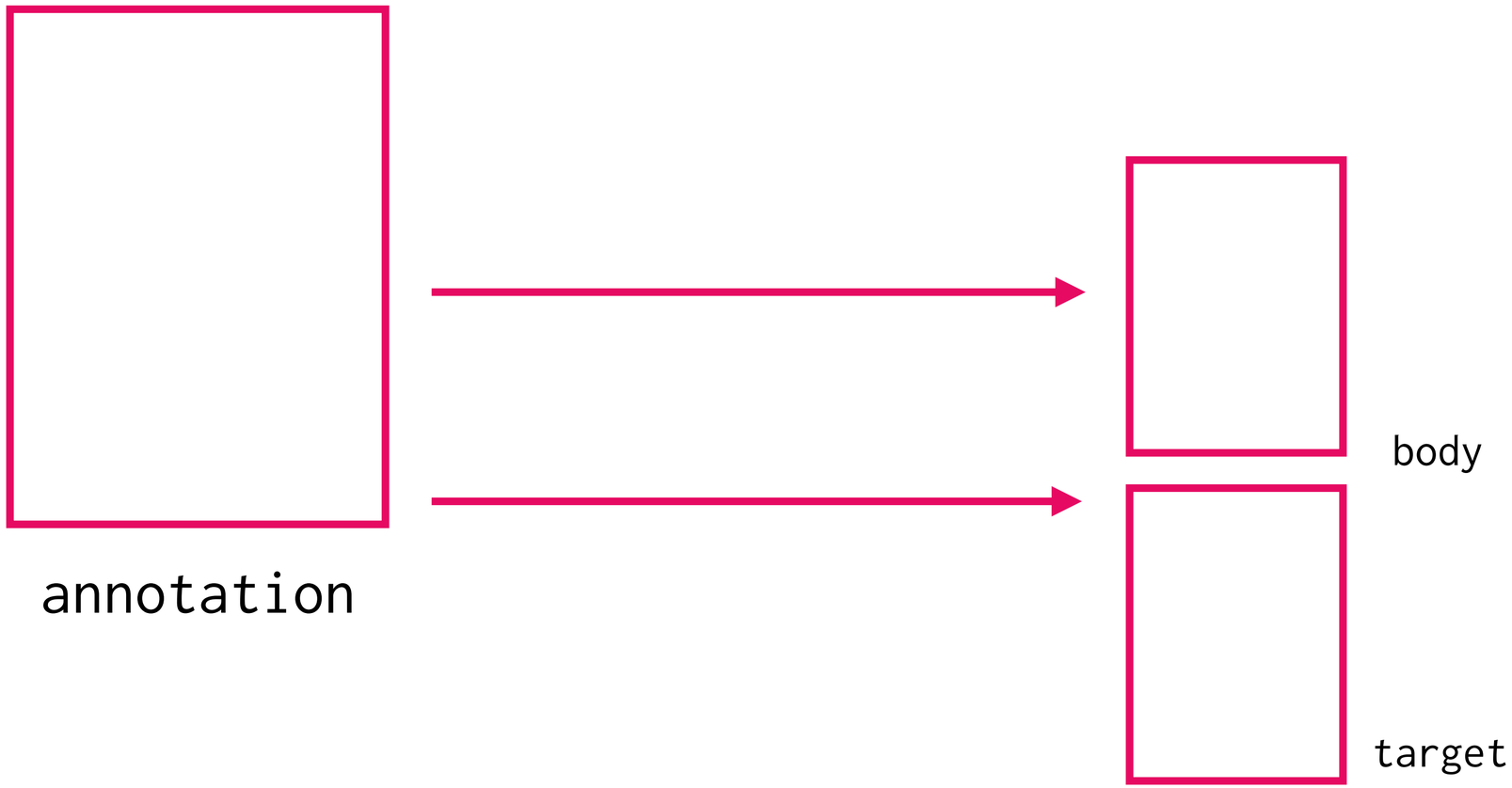
freedom vs. the trolls



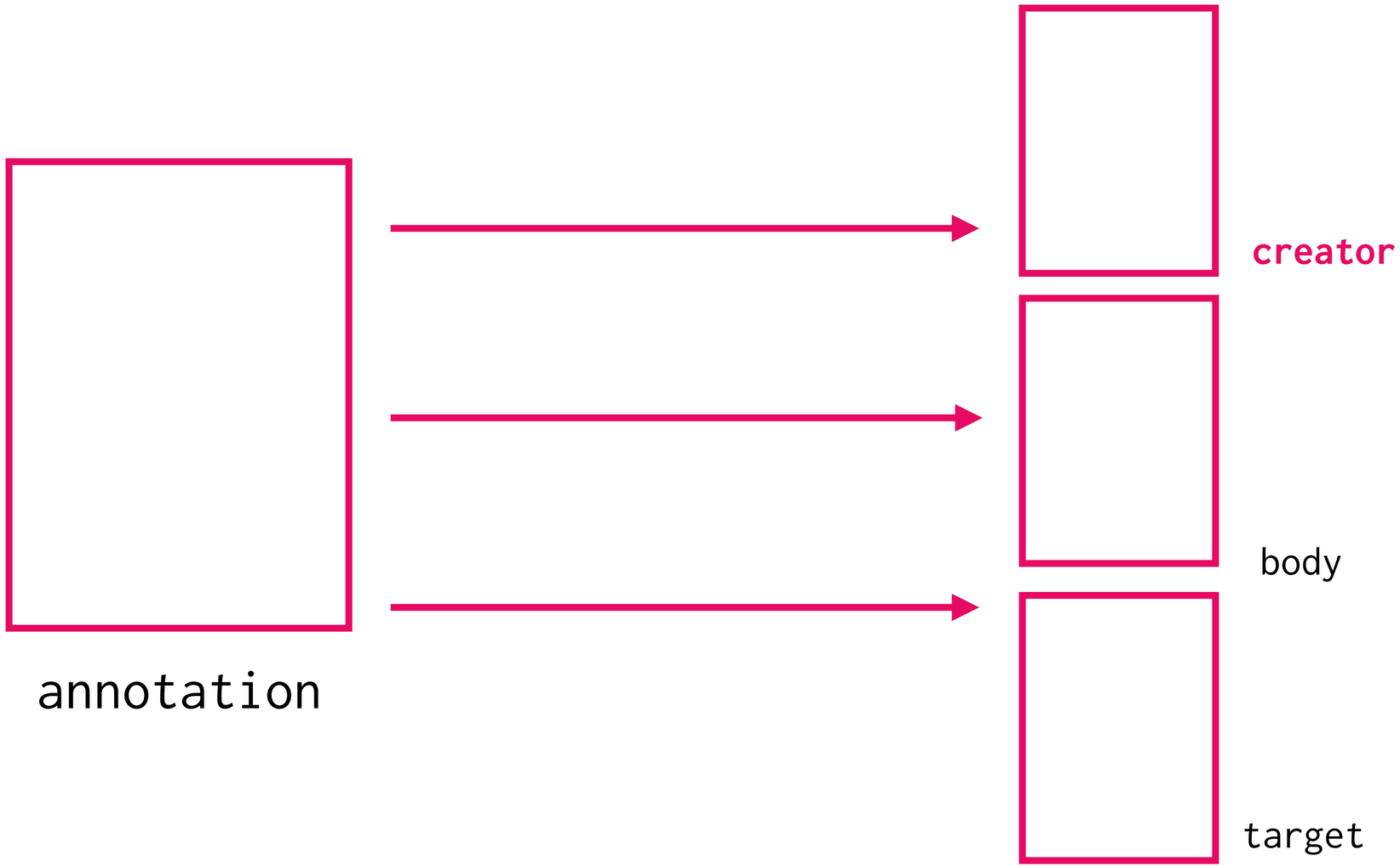
Creator Relationship



Creator Relationship



Creator Relationship



WAWG Objectives

- ***interoperability***
  centered on the URI, web foundations
- ***generalized model***
  “orthogonal to the domain of interest”
- ***simple, inexpensive implementation***
  un-opinionated about specific technologies

It’s complicated.

can I mute this thing? halp!

Your blog post

Your blog post

Allow publishers to opt out?

<makeItStop=“true”>

Allow publishers to opt out?

```
document.ohGod.please.no.annotations = true;
```

Not all opinions have real value

“

”

Not all opinions have real value

> This article is ***really*** wrong.
>
> There is just no way.

who gets to decide?

BAN THIS USER

who gets to decide?

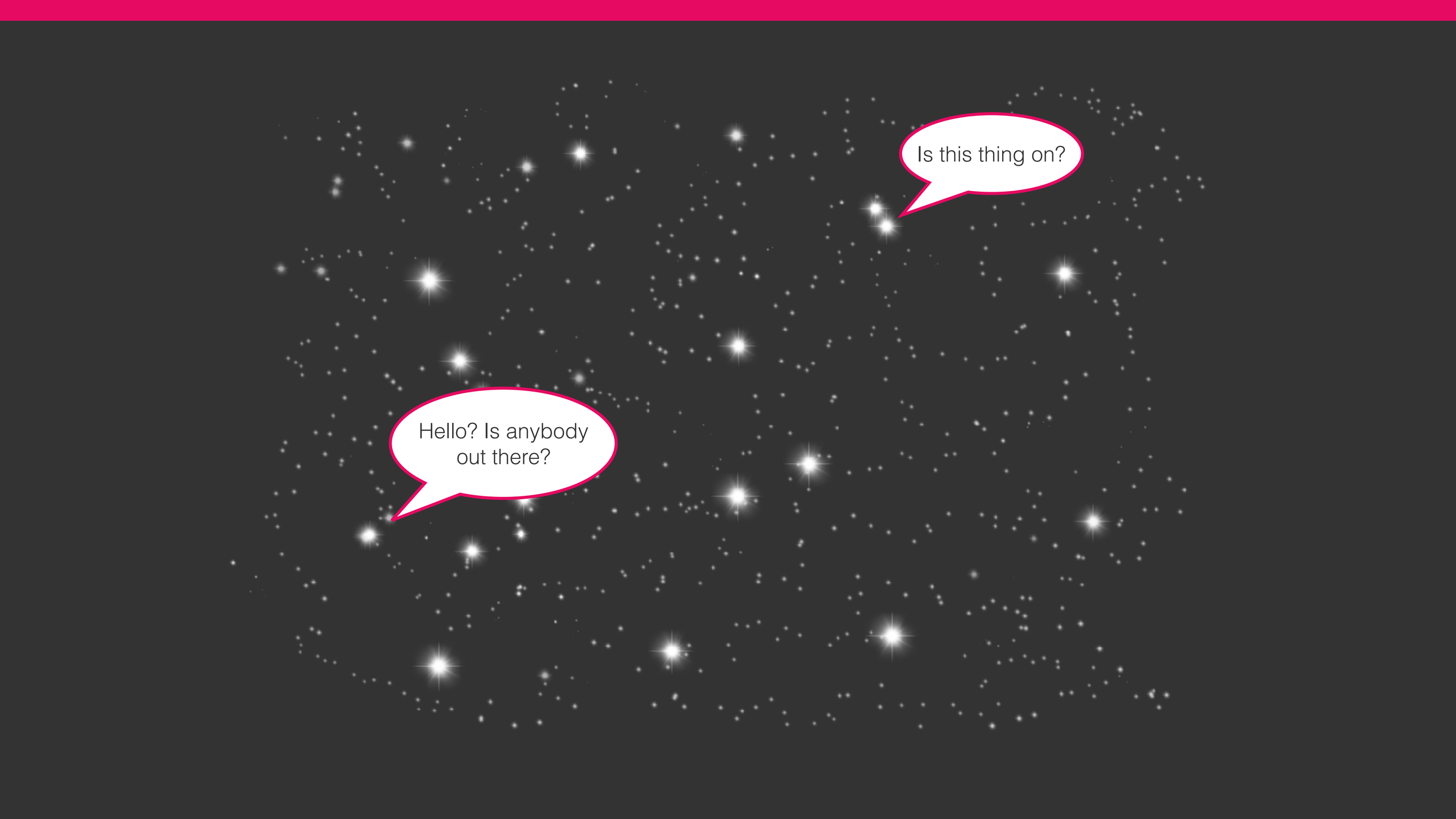
freedom vs. control

always a tension on the web

Shouting into the Void

Flexible vs. Specific

Hello? Is anybody out there?


Is this thing on?
Hello? Is anybody out there?

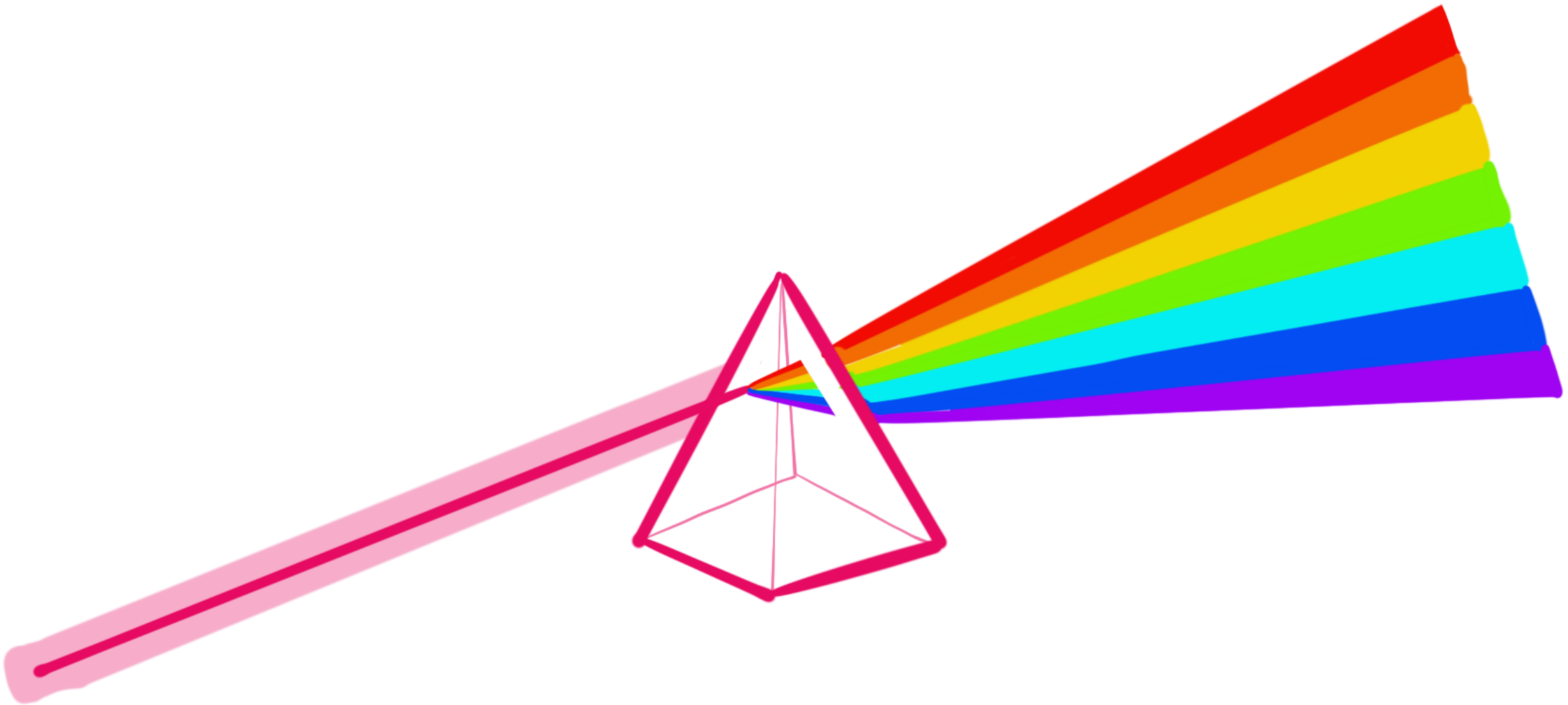
Web Annotation: a gift?

the TYRANNY *of* ABSTRACTION

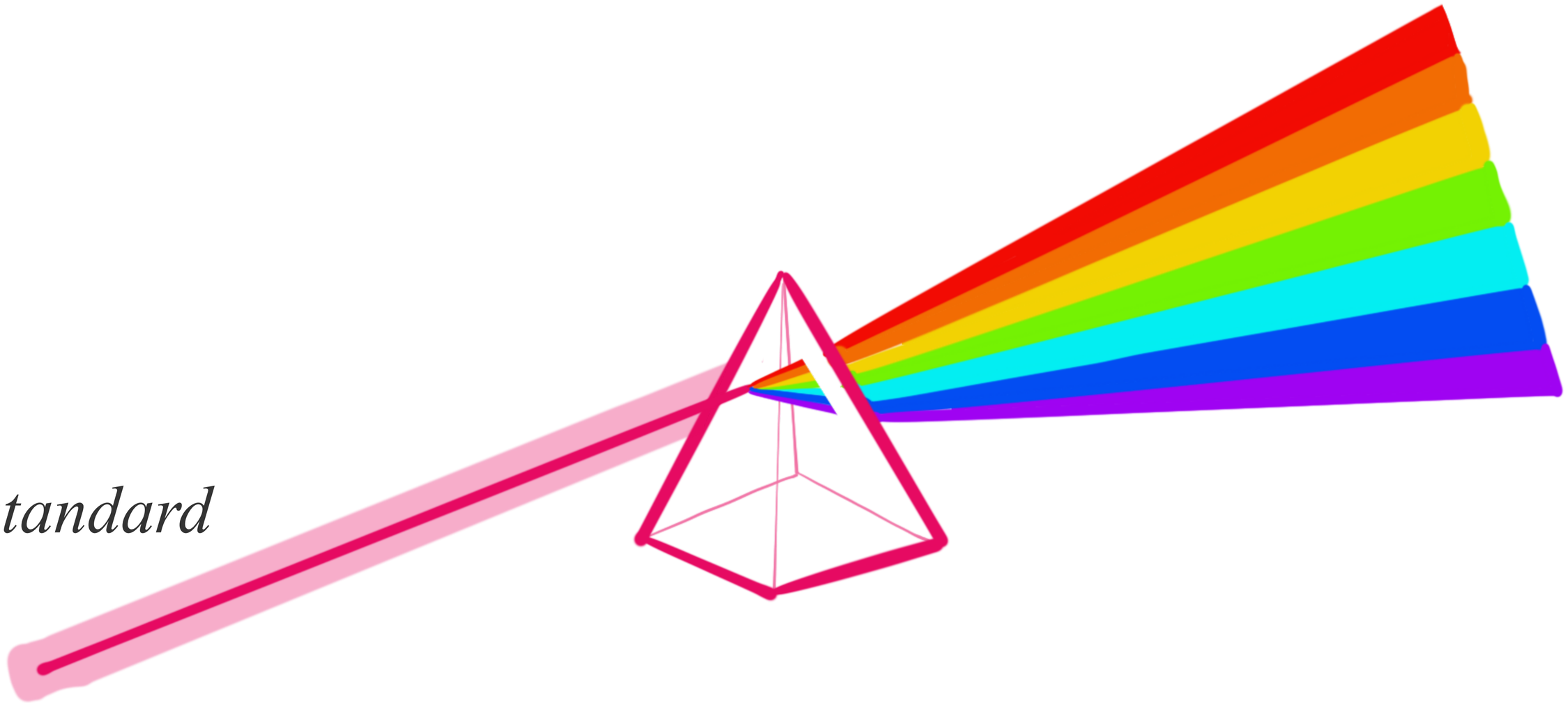
flexible vs. specific

always a tension on the web

making this great is up to implementors

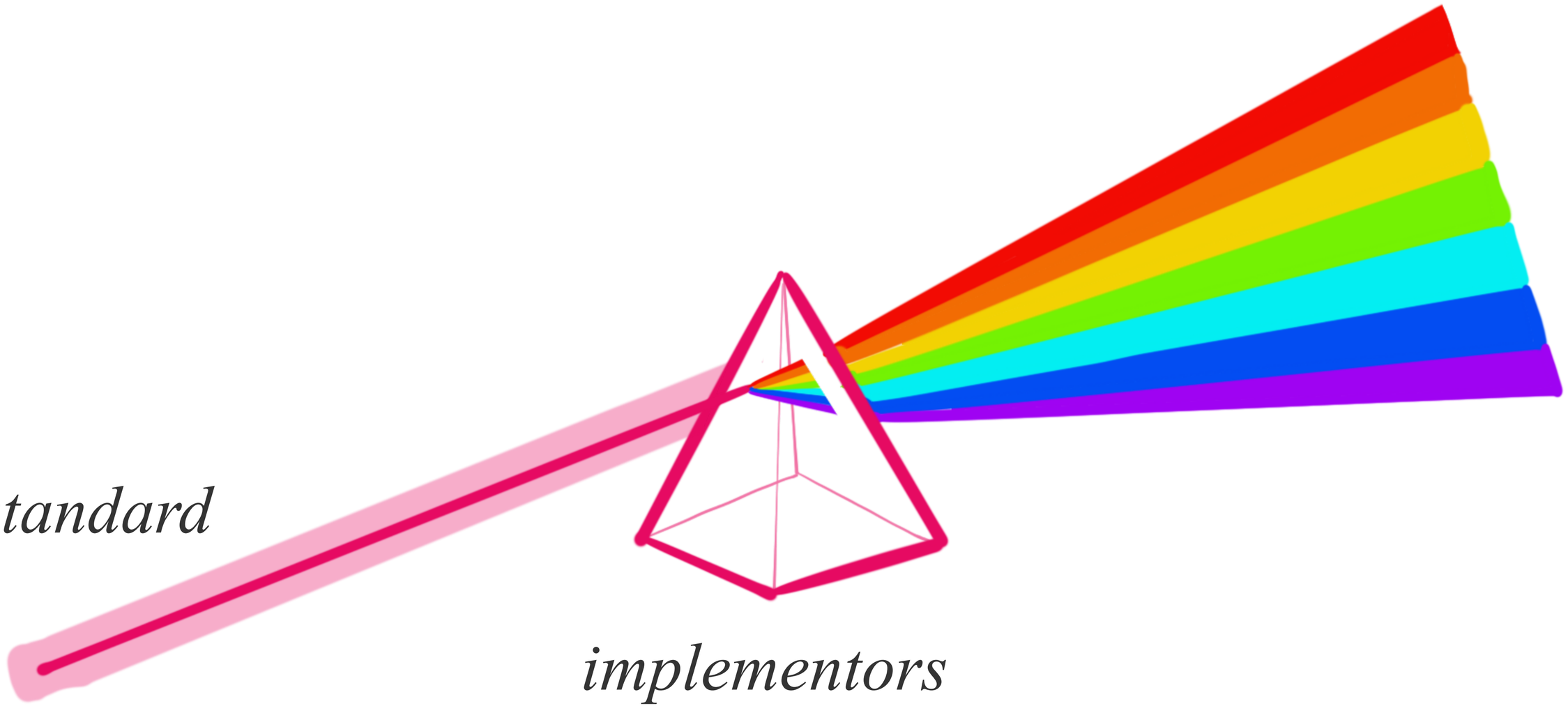


making this great is up to implementors

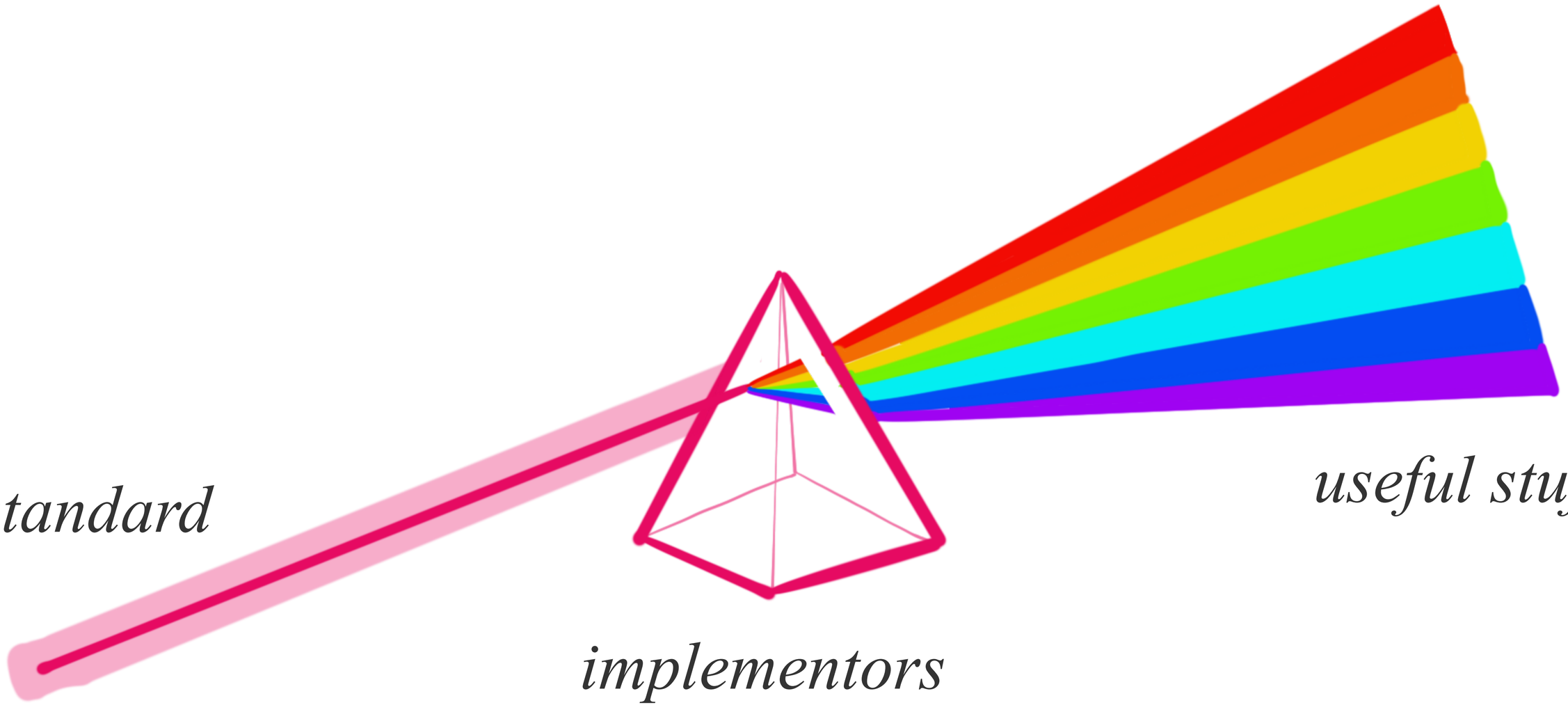


standard

making this great is up to implementors



making this great is up to implementors



“FIRST POST!!!!11”

“testing…”

“first annotation test”

flexible vs. specific

always a tension on the web

It’s slowing me down

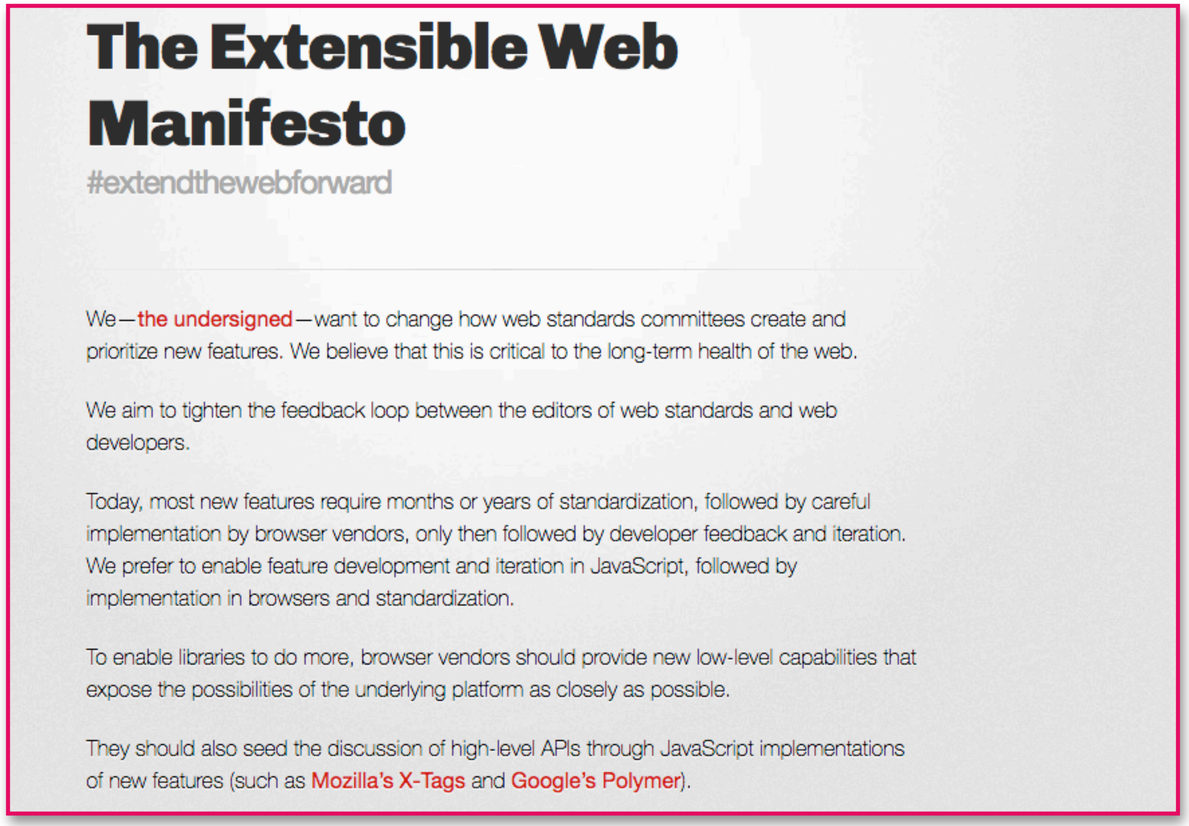
Open vs. Proprietary

the web evolves so slowly

the web evolves so slowly

Extensible Web Manifesto

Extensible Web Manifesto



The Extensible Web Manifesto

#extendthewebforward

We—the undersigned—want to change how web standards committees create and prioritize new features. We believe that this is critical to the long-term health of the web.

We aim to tighten the feedback loop between the editors of web standards and web developers.

Today, most new features require months or years of standardization, followed by careful implementation by browser vendors, only then followed by developer feedback and iteration. We prefer to enable feature development and iteration in JavaScript, followed by implementation in browsers and standardization.

To enable libraries to do more, browser vendors should provide new low-level capabilities that expose the possibilities of the underlying platform as closely as possible.

They should also seed the discussion of high-level APIs through JavaScript implementations of new features (such as Mozilla's X-Tags and Google's Polymer).

https://extensiblewebmanifesto.org/

open vs. proprietary

always a tension on the web

open

proprietary

open

proprietary

- ★ ***fast***
- ★ ***full-featured***
- ★ ***innovative***

open

- ★ *interoperable*
- ★ *democratic but slow*
- ★ *stable over the long term*

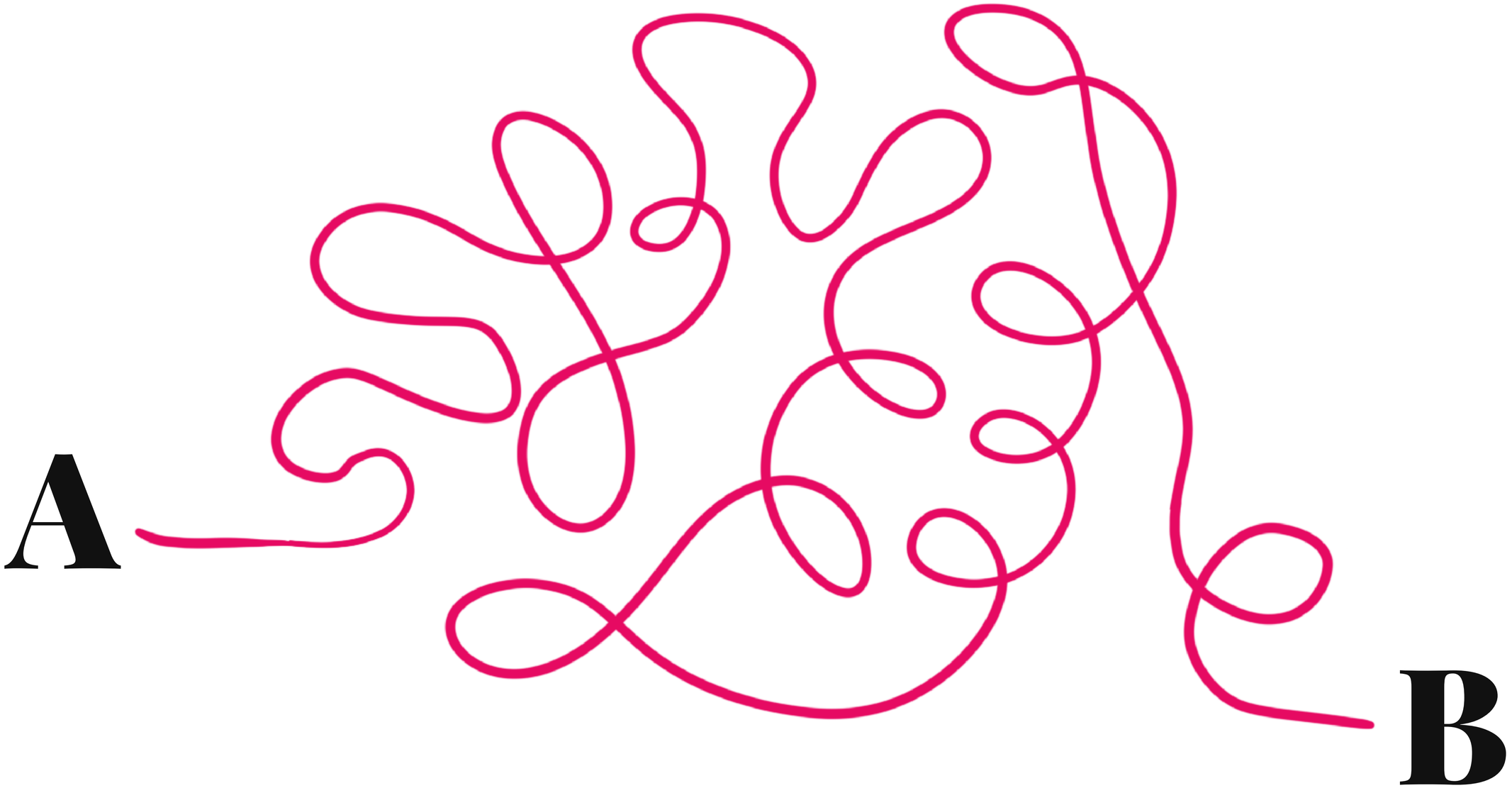
---

proprietary

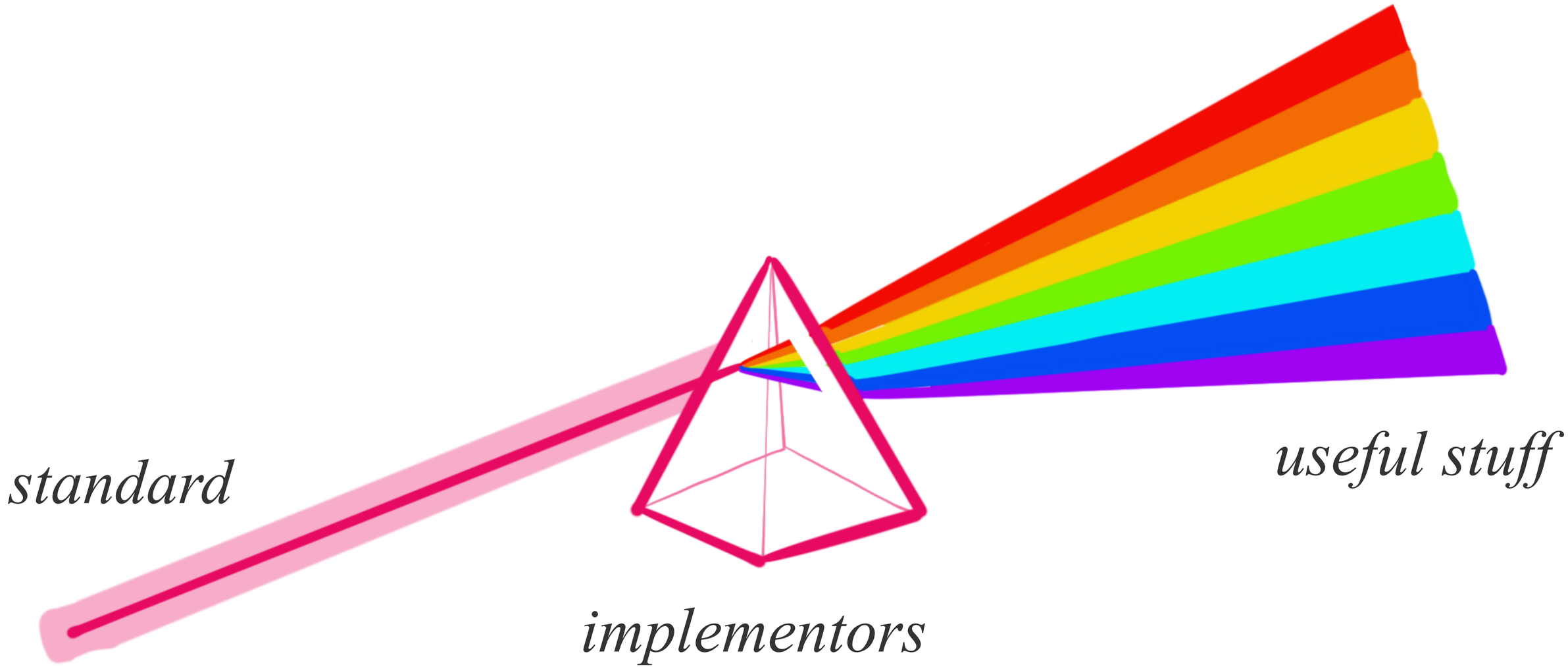
- ★ *fast*
- ★ *full-featured*
- ★ *innovative*

Byzantine standards process

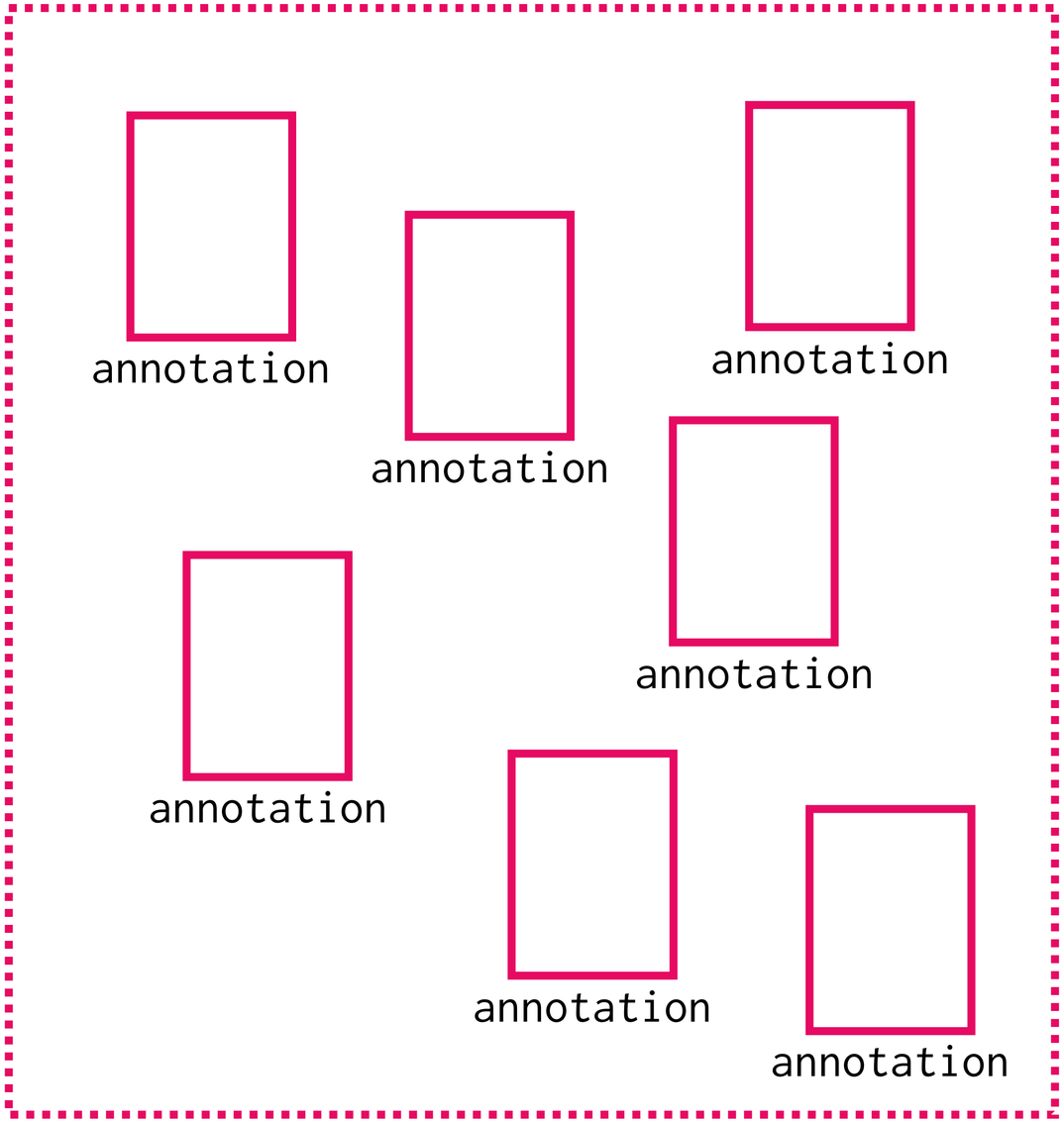
Byzantine standards process



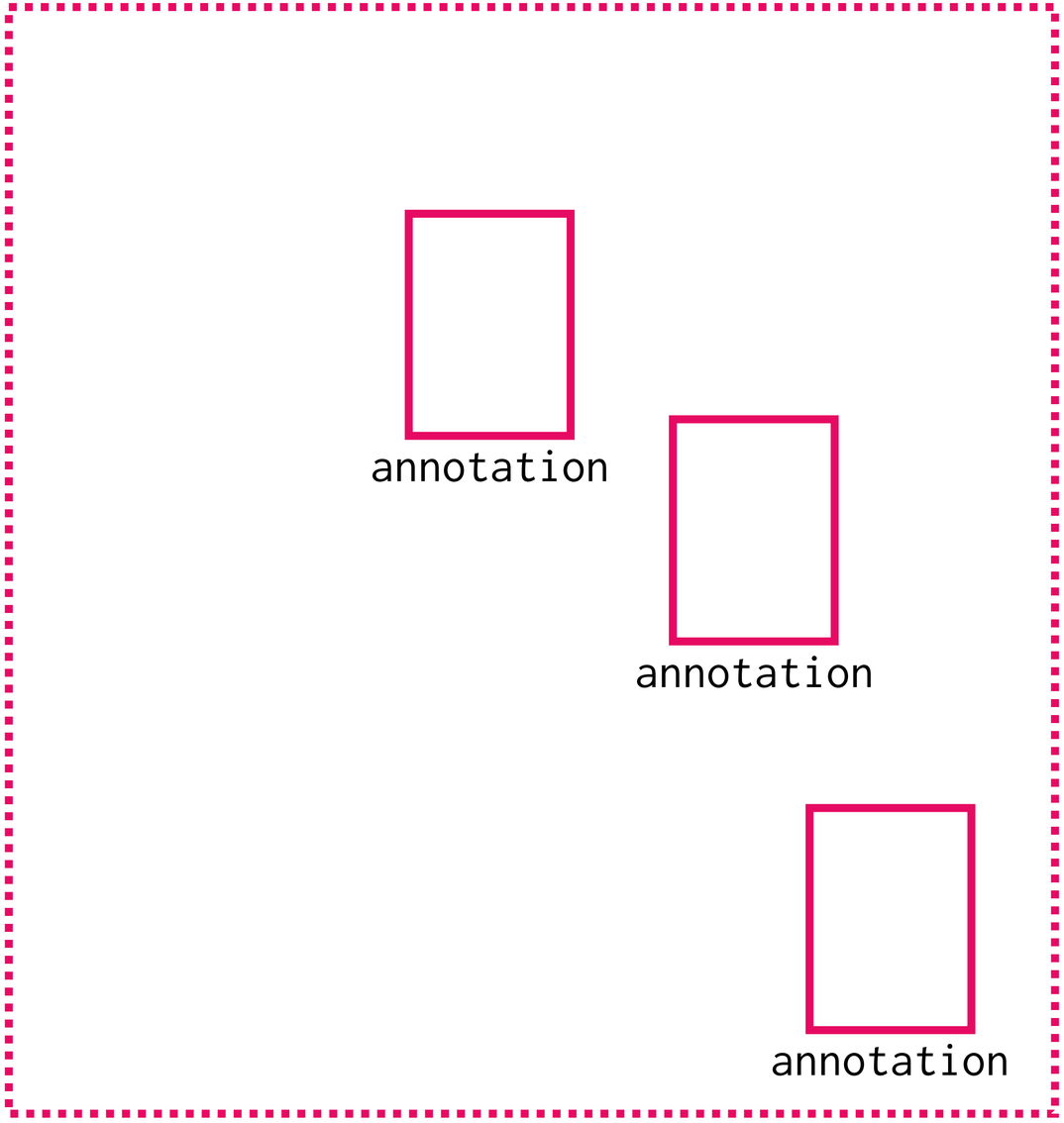
flexibility gives implementors breathing room

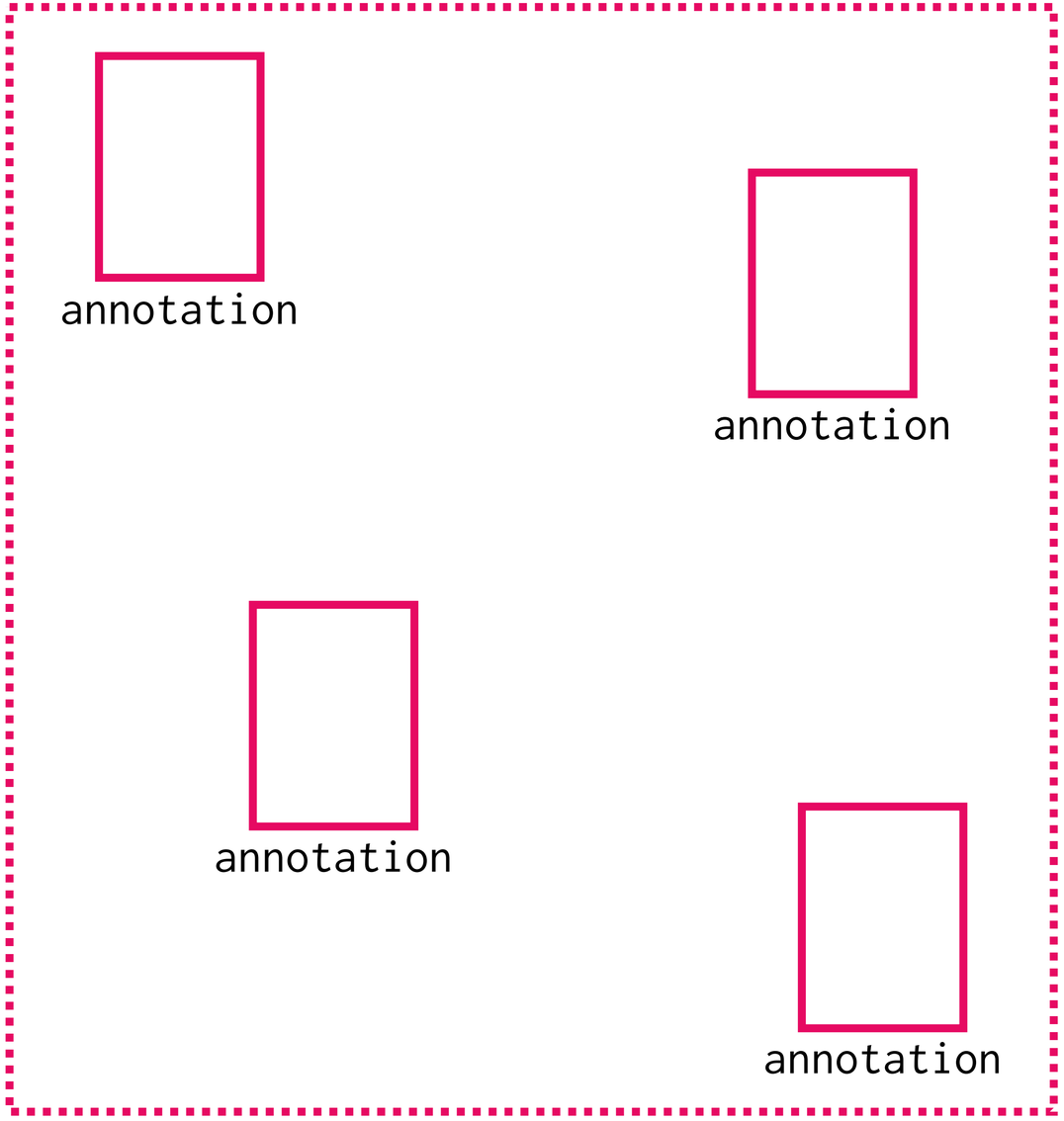


Interoperability



Interoperability





Orthogonal to Use Cases

- ☐ *annotating scientific articles*
- ☐ *bookmarking*
- ☐ *studying — private notes*
- ☐ *reviewing*

Orthogonal to Use Cases

- ☑ *annotating scientific articles*
- ☑ *bookmarking*
- ☑ *studying — private notes*
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Web Cornerstones

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- ***Web Annotation Model***
  The URI

Web Cornerstones

- ***Web Annotation Model***
  The URI
- ***Web Annotation Vocabulary***
  RDF, JSON-LD

Web Cornerstones

- ***Web Annotation Model***
  The URI
- ***Web Annotation Vocabulary***
  RDF, JSON-LD
- ***Web Annotation Protocol***
  RESTful

Let's Talk about Scientists

zoom level

Let's Talk about Scientists

How people use this thing

zoom level

universe *galaxies* *constellations* *planets* *humans*

Maryann Martone

neuroscientist, UCSD

“

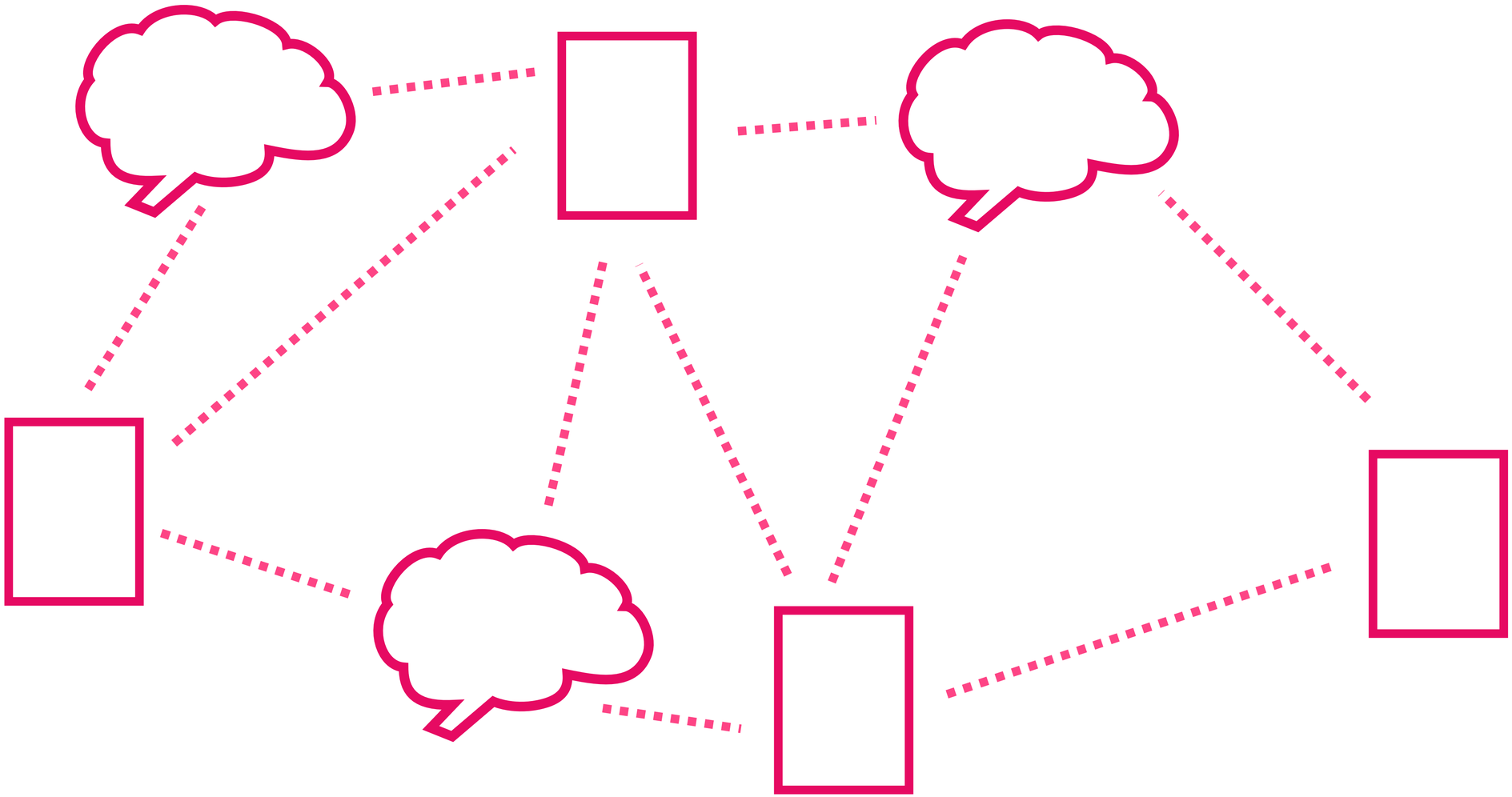
”

bioscientists are failing at the major scourges…we need an interface between data and knowledge.

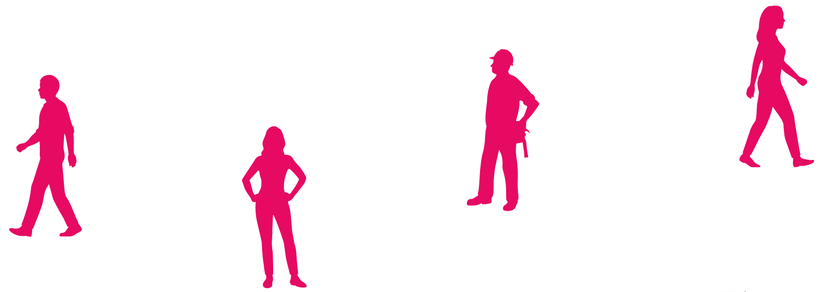
technology vs. culture

always a tension on the web

connective tissue

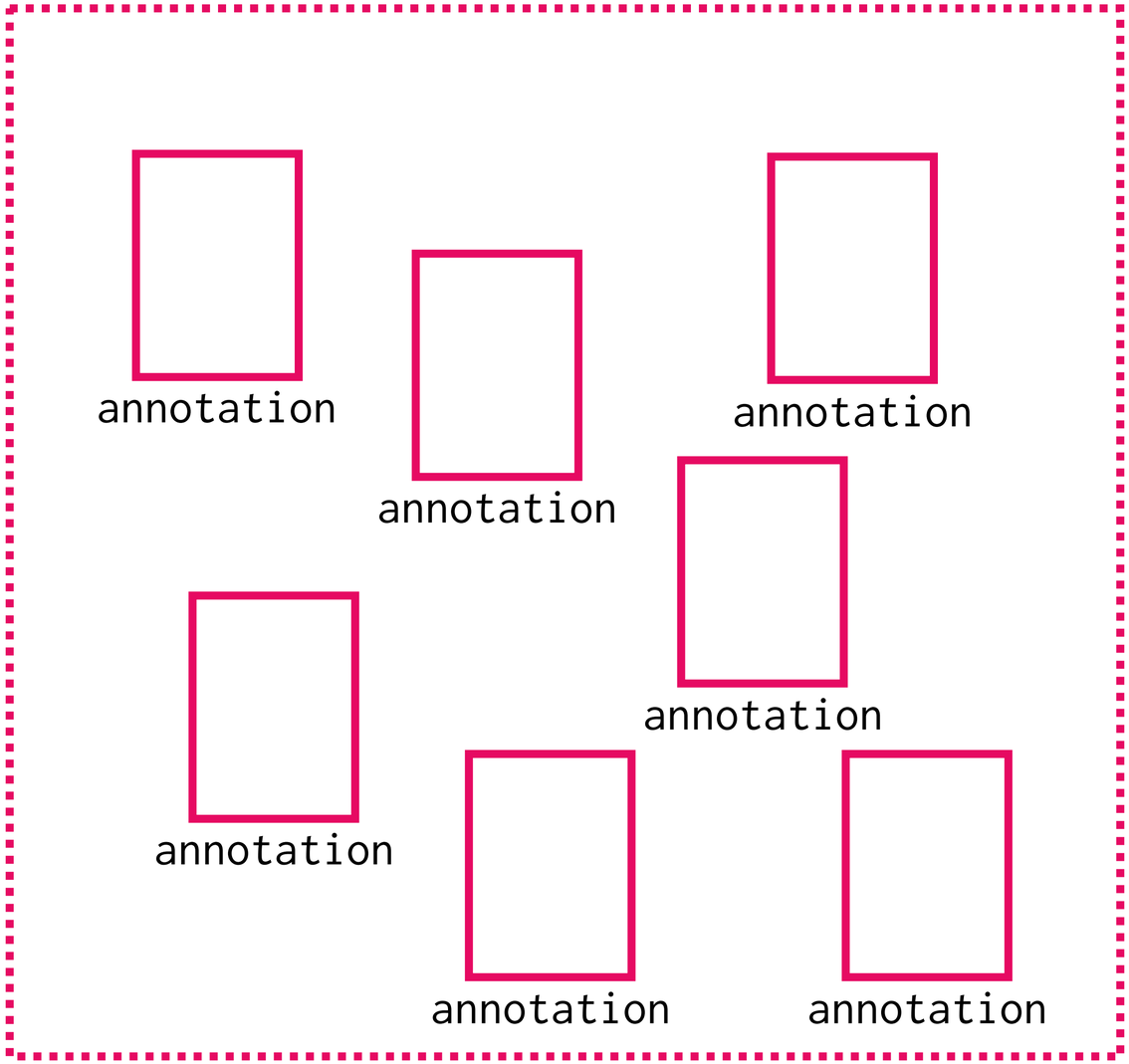


scientists are people

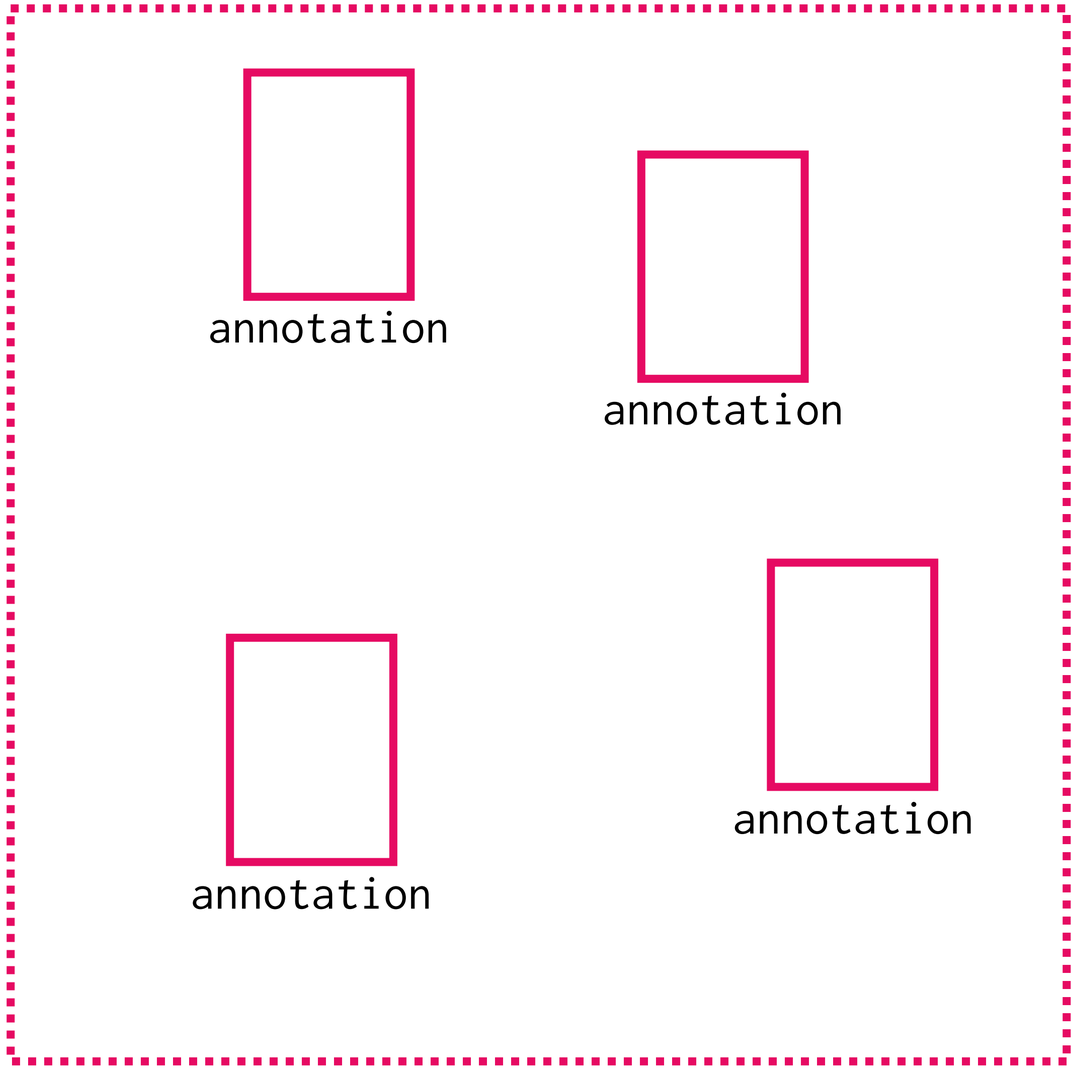


scientists are people

Organizing annotations in groups

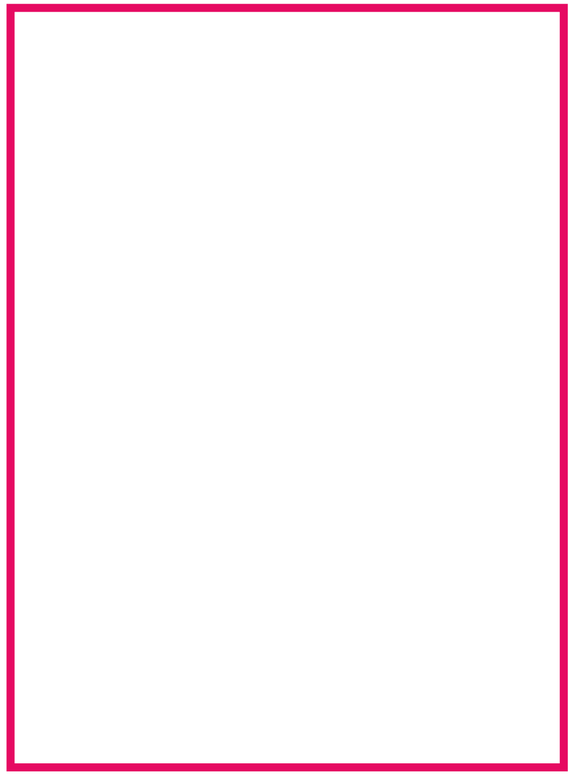


T. Rex diet research



fun facts about squirrels

Tagging



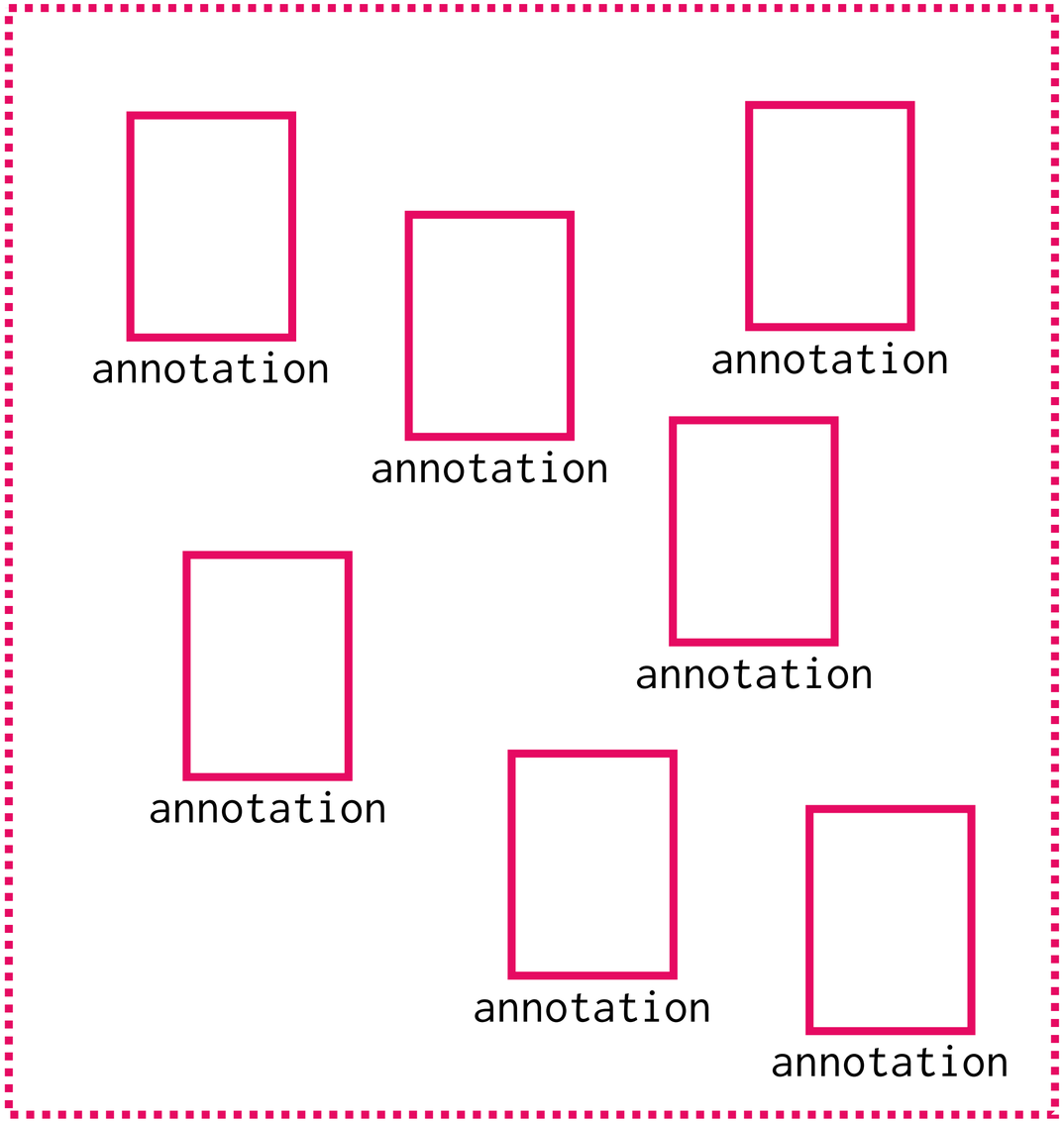
annotation

#t-rex-lies

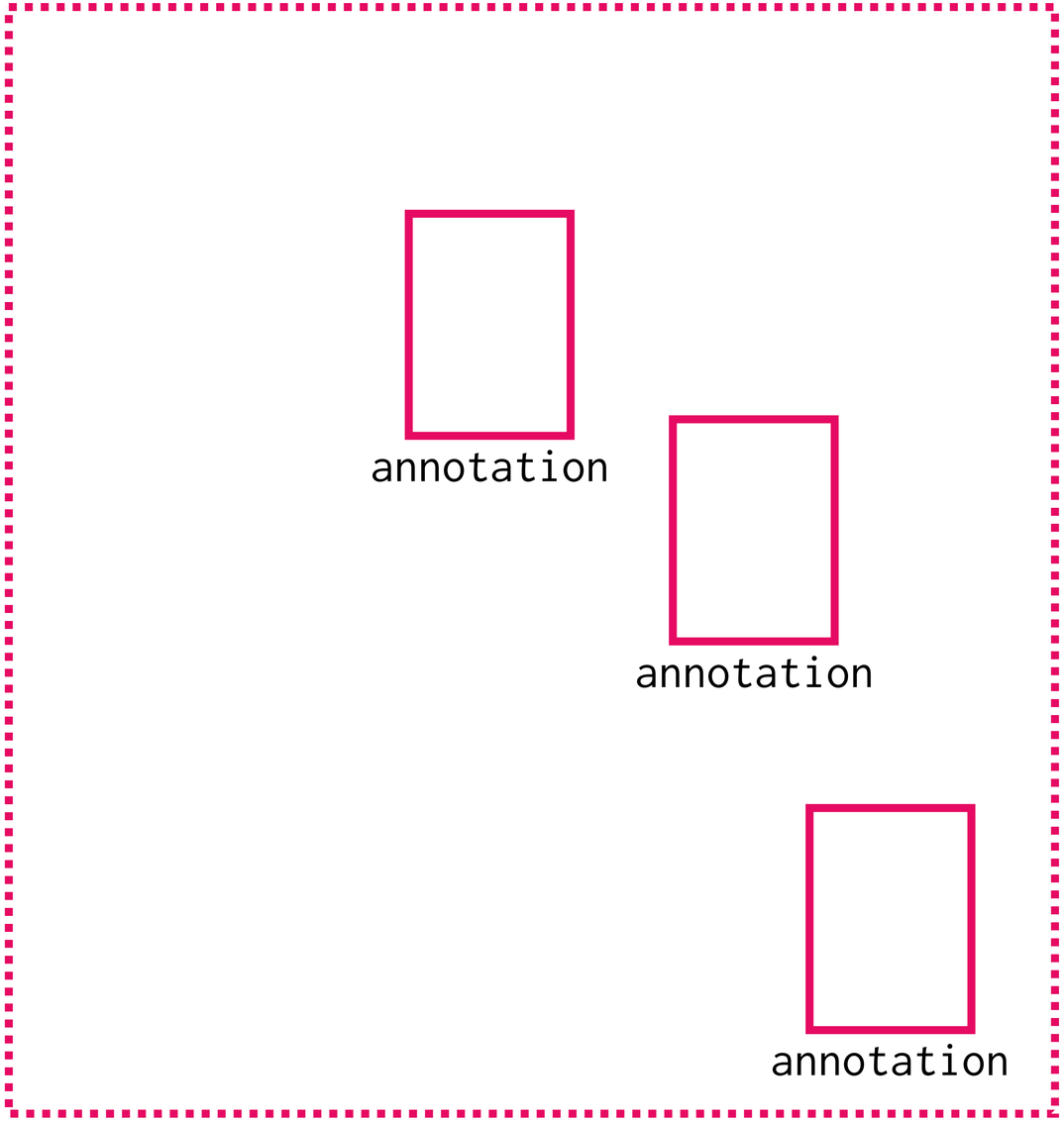
#followup

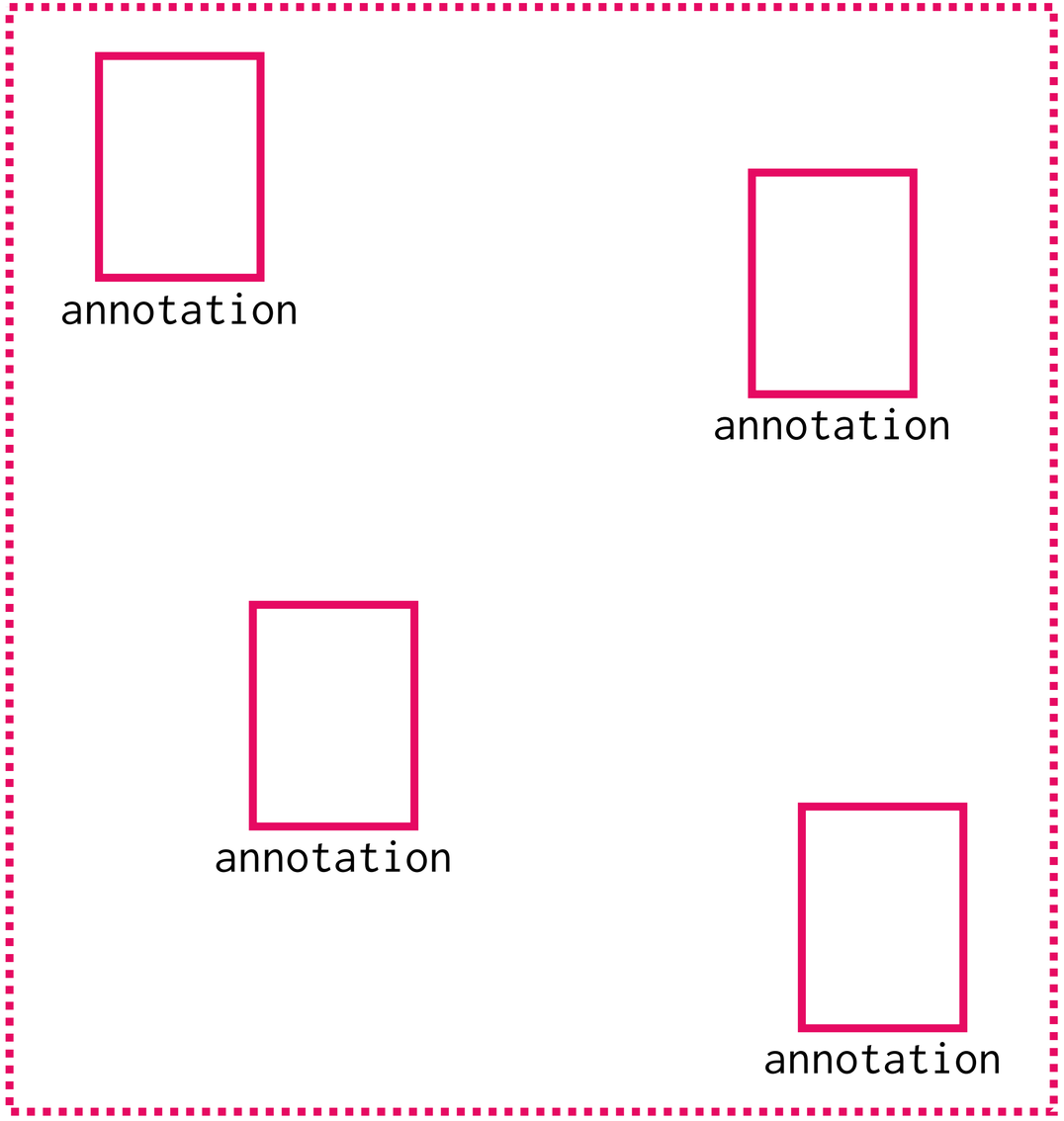
Standard is extensible

Interoperability



Interoperability





but there are some challenges

DOI

D

O

I

D*igital*

O*bject*

I*dentifier*

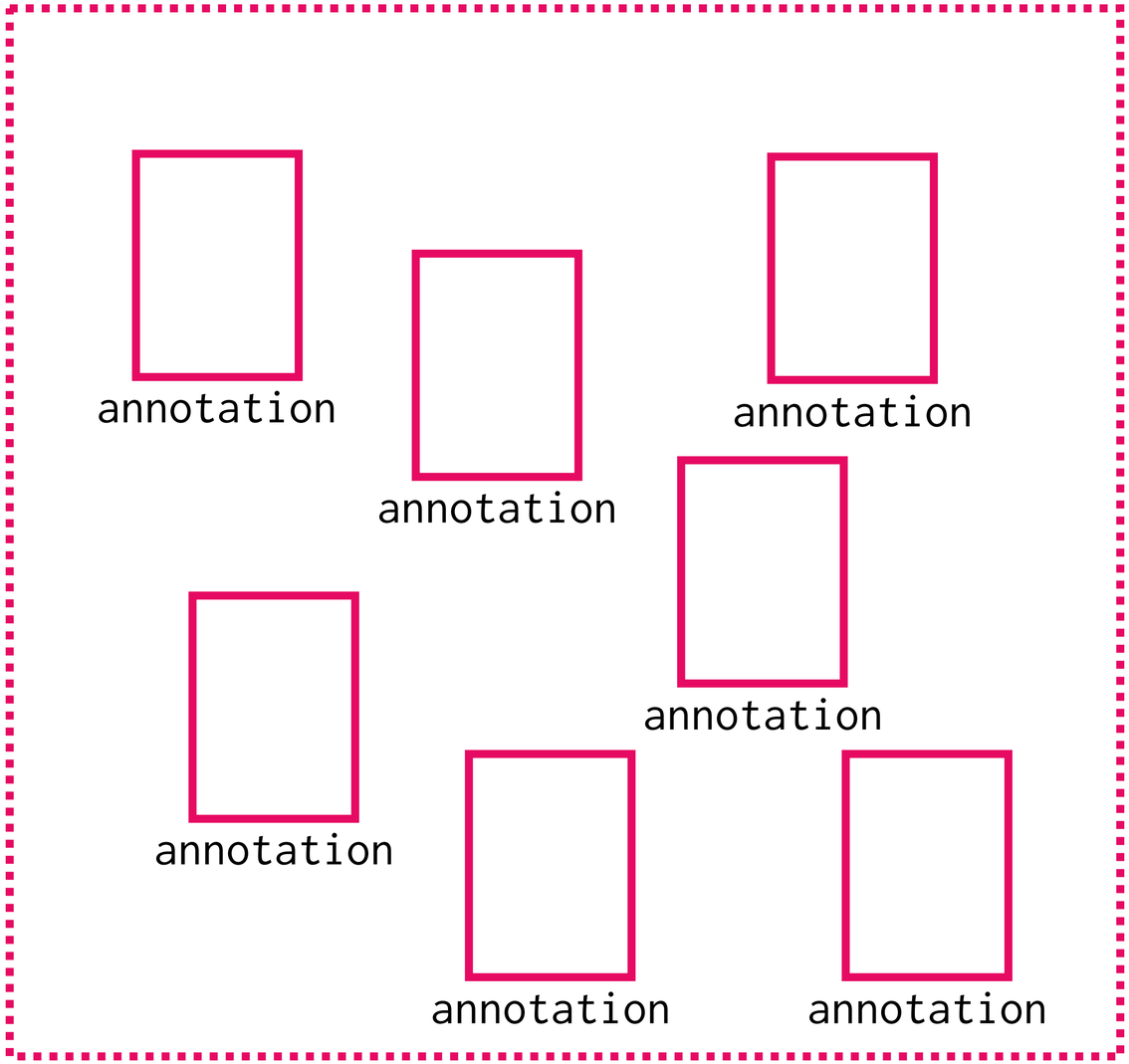
http://www.example.com/article20394af

doi:10.1037/rmh0000008

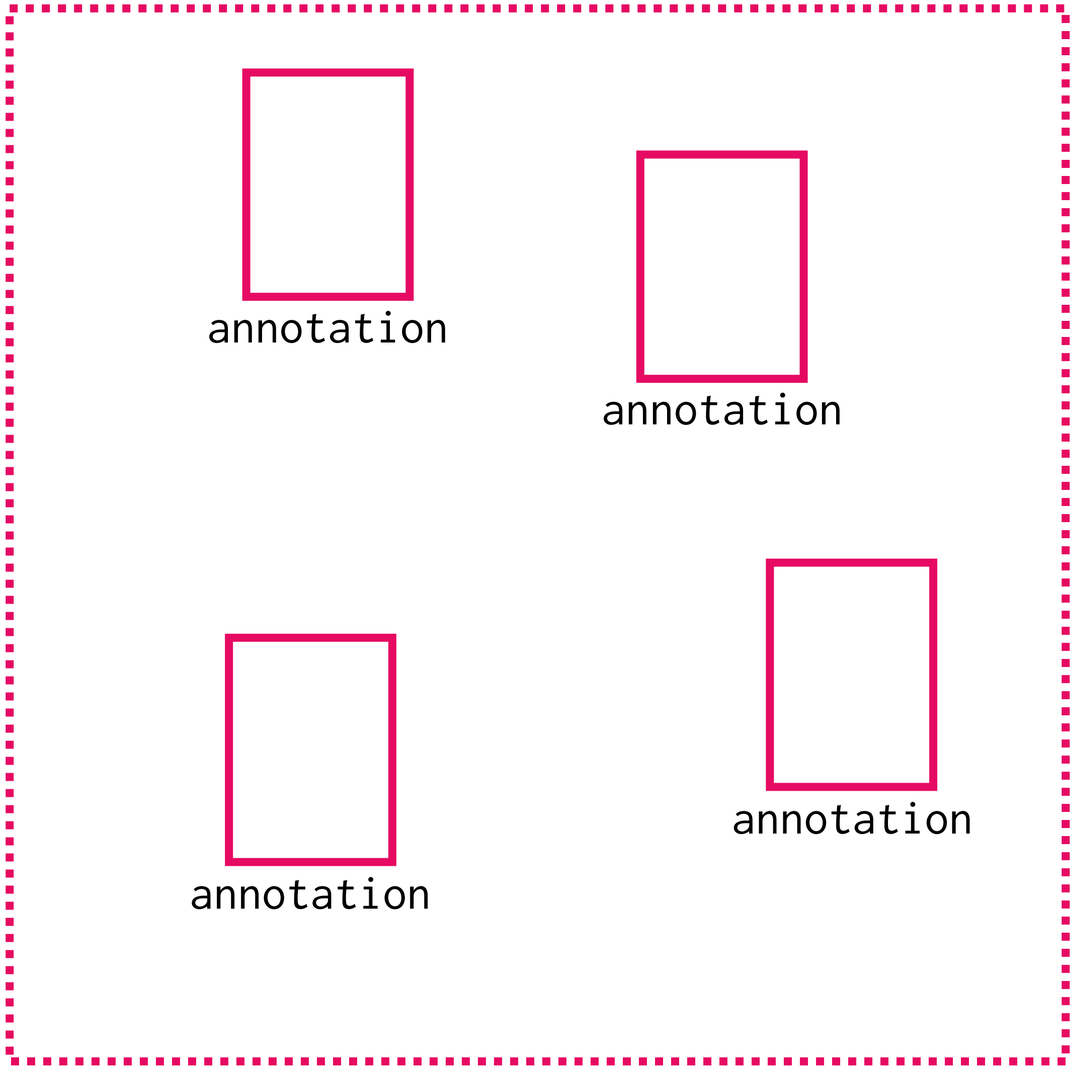
http://www.example.com/article20394af

http://www.example.com/adifferentURL

Moving annotations around

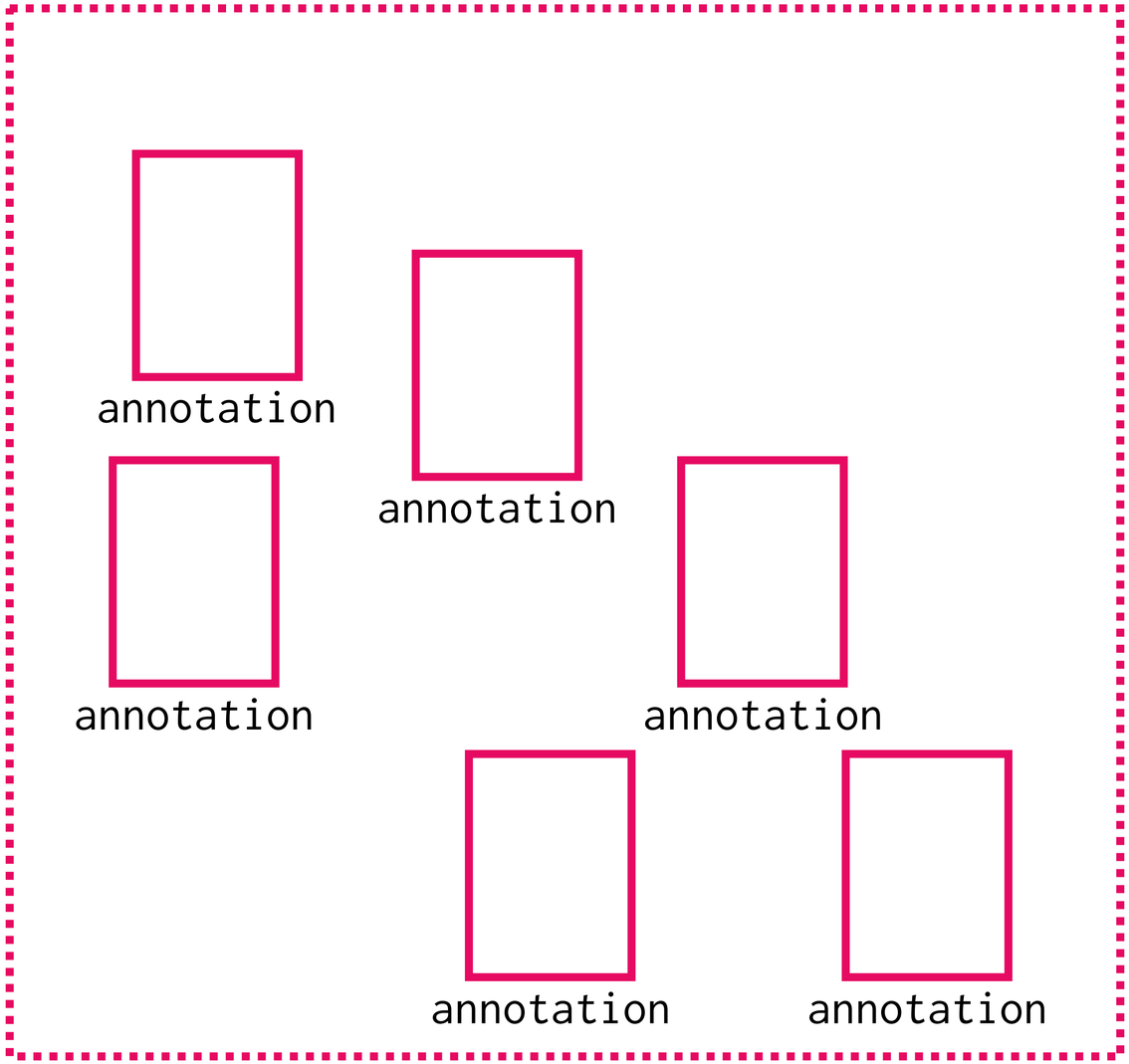


T. Rex diet research



fun facts about squirrels

Moving annotations around



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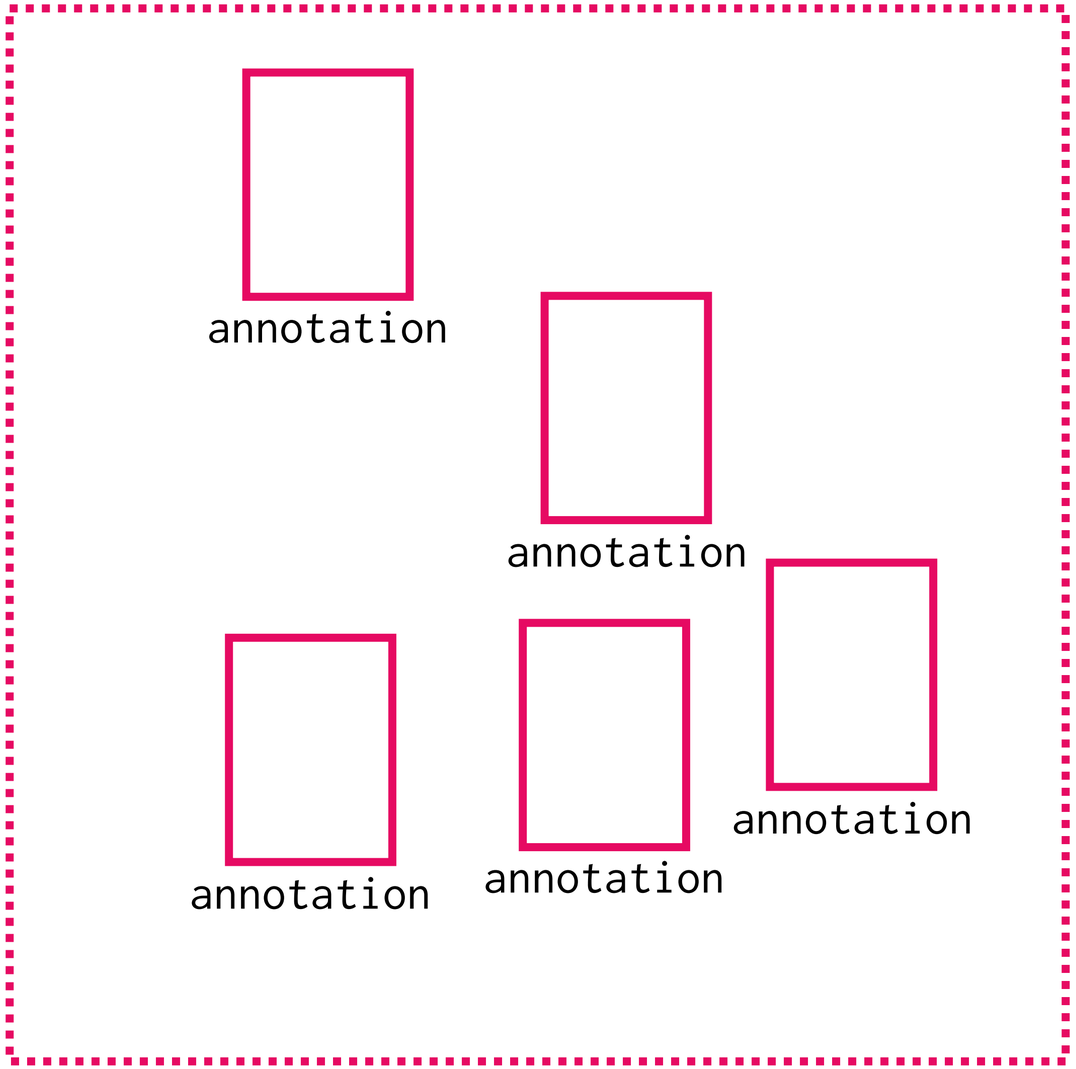

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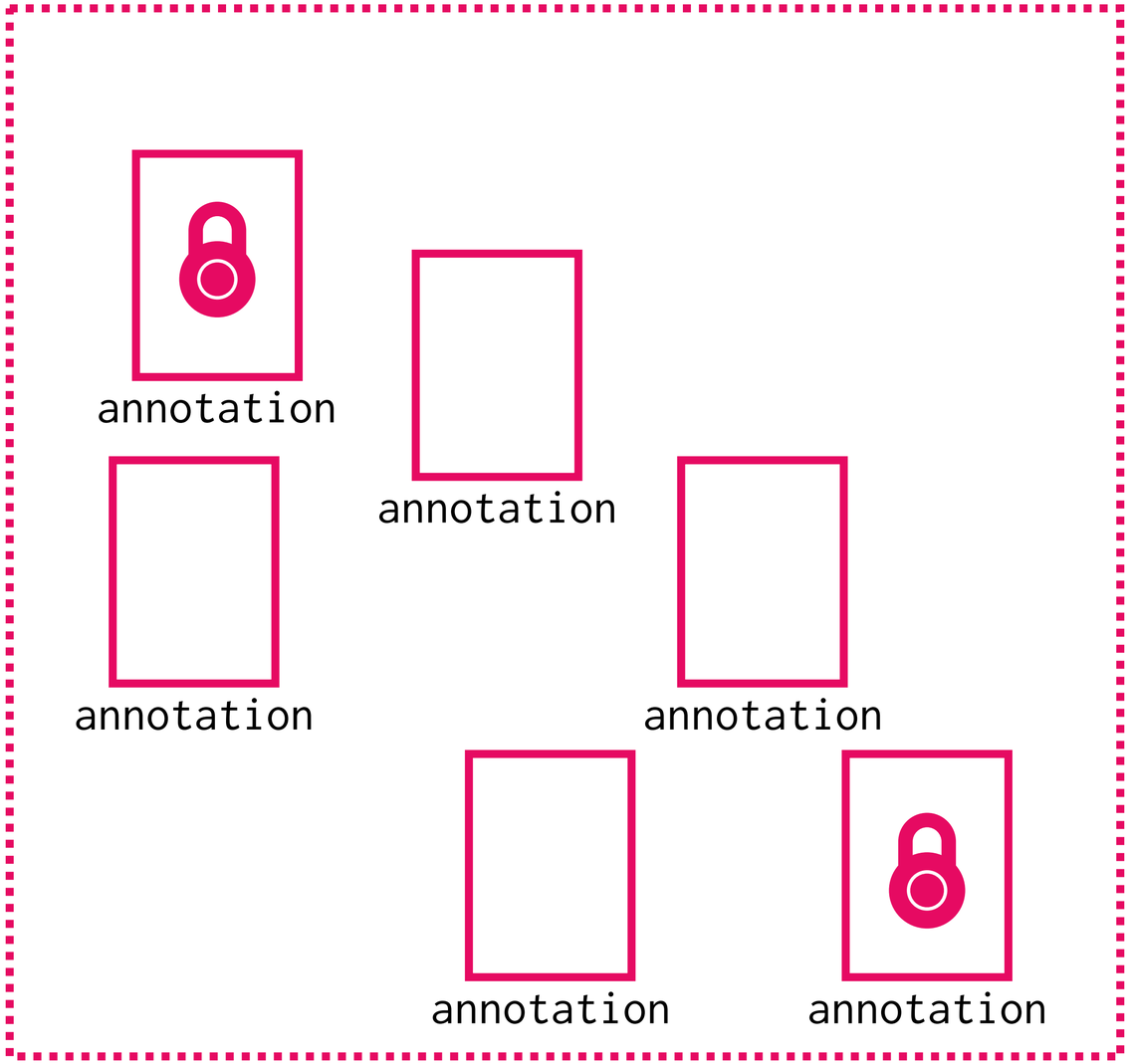

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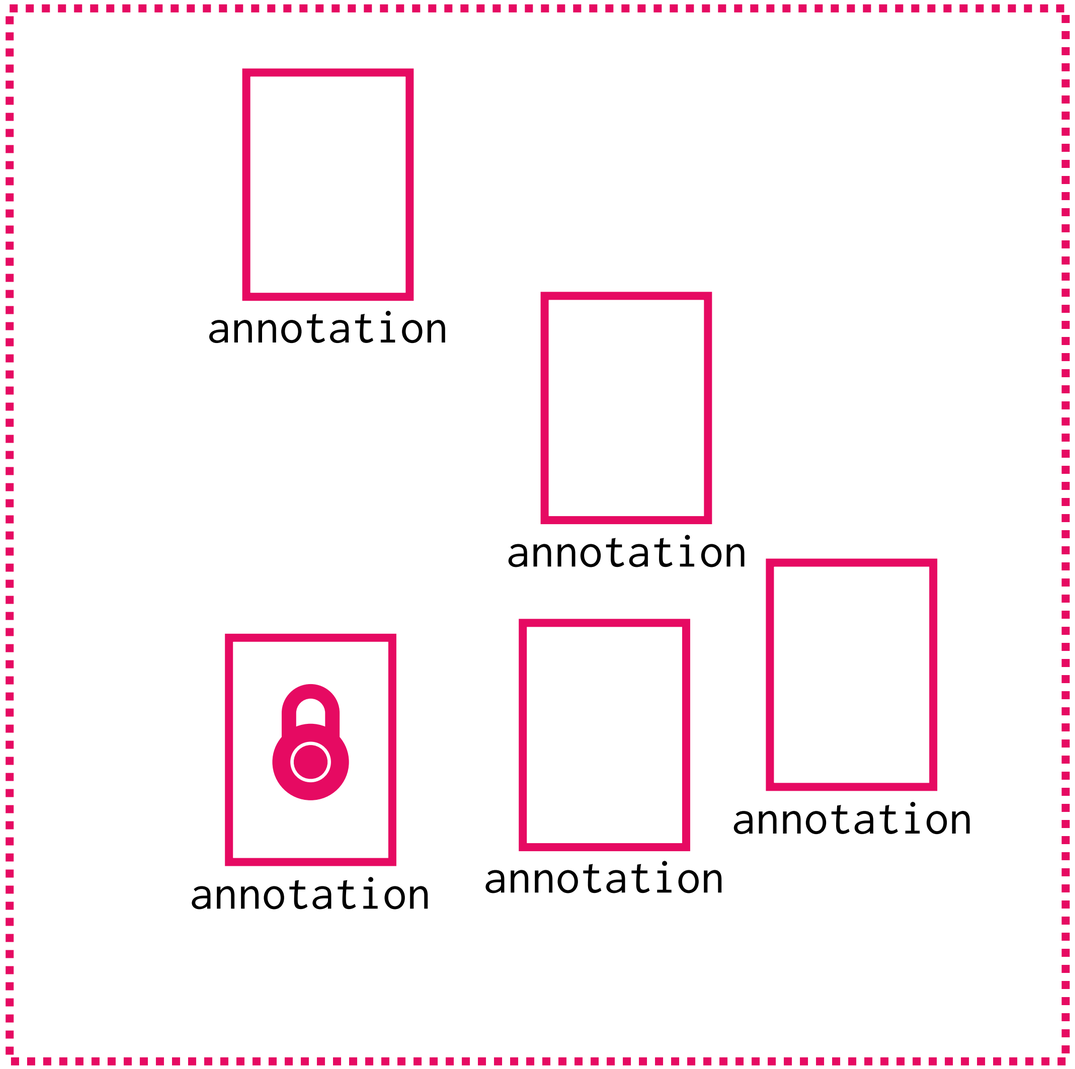

fun facts about squirrels

SciBot

SciBot

A tool and companion service used to:

- find RRIDs in articles
- look them up in the SciCrunch resolver
- create Hypothesis annotations that anchor to the RRIDs and display lookup results

Getting Started

- Create a Hypothesis account which will post the annotations.
- Generate an api token at https://hypothes.is/profile/developer (must be logged in to see page).
- Create a group to store the annotations at https://hypothes.is/groups/new (must be logged in to see page).
- See Setup on amazon

Capturing the bookmarklet

Visit http://HOST:PORT/bookmarklet and follow the instructions.

Using the bookmarklet

Visit an article that contains RRIDs, click the bookmarklet

Checking results in the browser

The found RRIDs are logged to the JavaScript console

Checking results on the server

The found RRIDs are logged to timestamped files, along with the text and html of the article that was scanned for RRIDs

https://github.com/SciCrunch/scibot

“

”

Some things are dead ends: but that's what you get in a big, chaotic system…You rip it apart and you try it again.

The web is…

a vast, imperfect universe

Web Annotations

are a part of that vast, imperfect universe

Web annotations are…

Web annotations are…

noble

Web annotations are…

noble *practical*

Web annotations are…

noble practical ***ours***

Web annotations are…

noble practical ours ***brilliant***

Web annotations are…

practical ours brilliant flawed

Web annotations are…

urs brilliant flawed ***uncontrollable***

Web annotations are…

flawed uncontrollable democratic

freedom vs. control

always a tension on the web

expression vs. the trolls

always a tension on the web

expression vs. the trolls

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flexible vs. specific

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the TYRANNY *of* ABSTRACTION

open vs. proprietary

always a tension on the web

technology vs. culture

always a tension on the web

Web Annotation

The Web's Conversation Layer

Lyza Danger Gardner | lyza@lyza.com