Tags, Borders, and Catalogs:
Social Re-Working of Genre on LibraryThing

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- October 2021 -

Who decides how to organize genres?

- We know how literary critics, academics, publishers, authors think about genre, but what about people in **online reading communities**?
- What non-traditional genres exist? Is **vampires** a genre?
- How are online genres related to offline organization of books?

How to map and measure “genre”? (prior work)

- Literary scholars emphasize that **genres are blurry**, change over time, and depend on context.
  (Pavel, 2003; Rosen, 2018)

- Prior work from digital humanities and NLP has focused on genre classification of **book-length texts**.
  (Kessler, 1997; Stamatatos, 2000; Wilkens, 2016; Underwood, 2016)

- We instead focus on **reception** and many **personal** interpretations of genres using online book reviews.

LibraryThing: A Web of Books

- Similar to Goodreads but more ✨ **independent** + **accessible** ✨
- Social website for curating and cataloging and sharing your collection of **books** and **reviews**
- Revenue is generated through a **catalog** for small bookstores and libraries—and the catalog is built from the **free-text tags** applied by users!

Overview

Books
Members
Popularity
Reviews
Authors
Series
Recommendations
Languages
On This Day

Author Gallery
Tag Cloud

Helpers
Helpers Log

Common Knowledge

Zeitgeist › Overview

LibraryThing Members	Books Cataloged	Reviews Written
2,670,412	161,909,219	4,311,151

Vital Statistics

Members: **2,670,412**
Books Cataloged: **161,909,219**
Reviews Written: **4,311,151**
Tags: **176,859,531**

Ratings: **22,388,701**
Works: **26,507,513**
Series: **180,111**

Covers Uploaded: **7,540,063**
Author Pictures: **150,833**
Venue Pictures: **17,898**

Groups: **12,306**
Topics: **240,048**
Messages: **7,556,700**
Touchstones: **5,805,163**

Most Cataloged Books

Harry Potter and the Sorcerer's Stone (111,820), Harry Potter and the Chamber of Secrets (93,026), Harry Potter and the Prisoner of Azkaban (91,087), Harry Potter and the Half-Blood Prince (88,468), Harry Potter and the Goblet of Fire (87,472), Harry Potter and the Order of the Phoenix (86,983), Harry Potter and the Deathly Hallows (83,085), The Hobbit (78,872), Nineteen Eighty-Four (69,291), To Kill a Mockingbird (66,973), Pride and Prejudice (64,396), The Da Vinci Code (63,702), The Catcher in the Rye (61,571), The Great Gatsby (61,108), The Hunger Games (53,021), Twilight (51,392), Animal Farm (50,177), Jane Eyre (49,976), Brave New World (46,471), The Kite Runner (46,454), The Fellowship of the Ring (44,976), Fahrenheit 451 (44,783), The Lord of the Rings (44,116), The Odyssey (43,504), Wuthering Heights (42,791) (show more)

Full list ›

Most Reviev

The Hunger Games
Twilight by Stephen
Thief by Markus Zus
the Sorcerer's Stone
Catching Fire by Suz
with the Dragon Tat
Mockingjay by Suza
Potter and the Deatl
reviews), The Giver
Fault in Our Stars b
Help by Kathryn Sto
Gillian Flynn (1,408
by Maurice Sendak
Roth (1,351 reviews
(1,323 reviews), To
(1,308 reviews), Th
Night-Time by Mark
Code by Dan Brown

Largest Libraries

Celialiu (96,311 books), eandino2012 (81,313 books),

Top Authors

J. K. Rowling (749,749), Stephen King (595,220), Terry

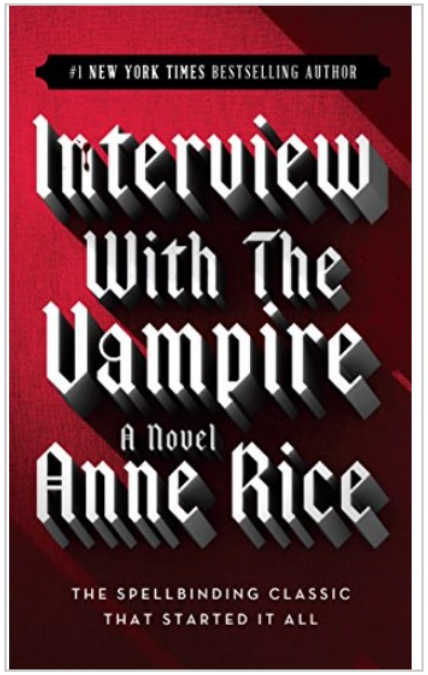
Top Tags

fiction (6,455,238),

Folksonomies & Tagging

- LibraryThing allow users to **tag** books with free-text fields.
- Tags can be used as personal categories, community rankings, genres, and more.
- **Folksonomies**: unconstrained tags (rather than rigid hierarchies or taxonomies) applied by individuals and communities

  (Vander Wal, 2005 & 2007; Weber, 2006)



Interview with the Vampire

by Anne Rice

Other authors: See the other authors section.

Series: The Vampire Chronicles (1)

Members	Reviews	Popularity	Average rating	Mentions
20,113	293	150	★★★★ (3.83)	441

A vampire recounts his tragic two-century life, marked by an endless thirst for human blood.

Tags numbers show all

1001 (81) 1001 books (82) 1001 books you must read before you die (56) 20th century (65) American (64)
Anne Rice (221) dark fantasy (70) fantasy (851) fiction (1,687) gothic (256)
historical fiction (88) horror (1,376) Lestat (121) Louisiana (56) made into movie (58)
New Orleans (260) novel (182) own (112) paperback (80) paranormal (175) Paris (55)
read (307) rice (58) series (204) supernatural (216) to-read (434) urban fantasy (69)
vampire (609) Vampire Chronicles (339) vampires (1,490)

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“It’s knocked my socks off, thrown me in the corner and left me a crumbling, emotional wreck...the **character** and **story** development, the **writing**, the way in which it stirs the **emotions** and its sheer humanity have all hit the right spot. It is also an emotional study into how a person may react to the possibility of the onset of dementia...Yes, Flowers for Algernon has won awards for **science fiction** and yes it is in the SF Masterworks list but ultimately it is a story of **humanity** and a person struggling to gain acceptance for who he really is not for who others want him to be.”

— lilywren, review of *Flowers for Algernon*

(**emphasis** mine)

Data Collection

- Gathered **book metadata**, **all reviews**, and **reviewer tag clouds** for the top 1000 books for 20 tags on LibraryThing
- Book metadata includes title, author, publication year, tags, lists, distribution of ratings, etc.
- Mostly English-language reviews
- **17,440 books; 319,850 reviews; 33,849 users**

Data Ethics: Private or Public?

- Book reviews are an interesting case; reviewers share personal and political opinions and stories but also often view their reviews as professional work.

- Replicating texts of reviews takes away users' ability to edit, update, or delete their reviews.

- **We contact all reviewers whom we directly quote and ask about their quotation and attribution preferences**

(Bruckman, 2002; Fiesler and Proferes, 2018)

Genre	Words/ Review	Related Tags	Most Tagged Books
politics	312 words	presidents, American Presidents, communism, political science, US history	*The Prince* *The Communist Manifesto* *Animal Farm*
science fiction	289 words	Terry Pratchett, futuristic, sf, dystopian, dystopia	*Ender's Game* *The Hitchhiker's Guide to the Galaxy* *Fahrenheit 451*
vampires	273 words	vampire, werewolves, werewolf, paranormal romance, paranormal	*Twilight* *New Moon* *Eclipse*
memoir	252 words	autobiography, biography, essays, travel, Islam	*The Glass Castle: A Memoir* *Angela's Ashes* *Running with Scissors*
crime	238 words	Agatha Christie, Christie, crime fiction, police procedural, historical mystery	*The Girl with the Dragon Tattoo* *In Cold Blood* *The Girl Who Played with Fire*
picture book	175 words	Caldecott Medal, Caldecott Honor, collection:Fiction, shelf:Fiction, colors	*Where the Wild Things Are* *The Very Hungry Caterpillar* *Goodnight Moon*

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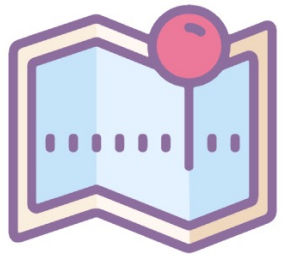
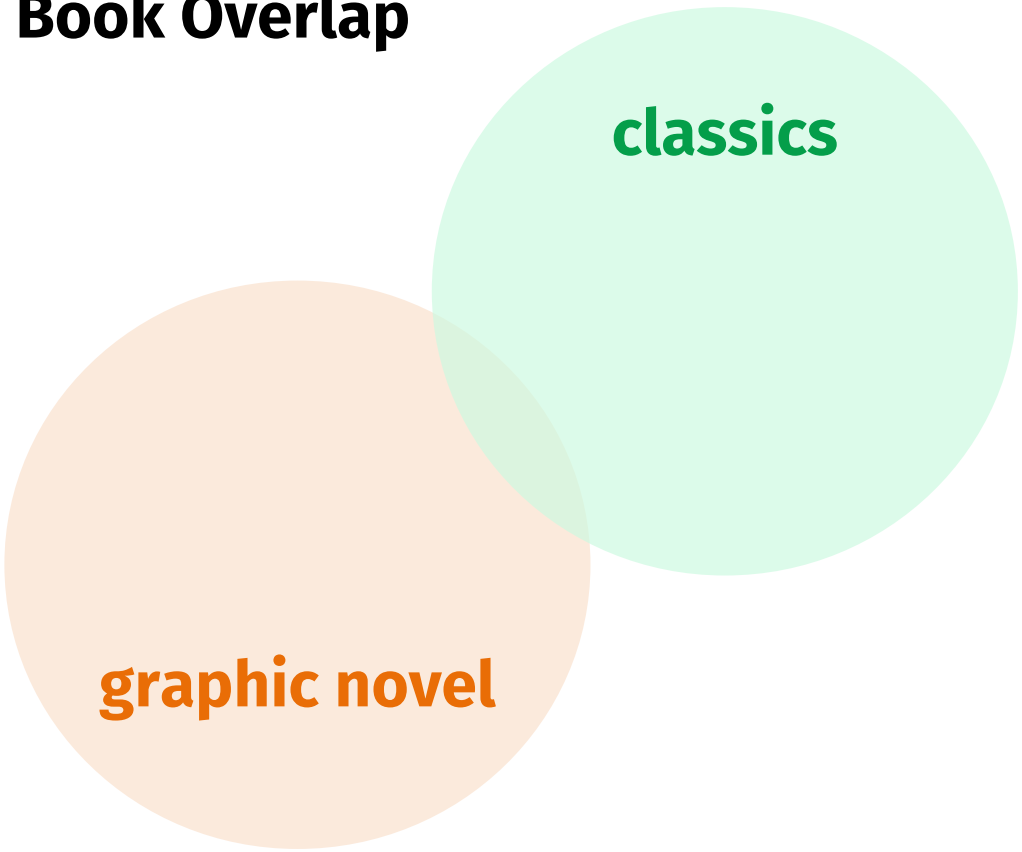
How to map and measure “genre”? (this paper)



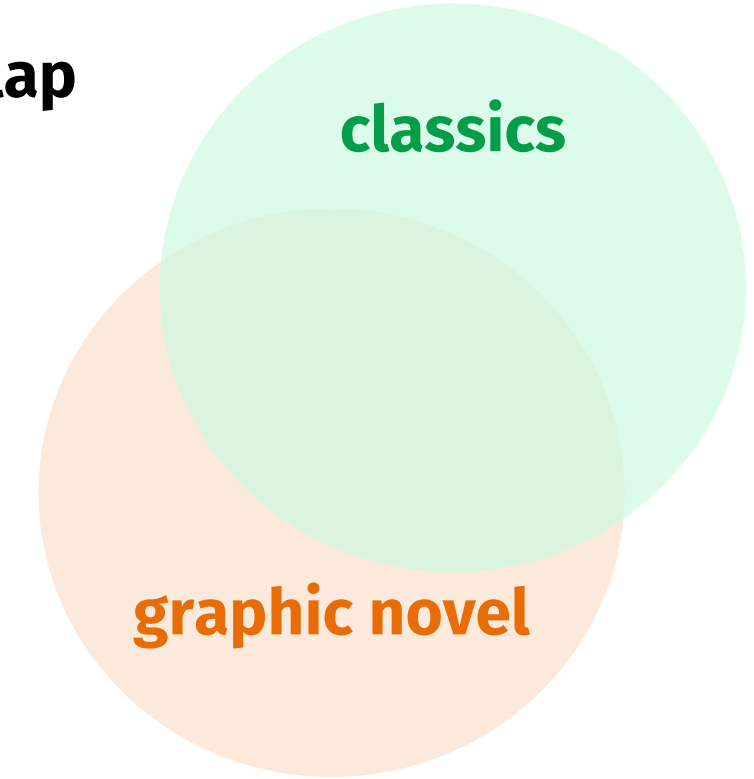
- Compare **overlap** of books and users between genre pairs
- How distinctive are the **review texts** for this genre?
- How similar are the tagging habits of a genre’s **reviewers**?

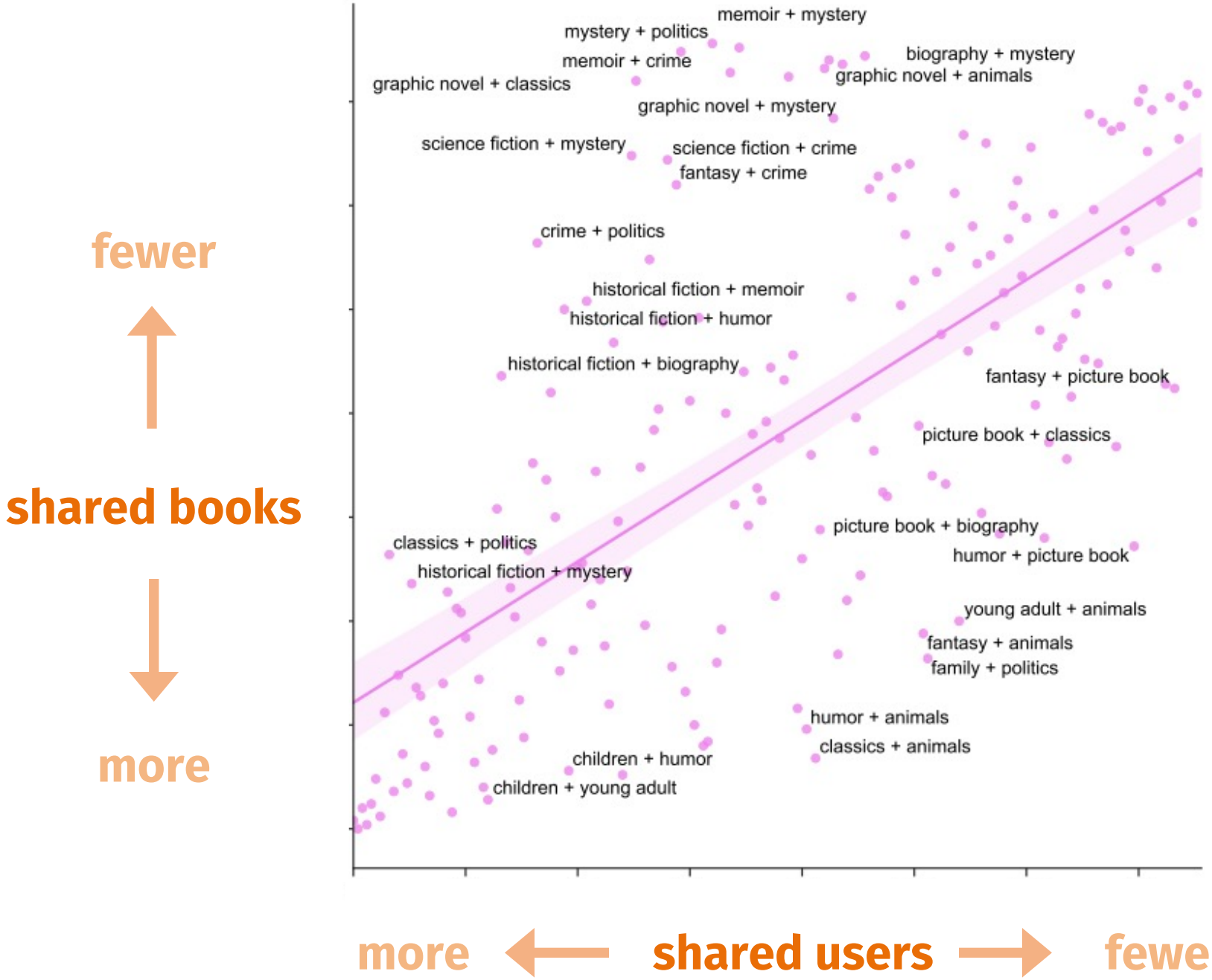
Book and User Overlap

Book Overlap



User Overlap





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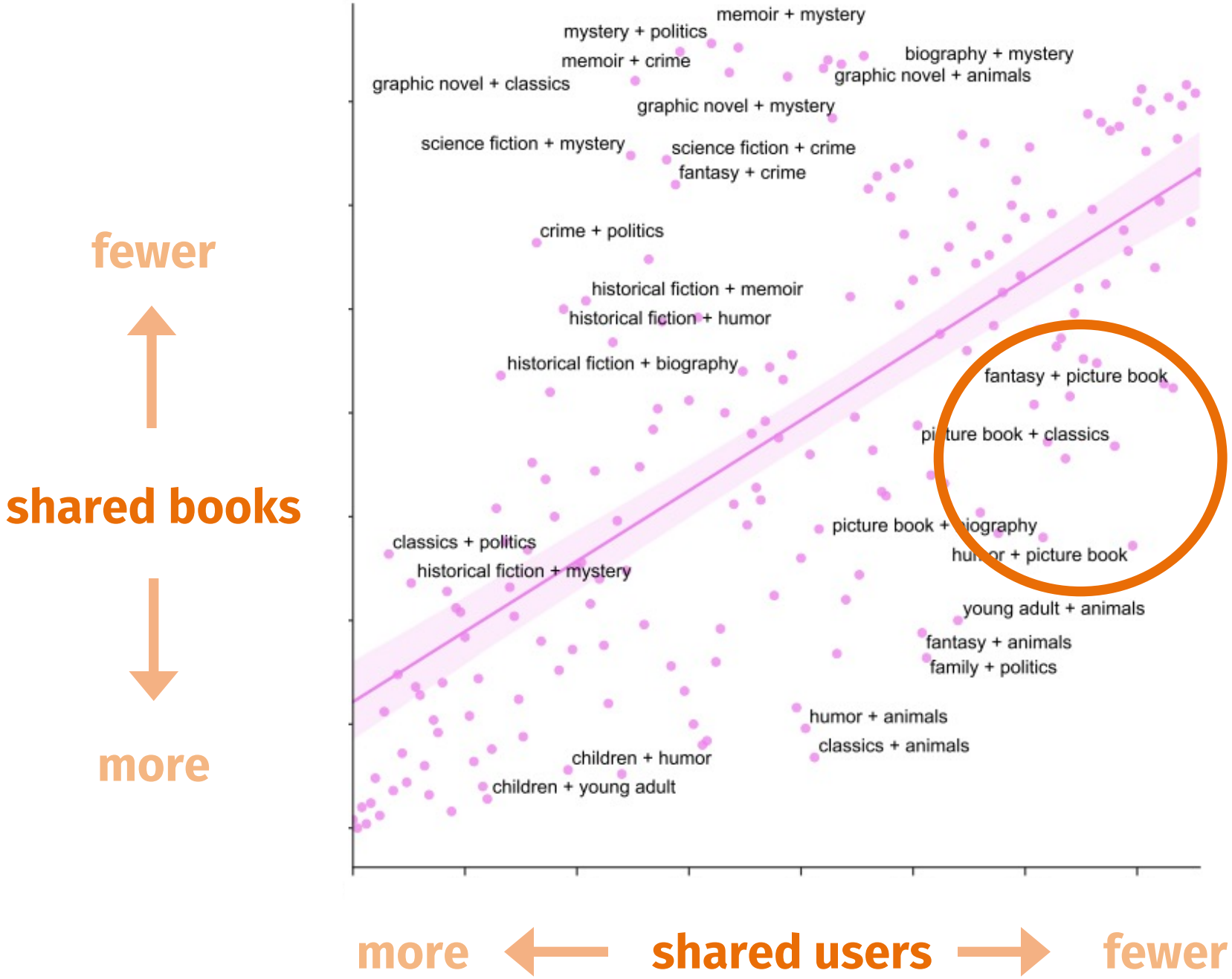

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Genre Classification “Mistakes”

There were some moments though where I had to wonder about the historical accuracy of some of the attitudes and that broke the reading spell for me. Pretty predictable but I enjoyed the ride. Almost a 4 read for me but not quite.

—wyvernfriend, review of *Simply Unforgettable*

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more
book overlap
fewer
True: children
Predicted: animals
True: Animals
Predicted: picture book
True: memoir
Predicted: biography
True: mystery
Predicted: crime
True: children
Predicted: humor
True: classics
Predicted: animals
True: romance
Predicted: horror
True: memoir
Predicted: psychology
True: horror
Predicted: graphic novel
True: fantasy
Predicted: animals
True: mystery
Predicted: romance
True: humor
Predicted: psychology
True: historical fiction
Predicted: psychology
True: animals
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Predicted: animals
True: memoir
Predicted: psychology
True: romance
Predicted: horror
True: horror
Predicted: graphic novel
True: fantasy
Predicted: animals
True: mystery
Predicted: romance
True: humor
Predicted: psychology
True: historical fiction
Predicted: psychology
True: animals
Predicted: psychology
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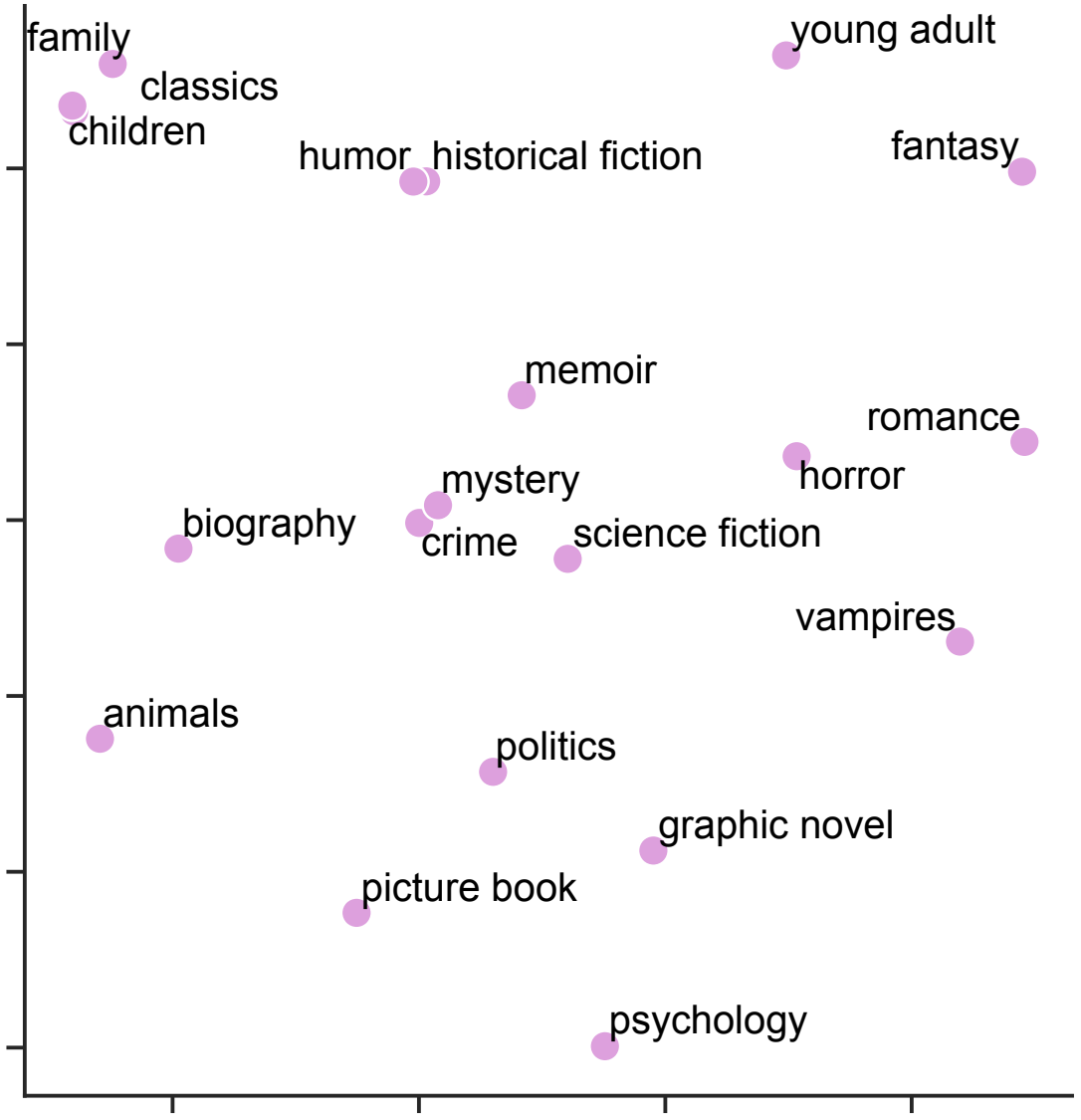
more

Reviewer Homogeneity

Do these users have similar tagging (reading) habits?

	history	biography	memoir	historical fiction	romance	crime
User 1	12	3	6	3	0	2
User 2	10	2	11	15	55	0

classification is **harder**



classification is **easier**

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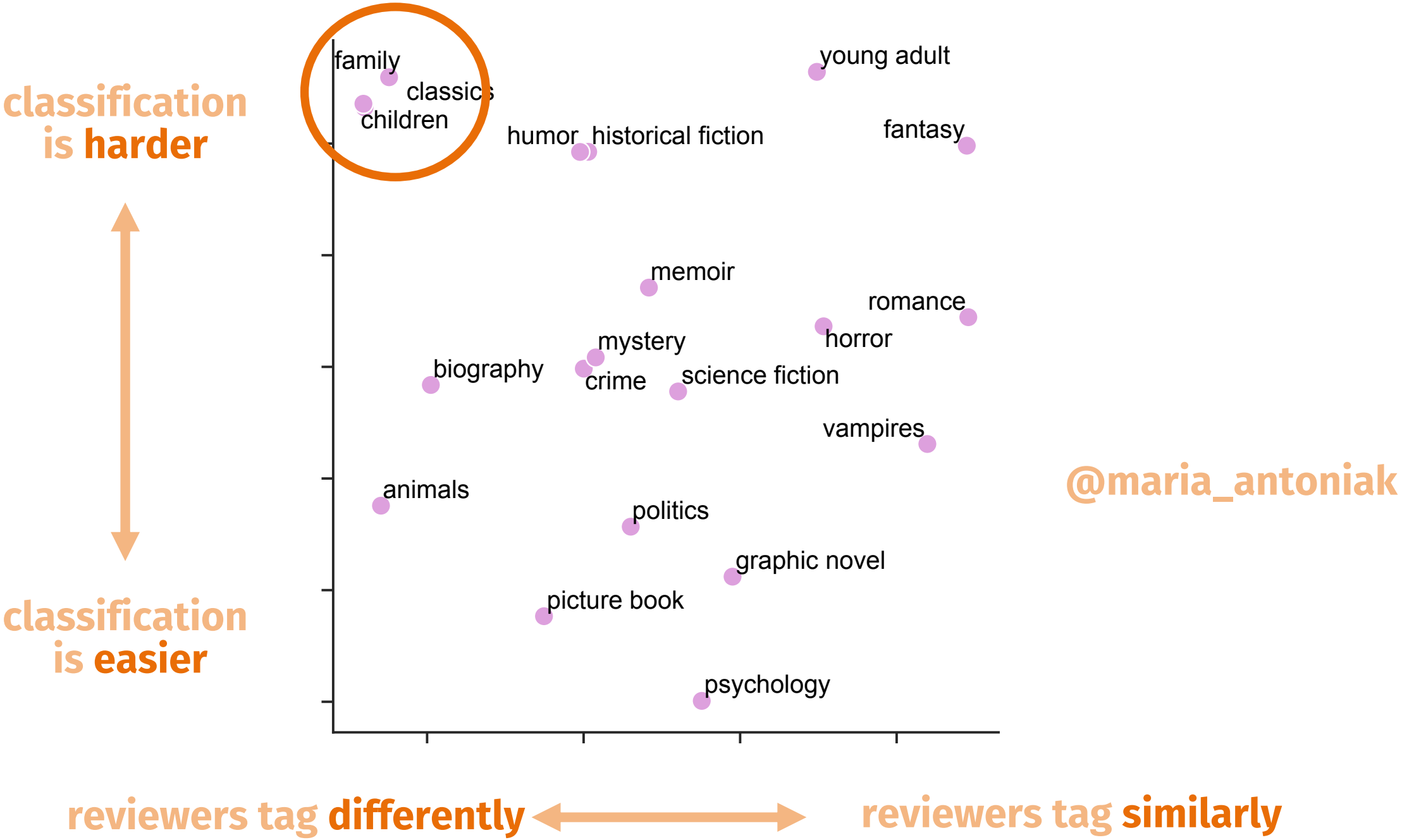
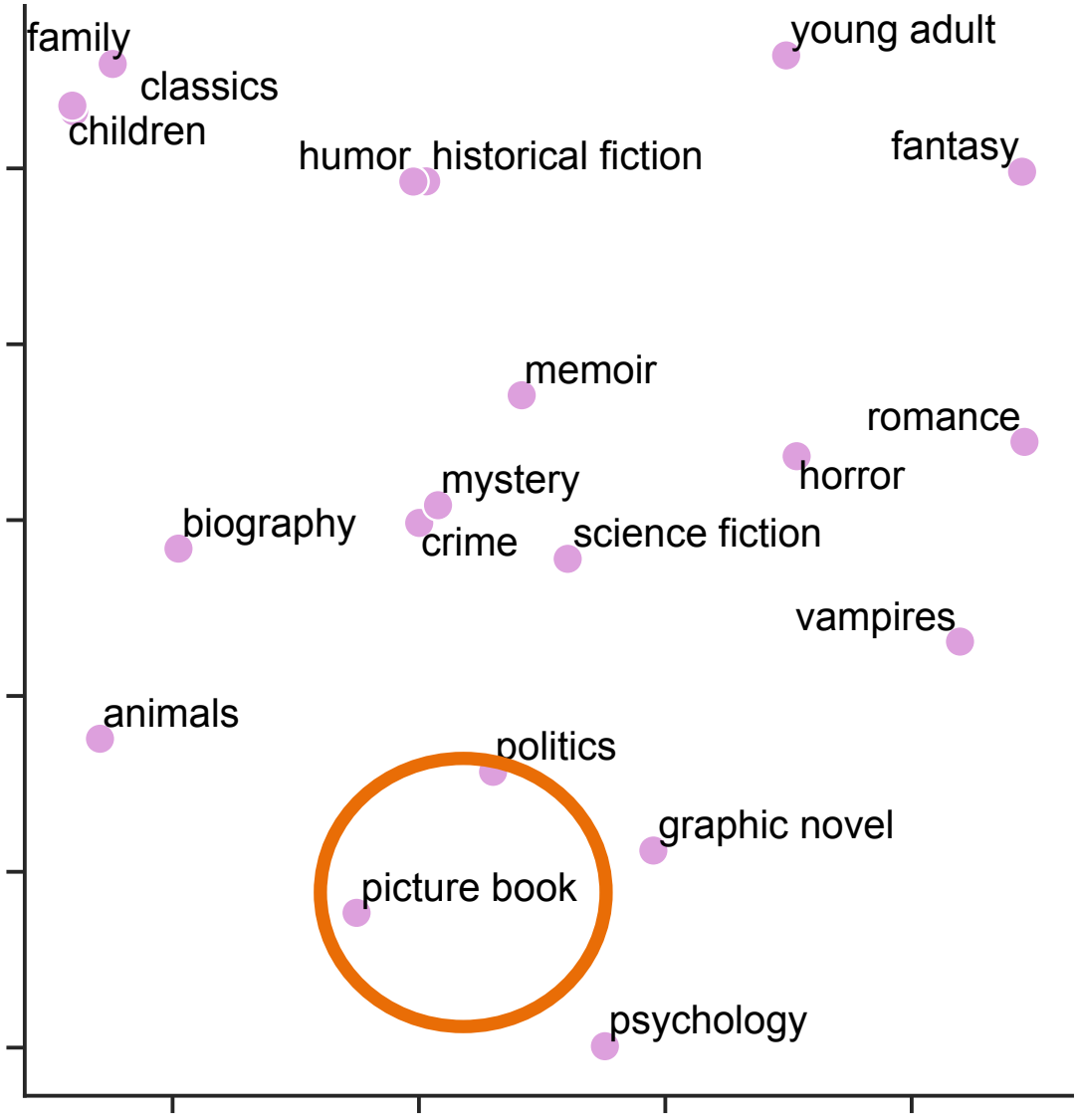
reviewers tag **differently** ⟷ reviewers tag **similarly**


classification is harder
classification is easier
family
classics
children
young adult
humor
historical fiction
fantasy
memoir
romance
horror
mystery
biography
crime
science fiction
vampires
animals
politics
graphic novel
picture book
psychology
@maria_antoniak
reviewers tag differently
reviewers tag similarly

classification is **harder**



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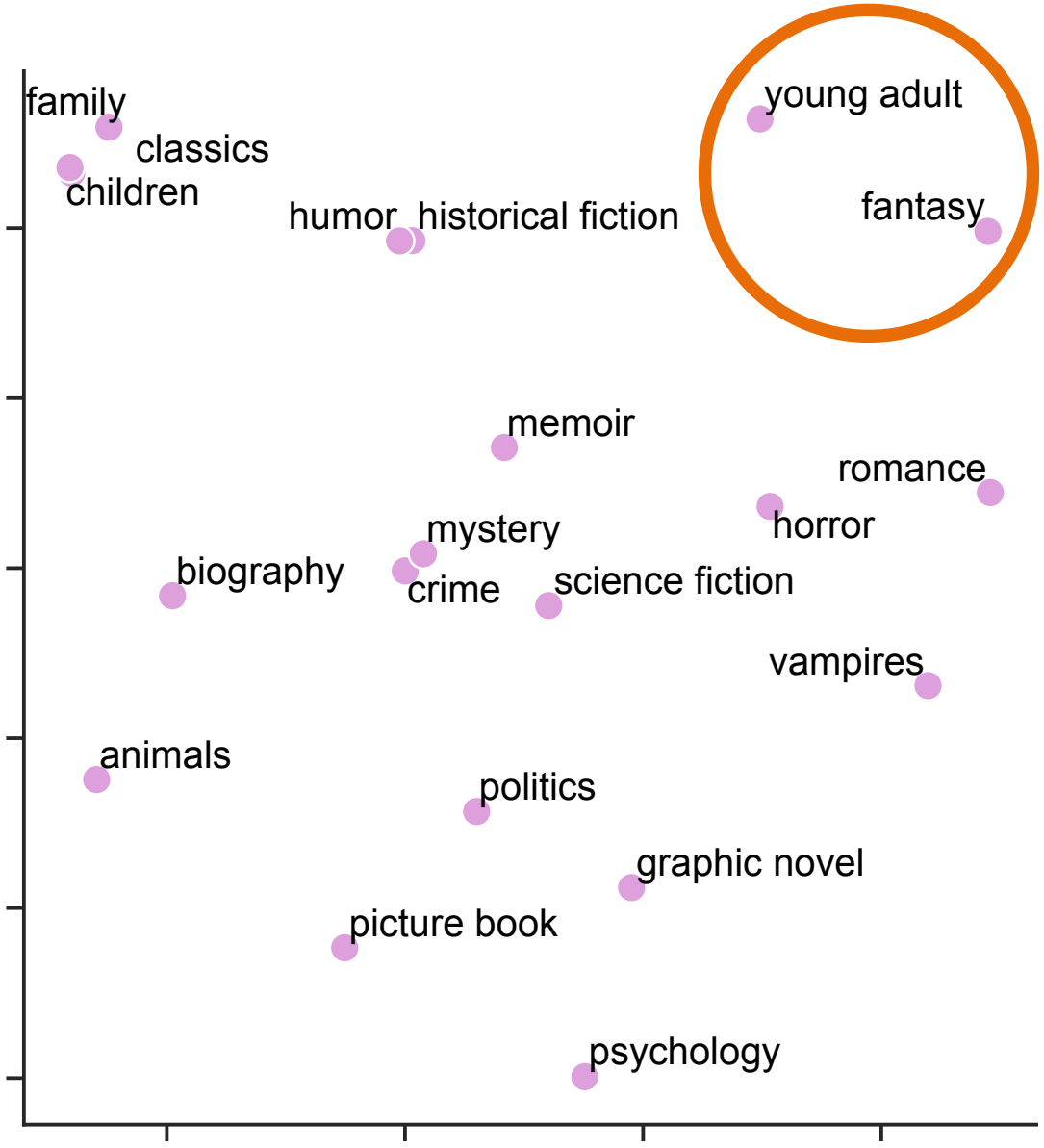

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reviewers tag **differently** ⟷ reviewers tag **similarly**

Take Aways from LibraryThing

- Genres differ by their surprisal, reviewer homogeneity, topics, and book and user overlap with other genres
- Free-form tagging gives individuals **creative license** to diverge from traditional catalogs
- Goodreads and LibraryThing help shape literary reception—and **reviewers' tags are directly shaping your bookstores and libraries**

Learn More

Tags, Borders, and Catalogs:
Social Re-Working of Genre on LibraryThing
https://dl.acm.org/doi/10.1145/3449103

All quotations all used with explicit reviewer permission.

Genre
animals
picture book
graphic novel
children
young adult
family
romance
classics
historical fiction
biography
memoir
humor
psychology
politics
science fiction
fantasy
vampires
horror
crime
mystery
Topic
10: life lessons around empathy and relationships
11: writing style (characters, plot, pacing)
12: coming-of-age story
13: audiobook
14: life lessons from terrible experiences
15: action plot summary
16: character development
17: book background (author, history, curation)
18: fantasy adventures
19: romantic relationships
20: family relationships
21: short plot summaries about children
22: series + plot summary
23: emotional reaction to characters
24: military + racial + class history
25: politics/sociology/religion/psychology
26: mystery
27: pop psychology + self-help
28: illustrations + child-appropriate writing style
29: suitability for school reading/activities

High Topic Entropy

“It’s knocked my socks off, thrown me in the corner and left me a crumbling, emotional wreck...the character and story development, the writing, the way in which it stirs the emotions and its sheer humanity have all hit the right spot. It is also an emotional study into how a person may react to the possibility of the onset of dementia...Yes, Flowers for Algernon has won awards for science fiction and yes it is in the SF Masterworks list but ultimately it is a story of humanity and a person struggling to gain acceptance for who he really is not for who others want him to be.”

-- lilywren, from a review of *Flowers for Algernon*

Genre Classification “Mistakes”

“I was in awe of Anne Bronte’s ability to tell such a relevant story in 1848. There are so many women who find themselves in the same situation today. She was young and naïve when she married Arthur Huntingdon and by the time she learned his true character it was too late. The writing is wonderful and for me that story pulled me in completely. The author tells the story from Gilbert’s point-of-view at times and from Helen’s at other times. The changing narrative flowed well and never rang false. Bronte covers some intense subjects in the book. In addition to infidelity and alcoholism, she makes some disturbing observations about women’s rights during this time period. Sometimes it’s easy to forget how far we’ve come in the last few years.”

—bookworm12, review of *The Tenant of Wildfell Hall* (1848)

	Label	Top Words	Example Review
0	reading log	*read, reading, time, one, first, years, [NUMBER], ago, back, library*	*"Edit: 4-4-18 Just finished, full review coming soon. I read this for book club and it was an interesting..."*
1	expectations + mixed opinions	*really, like, didn, story, read, think, felt, much, liked, would*	*"At the beginning, I loved this book! But as I read further, I went back and forth. Maybe I just didn't get it..."*
2	visual descriptions	*one, like, little, could, every, back, night, man, time, see*	*"Beautifully written and detailed descriptions of the scenery and animals. 'In the pale moonlight...'"*
3	numbers (ratings, dates, pages)	*[NUMBER], read, stars, first, pages, story, would, really, like, good*	*"I would give the first 100 pages a 2 star rating, but the next 200 pages are a solid 4 stars..."*
4	simple plots	*would, could, never, one, made, didn, thought, wanted, like, even*	*"Joey is a chipmunk and today is his friend's birthday. He organizes a party but can't find a present..."*
5	city/town/village/country setting	*new, town, life, small, city, story, people, time, house, home*	*"Maisie lives in a small village, in a rural part of the country. Her journey as an immigrant, traveling..."*
6	movie adaptations + short stories	*read, story, stories, written, one, movie, review, would, reading, novel*	*"This book was ok, but nothing compared to the TV show. If you've seen the Netflix series, then you know..."*
7	writing style (themes, coherence, prose)	*one, even, much, rather, would, seems, though, quite, might, perhaps*	*"Praise for this novel is well-deserved, despite the dense opening. Perhaps even too polished, but beautiful..."*
8	sarcastic/angry review	*like, really, get, know, even, one, think, good, much, thing*	*"I can't even with this book. The main character is a complete twit! Why the author wrote it is beyond..."*
9	strong emotional reaction by reviewer	*love, read, loved, one, story, characters, even, know, like, way*	*"I don't know where to start writing; this book broke my heart and swept me away to places I never expected..."*

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	Label	Top Words	Example Review
10	life lessons for empathy + relationships	*people, like, things, think, one, life, way, know, make, even*	*"This is a wonderful book that helps you understand that everyone is unique. Looking from the outside..."*
11	writing style (characters, plot, pacing)	*novel, story, characters, reader, character, first, narrative, plot, time, one*	*"Adeptly written character examinations. By the end of the book, the point of view could have been switched..."*
12	coming-of-age story	*school, young, girl, high, friends, year, life, adult, girls, new*	*"Tommy is a teenager working through some complicated family dynamics. The novel follows one year..."*
13	audiobook	*read, audio, funny, fun, humor, one, like, great, voice, bit*	*"Reread by listening to the audiobook. (Streamed from my library.) Narrator made me laugh a lot, better..."*
14	life lessons from terrible experiences	*life, story, love, death, one, human, world, reader, yet, man*	*"A powerful memoir about an unimaginable nightmare. Moving and through-provoking experiences..."*
15	action plot summary	*world, one, war, find, must, evil, human, power, fight, save*	*"Action-packed fantasy! Three friends set out on a quest to save the world. The evil that awaits them is..."*
16	character development	*characters, character, plot, story, novel, main, interesting, well, much, good*	*"This book was well-written, but I couldn't empathize with the characters. The personalities aren't complex..."*
17	book background (author, history, curation)	*novel, first, [NUMBER], read, one, years, time, work, century, history*	*"This book was relatively unknown until recently. Parts had been printed in magazines, but this collection..."*
18	fantasy adventures	*story, world, tale, fantasy, stories, young, characters, adventure, magic, find*	*"Short stories about a fantasy land and one boy's struggle to find his magical talent. Interesting creatures..."*
19	romantic relationships	*love, woman, women, man, young, life, men, novel, husband, marriage*	*"A classic romance, gripping to the end. The central figure, Philip, falls irredeemably in love with... "*

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	Label	Top Words	Example Review
20	family relationships	*family, mother, father, story, life, children, child, parents, sister, brother*	*"I felt sorrow and joy for the twin brothers, surviving without their parents and adopted by their..."*
21	short plot summaries about children	*get, gets, one, day, boy, back, girl, goes, little, home*	*"One morning a little boy and his father wake up and make waffles. The boy gets dressed and goes to school..."*
22	series + plot summary	*series, first, characters, one, still, new, story, next, much, time*	*"This book picks up where the last one ended. The first three books moved quickly, and once again, the... "*
23	emotional reaction to characters	*really, love, series, like, read, characters, character, one, also, good*	*"A fun, silly read. I really liked the romance, and the characters aren't too dramatic. Claire was my fav..."*
24	military + racial + class history	*war, american, history, people, white, time, america, black, world, country*	*"This autobiography of WWII tells a story of discrimination. At that time, companies wouldn't hire..."*
25	politics / sociology / religion / psychology	*world, human, society, science, people, one, future, new, god, also*	*"A classic treatise on historians struggling to fit ancient culture into modern times. Social and political..."*
26	mystery	*one, case, murder, mystery, death, man, dead, police, find, series*	*"A series of murders plagues the English countryside. After her encounter with the killer, Investigator..."*
27	pop psychology + self-help	*author, also, life, interesting, many, read, work, well, much, information*	*"An effective tool and a good guide with a wide-ranging perspective to relationships. Offers insights..."*
28	illustrations + child-appropriate writing style	*story, illustrations, reader, also, readers, author, liked, like, different, main*	*"Clearly for children, and in my opinion, a great introduction with easy words. The illustrations are..."*
29	suitability for school reading/activities	*would, children, story, students, could, read, great, use, also, kids*	*"Fun to read, and elementary students would enjoy this book. Summary and classroom extensions..."*

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