

PROBING LLMS' 'INTERPRETATION' OF CHAUCER'S CANTERBURY TALES:
REFLECTIONS ON THE USE OF GENERATIVE AI FOR DIGITAL SCHOLARLY EDITING & THE UNIVERSITY CLASSROOM

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### **Questions**

- I. What are the issues when using LLMs to respond to medieval texts, from an editorial and pedagogical perspective?
- 2. Who should have their say on the development of LLMs?

## Key take-home messages:

- I. Collaboration between disciplines and people with varying expertise
- 2. Accessibility for wider audiences
- 3. Interrogation as a solution



# WHAT ARE YOUR CONCERNS ABOUT GENERATIVE AI?



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## NORBOT TAKES OVER GROMIT'S GARDEN! WALLACE & GROMIT: A VENGEANCE MOST FOWL



YouTube: Netflix After School

### LARGE LANGUAGE MODELS & CRITICAL AI

- Recent hype & fear around AI (Goodlad 2023, Stone et al. 2024)
  - LLMs are black boxes: training data & sources, billions of parameters, homogenised responses based on probabilistic scoping
  - Reinforcement Learning from Human Feedback (RLHF)
- Ethics: authorship/plagiarism, environmental impact, human labour exploitation, hallucinations & stereotypes
- Importance of sociolinguistics (Schneider 2024)
- Recommend: Katie Conrad's "A Blueprint for an Al Bill of Rights for Education", Emily Bender et al.'s (2021) "On the dangers of stochastic parrots: Can language models be too big? & the Algorithmic Justice League led by Joy Buolamwini along with her TED Talk (2017)



Adapted from Stone et al. (2024), figure I

Prompted by Erin Bow (@erinbowbooks.bsky.social)

RECANGE

HECTANBI

TLIABLE

CHALE

RENSTOON

QUARE

REUAGE

# IMPACT ON INTERPRETATION OF MEDIEVAL TEXTS

# What might genAl be able to do for digital editing and pedagogy?

- Automated transcription (e.g. ATR) and translation
- Summarisation of salient themes and topics
- Free up editors time for creativity & ideas for interactive critical apparatus/tech development

### But: what are the issues/challenges?

- Training primarily based on modern data
- Researchers aware of many of the nuances already
- Not suitable for those lacking in experience to probe responses





Tete d'une Femme Lisant, Pablo Picasso

#### C21 EDITIONS: INITIAL AIMS

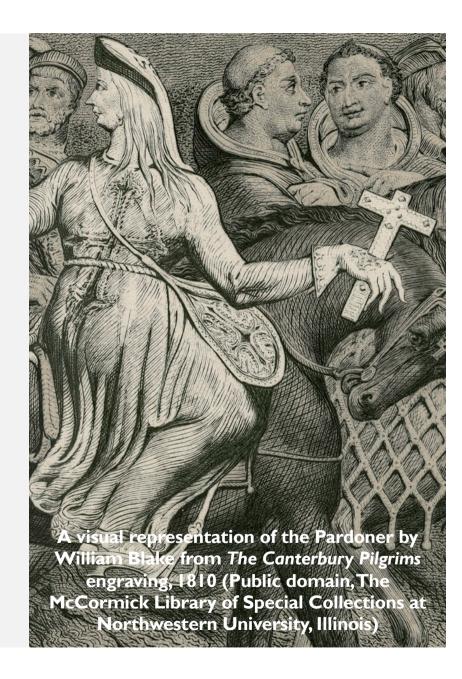
- How Machine Learning and Natural Language Processing can improve the process of edition-making
- Open access edition, drawing on open access knowledge
- Reproducible framework
- Inclusive design workshops/focus groups
- Later: focus on generative AI and impact on digital pedagogical editing

## WHY CHAUCER AND THE PARDONER?

- Chaucer: The father of English literature?
- Pardoner and his tale: transgressive, resisting and disrupting the norms of medieval society & the Catholic church
- Sarah Baechle & Carissa M. Harris (2021): ethical challenges of Chaucerian scholarship
- Ruth Evans (2022): reimagining Chaucer's literature

#### Possible approaches:

- Queer DH (Jason Boyd and Bo Ruberg 2022): Estranging, skeptical, subversive, social, sensual
- Critical race theory & intersectionality (Rahul Gairola 2022): Need to account for colonialist histories and decolonial approaches to probe Al



### **METHODS**

Conducted initial preliminary focus groups and interviews (49 theorists/practitioners, 13 students, 6 teachers) to feed into development of edition.

Different features of edition: translation, annotation, background/topic guide and summary generation, recording of the tale, manuscript recognition.

For each feature, we asked the overarching question: "Does the use of AI technology enrich the experience of digital editing and digital pedagogy?" from the perspectives of editors, teachers and students.

### STUDENT & TEACHER INSIGHTS

"I try not to underestimate how curious and intelligent my students are because often they come up with brilliant questions and really interesting insights, and that really happens when you give the floor to them and when you give them things to work on."

"I also think it's part of a larger historical conversation about this movement from investigating people that are not typically investigated and making them part of the narrative."

"It is vital I tell my students about ways in which, in the 19th Century American/British literature curriculum, Black students and Black educators were trying to find ways of engaging with Chaucer, and were trying to counter some of the narratives of 'Anglo-Saxon' whiteness..."

"There's a lot of this unquestioned inherited knowledge that I find that my students can often just push through. We look up a word in the Oxford English Dictionary and they're like 'why can't it mean this instead?"

"It's going against the grain of the idea of pilgrimage. There are religious characters, there's a prioress, there are nuns, and there's a parson — so there are religious representations — but they're going against the norm of pilgrimage. Doesn't that immediately put them into a queer space?"

"Medieval literature is actually a lot more disruptive than you would think and has a lot more to say about present times than we think."

"It gives you such insight into all different corners of everyday medieval life in terms of giving him a voice to all these radically different, socially stratified characters"

### STUDENT & TEACHER INSIGHTS

"There's a valuable way of learning in reverse engineering basically. And you're taking on that typical marking role and you're having to understand everything from a different perspective."

I guess it's about reliability. Is it representative? [...] But I wonder if that's what we'll arrive at—'this is what a human could do, isn't that nice?'"

I definitely could see, especially in a translation sort of environment [...] how that [critiquing genAl] could be really illuminating for the student. If they were to do that, I think it would foster a lot of critical thinking skills about the text [e.g. Chaucer] which is a very difficult one to actually get into."

"Maybe incorporating the Middle English
Dictionary into ChatGPT rather than just opening
up a glossary—I think your Al is the glossary
itself."

I think he [the teacher] is really curious about the implications of Al and how that's going to change how we are able to convey information with one another, how we process information."

"...all the stuff about ChatGPT and its usefulness really does emphasise how much you need a human to be able to sort through these things. But if I were teaching translation of Chaucer in the classroom, I think a great thing to do would be to actually use ChatGPT and then ask the students to think about why these translations are inadequate."

### EDITOR INSIGHTS: C21 INTERVIEWS

"Simply by taking the formidable power of deep learning methods and techniques, and Al techniques you will be able to do much more interesting things with your digital text than before. [...] But once this is possible say in five years or even sooner, would you really, as a scholar, still want to be doing that work manually? Again, there will always be these tiny corner cases that will require this kind of manual labour. But in all other cases I think you want to use your time for more challenging aims in that case." (Joris van Zundert)

"I think it's that thing about in DH of let machines do what machines can do well and let humans do what humans do and creative work, creating a textual environment where the automatic transcription can then be corrected and improved. But then simultaneously that leaves the scholar to focus on the task of devising more interesting and intensive and hybridised and creative ways of interpreting the text." (James Louis Smith)

"NLP approaches mixed with HTR and stuff are about to make a second revolution on the way we do things, and there are colleagues of mine here in France theorising about computational philology, computational editing and not digital editing which is a completely different approach." (Elena Pierazzo)

### EDITOR INSIGHTS: C21 INTERVIEWS

"I do worry about machine learning from an environmental perspective; it's hugely resource intensive and I have to wonder how important it is in some contexts to do machine learning just for a kind of 'oh isn't this interesting' sort of result when you're burning up fossil fuels to generate these things. [...] editing itself is kind of computational in that it's always looking for patterns and outliers and doing quantitative analysis." (Christopher Ohge)

"What do you gain in saved cost versus what you lose in the by-products of human transcription, in the sense of new research questions being formed by the person transcribing, new knowledge being imparted to the person transcribing?" (Ben Brumfield)

"Every new technology is immediately welcomed and embraced: how can we benefit from this innovation and improve our research? Can we address new research questions to the material, to new material available?" (Franz Fischer)

"I just think it's very important that we as a scholarly community are not too keen on simply adopting software that automates or processes, because if we [...] try to critically analyse the different transformations that our text undergoes when it's being processed by such a tool, we can learn so much." (Elli Bleeker)

#### ISSUES WITH LLM RESPONSES FOR CHAUCER/MEDIEVAL TEXTS

Input (Bing Chat, 9 October 2023): Provide the meaning and etymology of the following words from Chaucer's Pardoner's Prologue and Tale, to a university level standard, using information from the Oxford English Dictionary and the Middle English Dictionary. Ensure to include information on its meaning in the 1300s and within the context of the tale, and details on the origins of the word and whether it was borrowed from another language:

ioly wenche (And haue a ioly wenche in euery toun)

**Output:** I'll do my best to provide the meaning and etymology of the words you have requested from Chaucer's Pardoner's Prologue and Tale.

loly wenche: In Middle English, "ioly wenche" referred to a pretty young woman. In the context of the Pardoner's Tale, it is used in reference to a woman who is kept by one of the three rioters as a mistress. The word "ioly" has its roots in Old French, where it was used to refer to something that is cheerful or merry.

#### ISSUES WITH LLM RESPONSES FOR CHAUCER/MEDIEVAL TEXTS

**Input (ChatGPT, version 4, I4 August 2023):** Can you summarise the theme of gender and sexuality in Chaucer's Pardoner's Prologue and Tale, to a university level standard?

#### **Output:**

Gender and sexuality in Chaucer's Pardoner's Prologue and Tale are complex and multifaceted. The Pardoner himself is a controversial figure whose ambiguous gender and sexual identity have long been subjects of critical debate.

The Pardoner's ambiguous gender presentation is apparent in his physical description in the "General Prologue," where he is described as having hair as yellow as wax, hanging as smoothly as a hank of flax, and a voice as small as a goat. He is also said to be unable to grow a beard, which was a significant marker of masculinity in the Middle Ages. These descriptions suggest a certain androgyny or effeminacy, which is further emphasized by the fact that he carries a bag of relics, an occupation typically associated with women in the Middle Ages.

Sexuality is also a significant theme in the Pardoner's Prologue and Tale. The Pardoner's sexuality is hinted at in the text, with some critics interpreting him as a eunuch or a homosexual, based on his effeminate appearance, his apparent lack of sexual desire for women, and his close relationship with the Summoner. The Pardoner's Tale itself also deals with sexual sins, as the three rioters in the tale are guilty of gluttony, gambling, and lechery.

Moreover, the Pardoner's hypocritical preaching against the very sins he himself indulges in can be seen as a commentary on the corruption of the Church and its officials, who often violated the vows of chastity, poverty, and obedience they were supposed to uphold.

In conclusion, the themes of gender and sexuality in the Pardoner's Prologue and Tale are intricately linked with the broader themes of hypocrisy, corruption, and moral decay in the Church and society. The Pardoner's ambiguous gender and sexual identity not only challenge the rigid gender norms of the time, but also serve as a critique of the moral failings of religious officials.

#### ISSUES WITH LLM RESPONSES FOR CHAUCER/MEDIEVAL TEXTS

Input (ChatGPT, version 40, 18 November 2024): You are a scholarly editor of Geoffrey Chaucer's text, The Pardoner's Prologue and Tale from The Canterbury Tales, with an interest in pedagogical approaches to the text. Your task is to identify and annotate words from the tale from an intersectional feminist and queer lens. Ensure the output is suitable for undergraduate university students.

#### Output (Smaller extracts taken for analysis):

"I trowe he were a geldyng or a mare" (General Prologue, line 691, describing the Pardoner)

Annotation: This line has sparked debates about the Pardoner's gender and sexual identity. The ambiguous reference to the Pardoner as possibly a "gelding" (castrated male) or "mare" (feminized term) destabilizes fixed notions of gender and sexuality. Feminist and queer interpretations highlight this ambiguity as a space for questioning medieval norms of masculinity and the rigid binary of male/female.

Discussion Points for Pedagogy:

Queering the Pardoner: How does the Pardoner's ambiguous gender presentation and sexual identity invite discussions about medieval perceptions of queerness? How do these perceptions align with or differ from contemporary understandings of gender fluidity and nonconformity?

Gendered Morality: How are sins like greed, gluttony, or avarice gendered in the text, and what might this suggest about medieval attitudes toward morality and gender roles?

Institutional Hypocrisy: What parallels can be drawn between the Pardoner's critique of sin and his embodiment of it, particularly regarding feminist critiques of institutional power?

Greed and Colonial Narratives

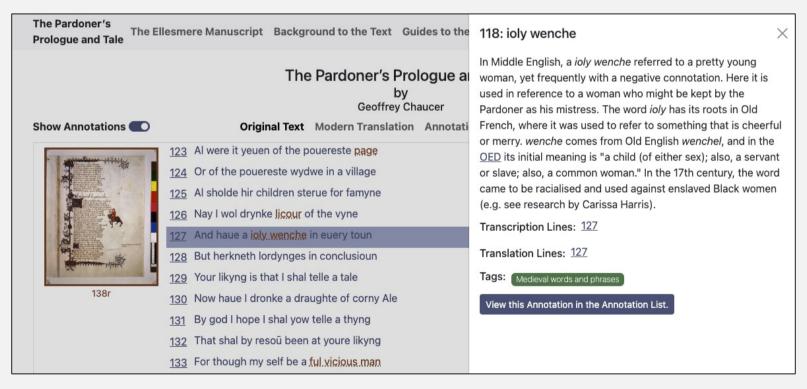
The "Three Rioters" and Stereotypes of Disorder

Textual Reference: "Sworn brotherhood in filthee rage and pride" (Tale, line 709).

Analysis: The three rioters embody moral and social disorder, engaging in drunkenness and violence. Medieval European narratives often associated social chaos with groups perceived as "other," such as non-Christian or non-European peoples. The alignment of moral decay with "outgroups" can be interrogated for its proto-racial undertones.

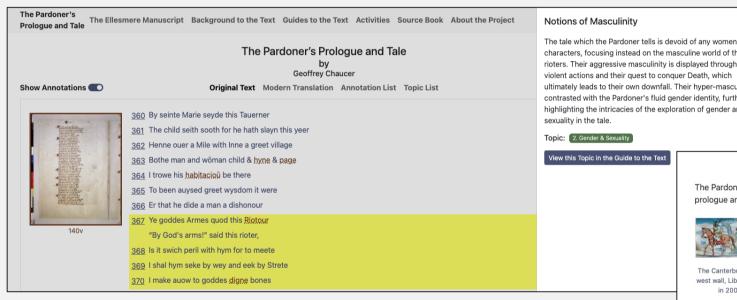
# A GENAI EDITION: WHAT ARE THE PROBLEMS FOR DIGITAL EDITING & PEDAGOGY?

### Annotation: nuance added by the editor



Chaucer Edition prototype (C21 Editions project), landing page

### A GENAL EDITION: WHAT ARE THE PROBLEMS FOR **DIGITAL EDITING & PEDAGOGY?**



Chaucer Edition prototype (C21 Editions project), landing page

Topic summaries: few in-text examples generated, and linked to a topic guide (also enriched by the editor)

characters, focusing instead on the masculine world of the three rioters. Their aggressive masculinity is displayed through their violent actions and their quest to conquer Death, which ultimately leads to their own downfall. Their hyper-masculinity is contrasted with the Pardoner's fluid gender identity, further highlighting the intricacies of the exploration of gender and

Chaucer Edition prototype (C21 Editions project), Notions of Masculinity

#### **Notions of Masculinity**

The Pardoner's 'transgression' is evident from a number of specific moments in the prologue and tale, which could be seen as disruptive of some of the norms of the time.



The Canterbury pilgrims depicted in a mural by Ezra Winter (1939). It is based in the North Reading Room west wall. Library of Congress John Adams Building, in Washington D.C. (Photographed by Carol Highsmith in 2007 who stipulates that her photographs are in the public domain, Wikimedia Commons)

The relics that the Pardoner holds are said to symbolise many different aspects of his identity. Dinshaw (1989: 164) first considered the objects as euphemistic for the Pardoner's 'lacking' physicality, yet, more recently, scholars have suggested the objects harbour the Pardoner's sexual power, which he uses against other pilgrims in the tale.

The Pardoner's focus on his relics to alleviate others of their sin might carry connotations of sexual potency, especially the way in which he uses them to humiliate or outwit others. Zeikowitz (2002: 56) states that "the Pardoner's gender and sexuality are a problem precisely because we can find neither his 'gender core' nor his 'sexuality core'", and instead, the Pardoner "challenges the idea that masculine normalcy has an exclusive claim to power." Despite the way in which the Pardoner's actions and behaviour are stigmatised, he is able to reconstruct a new perception of himself, which encompasses his sharp wit, preaching abilities, and enticing nature.

# A GENAI EDITION: WHAT ARE THE PROBLEMS FOR DIGITAL EDITING & PEDAGOGY?

## I. Editor required to write guidance for the discussion of potentially sensitive subjects

## Guidance for Discussions of the Pardoner

As we have discussed in the previous pages, many views have been provided about the Pardoner's character and body, which have real-world consequences for individuals existing and living in society today. It is therefore important in class (whether you are a student or a teacher) to approach the topic with sensitivity and care for others. As recent literature has shown, it is helpful to view the Pardoner's character as limitless, not from an 'either/or' perspective. Further suggestions about the Pardoner's physical being, as well his sexuality – particularly those arising from a normative, patriarchal sphere – are potentially harmful for individuals in the past, present, and future.

We encourage you to approach the Pardoner's character with an open mind, focusing on the range of ways the Pardoner presents himself to his audiences, such as the sharp wit, foolery and playfulness that he exudes. We have included further open access reading below that you may want to use in the classroom, for assignments, or teaching. Note that these openly accessible resources are unfortunately limited, which is why we have summarised some recent literature in the previous sections. We aimed to show here that a queer reading of the Pardoner sheds light on a figure who challenges traditional, patriarchal, and strict binary modes of thinking, and highlights the endless forms of 'being' in both medieval and modern society.

#### 2. How do we cite 'GenAl editions'?

#### Al Tools

OpenAl. 2024. 'Gender and sexuality of the Pardoner and in Chaucer's "Pardoner's Prologue and Tale", and the history of homosexuality in medieval Europe' prompt. ChatGPT-4 (Playground) [Large language model], generated August-December 2023, <a href="https://platform.openai.com/playground/chat">https://platform.openai.com/playground/chat</a>. In *The Pardoner's Prologue and Tale: A Generative Al Edition for Teaching*, edited by Sophie Whittle, Matthew Groves and Michael Pidd. Digital Humanities Institute. Available at <a href="https://www.dhi.ac.uk/c21-chaucer-interface-prototype/topic/gender-sexuality">https://www.dhi.ac.uk/c21-chaucer-interface-prototype/topic/gender-sexuality</a>

#### Al & Wikipedia Content

The content on this page was generated using Al alongside an editor. Data from the following Wikipedia articles was also rewritten by generative Al where applicable: <a href="The Pardoner's Tale">The Pardoner's Tale</a>, <a href="Homosexuality in medieval Europe">Homosexuality in medieval Europe</a>. Please treat the text on this page with caution and refer to our <a href="Source book">Source book</a> for further information about how Al was prompted to generate specific sections of this page.

Chaucer Edition prototype (C21 Editions project), Gender and sexuality of the Pardoner

#### COLLABORATIVE SOLUTIONS

#### Critical, flexible and collaborative translation:

- Different translation possibilities
- Annotations
- Initial suggestions for discussion points
- Follow-up discussion boards
- Similar to 'Beowulf By All': a community translation and workbook providing opportunities for contribution from multiple lived experiences

#### BEOWULF BY ALL

Heyla!¹ We have a story about the Spear-Danes, from the old days when they were big and their kings showed their strength. There was one king, Shield Schefing, who stole many mead-benches from other tribes and terrified their leaders. At first, he was found weak and wandering, but was taken in and then grew under the comfort of the skies. He consumed honors until each of the other surrounding tribes over the whale's road were forced to obey him and pay tribute. They say, that was a good king.

After all this (when he was old), Shield had a son—a young one in the courtyard—who had been sent by God as a comfort to the people because He had seen how they were distressed, left without a strong leader for a long while.

#### **loly Wenche**

The Pardoner discusses what he would rather do with his riches in his prologue:

126 Nay I wol drynke licour of the vyne127 And haue a joly wenche in euery toun

Transcription: And haue a **ioly wenche** in euery toun Translation 1: And have a **jolly wench** in every town. Translation 2: And have a **pretty wench** in every town.

#### Help [collapse]

Carissa Harris states that, through time, 'wench' came to be known as a 'structural position', rather than a 'gender identity'. She states that "the label of wench is capacious enough to include many, yet binding enough to compel to coerce and to constrain" (Harris 2023). Its roots are the product of colonialism and slavery, and the modern-day use of the term is embedded in racialised misogyny arising from the 17th century.

The medieval use of the term is also encompassed by negative connotations of women in society. In the OED, the term 'wench' is derived from Old English 'wencel', a now obsolete meaning to refer to "a child (of either sex)' or 'a servant or slave; also, a common woman" (OED Online, 'wenchel (n.)' 2024). Harris (2023) explains that 'wench' is used in Chaucer for the purposes of control and coercion, domination, and to denote masculine possession, and is often used to justify violence against those with a degraded social position.

The same could be said of the use of 'wench' in the Pardoner's prologue. In this case, the use of *ioly* as a premodifier for 'wench' objectifies the woman's body as central to the Pardoner's pleasure. In Translation 2, *ioly* is translated as 'pretty', which may relate to the physical sense in the OED of 'having the freshness and lively spirits of youth or good health; fresh, lively, sprightly, spirited' (OED Online, 'jolly (*adj.* & *adv.*)' 2023), or in the MED where *joli* is presented as "pleasant, beautiful, pretty, elegant, excellent". While the Pardoner might be simply expressing his sexual desires and sin, regardless of his 'responsibilities' within the church, Chaucer's use of the term in this context appears to be embedded in a societal expectation that women be controlled and objectified.

Chaucer Edition prototype (C21 Editions project), Student Translation Task 1

#### COLLABORATIVE SOLUTIONS

Chaucer Edition prototype (C21 Editions project), translation discussion board



Programming Historian, tutorials for humanists



Network building

READ-COOP to improve access to historical documents via Transkribus and a European Cooperative Society



Depository for MarineLives Collaboratory

marinelives-collaboratory

To accompany Colin Greenstreet's November 19th 2024 talk at the IHR Digital History seminar on Machine Learning and Historical Research, MarineLives is launching an online collaboratory. We welcome non-coding and very-low-coding historians with open arms.

The collaboratory is targeted at masters and doctoral students working in the field of history, who would like to explore how large language model based machine learning techniques can be incorporated into their research design and research processes. Each session will be built around specific Historical Research Use Cases. Participants are invited to bring their own use cases for discussion.

We will look at a wide range of analytical frameworks, subject matter and periods, directed by the research interests of participants in the collaboratory, and will explore how large language models can assist with the design and conduct of different types of research.

The goals of the collaboratory are to:

- 1. Build useful research tools for real historical research use cases which can be put into immediate effect
- 2. Develop and document shared knowledge of large language models applied to historical research use cases
- 3. Build a community of doctoral students interested in large language model applications to historical research

Colaboratory by Colin Greenstreet for students to gain understanding of machine learning techniques for research in digital history

AI PEDAGOGY PROJECT metaLAB (at) Harvard

Harvard Al Pedagogy Project: "We are at an inflection point in the development of Al tools-who will decide what capabilities are developed, by whom, and to what end?"

Iterative and inclusive processes

WE BELIEVE THAT VERYONE IS AN

EXPERT BASED ON THEIR

A COMMUNITIES

ILEDGE &

WITH DUR

WE ALL HAVE UNIQUE & BRILLIANT

CONTRIBUTIONS & the DESIGN

8 WE WORK TOWARDS

LED & CONTROLLED

DUTCOMES

SUSTAINABLE, COMMUNITY-

Design Justice Network principles, from the Philanthropy Workshop, 14 April 2021

9 WE WORK TOWARDS

SALUTIONS THAT

RECONNECT US TO

WE USE DESIGN &

(3)

DESIGN SOLUTIONS, WE

LOOK FOR WHAT IS

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OUR COMMUNITIES, AS WELL AS &

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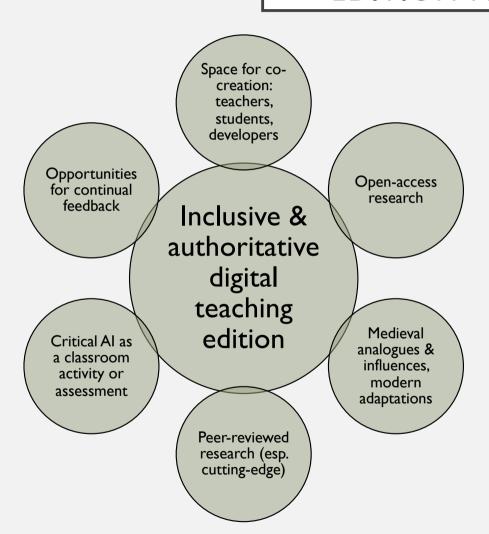
RAMEWORK

# PROBING LLMS: WHAT MIGHT IT LOOK LIKE IN A CLASSROOM ENVIRONMENT?



- I. Critical Al Literacies: A Guide for Students, Design Justice Labs, Rutgers University
  - 2. Teaching Critical Al literacies document

# DIGITAL PEDAGOGICAL EDITION FRAMEWORKS

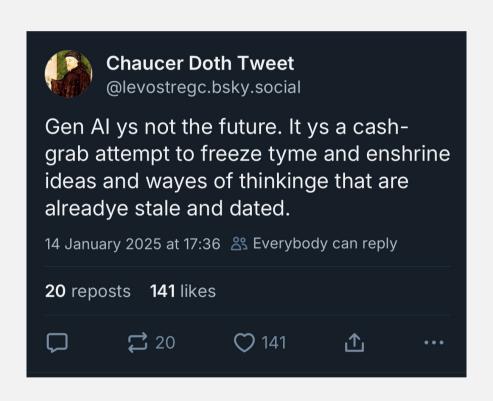


### Returning back to RQs:

- 1. What are the issues when using LLMs to respond to medieval texts, from an editorial and pedagogical perspective?
  - I. Lack of nuance and specificity
  - 2. Not always able to produce responses based on specific approaches, e.g. intersectional or queer
  - 3. Moral and ethical considerations when using the technology
  - 4. Pedagogical implications if resources on genAl are not discussed or made accessible
- 2. Who should have their say on the development of LLMs?
  - I. Everyone that is affected by the developments of generative AI 'tools'



- Hope to build a network for understanding challenges within machine-assisted digital editing and pedagogy, please get in touch if you are interested and would like a chat: sophie.whittle@sheffield.ac.uk
- Publication of edition & source book, further funding for iterative testing processes of the Chaucer edition
- Interaction between TEI and AI?: representing responsibility and highlighting contributions from multiple, collaborating sources
- Returning to smaller language models? (I would recommend a recent IHR digital history seminar by Ashley Sanders, on 'Identifying Latent Textual Bias: Making a case for traditional NLP tasks in the era of Al')
- More reading?: Code Dependent: Living in the Shadow of AI by Madhumita Murgia and Moral Codes: Designing Alternatives to AI by Alan Blackwell



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