

## Why Literary Time Is Measured in Minutes

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I'd like to thank Sandra Macpherson and everyone who helped organize this year's English Institute. Also a few other people. This article is based on evidence that I gathered in collaboration with Sabrina Lee and Jessica Mercado; we're writing a separate co-authored piece that will dive more deeply into the data. The story would stop in 1900 if I hadn't relied on a corpus of novels at the Chicago Text Lab, directed by Hoyt Long and Richard So. I cannot stress enough how crucial that has been. Before 1900, I collaborated with HathiTrust Research Center. My thinking on this topic was also influenced by Andrew Goldstone, Eleanor Courtemanche, and Sharon Marcus.<sup>1</sup>

I'll begin with a kind of New Historicist anecdote. Sixteen years ago, in an essay titled "Formalism and Time," Catherine Gallagher argued that critics are bad at understanding narrative form as something that *takes* time. Instead we try to convert narrative into a timeless structure — or even more commonly, condense stories into a few scenes that convey the meaning of the whole. Whether it's Jane Eyre walking back and forth on the third story of Thornfield, or Gabriel Conroy watching the snow fall outside his window, we understand fiction by identifying moments of heightened significance. These could be epiphanies, or anticlimaxes. It doesn't matter, because in Gallagher's view the value of these scenes for critics depends less on their specific content than on their structural function, which is to reconcile time with timelessness. She sees critical tradition as deeply shaped by Walter Pater's dream of cheating death by embracing the ephemerality of life — seeking out a sort of meaning that can be contained in a single "hard, gem-like" moment and thus, paradoxically, become eternal. A moving aspiration. But also, according to Gallagher, a way of undervaluing the dailiness of life, and long Victorian novels.<sup>2</sup>

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<sup>1</sup> Goldstone introduced me to content analysis. The article was first sparked by thinking about Sharon Marcus, "Erich Auerbach's *Mimesis* and the Value of Scale," *MLQ* 77.3 (2016): 297-319. Courtemanche contributed many leads on narrative theory and literary history.

<sup>2</sup> Catherine Gallagher, "Formalism and Time," *Modern Language Quarterly* 61.1 (2000): 229-51.

This would be an interesting argument if anyone had made it, but it's a particularly wild thing for Catherine Gallagher to have written in the year 2000, when she was also collaborating with Stephen Greenblatt on a theoretical defense of New Historicism. After all, the New Historicist critic does for historical time exactly what Gallagher's Paterian critic does for narrative — that is, condense it into a brief scene (an anecdote) that crystallizes the meaning latent in a larger mass of events. And this condensation is not just a rhetorical move that New Historicists happened to favor: Gallagher and Greenblatt explicitly theorize the “effect of compression” as a crucial bridge between historical and literary representation. The anecdote becomes for historical narrative what the detail is for literary realism, conveying Erich Auerbach's “confidence that in any random fragment plucked from the course of a life at any time the totality of its fate is contained and can be portrayed” (42).<sup>3</sup> While Gallagher's essay diagnoses this condensation as an attempt to evade mortality, her coauthored book presents it as a necessary principle of historical understanding, producing “a touch of the real” that disrupts the “generalizable typicality” of the “Big Stories” told by Marxist or Annaliste historians (51).

I don't mean to pick on Gallagher here; in exploring both sides of this issue, I think she interestingly highlights and problematizes an aspect of our discipline that we tend to take for granted. For all the arguments we have with each other in literary studies — which books to teach, which themes to foreground — we still share a surprising amount of consensus about certain aesthetic and rhetorical choices. Our habit of condensing evidence into a resonant moment is a great example. New Historical anecdotes are not the only way we achieve this. Our titles are often organized by an implicit tableau: “The Madwoman in the Attic,” “Unpacking My Library,” “The Halted Traveler.” They all evoke a brief episode from which you can unfold a larger structure of feeling. This leap across scales of time, connecting history to an experienced moment, and lending immediacy to the past, is one of the distinctive strengths of literary criticism.<sup>4</sup>

However, as Gallagher points out in “Formalism and Time,” the assumptions underlying this gesture are far from self-evident. Why are short spans

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<sup>3</sup> Catherine Gallagher and Stephen Greenblatt, *Practicing New Historicism* (Chicago: University of Chicago Press, 2000), 26, 42. Erich Auerbach, *Mimesis: The Representation of Reality in Western Literature* (New York: Doubleday, 1957), 484.

<sup>4</sup> For more on this, see Marcus, “Erich Auerbach's *Mimesis* and the Value of Scale.”

of time so central to our disciplinary aesthetic? Novels sometimes cover twenty, thirty, fifty years.<sup>5</sup> Why is experience measured in seconds or minutes more literary than experience measured in months or decades?

The question is urgent for me because, as a distant reader, I'm committed to exploring patterns that sprawl across long timelines, and may not be visible on a scale of minutes. In spite of Franco Moretti's playful swipe at "the cheerful town of New Haven," quantitative methods don't really conflict with close reading. They coexist with textual detail only too well: the danger is of burying readers in detail. But the strategy of condensing a thesis into a tableau can be hard for distant readers to pull off.<sup>6</sup> If a historical pattern could be located in a single resonant episode, you probably wouldn't need to be measuring patterns in the first place. You would just cite examples. Distant reading becomes necessary when no single example embodies the pattern. And yet I hate to give up that leap across scales of time, which has been such a central source of drama in critical writing. While I'm rarely convinced by attempts to draw a firm boundary between the humanities and social sciences, I do feel that literary criticism ought to be lively.

So the question I'm posing is not an idle one. If we feel brief experiences are distinctively literary, I want to know why. How old is the assumption? What pressures shaped it? Can we use luminous moments in studies of the *longue durée*? If not, what are the odds that we can find another way to make those studies resonant and interesting?

Gallagher diagnoses critics' reliance on small units of time as an evasion of mortality, but doesn't tell us where the idea came from. The one clue we might glean is that her story begins with fleeting moments of inspiration in Shelley's "Defence of Poetry." That may remind us of James Chandler's *England in 1819* — another story about the Romantic origins of temporal precision. Or it could remind us of Wordsworth's halted traveler, used by Geoffrey Hartman to define

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<sup>5</sup> Kim Stanley Robinson's novels routinely cover centuries. The works of James Michener and Olaf Stapledon vault across millenia. Admittedly, these are exceptional examples.

<sup>6</sup> This swipe is located in "The Slaughterhouse of Literature," *MLQ* 61.1 (2000): 208. "Slaughterhouse," interestingly enough, appears immediately next to "Formalism and Time," in the same issue of *MLQ*. One might venture to say that close reading was always a straw man. The live competition for distant readers never came from New Criticism, but from the New Historical anecdote.

the Romantic lyric as “a meditative slowing of time.”<sup>7</sup> But finally, it should remind us of something broader than Romanticism: the rise of the lyric as the paradigmatic poetic form. In 1848, when Poe writes that “a long poem” is a “contradiction in terms,” we’ve taken a big step toward identifying literature with brief experiences.<sup>8</sup>

So, in short, subjectivity and the lyric are part of this story. But they can’t be the whole story. By the nineteenth century, critics are taking the novel seriously, so it doesn’t seem inevitable that the lyric poem should have defined the granularity of time for all literature. No, the decisive move was the choice to understand narrative, too, through representative episodes or moments of lyrical perception. It’s a choice made explicit in the structure of *Mimesis*, where Auerbach converts three thousand years of the history of narrative into a sequence of fragmentary scenes.

So how did we get to a place where it seems natural to understand a whole novel by focusing on five minutes of the story? How did that come to seem not only a valid approach, but — for Gallagher and Greenblatt — the distinctively literary one?

### **The compression of fictional time**

Let’s start by making up an explanation using things we already know. We’ve noticed that criticism can be shaped by changes in literature itself: the decline of the long poem, for instance. So it stands to reason that early twentieth-century criticism might have been shaped by recent changes in fiction. We also happen to know that modernists were obsessed with time. Narrative techniques like stream of consciousness and new forms like “the story of a single day” suggest that something around the turn of the century encouraged a lyrical compression of fictional time. Perhaps it was the telephone, or urbanization, or Henri Bergson’s philosophy of experienced time? Whatever the cause, we can blame modernism.<sup>9</sup>

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<sup>7</sup> James Chandler, *England in 1819: The Politics of Literary Culture and the Case of Romantic Historicism* (Chicago: University of Chicago Press, 1998). Geoffrey Hartman, *Wordsworth’s Poetry, 1787-1814* (Cambridge, MA: Harvard University Press, 1987), 12.

<sup>8</sup> Edgar Allan Poe, “The Poetic Principle,” *Home Journal* 36 (1850): 1.

<sup>9</sup> David Harvey influentially argues that modernism “is ... suffused with the sense of the fleeting, the ephemeral, the fragmentary, and the contingent.” *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change* (Cambridge: Blackwell, 1990), 11. See also Erin D. Sells, *The Story of a Day in Modernism*, Ph.D dissertation, Emory University (2009), 9, 135-36.

And this is, in fact, an influential story. Gérard Genette credits the compression of time specifically to Proust. Before Proust, he says, novelists alternated between passages of “scene” and “summary.” In a scene, the time we spend reading may be loosely equivalent to the time represented the world of the story; events happen, as it were, close up and in slow motion. A passage of summary, on the other hand, may quickly traverse weeks or months where our protagonist has an illness or learns to love the students in her rustic schoolhouse. According to Genette, Proust’s innovation is to cut out the summary, and simply juxtapose one scene with another.<sup>10</sup> Genette characterizes the time that passes between these scenes as “ellipsis”; time that must have passed in the story, but isn’t narrated in the text. Replacing summary with ellipsis makes fiction, in effect, all scene: all slow motion. Narratologists who aren’t French haven’t always given Proust personally this much credit, but they tend to agree that the shift toward scene was a modernist innovation.<sup>11</sup>

And without distant reading, here is where the talk would end, because we have a plausible story. The compression of time that began to define poetry in the Romantic era spread to fiction later, when modernists slowed narration to a phenomenological pace. Gallagher hints at this account. It’s a good fit for several examples we are likely to remember from Woolf or Joyce. It could also be a polemically useful story — if you were, say, a distant reader who wanted to blame our obsession with moments on the dubious aesthetics of high modernism. In fact, this a great story in every way, as long as we don’t test our memory of three or four examples by gathering (say) a hundred books and comparing them.

How would we do that? Prompted by Genette, my first thought was, perhaps we should just measure how much space on the page different writers allocate to scene or summary.

But of course dividing the two is going to be hard. How much time has to pass in a “scene” before it becomes “summary”? The dividing line could shift in different books. And actually, we have no reason to assume that this is a binary division at all. The contrast between scene and summary is a critical convention, but we don’t have much real evidence for it. So here’s where numbers start to be

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<sup>10</sup> Gérard Genette, *Narrative Discourse: An Essay in Method*, trans. Jane E. Lewin (Ithaca: Cornell University Press, 1980), 97-98.

<sup>11</sup> Seymour Chatman, *Story and Discourse: Narrative Structure in Fiction and Film* (Ithaca: Cornell University Press, 1989), 71-78.

useful. We don't have to divide passages into binary categories; instead, we can start by treating this as a continuum, and just characterize the amount of time that elapses in a given passage — whether that's ten minutes or a month. Later we can look at all the passages and ask whether they do divide neatly into categories like scene or summary.

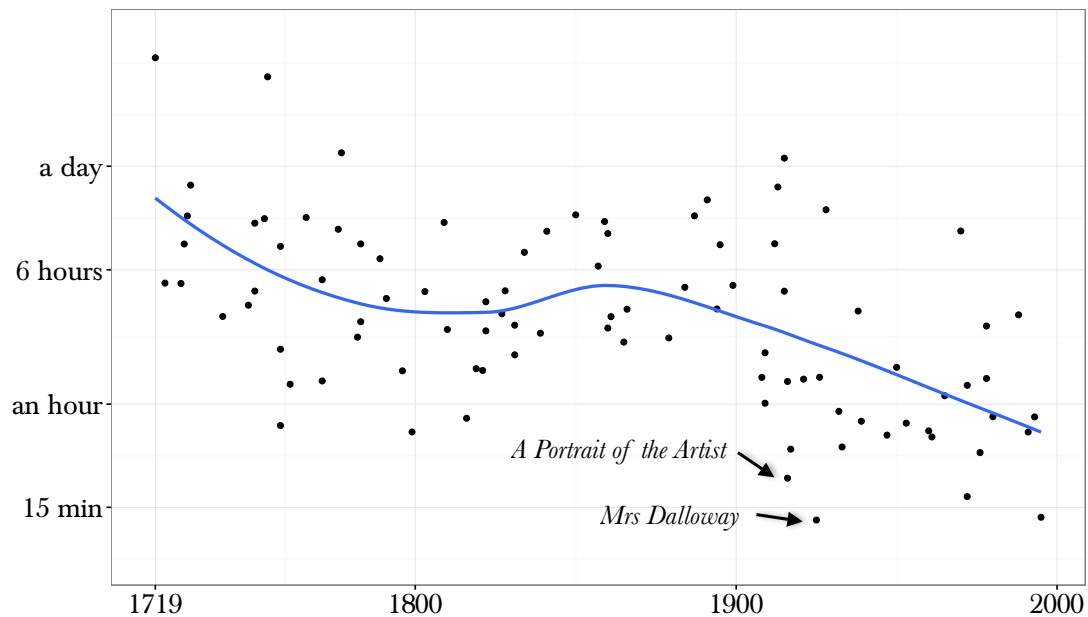
Our description of elapsed time doesn't need to be exact. Fictional time isn't exact: how long is a remembered afternoon? We also don't need to be objective. Different people estimate time differently. I collaborated with a couple of graduate student colleagues (Sabrina Lee and Jessica Mercado) explicitly to acknowledge subjectivity. We divided ninety novels between us, and covered almost three hundred years. But we also had six novels in common so we could compare different people's reactions to the same passages.

Here comes the “methods” section. From each novel we characterized sixteen passages of roughly 250 words each. Four of those passages were the first 500 and the last 500 words of each novel, because I was curious about the temporal zooming in or out that might happen in the opening or closing pages. The other twelve passages were selected at random from the middle.

Then we tried to say how much time is narrated in each passage. We tried to capture the duration described in the plot, *syuzhet*, rather than any underlying linear chronology. We also made provision for weird stuff. For instance if there's a line of asterisks across the page we could separately record time that passes “in ellipsis.” We also started out with a separate category for “subjective time,” to acknowledge memory and anticipation. But as we got a few novels into the process it became clear that the boundary between subjective and objective time is really a question about scale. For instance, you meet the monster in *Frankenstein* and he starts to tell his tale. Is narrated duration now the hour or so it takes him to talk, or the month he's describing? We decided it's the month. If the edges of his story fall outside our frame of 250 words, we're inside his narrative. On the other hand, if a character says something about her childhood in dialogue, and we can see the edges of that subjective perspective, we count it as the minute or two the dialogue would take to speak. In short, we're recording what time looks like at a particular textual scale — 250 words, a little less than a page. A different scale might give you a different measure; nothing prevents us from measuring narrative pacing in many different ways.

So what should we expect to see at the scale of a page? The account we get in Genette is that the alternation of scene and summary remained fairly stable “up to the end of the nineteenth century.”<sup>12</sup> So if we take 16 passages scattered across each novel, and average them to find out how much fictional time passes typically in 250 words, we might expect to see a pace somewhere between scene and summary: shall we say, roughly six hours a page?

### Time narrated, on average, in 250 words in a hypothetical world



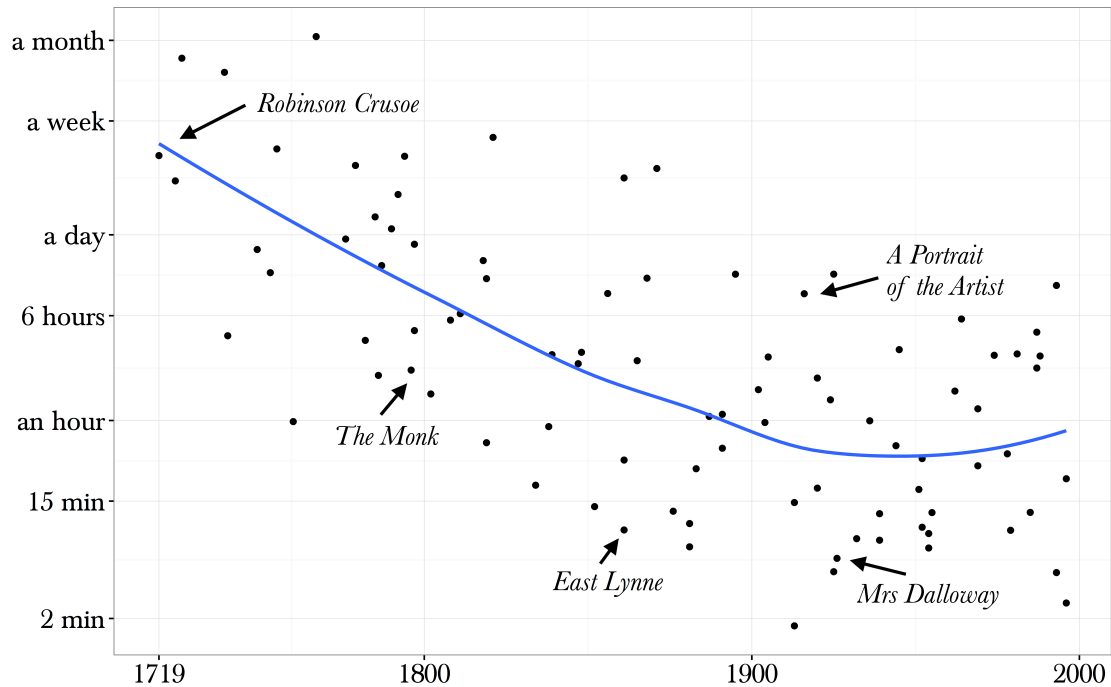
Here’s a hypothetical world of that kind. On the vertical axis you have the amount of time narrated, on average, in 250 words. It’s a logarithmic scale, so the distance between 15 minutes and an hour is the same as the distance between 6 hours and a day; in both cases you’re multiplying by four. The average pace of

<sup>12</sup> “[I]t is obvious that summary remained, up to the end of the nineteenth century, the most usual transition between two scenes, the ‘background’ against which scenes stand out, and thus the connective tissue par excellence of novelistic narrative, whose fundamental rhythm is defined by the alternation of summary and scene.” Gérard Genette, *Narrative Discourse: An Essay in Method*, trans. Jane E. Lewin (Ithaca: Cornell University Press, 1980).

narration remains more or less stable up to the end of the nineteenth century. Then Proust cuts out the summary. Now fiction is all scene. Diegetic time gets slower, more phenomenological: there's going to be less time on each page. At first it's just a few experimental writers doing this in English — Woolf and Joyce — but then eventually their example diffuses outward, and the pace also drops toward “scene” in the rest of literature. I'm not saying this is exactly what you're expecting to see, or what I expected to see. I don't think we really have clearly-formed expectations on this scale. But I guarantee you, once the actual pattern is revealed, it will seem as though “we might have guessed” whatever it is you do see. So before revealing any actual evidence, I thought I would share one thing we might have guessed if we relied on several influential accounts of the history of narrative pace (Genette; Chatman).



## Time narrated, on average, in 250 words



Here's what we actually see. The pace of narration is already dropping rapidly in the eighteenth century, and it continues to drop to the early twentieth. Then there is perhaps a subtle movement in the other direction, or at least a leveling-off. This picture raises doubts about our first guess that Romantic lyric initiated the compression of time. And it's almost the opposite of the story initiated by modernism we might have extracted from Genette. Far from being the moment when a new slower pace was introduced, the early twentieth century is the moment when the slowing stops, or even reverses.

But debate about modernism is not what I want to dwell on. What's more interesting is that the changes between 1719 and 1919 or so are enormous. Fiction goes from covering several days on each page to covering roughly thirty minutes. That's a hundredfold compression of time. It must be one of the biggest, simplest changes in the history of fiction, bound up (as cause or effect) with many other things. At the scale of thirty minutes you're simply going to narrate different aspects of human life than you would narrate at the scale of two days.

Didn't I predict it would feel like we must have known this already? A trend like this seems too big to hide. All the evidence is in the open; the volumes used in

our study are mostly well-known books. Many of us have read, say, half of them, and that should be enough to glimpse the trend. How could we *not* already know this?

It's true there's a lot of variation in each period, which might have made the shift hard to perceive. But the mean pace of fiction is changing a lot even relative to the variation. Think about it this way. The mean temperature in Chicago, year-round, is 55 degrees Fahrenheit. Here, in this graph, the mean pace of fiction changes by two standard deviations. In Chicago, that would be like getting a new mean temperature of 20 degrees. In that much colder world, there would still be a lot of variation; certain summer days would still feel like days we used to get in spring or autumn. But the variation definitely would not prevent us from noticing that the world was much colder.

So we must notice this historical change as well. And I think we do. It's just that we don't necessarily know how to describe it. For instance, students may say that they like contemporary fiction because it "has more action" than older books. I suspect this graph is part of what they mean. There's plenty of fighting in *Robinson Crusoe*, but it tends to be described from a distance, in summaries that cover an hour or two. You don't get much "biff — pow — and then I groped for my revolver, but it was ... just .. out of ... reach." Twentieth-century fiction is closer to the scale of dramatic presentation, and that may feel more like action, or even (paradoxically) like a "faster pace," even though diegetic time is passing more slowly from one page to the next.

So I think it is fair to say that we must have known this in some half-conscious way. We have experienced this difference. It's just that we didn't know what we knew; we hadn't paused to organize our experience in this particular way. But pausing to organize our experience of literature is what I mean by distant reading. It doesn't have to involve big data, and it doesn't depend on the premise that we want to survey thousands of forgotten books. Here, we're looking at ninety mostly canonical volumes. But we can't intuitively guess the pattern they form, because our memories aren't as good as we like to pretend. We cannot remember ninety examples, all at once, well enough to compare them. To glimpse the pattern, we need to somehow supplement our memories. That doesn't necessarily require a computer. In this case, Sabrina, Jessica, and myself could have done this with index cards and a slide rule for the logarithms. Reading fifteen hundred passages, making notes, averaging our observations; you could do that all with

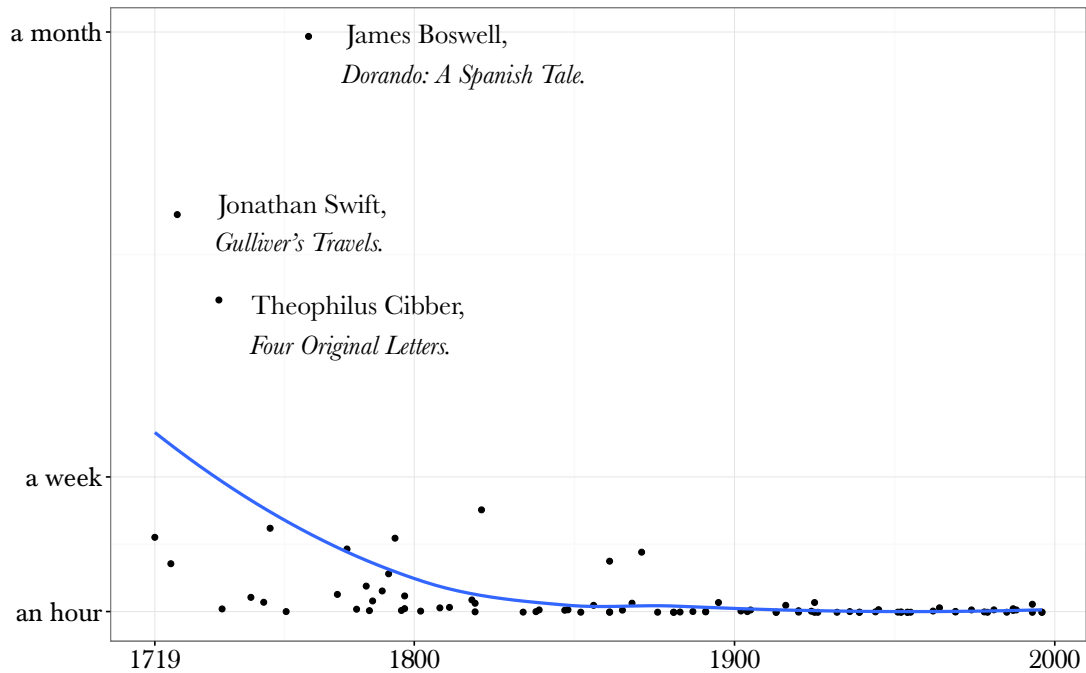
technology from 1916. In fact, I call this distant reading — and *not* digital humanities — because it doesn't have to be about anything digital. It's just about glimpsing patterns that aren't legible at our ordinary scale of reading. Pencil, paper and Arabic numerals are already a substantial help. In fact, those are the tools Moretti used in "The Slaughterhouse of Literature": he read a hundred detective stories and took notes. And although I like Moretti's phrase "distant reading," this approach precedes Moretti: you can find twentieth-century examples in sociologists' "content analysis" of the mass media, or in Janice Radway's book *Reading the Romance*.<sup>13</sup>

On the other hand, computers can certainly enrich our understanding of a pattern like this. In this talk I'll just scratch the surface of the possibilities — but for one thing, computers make it possible to look at the same evidence, quickly, in lots of different ways. So if you're skeptical about this pattern, we can consider some reasons for skepticism. What about that logarithmic scale, for instance? Here's what happens if you don't use it. A few eighteenth-century examples blow the lid off the vertical axis and make it impossible to see changes later in the timeline. One thing that becomes visible here, by the way, is that the really extreme early-eighteenth-century examples aren't novels at all. I defined "fiction" very loosely, so the corpus includes *Gulliver's Travels* and a couple of lightly fictionalized scandals. Perhaps they represent an older narrative mode. The eighteenth-century novel, proper, is already moving toward slightly smaller units of time.

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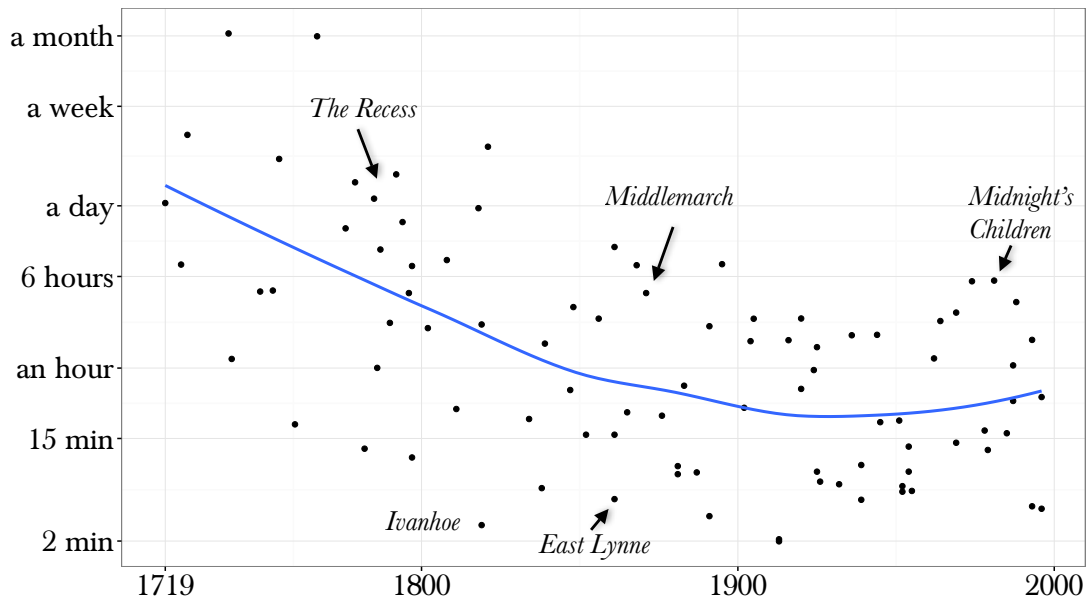
<sup>13</sup> Klaus Krippendorff and Mary Angela Bock, *The Content Analysis Reader* (Sage Publications, 2008). Janice Radway, *Reading the Romance: Women, Patriarchy, and Popular Literature* (Chapel Hill: University of North Carolina Press, 1984). My emphasis on continuity with sociology was shaped by collaboration with Andrew Goldstone, and by reading James F. English, "Everywhere and Nowhere: The Sociology of Literature After 'the Sociology of Literature'," *New Literary History* 41.2 (2010): v-xxiii.

### Time narrated, on average, in 250 words



In this picture later changes become invisible. So I chose to use logarithms to make them visible. But that's a choice; we can look at things both ways. Another question: why have I weighted all sixteen passages equally? If you recall, we were always sampling the first two and last two passages in each book. So the beginnings and ends of each story get sampled more often than they would if we were sampling randomly. That's one way of modeling pace; and you might like that model, if you think beginnings and ends are important. But we could alternatively down-weight those passages to reflect the fact that they're sampled from a small portion of the text. If we do that, here's the pattern we get. The trend is still clear, and still basically the same, but a little less dramatic; it's like a seventy-fold decline instead of a hundred-fold. I think this is probably a better model of narrative pace, and it's what I'll use from here on.

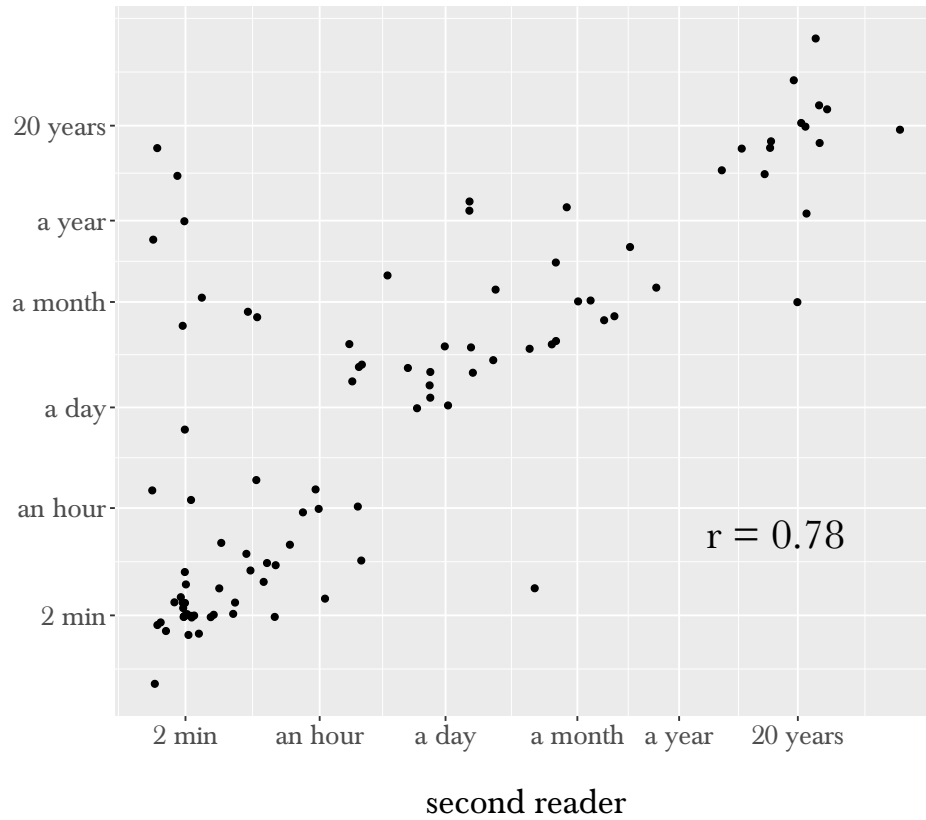
## Time narrated in 250 words, weighted average



We can also consider differences between different readers' perspectives. As I've stressed, fictional time is far from linear. If I tell you, "for a long time I used to go to bed early," and describe my typical bedtime routine, it's not necessarily clear whether I'm talking about one night, or about my whole childhood. And how long is "a childhood"? So the three of us read six novels in common and compared our reactions to different passages. Here the vertical axis is the amount of time assigned by one reader and the horizontal axis, another reader. The passages are mostly spread out along a diagonal line because most of the time we roughly agreed. There are some exceptions, and they tend to be passages of the kind that narratologists love to talk about — where ellipsis or iteration makes time hard to describe. If you're interested in those exceptions, never fear: that's the kind of thing you can find already discussed in Genette and Chatman.<sup>14</sup>

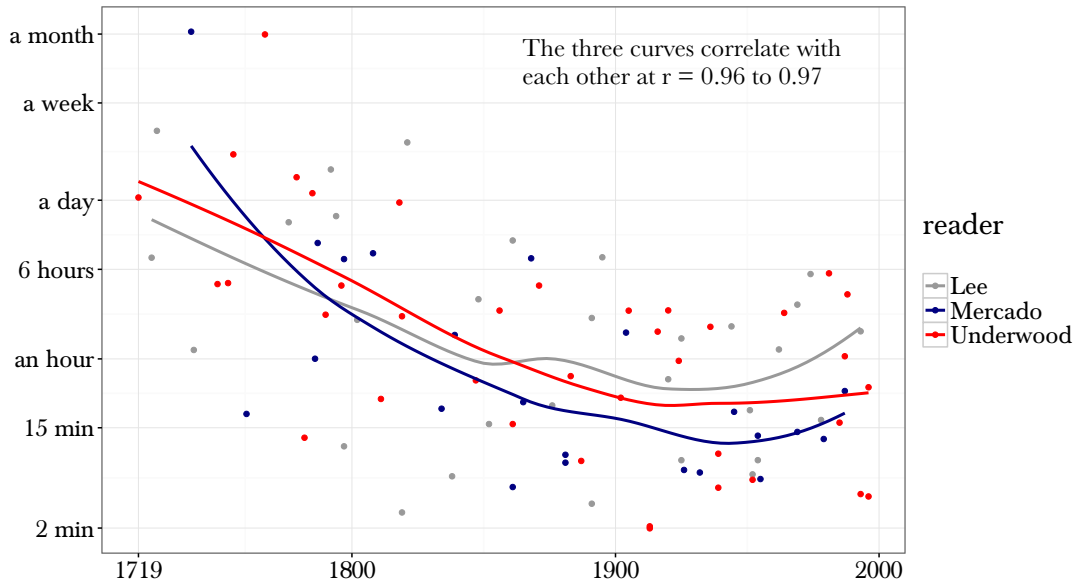
<sup>14</sup> Literary scholars commonly ask, "Couldn't we choose to view the exceptional passages — the ones where there was little consensus — as the truly interesting parts of this diagram?" The answer is yes, we could: and we usually do. Paying attention to aggregate trends *is* the exception in our discipline.

## Agreement between readers



But we mostly agreed about time, as the correlation coefficient, .78, suggests. There was even more agreement when you average out all the passages for a novel. And when we back out to the historical trend, all three of the collaborators on this project saw roughly the same pattern.

### Time narrated in 250 words, weighted average as seen by three different readers



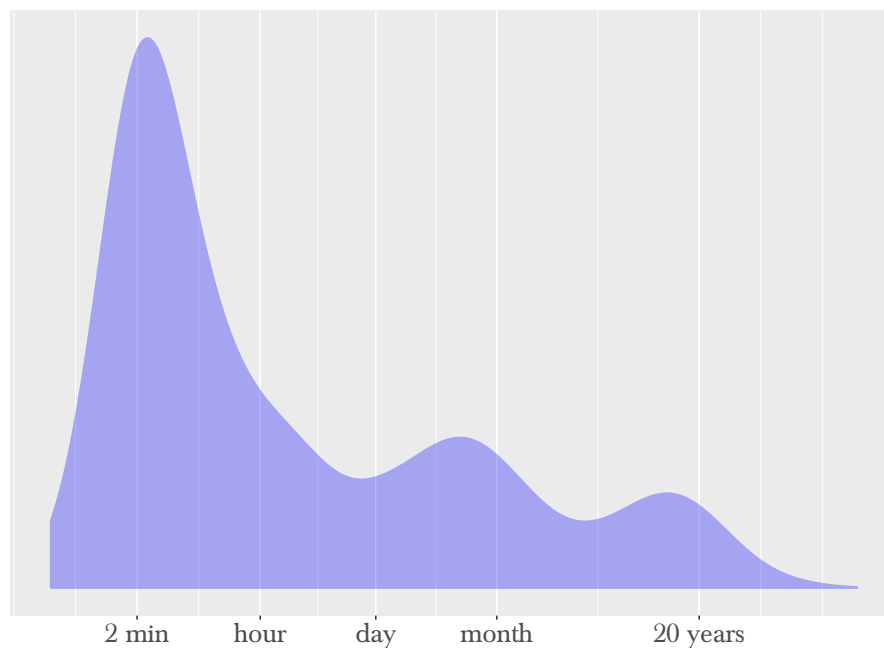
I want to pause to underline the subjective character of the evidence, because we inherit an assumption that quantitative methods produce objectivity, or at least pretend to produce it. The history of that straw man is matter for another day, but let me briefly offer my view — which is, that numbers are no more objective than words. They are just signs that allow us to wrestle with questions of degree. As we back up and look at large historical patterns, we need numbers, not because we're trying to be more objective than usual, but because our material is becoming more varied and comparisons are becoming difficult. So we need a way to acknowledge imprecision and disagreement — which are questions of degree. In the image you're seeing now, there is a fair amount of overlap between different perspectives, but all the evidence is still subjective. Given less overlap, I can envision making a different argument, where the point would be that readers really don't agree about some topic where we expect consensus.

In this case, I hope I've kicked the tires of this trend line enough to convince you that it's robust. It looks different from different angles, but doesn't disappear. So how should we interpret it?

I'm saying "interpret," not "explain," because I don't think we should expect to move rapidly toward causal explanation. A three-century trend spanning the Atlantic Ocean is likely to have lots of causes. It's also going to be hard to separate cause from effect, because in the course of three hundred years the feedback loop from cause to effect to cause again may have cycled through many times. We have been trained to insist, a bit sententiously, on the difference between correlation and causation. But if you're studying a self-reinforcing cycle across three centuries, that difference can become moot. What's important is not to separate cause from effect, but to avoid simplistic reliance on a single cause. I want to pause to warn you against two candidates.

One is Genette's notion that the main change happens when writers just drop out the summary and replace it with ellipsis. I don't think there's much truth to that. For one thing, the division between scene and summary is not crisp to begin with. Looking at the distribution of passages across different lengths of time, I wouldn't know where to divide scene from summary.

### Distribution of passages across timespans





It is true that ellipses become more common in the twentieth century. Genette is right about that. But they remain a rare phenomenon — too rare to help explain the broader change of pace. In fact, the books that lead the way by introducing a slower pace are not modernist novels experimenting with ellipses, but if anything popular nineteenth-century bestsellers like *Ivanhoe* and *East Lynne*.

The second explanation I want to warn you about is something you might extract from E. P. Thompson. Industrial capitalism certainly changes the organization of time; Thompson connects it to the diffusion of watches, which help people measure smaller units of time. It seems intuitively plausible that fiction might have adapted itself to this more finely-divided timeline.<sup>15</sup>

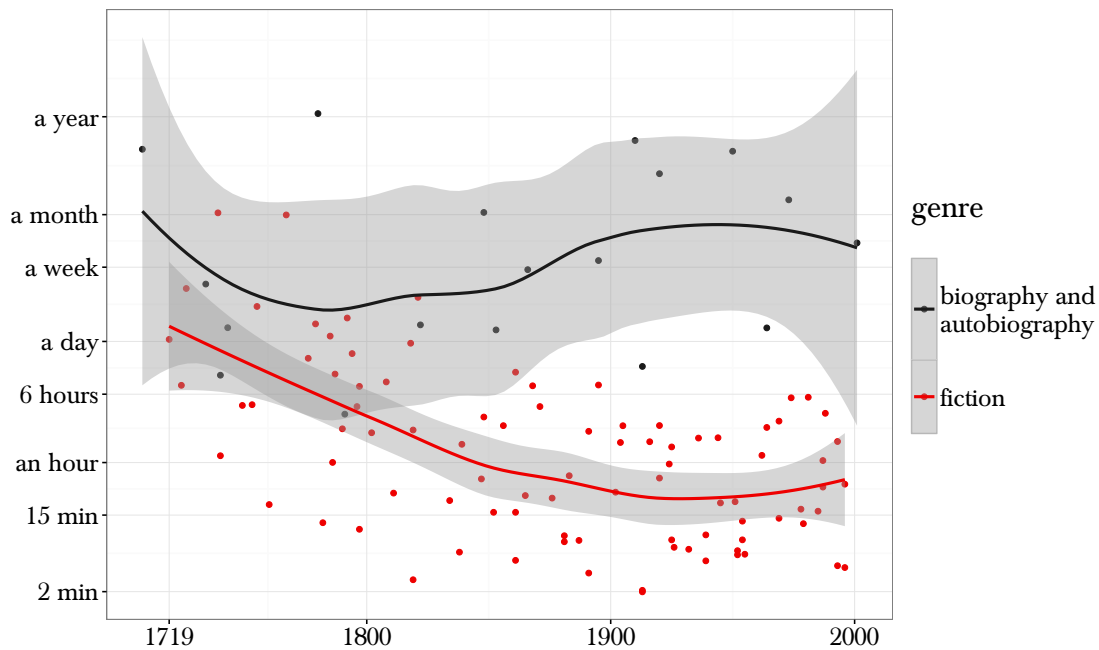
And indeed that may be some part of the explanation for temporal compression.<sup>16</sup> But it can't be the whole explanation, because the trend we see in fiction isn't found in other forms of narrative. If this were just a broadly social change in the experience of time, we might expect it to affect nonfiction as well. For instance, biographies and autobiographies are also narratives centrally concerned, like novels, with individual experience. But in those genres, the pace of narration doesn't seem to change as it changes in the novel. I haven't tagged as many biographies, and they're very diverse, so I can't say confidently whether the pace of narration increases or decreases in biography. That's why the shaded band is so wide for that genre. But certainly we can't see any evidence yet for the kind of clear deceleration we see in fiction.

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<sup>15</sup> E. P. Thompson, "Time, Work-Discipline, and Industrial Capitalism," *Past & Present* 38 (1967): 56-97.

<sup>16</sup> For a more fully worked-out account of the connection, see Sue Zemka, *Time and the Moment in Victorian Literature and Society* (Cambridge: Cambridge University Press, 2012).

### Time narrated in 250 words, weighted average



In fact if Emile Durkheim were sitting in the audience, he would stand up, point to this widening gap between fiction and biography, and say “there’s your explanation.” The changes we see in fiction might be caused by what he called structural differentiation — which leads institutions to specialize in distinct social niches.<sup>17</sup> In fact I have good evidence beyond this graph that biography and fiction were differentiating; I don’t want to go into it deeply because it’s tricky stuff that takes time to explain, but let’s just say that as we proceed down the timeline computers find it easier to tell biographies and works of fiction apart in a blind taste test. The genres become textually less similar, and the representation of time seems to be a central reason why.

So I admit, it is tempting to call differentiation a cause of change. It fits well with the textual evidence, and perhaps also makes sense of anecdotal evidence that bestsellers were the leading edge of this trend.

But I’m going to resist the temptation to explain causality, at least for now. We haven’t fully described this trend yet. Instead of rushing to explain it causally,

<sup>17</sup> Emile Durkheim, *The Division of Labor in Society* (New York: Free Press, 1964). See also Dietrich Rueschemeyer, “Structural Differentiation, Efficiency, and Power,” *American Journal of Sociology* 83.1 (1977): 1-25.

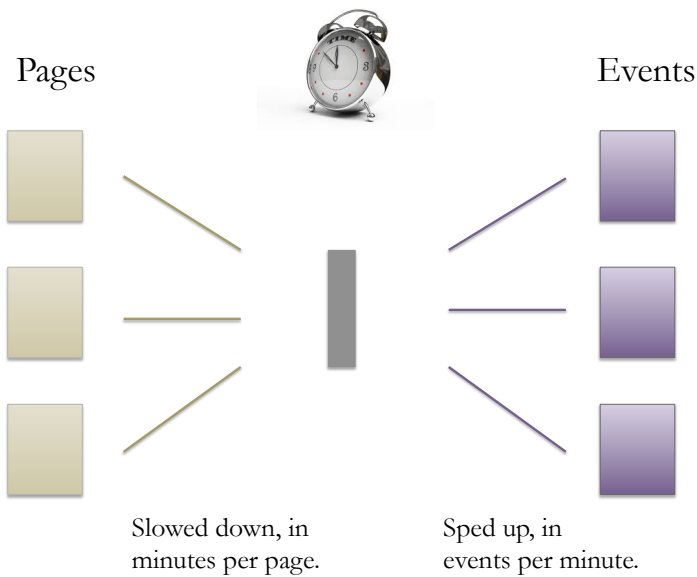
let's thicken our description by looking for textual patterns and literary pleasures bound up with the change. That can be another way of answering the "why" question. It may not explain agency — Aristotle's efficient cause — but it could help us understand purpose, or formal cause. What, in other words, did writers *achieve* by compressing fictional time?

### **The pleasures of the moment**

One pleasure bound up with this change is overt and naïve. I'm going to call it breathless narration — when the narrator explicitly draws attention to compression of time and presents it as a source of thrilling surprise. Maybe the ur-text for this is *Pamela*, where the epistolary narration can be literally breathless because I have to finish writing before Mr — bless me, there is Mr B at my door now. But those tricks have limits; eventually you get mocked by Fielding. By the late eighteenth century, novelists were working out a subtler and more durable stance of breathlessness. Maybe you can't literally have your narrator describe events *as* they happen, but you can describe events in a way that highlights their immediacy. This is one of the things that makes Frances Burney sound more modern than Defoe; she keeps reminding her readers that events are succeeding each other quickly. A new paragraph will begin "A few moments after he was gone ..." or "At that moment Sir Robert himself burst into the Room ..." <sup>18</sup> Gothic novels similarly intensify events by making them happen "at the very moment" something else does.

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<sup>18</sup> Frances Burney, *Cecilia; or, Memoirs of an Heiress*, 2vols. (London: George Bell, 1890) 1:357, 358.



Calling this breathless narration may seem paradoxical, since I’ve also been talking about the *slowing* of narration. When you compress fictional time (clock time in the fictional world), the pace of narration can be said to move slower, in terms of fictional minutes per page, which is the measure we’ve been using so far. But in another sense, if you’re compressing the same number of events into a shorter fictional clock time, you might say that the plot is speeding up (measured as events per fictional minute). I don’t know how to count “events,” so I won’t. But I think that’s the acceleration breathless narration is trying to convey — this compression of more fictional events into each fictional minute.

The gesture is naïve because it’s trying to do something a writer can’t ever achieve. Fiction is great at suspense. But instead of creating suspenseful puzzles for us to wonder about, breathless narration tries to create intensity through the sheer pace of presentation, which is not actually in a writer’s control. Novels are not music videos. If the pace really began to startle us, we could just read more slowly. And yet, breathlessness is a very popular narrative stance — so popular that on some level it must work. If you count words, you can trace verbal formulas of breathlessness across the nineteenth century. “The very moment” is succeeded by “it was the work of a few minutes to” do something, which in turn is succeeded by “it was the work of a few seconds.”

Breathlessness can also be self-conscious rather than naïve, for instance when characters do something “in much less time than it takes to write it.”<sup>19</sup> Acknowledging the difference between space on the page and fictional time may sound like an apology. But more often the breathless narrator is proud of creating temporal distortion. You can feel this sort of weary pride when Philip Marlowe writes, at the end of *The Big Sleep*: “I rang the bell. It had been five days since I rang it for the first time. It felt like a year.”<sup>20</sup> That’s how hard I’ve been narrating, folks. Bet you can’t believe it was just five days either. Not a big deal; it’s a job.

But the narrator’s self-conscious bragging about the amount of description they’ve crammed into a fictional minute or day may not really be where readers get most pleasure. The compression of time is also, more simply, associated with a tendency to describe different aspects of human life — for instance, more dialogue and more physical description.

And I don’t have much time left, but distant reading to the rescue, because dialogue is something we can count.<sup>21</sup> Here’s what happens if we correlate the percentage of words each book devotes to dialogue with the average amount of fictional time narrated in a passage. It’s not a strong relationship, but there’s a slight tilt to that cloud of dots: the more dialogue in a passage, the less time tends to elapse. For obvious reasons, dialogue pushes a passage away from summary and closer to a one-to-one equivalence between narrated time and reading time.

Since that is fairly obvious, I thought dialogue would be the formal change that correlated most closely with the slowing pace of fiction, but actually, the thing that fits even better is physical description. There are lots of ways we could measure this. For convenience, I’m going to borrow a measure that was developed in the Stanford Literary Lab.<sup>22</sup> It’s simply a list of words that tend to be used in physical description: directional prepositions, like “up” or “down,” physical verbs like “walk,” physical adjectives, numbers, and body parts. A list like this isn’t a perfect or stable measure. It’s true that words have multiple meanings, and the

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<sup>19</sup> William M. Baker, “Mr Dod’s Six Shots,” *Harper’s New Monthly Magazine* 32 (1866): 210.

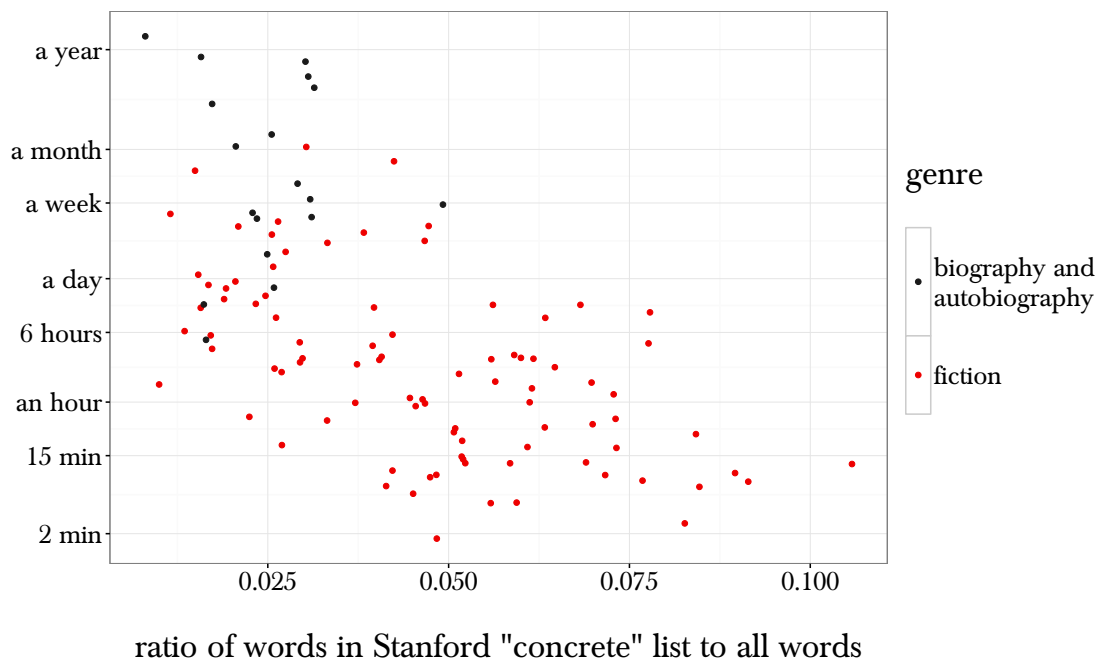
<sup>20</sup> Raymond Chandler, *The Big Sleep* (London: Penguin, 2011), 227.

<sup>21</sup> For more reflection on the role of dialogue in fiction, see Marissa Gemma, Frédéric Glorieux, and Jean-Gabriel Ganascia, “Operationalizing the Colloquial Style: Repetition in 19th-Century American Fiction,” *Digital Scholarship in the Humanities* (2015): <http://dx.doi.org/10.1093/llc/fqv066>.

<sup>22</sup> Ryan Heuser and Long Le-Khac, “A Quantitative History of 2,958 Nineteenth-Century British Novels: The Semantic Cohort Method,” *Stanford Literary Lab Pamphlet Series*, <https://litlab.stanford.edu/LiteraryLabPamphlet4.pdf>

definition of concreteness can change across time. But the changes aren't huge, and as you can see, this list works in practice very well across three centuries, organizing biographies and fiction as a single pattern.<sup>23</sup> This correlation between pace and physicality, I think, is why Gallagher and Greenblatt, and many other people, can assume that a critical method organized around brief spans of time will go hand in hand with concrete particularity. That doesn't have to be true; technically, you could spend a page slowly describing ten seconds of abstract thought, and some novels do. But usually, slowing the pace of narration to a scale of minutes does tend to mean increasing the amount of sensory detail.

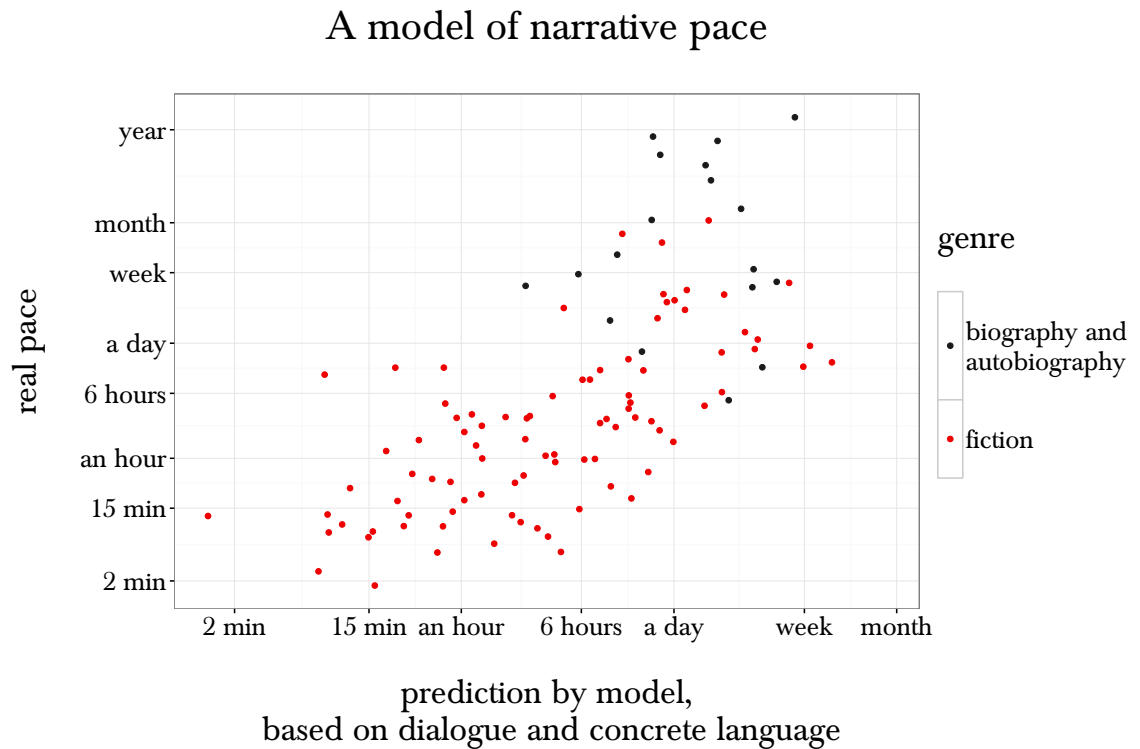
### Relation between concrete description and narrative pace



If you combine these two measures — the amount of space devoted to dialogue and to physical description — you can produce a rather good model of pacing in fiction. Statistical models often take the form of an equation where one variable is predicted by others. Here, we're hypothesizing that the proportion of a book devoted to dialogue and to physical description will predict the time narrated

<sup>23</sup> Ryan Heuser and Long Le-Khac have already shown that concreteness increases steadily in nineteenth-century fiction, so one might at first wonder whether concreteness is simply a proxy for date. But a variable that was a proxy for date wouldn't be able to explain biographies, which have a different historical trajectory.

on average in 250 words. It's a simple linear equation, but it works. The horizontal axis is the pace our model predicts and the vertical axis is the actual pace of narration as estimated from our sample passages. It's a solid relationship, as these things go:  $r^2 = 0.45$ . Moreover, it can explain biographies as well as novels; they fit roughly the same pattern.



This tells us, perhaps not exactly *why*, but certainly *how* the pace of fiction changed. I don't know which of these axes is cause and which is effect. I don't even know that cause and effect are separable. But the slowing pace of fiction is strongly bound up with the prominence of dialogue and physical description, across a span of three hundred years. I have described this shift as an attempt to emulate the immediacy of dramatic presentation. That's not a radically new idea; in the 1920s, Percy Lubbock already saw that fiction had been moving toward "showing" rather than "telling" in the late nineteenth century.<sup>24</sup> But now, we've stepped far enough back to see that argument as part of a bigger picture. This was not, as Lubbock

<sup>24</sup> Percy Lubbock, *The Craft of Fiction* (1921), (New York: Viking Press, 1957).

suggests, an innovation made by Flaubert or Henry James; it's a two-hundred year trend that transformed time in fiction, moving it from a scale of days to a scale of minutes. And the trend may have been led by bestsellers, like Ellen Wood's *East Lynne*, rather than Henry James.

### **The timeline and the anecdote**

I don't mean to argue that the changes we've traced in fiction are directly responsible for the prestige of anecdotes in literary criticism. The New Historical anecdote often runs longer than thirty minutes; it's not literally the same thing as a fictional scene, and I don't imagine that critics directly model their articles on fiction. But I do believe that changes in the pacing of fiction helped consolidate a notion that literary language was distinguished from nonfiction by presenting life up close and in slow motion. That concept of literariness is invoked explicitly by Gallagher and Greenblatt as a source of authority for their anecdotal method. And this New Historical argument was not radically new; rather, it reaffirmed an earlier twentieth-century consensus that experienced moments and vivid particulars are central to the mission of literary study. So we don't need a smoking gun to connect these things; the connection has been conscious and openly avowed.

But I also haven't gone looking for a smoking gun because I'm not trying to indict anyone. The basic shtick of this talk, admittedly, is that distant reading itself can cast light on sources of resistance to distant reading. And I do think our association of literature with temporal immediacy has been one source of resistance. But my goal has been to interpret the rise of temporal immediacy sympathetically, not to unveil or demystify it. The specialization of literary discourse is not something we can reverse in any case. Imaginative literature is now defined by the fine resolution of its timeframe, which contrasts to the looser pace of biography and history. That's a historically specific definition of literature, but I don't think there's anything wrong with it; it's a conception of the literary that produces specific pleasures.

Nor am I critiquing New Historicism. Modeling criticism on the temporal compression of literary discourse was a good plan — a neat echoing of content by form that distant readers would do well to emulate where we can. It won't always be possible to compress our arguments into an anecdote: we're aiming at a different scale of description, and we may need a different strategy. Maybe we need to imitate techniques of suspense, for instance, rather than sheer descriptive



immediacy. But however we do it, I think it is a good idea for criticism to echo the aesthetic strengths of literature.

What I want to reject is the notion that a specific, recent conception of literature centered on the immediacy of the moment constitutes an argument against other scales of knowledge. In *Practicing New Historicism*, Greenblatt and Gallagher present brief fragments of experience and concrete particulars as weapons in a kind of war against “Big Stories” and “generalizable typicality” (51). Looking back at the 1970s, they’re taking aim at social historians, but of course today the same sort of disciplinary boundary-drawing is often used to rule out the quantitative methods I’ve used in this talk. If you believe that the literary example and the social-scientific model are basically opposed modes of knowledge, then this could make sense. It might be necessary to protect literary criticism from being diluted by, or undermined by, alien methods. And perhaps most people in our discipline do believe that the humanities and quantitative social sciences are organized around competing modes of knowledge. That may be why discussions of distant reading are so often framed as attempts to find a middle path or compromise — the implicit assumption being, that we confront some kind of zero-sum tradeoff between opposing principles.

I don’t believe any of that. I see these methods not as competing approaches to human life, but as interlocking modes of interpretation that excel at different time scales. I cite Gallagher on Pater and Hartman on Wordsworth because I think my diachronic account can learn a lot from more focused, synchronic scholarship. But the converse is also true. If we want to understand how case studies fit together on a long timeline, we need more than our unaided memory of examples. Even if we’re interested strictly in the canon, I think we need at least pencil, paper, and Arabic numbers. If we want to keep our methodology purely qualitative, we can. We can choose to outsource everything that requires numbers to departments of Communications or Sociology. But we’ll be outsourcing a big part of literary history.

In this talk, I have presented quantitative models neither as simple descriptions, nor as causal explanations, but as ways of interpreting the human past.<sup>25</sup> Although an interpretation that uses numbers is called a “model,” the

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<sup>25</sup> I don’t mean to disavow description or explanation. The boundary between these practices is always fuzzy, and I think it becomes extremely fuzzy on a three-century timeline, where descriptions have to be more controversial than usual in our discipline, and explanations have to

differences from textual interpretation are not huge. Models provide a perspective on the world designed to address a specific question; like textual interpretations, they can acknowledge assumptions, use subjective evidence, and simplify some patterns in order to bring others forward.

I have also, finally, tried to convince you that different scales of interpretation are not opposing approaches to human life, but different perspectives that support and illuminate each other. A model of century-spanning trends can cast light, for instance, on the characteristic pleasures of brief scenes and gem-like moments. The timeline and the anecdote are not just compatible, but complementary ways of thinking about the past; each perspective needs the other to better understand itself.

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be more cautious. But several influential works championing quantitative method have positioned it specifically as an alternative to interpretation, and I want to make clear that, in my view, no such choice is necessary. For advocacy of explanation, see Franco Moretti, “Moretti Responds (II),” *Reading Graphs, Maps, Trees: Critical Responses to Franco Moretti*, ed. Jonathan Goodwin and John Holbo (Anderson: Parlor Press, 2011), 74. For advocacy of description, see Stephen Best and Sharon Marcus, “Surface Reading: An Introduction,” *Representations* 108.1 (2009): 1-21.