To judge from the ideas we have proposed for this session, periodicals scholars increasingly believe that we will best answer the question posed in our session title by thinking of periodicals as systems or networks, and by evaluating them using the conceptual language of information technology: software and hardware, code and process. I don't disagree; on the contrary, I think I have compelling evidence that systems modeling could provide a powerful way to show how periodicals develop over time. But I don't think this approach in itself will resolve the methodological issues Matthew Philpotts has articulated so well in his session proposal: that scholarly study of periodicals remains at the level of description rather than explanation, and that useful theoretical understanding of periodicals, individually and as a discourse genre, still eludes us. Systems modeling may help us visualize more clearly what we need to explain, but even the most powerful evidence that periodicals change like information systems would in itself provide only another level of description. We will only reach real explanatory power, I believe, when we can trace how and why periodical systems work at their most functional level, the level of the article and its genre.

This short position paper lays out the method I have in mind, using a case study of the London Times from 1785 to 1885 to demonstrate both the value of seeing periodicals as systems and the limits of that approach. I will then try to show how genre analysis might complement systems thinking to form a theoretically coherent and powerful practice for periodicals studies.

Trace the system
The Times is the iconic British daily newspaper of the nineteenth century, and an acid test for any method of studying the periodical press. Its historical importance is unquestionable, if difficult to measure precisely: the nineteenth-century Times, self-styled "the Leading Journal of Europe," has been held responsible for fomenting wars, bringing down governments, and inventing techniques and genres still used in modern journalism, including war reporting and the editorial "leading article." By the mid-1850s the dominant position The Times had achieved in British politics was the stuff of political legends, cultural memes, and even literary treatments including Anthony Trollope's The Warden. But The Times is also a classic example of the difficulties posed by periodicals' outsized texts and uncertain authorships. To scholars trained in close reading, its file presents a text literally impossible to read: the more than 31,000 issues of The Times printed in that first 100 years contained more than 2.6 billion words, enough for 13,800 novels the length of Jane Eyre

Moreover, the overwhelming majority of those 2.6 billion words were anonymously authored, edited, and published, brought into existence by shifting and untraceable Darnton loops of advertisers, penny-a-liners, letter-writers, leader-writers, reporters, correspondents, subeditors, editors, and clerks.

Press historians, faced with a phenomenon impossible to ignore and impossible to fully comprehend, have offered accounts of The Times that can seem designed to tame its complexity rather than to show how it really worked. Victorian observers often described the paper in terms of a single guiding individual, such as leader-writer Edward Sterling, publisher John Walter II, or editor John Thaddeus Delane, or else as a vague manifestation of the spirit of the age. In the twentieth century, scholars have linked the development of the newspaper to contemporary events such as the trial of Queen Caroline, the Corn Law debates, the Crimean, American Civil, and Franco-Prussian Wars, the end of the stamp tax, and three rounds of parliamentary reform--

---

1 Raw data for these measures of The Times, as well as those used in the figure below, were provided by Cengage Learning, publishers of the Times Digital Archive, www.cengage.co.uk. I would like to particularly thank Cengage's Seth Cayley, Publisher--Media History, for his ongoing and generous help.
or more rarely to technological innovations such as the Stanhope press, steam printing machines, the telegraph, stereotyping, and mechanical composition. Scholars more invested in social and economic causation have told its story as reflecting evolving readership, macroeconomic factors such as commodity prices, and political and professional class conflict. Among the few points of agreement have been that sheer historical contingency must have strongly influenced the paper's development, and that its history included long stretches in which it hardly changed at all.

Jeremy Black has speculated that the British daily newspaper of 1800 "would not have surprised a printer-proprietor of 1710" (23); Joel Wiener recently described The Times as an eighteenth-century paper as late as 1830 (28, 61). Stanley Morison, authorized historian of The Times, wrote that it showed "an astonishing uniformity in type make-up, format, and even extent in the half-century from 1848 to 1898" (155).

Recently I decided to test these widely varying accounts against a consistent metric that would track the paper across this whole era. With the help of Cengage, publishers of the Times Digital Archive, I was able to have data-gathering runs done on their database to measure the paper's growth in total text characters printed in each issue over that first 100 years. This query resulted in the figure below, 31,439 individual data points in gray with their central tendency shown by trendlines for running average and for a fifth-degree polynomial regression.

The first takeaway from this figure is that it's hard to imagine a completer vindication for a systems approach to periodicals history. The logic of the s-curve dominates and subsumes all other historical influences, and s-curved development is the signature trace of technological systems. A new technology enters its market full of unrealized potential; gradually at first, then at an accelerating rate, its practitioners solve problems and improve its performance until the system reaches a maximum capacity and growth levels off. At that point it is "mature," and will remain at that level until the environment changes or it is overtaken by a newer technology on its own s-curve rise (Christensen 39). The revelation that an s-curve governed the growing textual capacity of The Times suggests that the newspaper's development was no more blown about by contingency or diverted by individual agency than the modern development of disk drives and microchips was. In this graph, the formative events and turning points of newspaper history as
we have always told it--political crises, economic highs and lows, influential editors and publishers--either disappear or drop to the status of contributing factors or noise. In their place two imperatives work themselves out on the s-curve track: the pressure for more available volume, and toward greater variable range.

The researcher's dream is a result that is both significant and counterintuitive, but by itself this result is just another puzzle. Like Franco Moretti's famous map of genres in the British novel from 1740-1900, with its mysterious waves of change at 25-year intervals, it powerfully suggests a developmental pattern without being able to identify what drives it (Moretti 81-84). Why would The Times's s-curve take off in 1790? Daily newspapers had existed in Britain as stable four-page folios for most of the eighteenth century. Why would growth level off in the 1870s, when the market for newspapers was expanding, and printing capacity was not limited to 12- to 24-page papers? What factor could have been so important to this newspaper as to direct its growth in these directions and limit it in others for 100 years, overwhelming other factors and outlasting three generations of publishers and at least five major changes of production method?

Follow the genre

This chart cannot tell us the answer, but it does suggest where to look for one. In the lower left corner, increasing volume and variability begin to make the thin line of the newspaper's size higher and bumpier just before the year 1790. Britain's first press historians, a committee of compositors surveying trade history as part of a labor action, wrote in 1820 that the years immediately after 1785 saw "a complete revolution ... in the nature of Newwork" (Howe 381). News compositing had long been a job with regular hours, typesetting mostly low-urgency items such as "controversial essays, domestic news, and extracts from the official communications in the London Gazette" (Howe 378-9). With the French Revolution and the outbreak of war, however, newspapers focused on political and military events. The genre forms in which parliamentary debates and European news were cast then became the primary textual vehicles in the paper, and at that point--according to the compositors--everything about their work changed.

We now associate news with a genre called the inverted pyramid, which constructs it as an expository narrative with a single main point--given in a "summary news lede"--followed by supporting information in descending order of importance. This genre allows editors to fit almost any story into any amount of space, providing huge flexibility. At the Kansas newspaper where I worked in the late 1980s the publisher told the managing editor how big the paper would be each day, and news was cut to fit. But the inverted pyramid came into use in England only at the end of the nineteenth century. For the period covered by this graph, "news" at The Times meant a plausibly verbatim transcript of the discourse generated at or by a public event. The news of a trial was the report; the news of parliament was the speeches; the news of a military action was the dispatches. Summaries and digests weren't unknown, but they were not the news, and when they were offered in place of a transcript it was usually with an apology. On any given day there could be more or less of this kind of text to transcribe, and it might arrive by mail or messenger very late, so that competitive newspapers post-1790 faced two main pressures: to become able to print larger amounts of text, and to print it from day to day in highly variable quantities.

The systemic and subsystemic capabilities Victorian newspapers developed in response to these pressures were extraordinary. By the mid-century teams of reporters could coordinate with teams of couriers and compositors so effectively that a speech given in Parliament in the wee hours could be partly set in type before the member had finished speaking, and thousands of copies of its text could be loaded onto a 6 a.m. train for Manchester. The imperative to maximize volume and variability also led to a host of other downstream effects including development of complementary genres such as the leading article, which began as a kind of control code for the
real news and then co-evolved with the expanding transcripts to help the reader manage them. That kind of complex systemic development over time is what I believe the striking s-curve in my figure shows. It cannot be showing merely the changing technology of newspaper printing, since that was revolutionized half a dozen times over this period--and did not slow in the 1880s. I believe the graph shows the newspaper system optimizing itself to print a particular genre in a competitive environment, and that its shape reflects the nature of that genre. The history of The Times for at least 100 years was therefore shaped by the characteristics of a particular discourse genre--a sort of generic tail that wagged the entire journalistic dog.

Even if the reader grants that one genre could have shaped a whole periodical in this particular case, however, it is reasonable to ask whether the case is generalizable. Is studying how genres interact with systems a workable model for the scholarship of other periodicals as well, or just a lucky way to explain the Victorian Times? I think the method will indeed work for other periodicals, for reasons that go deep into the DNA of periodical publication itself. All periodicals, not just newspapers, are systems to produce at regular intervals novel instances of the same discourse artifact. Genre is the major--perhaps only--linguistic phenomenon that makes it possible to regularly produce novelty on the level of text while preserving identity on the levels of form and function. To invoke an idea of Bakhtin's by way of a phrase from technology scholar Edwin Hutchins, genres are "partial solutions to frequently encountered problems" (168). The vital importance of genre to periodicals is suggested by the observation that the more tightly periodized the periodical--from quarterly and monthly magazines down to the hourly turnover of news websites--the more tightly defined its genres become. Increased reliance on genres must render periodicals more subject to the characteristics and constraints of the genres they use. We choose tools to solve a problem, but the tools we choose determine the shape of our solution.

The good news for scholars is that the article and its genre are also the most researchable aspect of periodicals--the level at which the largest number of historical agents have left the greatest number of traces. For writers, journalists, editors, publishers, and readers, articles have always been the periodical's primary units of composition, exchange, design, consumption, discourse, decoding, and comprehension. In Bakhtinian terms, moreover, the article is clearly the unit of the "utterance"--the discrete division marking off one speaker's discourse. My thesis, then, is that periodicals scholars must follow the genre. I am trying to apply it myself, as I write my chapter on the newspaper leading article, by following that genre's production pathways, design and structure, volume (words per article, articles per issue), peritexts, memes and codes, and most common n-gram sequences. Most of all, I am trying to follow genre function. What does the genre do, exactly, and what does that function lead the periodical to do? As we search for a better model for understanding the periodical press, those are surely the questions to ask.

Works Cited