8 Historical Evolution of Registers, Genres, and Styles

8.1 Introduction

For the most part, the preceding chapters have approached the analysis of registers from a synchronic perspective, considering the situational and linguistic characteristics of present-day varieties. These same techniques can be applied to registers from earlier historical periods. In many cases, these analyses show that a register has changed over time in some of its typical linguistic characteristics. Such changes reflect changes in the situational context of the register, like a shift in communicative purpose, a shift in the audience targeted by the register, or even changing attitudes about good style. In some cases, these changes can be so extreme that it is reasonable to ask whether the earlier variety actually represents the same register as the modern variety.

In the present chapter, we consider case studies illustrating these various kinds of change. We begin with a discussion of the fictional novel, showing how it has been recognizable as the same general register over the past four centuries. At the same time, there are some notable linguistic changes that distinguish typical novels in the eighteenth century from their modern-day equivalents.

Our second case study considers changes in scientific research articles. In contrast to the first case study, the linguistic and communicative changes documented in the second study are so extensive that they might be regarded as a shift to a new register – even when we restrict the description to research articles published in a single academic journal (*The Philosophical Transactions of the Royal Society of London*).

Finally, we take up the topic of how historical change in the use of particular linguistic features is mediated by register factors. We first show how grammatical change in noun phrase complexity is mediated by register differences, so that registers have evolved over time to become more sharply distinguished from one another. We then consider the expression of stance, again showing how the relations among registers has changed historically.

The linguistic patterns that are discussed in this chapter come from studies of the ARCHER corpus, a large corpus (1,037 texts and approximately 1.7 million words) designed for the study of historical register variation (Biber and Finegan, 1989a, 1997). Texts in the ARCHER corpus are sampled systematically over the last three and a half centuries to represent as wide a range of register variation as possible. Among the written registers, the corpus includes personal styles of

communication (journals/diaries and personal letters), prose fiction, popular exposition represented by news reportage, and specialist expository registers, represented by legal opinions, medical prose, and scientific prose. The corpus similarly includes several different kinds of speech-based registers: dialogue in drama and dialogue in fiction as reflections of casual face-to-face conversation, and sermons as a reflection of planned monologue styles. The present chapter focuses mostly on historical change in fiction and scientific research articles (Sections 8.2 and 8.3), but we also include descriptions of medical research articles, newspaper reportage, drama, and personal letters (in Section 8.4), and even historical change in advertisements (in Activity 13).

8.2 Historical Change in the Fictional Novel

In other courses you might have studied English literature from earlier historical periods, such as plays by Shakespeare or novels by Defoe. From a genre perspective, these varieties are defined by many of the same textual conventions as their modern-day equivalents. However, from a register and style perspective, these texts have undergone extensive change in their typical linguistic features over the centuries. In the present section, we describe some of the major linguistic changes that have occurred in novels over the past three centuries, and then discuss the larger situational context that accounts for those changes.

8.2.1 A Genre Perspective on The Historical Novel

For the most part, novels from the last three centuries are all recognizable as belonging to the same general genre, with the same major textual conventions and components. As noted in Chapter 1, for literary genres the notion of *textual convention* is somewhat different than what we have discussed in previous chapters for non-literary genres. That is, there are generally no formulaic beginnings or closings in literary genres, but there are expected conventions for constructing a text in a particular genre. For example, the expected textual conventions for novels includes the existence of protagonists and antagonists, some kind of story conflict, a climax, a resolution of the conflict, and discourse that shifts across several major communicative goals (e.g., narration, dialogue, descriptions of the inner thoughts of the main characters, background descriptions).

The following passages (Text Sample 8.1) from *Amelia*, written by Henry Fielding in 1751, illustrate several of these textual components. The passage begins with a sequence of narrative events (A) involving Booth, one of the main characters. This narrative then transitions into an extended dialogue (B) between Booth and a bailiff. A little later in the chapter, there is a paragraph devoted to Booth's frame of mind and his inner thoughts (C), while the following paragraph includes a description (D) of the apartment where Booth was waiting. Although written over 250 years ago, these passages are readily recognizable as taken from a novel, employing the same major textual conventions as modern-day novels.

Text Sample 8.1 Henry Fielding, *Amelia* (Chapter 1 of Book 8), 1751

[A]

When Amelia went out in the morning, she left her children to the care of her husband. In this amiable office he had been engaged near an hour; and was at that very time lying along on the floor, and his little things crawling and playing about him, when a most violent knock was heard at the door; and immediately a footman running up stairs, acquainted him, that his lady was taken violently ill, and carried into Mrs. Chenevix's toy-shop.

Booth no sooner heard this account, which was delivered with great appearance of haste and earnestness, than he leapt suddenly from the floor; and leaving his children roaring at the news of their mother's illness, in strict charge with his maid, he ran as fast as his legs could carry him to the place; or towards the place rather: for, before he arrived at the shop, a gentleman stopt him full butt, crying,

[B]

"captain, whither so fast?" – Booth answered eagerly, "whoever you are, friend, don't ask me any questions now." – "You must pardon me, captain," answered the gentleman; "but I have a little business with your honour – In short, captain, I have a small warrant here in my pocket against your honour, at the suit of one Dr. Harrison." "You are a bailiff then," says Booth. "I am an officer, sir," answered the other. – "Well, sir, it is in vain to contend," cries Booth; "but let me beg you will permit me only to step to Mrs. Chenevix's – I will attend you, upon my honour, wherever you please; but my wife lies violently ill there." [. . .]

[C]

Notwithstanding the pleasantry which Booth endeavoured to preserve, he in reality envied every labourer whom he saw pass by him in his way. The charms of liberty against his will rushed on his mind; and he could not avoid suggesting to himself, how much more happy was the poorest wretch who without control could repair to his homely habitation, and to his family; compared to him, who was thus violently, and yet lawfully torn away from the company of his wife and children. And their condition, especially that of his Amelia, gave his heart many a severe and bitter pang.

[D]

At length he arrived at the bailiff's mansion, and was ushered into a room; in which were several persons. Booth desired to be alone, upon which the bailiff waited on him up stairs, into an apartment, the windows of which were well fortified with iron bars; but the walls had not the least outwork raised before them; they were, indeed, what is generally called naked, the bricks having been only covered with a thin plaister, which in many places was mouldered away. [. . .]

There is one textual convention used in many eighteenth-century novels that is notably different from modern novels: the author's relation to the reader. In most modern-day novels, the author is hidden. As described in Chapter 5, many modern-day novels are written as a first-person account by one of the main

characters. Other modern novels are written from the point of view of an omniscient third-person narrator, but there is no hint of who that person is. However, many eighteenth-century novels differ from both of these modern conventions: they are written from the perspective of a third-person narrator, but the author explicitly identifies him/herself as the narrator. As a result the author directly refers to "the reader" and to him/herself (often as *we*). Fielding is typical in this regard. Thus, a little later in the same chapter of *Amelia*, we find the following passage:

Text Sample 8.1 (continued): *Amelia*

The serjeant, however, as the reader hath seen, brought himself the first account of the arrest. Indeed, the other messenger did not arrive till a full hour afterwards. [. . .]

Here the reader may be apt to conclude, that the bailiff, instead of being a friend, was really an enemy to poor Booth; but in fact, he was not so. His desire was no more than to accumulate bail bonds: for the bailiff was reckoned an honest and good sort of man in his way, and had no more malice against the bodies in his custody, than a butcher hath to those in his; and as the latter when he takes his knife in hand, hath no idea but of the joints into which he is to cut the carcase; so the former when he handles his writ, hath no other design but to cut out the body into as many bail bonds as possible. As to the life of the animal, or the liberty of the man, they are thoughts which never obtrude themselves on either.

CHAPTER 2. Containing an account of Mr. Booth's fellow sufferers.

BEFORE we return to Amelia, we must detain our reader a little longer with Mr. Booth, in the custody of Mr. Bondum the bailiff, who now informed his prisoner, that he was welcome to the liberty of the house with the other gentlemen. [. . .]

When they were directly addressing the reader, authors in the eighteenth and nineteenth century also felt free to provide overt social commentary. In the present passage, Fielding discusses how butchers and bailiffs are similar in that they are both just doing their job, with no regard for the harm they might be causing to others. In modern-day novels, authors almost never directly address the reader, and any social commentary is expressed through the words and action of characters rather than as an overt statement outside of the narrative.

In sum, novels in English have continued to employ many of the same textual conventions over the past three centuries. Of course, in other respects, some modern novels have evolved to employ literary devices and styles not found in earlier novels (such as the present tense narration of events as they are occurring, or the blurring of the distinction between speech and thought). For the most part, though, even the earliest novels are recognizable as belonging to the same general genre as modern-day novels.

8.2.2 Style Characteristics of Particular Eighteenth- and Twentieth-Century Novels

From a style perspective, eighteenth-century novels are also similar to modern novels in many of their typical lexical and grammatical characteristics. It is somewhat difficult to specify what a "typical" modern novel is, because there is considerable experimentation with a wide range of linguistic styles. But the following excerpts illustrate a range of these styles, with passages from three well-known contemporary authors: Kurt Vonnegut, Toni Morrison, and Robert Ludlum. Vonnegut employs a very colloquial style, with the story narrated in the first-person, almost as if the narrator is telling us the story in person. In contrast, Morrison employs an omniscient third-person narrator who is privy to the innermost thoughts of the main characters. Ludlum also uses third-person narration, but with a story line that is much more focused on action than character development.

Text Sample 8.2 Kurt Vonnegut, *Slaughterhouse-Five*, 1969

I have this disease late at night sometimes, involving alcohol and the telephone. I get drunk, and I drive my wife away with a breath like mustard gas and roses. And then, speaking gravely and elegantly into the telephone, I ask the telephone operators to connect me with this friend or that one, from whom I have not heard in years. [. . .]

And I let the dog out, or I let him in, and we talk some. I let him know I like him, and he lets me know he likes me. He doesn't mind the smell of mustard gas and roses.

"You're all right, Sandy," I'll say to the dog. "You know that, Sandy? You're O.K."

Sometimes I'll turn on the radio and listen to a talk program from Boston or New York. I can't stand recorded music if I've been drinking a good deal.

Sooner or later I go to bed, and my wife asks me what time it is. She always had to know the time. Sometimes I don't know, and I say, "Search me."

I think about my education sometimes. I went to the University of Chicago for a while after the Second World War. I was a student in the Department of Anthropology. At that time, they were teaching that there was absolutely no difference between anybody. They may be teaching that still.

Another thing they taught was that nobody was ridiculous or bad or disgusting. Shortly before my father died, he said to me, "You know – you never wrote a story with a villain in it."

I told him that was one of the things I learned in college after the war.

While I was studying to be an anthropologist, I was also working as a police reporter for the famous Chicago City News Bureau for twenty-eight dollars a week. One time they switched me from the night shift to the day shift, so I worked sixteen hours straight. We were supported by all the newspapers in town, and the AP and the UP and all that. And we would cover the courts and the police stations and the Fire Department and the Coast Guard out on Lake Michigan and all that.

Text Sample 8.3 Toni Morrison, *Beloved*, 1988

"We could move," she suggested once to her mother-in-law.

"What'd be the point?" asked Baby Suggs. "Not a house in the country ain't packed to its rafters with some dead Negro's grief. We lucky this ghost is a baby. My husband's spirit was to come back in here? or yours? Don't talk to me. You lucky. You got three left.

"Three pulling at your skirts and just one raising hell from the other side. Be thankful, why don't you? I had eight. Every one of them gone away from me. Four taken, four chased, and all, I expect, worrying somebody's house into evil." Baby Suggs rubbed her eye-brows. "My first-born. All I can remember of her is how she loved the burned bottom of bread. Can you beat that? Eight children and that's all I remember."

"That's all you let yourself remember," Sethe had told her, but she was down to one herself – one alive, that is – the boys chased off by the dead one, and her memory of Buglar was fading fast. Howard at least had a head shape nobody could forget. As for the rest, she worked hard to remember as close to nothing as was safe. Unfortunately her brain was devious. She might be hurrying across a field, running practically, to get to the pump quickly and rinse the chamomile sap from her legs. Nothing else would be in her mind. The picture of the men coming to nurse her was as lifeless as the nerves in her back where the skin buckled like a washboard. Nor was there the faintest scent of ink or the cherry gum and oak bark from which it was made. Nothing. Just the breeze cooling her face as she rushed toward water. And then sopping the chamomile away with pump water and rags, her mind fixed on getting every last bit of sap off – on her carelessness in taking a shortcut across the field just to save a half mile, and not noticing how high the weeds had grown until the itching was all the way to her knees. Then something. The plash of water, the sight of her shoes and stockings awry on the path where she had flung them; or Here Boy lapping in the puddle near her feet, and suddenly there was Sweet Home rolling, rolling, rolling out before her eyes, and although there was not a leaf on that farm that did not make her want to scream, it rolled itself out before her in shameless beauty. It never looked as terrible as it was and it made her wonder if hell was a pretty place too. Fire and brimstone all right, but hidden in lacy groves. Boys hanging from the most beautiful sycamores in the world. It shamed her – remembering the wonderful soughing trees rather than the boys. Try as she might to make it otherwise, the sycamores beat out the children every time and she could not forgive her memory for that.

Text Sample 8.4 Robert Ludlum, *The Icarus Agenda*, 1989

Kendrick felt a third presence but, turning in the chair, saw no one else on the deck of the pleasure yacht. Then he raised his eyes to the aft railing of the bridge. A figure stepped back into the shadows but not quickly enough. It was the excessively tall, deeply tanned contributor from Bollinger's library, and from what could be seen of his face, it was contorted in hatred.

"Are all of the Vice President's guests on board?" he asked, seeing that the Mafioso had followed his gaze.

"What guests?"
"You're cute, Luigi."
"There's a captain and one crew. I've never seen either of them before."
"Where are we going?"
"On a cruise."
The boat slowed down as the beam of a powerful searchlight shot out from the bridge. The Mafia soldier unstrapped himself and got up; he walked across the deck and down into the lower cabin. Evan could hear him on an intercom, but with the wind and the slapping waves was unable to make out the words. Moments later the man returned; in his hand was a gun, a standard issue Colt .45 automatic.

Linguistically, there are some interesting differences among these three twentieth-century authors. Vonnegut blurs the line between narration and speech, using oral linguistic features in the narrative story. For example, the passage above (Text Sample 8.2) uses several features that are typical of conversation:

- the copular verb *get*:

  I get drunk

- simple clauses connected by coordinators:

  And I let the dog out, or I let him in, and we talk some.

- sentence-initial *and*:

  And then, speaking gravely; And I let the dog out

- "coordination tags":

  And we would cover the courts and the police stations and the Fire Department and the Coast Guard out on Lake Michigan and all that.

Morrison, in contrast, employs a wide range of sentence styles within a single passage of prose. Her dialogue is colloquial and portrays many of the characteristics of African American Vernacular English; for example:

- *ain't*:

  Not a house in the country ain't packed to its rafters with some dead Negro's grief.

- omission of the copula *be*:

  We [0] lucky this ghost is a baby. [. . .] You [0] lucky.

Morrison's narrative prose sections often describe a thought process rather than a sequence of actions. These passages employ many short, single-clause sentences, often with little or no modification of any kind; for example:

> Unfortunately her brain was devious. [. . .] Nothing else would be in her mind.

In fact, many sentences in the Morrison novel are phrases without a main verb:

> Just the breeze cooling her face as she rushed toward water.

Some of these sentences consist of just one or two words (e.g., *Nothing. Then something.*). But these sentences are sometimes in immediate proximity to long, complex sentences with multiple clauses; for example:

> Then something. The plash of water, the sight of her shoes and stockings awry on the path where she had flung them; or Here Boy lapping in the puddle near her feet, and suddenly there was Sweet Home rolling, rolling, rolling out before her eyes, and although there was not a leaf on that farm that did not make her want to scream, it rolled itself out before her in shameless beauty.

Finally, the narrative sections in the Ludlum novel often consist of short clauses with activity verbs; for example:

> he raised his eyes . . .; A figure stepped back . . .; The boat slowed down . . .; The Mafia soldier unstrapped himself and got up; he walked across the deck

However, novels from all historical periods generally share the same primary communicative purpose of narrating a story, and as a result, most novels have frequent "narrative" linguistic features, including: past-tense verbs, third-person pronouns, proper nouns, adverbials of time and place, reporting verbs (e.g., *say, tell, ask, suggest, answer*), and direct and indirect reported speech. These features are found in modern novels as well as eighteenth-century novels. Thus, compare the following two passages from *Amelia* and *The Icarus Agenda*, with the linguistic features used for narration underlined:

Text Sample 8.5 Comparison of Eighteenth-Century and Twentieth-Century Passages

["Narrative" linguistic features are underlined.]

Amelia

When Amelia went out in the morning, she left her children to the care of her husband. In this amiable office he had been engaged near an hour; and was at that very time lying along on the floor, and his little things crawling and playing about him, when a most violent knock was heard at the door; [. . .]

for, before he arrived at the shop, a gentleman stopt him full butt, crying, "captain, whither so fast?" – Booth answered eagerly, "whoever you are, friend, don't ask me any questions now." – "You must pardon me, captain," answered the gentleman.

The Icarus Agenda

Kendrick felt a third presence but, turning in the chair, saw no one else on the deck of the pleasure yacht. Then he raised his eyes to the aft railing of the bridge. A figure

stepped back into the shadows but not quickly enough. It was the excessively tall, deeply tanned contributor from Bollinger's library, and from what could be seen of his face, it was contorted in hatred.

"Are all of the Vice President's guests on board?" he asked, seeing that the Mafioso had followed his gaze.

Thus, despite their stylistic differences, these texts are realizations of the general fictional register, having the same general narrative purposes, and many of the same linguistic features used commonly in association with those purposes.

8.2.3 General Stylistic Differences between Eighteenth-Century and Modern Novels

The preceding chapters have made a distinction between *register* and *style*: register features are pervasive linguistic features that are functional; that is, they are frequent because they conform to the situational context and communicative purposes of the texts in the register. Style features are similarly pervasive linguistic features, but they are not directly functional. Rather, they reflect attitudes about language, and aesthetic or artistic preferences. Thus, texts from the same register, sharing the same situational context and the same communicative purposes, can differ in their linguistic *styles*.

Fictional novels provide one of the clearest illustrations of the difference between *register* and *style*. From a register perspective, most novels employ "narrative" linguistic features (e.g., past-tense verbs, perfect aspect, third-person pronouns, time adverbials) which have a direct functional association with the communicative purpose of telling a story of events which have occurred in the past. At the same time, there is considerable stylistic variation among novels, as described in Chapter 5 and in Section 8.2.2, with different authors preferring particular linguistic features for aesthetic or attitudinal reasons.

It is also possible to compare the typical linguistic style of different historical periods. That is, certain linguistic features have been preferred in different historical periods, not because the communicative purposes of the register were different, but because those features conformed to the prevailing attitudes about "good" style.

The most obvious difference between eighteenth-century and twentieth-century novels has to do with spelling and word choice. This difference actually results from linguistic changes to the English language rather than a change in preferred style. For example, the Fielding passage (Text Sample 8.1) illustrates several forms that are no longer used, such as *stopt* rather than "stopped"; *a footman acquainted him that* . . . rather than "told" or "informed" him; and the question *whither so fast?* rather than "where are you going so fast?"

Table 8.1 *Comparison of Sentence Lengths in Narrative from Four Text Samples*

Novel	Average length	Longest sentence	Shortest sentence
18th century; Fielding	42	95	12
20th century; Vonnegut	15	25	6
20th century; Morrison	20	70	1
20th century; Ludlum	18	25	11

However, there are also some more pervasive differences in the typical linguistic characteristics of novels from these two historical periods. These do not reflect a change to the linguistic system, but rather a change in the way that authors exploit the resources offered by the linguistic system. Perhaps the most important change has been in the syntactic complexity typical of eighteenth-century versus modern novels. Sentence length is one measure of this difference; Table 8.1 compares the sentence lengths from the narrative portions of Text Samples 8.1–8.4.

The eighteenth-century novel by Fielding uses much longer sentences than is typical in modern novels. Fielding's longest sentence is ninety-five words, but this is by no means atypical: five other sentences in Text Sample 8.1 are longer than sixty words. Vonnegut represents the opposite extreme, with an average sentence length of only fifteen words. This pattern reflects his colloquial style of narration, almost as if the narrator were telling an oral story. But the other two twentieth-century novels similarly use much shorter sentences than Fielding. Ludlum's average sentence length is eighteen, with relatively little variation in length. Morrison has a dramatically different style, with one sentence seventy words long, and other sentences only one or two words long. In fact, Morrison likes to alternate sentences with widely varying lengths. For example, the long prose paragraph in Text Sample 8.3 is composed of sentences with the following lengths:

33–10–16–5–23–7–25–20–1–11–57–2–70–20–10–12–25

Because of this variation, Morrison maintains an average sentence length roughly the same as Ludlum and Vonnegut, in contrast to the much longer average sentence length employed by Fielding.

This difference in sentence length is not an idiosyncratic trait of these particular authors; it rather reflects a difference in the typical linguistic styles of fiction in the eighteenth versus twentieth centuries. It is thus possible to track the gradual evolution from one extreme to the other over the intervening decades. For example, Table 8.2 presents the average sentence lengths for several novels from these periods. While there is some variation at any given historical period, there is also a very steady progression from the extremely long sentences of Defoe to the short sentences of Vonnegut and Bellow.

Table 8.2 *Comparison of Sentence Lengths in Narrative, across Historical Periods*

[based on samples of approximately 500 words of narrative prose from each novel]

Date	Author	Novel	Average sentence length
1720	Daniel Defoe	*The History of the Life and Adventures of Mr. Duncan Campbell*	144
1720	William Pitts	*The Jamaica Lady*	44
1736	Eliza Haywood	*Adventures of Eovaai*	74
1751	Henry Fielding	*Amelia*	42
1764	Horace Walpole	*The Castle of Otranto*	27
1778	Clara Reeve	*The Old English Baron*	40
1818	Jane Austen	*Persuasion*	28
1828	David Moir	*The Life of Mansie Wauch*	24
1850	Herman Melville	*White-Jacket*	27
1880	Edward Bellamy	*Dr. Heidenhoff's Process*	26
1897	Stephen Crane	*The Third Violet*	18
1923	P. G. Wodehouse	*The Inimitable Jeeves*	25
1969	Kurt Vonnegut	*Slaughterhouse-Five*	15
1970	Saul Bellow	*Mr. Sammler's Planet*	13
1977	P. D. James	*Death of an Expert Witness*	16
1988	Toni Morrison	*Beloved*	20
1989	Robert Ludlum	*The Icarus Agenda*	18

To a large extent, this difference reflects changing punctuation practices – especially a much more extensive use of colons and semi-colons in earlier historical periods. For example, sentences like the following are common in the 1720 novel by Defoe:

Text Sample 8.6 Daniel Defoe, *The History of the Life and Adventures of Mr. Duncan Campbell*, 1720

One day, I remember, when he was about nine years of age, going early to the house where he and his mother lived, and it being before his mother was stirring, I went into little Duncan Campbell's room to divert myself with him, I found him sitting up in his bed with his eyes broad open, if it had not been for a lively beautiful colour which the little pretty fair silver-haired boy always had in his cheeks, as if he had been quite dead; he did not seem so much as to breathe; the eyelids of him were so fixed and immoveable, that the eyelashes did not so much as once shake, which the least motion imaginable must agitate; not to say that he was like a person in an ecstacy, he was at least in what we commonly call a brown study, to the highest degree, and for the largest space of time I ever knew.

In this passage, punctuation marks are used in a radically different way from modern practice. Semi-colons are commonly used where modern-day authors would likely use a sentence-end punctuation mark, and even simple commas are used to separate completely independent clauses that express different ideas (e.g., *I went into little Duncan Campbell's room to divert myself with him, I found him sitting up in his bed*); these would be treated as separate sentences in modern prose. The full stop (.) functions almost like a paragraph marker rather than a sentence marker in eighteenth-century novels. The Fielding passage in Text Sample 8.1 is similar to this passage from Defoe in its liberal use of semi-colons to construct very long sentences.

However, the syntactic complexity of eighteenth-century novels extends well beyond punctuation practices. One of the most important differences from modern novels involves the syntactic complexity of noun phrases. In eighteenth-century novels, noun phrases tend to have many modifiers, especially relative clauses. In this prose style, authors embed descriptive details in noun phrases as noun modifiers, rather than using separate clauses. For example, the following passage repeats paragraphs C and D from Fielding's novel *Amelia* (Text Sample 8.1), with all relative clauses underlined:

> Notwithstanding the pleasantry which Booth endeavoured to preserve, he in reality envied every labourer whom he saw pass by him in his way. The charms of liberty against his will rushed on his mind; and he could not avoid suggesting to himself, how much more happy was the poorest wretch who without control could repair to his homely habitation, and to his family; compared to him, who was thus violently, and yet lawfully torn away from the company of his wife and children. And their condition, especially that of his Amelia, gave his heart many a severe and bitter pang.
>
> At length he arrived at the bailiff's mansion, and was ushered into a room; in which were several persons. Booth desired to be alone, upon which the bailiff waited on him up stairs, into an apartment, the windows of which were well fortified with iron bars; but the walls had not the least outwork raised before them; they were, indeed, what is generally called naked, the bricks having been only covered with a thin plaister, which in many places was mouldered away.

In contrast, modern novels rely to a much greater extent on separate clauses, while noun phrases tend to be much less complex. For example, the Vonnegut passage (Text Sample 8.2) has only two noun phrases with relative clauses:

> I ask the telephone operators to connect me with this friend or that one, from whom I have not heard in years.
> I told him that was one of the things I learned in college after the war.

The Ludlum passage has no relative clauses and only one moderately complex noun phrase, which is modified by a following "appositive" noun phrase:

> in his hand was a gun, a standard issue Colt .45 automatic

Instead of complex noun modification, modern novels tend to employ simpler syntax with more verbs and simple clauses. Descriptive details are often given in adverbials rather than being embedded inside noun phrases. For example, the verbs are in **bold** and adverbials are underlined in the following sentences from the Ludlum passage:

> Kendrick **felt** a third presence but, **turning** in the chair, **saw** no one else on the deck of the pleasure yacht. Then he **raised** his eyes to the aft railing of the bridge. A figure **stepped** back into the shadows but not quickly enough. [. . .]
>
> The boat **slowed** down as the beam of a powerful searchlight **shot** out from the bridge. The Mafia soldier **unstrapped** himself and **got up**; he **walked** across the deck and down into the lower cabin. Evan could **hear** him on an intercom, but with the wind and the slapping waves **was** unable to **make out** the words. Moments later the man **returned**; in his hand **was** a gun.

There are other differences in the typical linguistic styles of eighteenth-century versus modern novels. For example, the activities at the end of the chapter allow you to explore linguistic differences in how dialogue is portrayed in these historical periods.

In sum, the present section has illustrated historical variation and change within the confines of a single genre and register. That is, the general textual conventions and communicative purposes of the novel have remained largely the same over the past three centuries, and so it is possible to regard these texts from the eighteenth century as belonging to the same general genre as their modern-day counterparts. From a register perspective, novels from all periods are similar in their frequent use of grammatical devices associated with narration, reported speech, and direct portrayals of dialogue (e.g., past-tense verbs, third-person pronouns, reporting clauses). However, there have also been notable changes in the typical linguistic styles of novels from these periods. The following section discusses the social context of these linguistic changes.

8.2.4 Social Contexts of Eighteenth-Century and Modern Novels

The preceding sections have shown how eighteenth-century and modern novels can be regarded as realizations of the same general genre and register, while at the same time there have been systematic changes in the typical linguistic styles of novels from these different periods. For example, eighteenth-century novels used an elaborated linguistic style, with long sentences and complex noun phrases, while twentieth-century novels have changed so that they typically rely on a simpler style with more verbs, short clauses, and adverbials.

In Chapter 5, we described how an individual author can choose a linguistic style to achieve a particular literary or artistic effect. In contrast, the linguistic differences here correspond to general patterns for the authors of a period collectively adopting a style. The generalization is stronger for eighteenth-

century authors, who as a group tended to use a more elaborated style than modern authors (who show more variability among themselves in their preferred styles).

One obvious question that we could ask at this point is whether these are simply stylistic differences, reflecting changes in aesthetic preferences, or whether these are to some extent register differences, reflecting changes in the extra-linguistic context? That is, are there social/situational differences between the periods that correspond to this shift in preferred literary style?

One major change that might have had an influence is the target audience. At the beginning of the eighteenth century, relatively few adults could read and write, mostly restricted to members of the upper class or aristocracy. But the eighteenth century was a time of dramatic social change, with literacy spreading to the middle class. Thus, by the end of the eighteenth century, over 50 percent of adults in England had basic literacy skills. With the rise of mass schooling in the nineteenth century, these literacy skills were extended to the majority of the population. Because of these demographic changes, novels came to be written for a much wider reading public in the nineteenth and twentieth centuries than in earlier periods.

However, a more important change has been the shift in attitudes about good style. These attitudes were already changing in the seventeenth century as a result of new methods for scientific inquiry (see Section 8.3). For example, Sprat wrote a *History of the Royal Society* in 1667, where he praised a "plain" prose style that presented information with "a primitive purity and shortness." In contrast, Sprat criticizes all "amplifications, digressions, and swellings of style," concluding that "eloquence ought to be banished out of all civil societies as a thing fatal to peace and good manners."

While these values came to be adopted by many scientific researchers in the late seventeenth and early eighteenth centuries, it took longer for literary authors to change their preferred styles. However, the late eighteenth century and early nineteenth century witnessed a wider philosophical interest in nature and a general preference for linguistic styles that were perceived to be "natural." This preference was acknowledged by many commentators. For example, in 1800, Wordsworth writes in his influential preface to *Lyrical Ballads* how he attempted to write with "a selection of language really used by men," which conveys feelings and ideas in "simple and unelaborated expressions," as opposed to the "arbitrary and capricious habits of expression" used by earlier authors. Similarly, Hazlitt writes in 1822 that "It is not pomp or pretension, but the adaptation of the expression to the idea that clenches a writer's meaning [. . .] I hate anything that occupies more space than it is worth."

The linguistic changes between eighteenth-century and twentieth-century novels reflect these changing attitudes about language. Thus, there is a fairly steady progression towards simpler, more colloquial styles in novels across these periods. In this case, these texts all belong to the same general genre and register – the novel – shown by similarities at a basic level in their textual conventions,

purposes, and associated linguistic features. But the typical linguistic styles of eighteenth-century novels and twentieth-century novels have changed, associated with differences in attitudes about good style in the two periods.

In the following section, we take up an even more extensive example of historical change: the scientific research article, which has changed in its basic communicative goals as well as typical linguistic styles.

8.3 Historical Change in the Scientific Research Article

Research writing in science is extensive: there are entire libraries filled with books and academic journals devoted to the sciences. However, the situation in the seventeenth and eighteenth centuries was quite different, when scientists had very few outlets where they could publish the results of their research. Probably the most influential scientific journal in English during these periods was the *Philosophical Transactions of the Royal Society of London* (*PTRS*). The Royal Society was founded in 1660 to promote "Physico-Mathematical Learning." From its outset, the Society focused on "Experimental Learning," following Francis Bacon in advocating the first-hand empirical study of nature, in opposition to earlier scholars who attempted to describe nature in more general, abstract terms by reference to Aristotelian philosophy.

To disseminate the results of these empirical studies, the Society began to publish the *PTRS* in 1665. As mentioned above, this publication was probably the most influential record of scientific research during the seventeenth and eighteenth centuries. But more importantly for our purposes here, the *PTRS* has a continuous history of publication from 1665 to the present, and has continued to be an influential journal throughout that entire period.

These texts have all been published as research articles in the same academic journal. However, the textual conventions of these articles have changed considerably over the centuries, raising the question of whether they should be regarded as realizations of the same genre or not. Similarly, from a register perspective, the frequent linguistic features used in these research articles have changed dramatically, associated with shifts in communicative purpose and the target audience. The following sections describe these historical patterns from both genre and register perspectives, based on analyses of research articles in the ARCHER corpus (see also Atkinson, 1992, 1996, 1999).

8.3.1 Historical Change in Research Articles: A Genre Perspective

In addition to discovering new scientific information, the Royal Society in its early years had a rhetorical agenda of advocating the superiority of empirical research over general philosophical discussions. As a result, early articles in the *PTRS* usually gave an account of a concrete scientific event or a description of specific scientific phenomena that were observed at first hand by

the researcher. Many articles are purely descriptive and pesonal, characterizing natural phenomena observed in nature by the author. For example:

Text Sample 8.7 J. Beal, . . . Upon Frosts in Some Parts of Scotland, 1675

But to return to our Vulgarities, which may chance to have the richest usefulness or pertinence to our inquiries. In the sharpest Frost, that I have known these many years, the ground having been also some daies cover'd with Snow, I saw a small stream (no bigger than might run from the mouth of an ordinary quart Bottle, as now we have them of green Glass,) sliding merrily, and smoaking all the way over the lawns: I could not discern, that any Snow had fallen within five or six foot on each side; if it did, none remained there, and so far the Grass at that time, about Christmas, was as green as any Leek, and the Frost (so far) apparently dissolved: Of this I then wrote to our Worthy friend Mr. Evelyn, not for any wonder, (for perhaps there are or may be thousands of such smoaking Streams in England,) but only representing, How such a Stream may warm a mansion, and cherish tender evergreens well sheltered from winds, and flowry Gardens, all the hard Winter, and do us better service in an extream hot Summer. I have been perplext in observing my self, an hundred times, the difference of Heat and Cold between two Villages, within a mile of each other, where we could discern no disparity of Hills or Rivers; only the Springs in the one were all shallower, in the other some were deeper. In a large Tract of Land the surface was of so hot a ferment, that at every step I trod up to my ankles. I caused it to be examined by the Spade, and found it, as far as I tried here and there, at a foot depth, as thick set with Pibble-stones as if a Causey had been pitcht there.

In other early studies, the researcher carried out a kind of scientific experiment, deliberately manipulating natural phenomena. In these cases, the article describes the procedures in detail, but still from the first-hand personal perspective of the author:

Text Sample 8.8 Cristiaan Hugyens and M. Papin, Some Experiments Made in the Air Pump upon Plants, 1675

I took one day a small Recipient shaped like that, described formerly, and instead of an Iron wire, I passed into the little hole a sprig of a known Plant, which was Baulme, so as that the Top of the plant was within the Recipient, and the Roots without. Then I closed the rest of the hole with cement, that so I might keep it void a good while: But because I was not willing, that it should embarass the Engin, 'twas necessary to find a means of taking it away when exhausted. For that purpose I used the following method, which is very sure and very commodious, and which hath served me for many other Experiments hereafter to be related.

The method was this: I caused the edges of the side Orifice of my Recipient to be well ground, so as that being applyed, it every where touches the glass-plate, which had also been very smoothly ground to serve for a cover to the same; and I spread a

piece of Lambskin wetted over the said plate, and having thus applyed it to the Engin, I put my Recipient over it: But in one place there was a Hail-shot of lead, which kept the Receiver from being exactly applied to its cover, that so the Air might more freely get out. And having afterwards whelmed another great Receiver over all, I caused the Pump to be plyed. All being well evacuated, I shook the Engin, so as that the little Receiver fell off from the Hail-shot, and stood every where close to the skin, expanded over the cover of the Glass-plate.

From a genre perspective, many of these articles adopted the textual conventions of a letter addressed to the publisher of the *PTRS*, beginning with the salutation (*Sir*) and ending with a formulaic closing (e.g., *Your humble Servant*). But these conventions had little influence on the main body of the text, which normally transitioned quickly into a personal description of scientific phenomena. For example, the passage in Text Sample 8.7 begins as a letter, shown in Text Sample 8.9:

Text Sample 8.9 J. Beal, . . . Upon Frosts in Some Parts of Scotland, 1675

Sir,

It may seem, by the curious Remarks sent to you from Scotland that we are yet to seek out the Causes and original Source, as well as the Principles and Nature, of Frosts. I wish, I were able to name all circumstances that may be causative of Frosts, Heats, Winds, and Tempests. I know by experience, that the scituation of the place is considerable for some of these; but after much diligence and troublesome researches, I cannot define the proximity or distance, not all the requisites, that ought to be concurrent for all the strange effects I have observ'd in them.

Similarly, the letter-article shown in Text Sample 8.10 begins with a salutation but immediately shifts to a discussion of a particular scientific issue:

Text Sample 8.10 Dr. Nettleton, Observations Concerning the Height of the Barometer, 1725

SIR,

Being curious to learn by Observation, how far the Mercury will descend in the Tube at any given Elevation, for which there is sufficient Opportunity hereabouts, I proposed to take the Altitude of some of our highest Hills; but, when we attempted it, we found our Observation so disturbed by Refractions, that we cou'd come to no Certainty. Having measur'd one Hill of considerable height, in a clear Day, and

observed the Mercury at the Bottom and at the Top, we found, according to that Estimation, that about 90 Feet, or upwards, were required to make the Mercury fall one Tenth of an Inch; [. . .]

These letter-articles are virtually identical in subject matter and linguistic style to other early articles in the PTRS, except that they begin with a salutation and they end with a formulaic closing.

Scientific articles followed these same textual conventions throughout most of the eighteenth century, but by the early nineteenth century, there was more variability in the accepted conventions. Several PTRS articles in the early nineteenth century continued to use the conventions of a letter to the editor, as in Sample 8.11:

Text Sample 8.11 Samuel Hunter Christie, On the Magnetism Developed in Copper, 1825

Dear Sir,

[A] As you inform me that you are drawing up an account of your magnetical experiments, I send you a brief account of those which I have made: they may possibly bear upon some of the points which you have had under consideration; and in this case you will not be displeased at being able to compare independent results.

[B] After having made experiments with a thin copper disk suspended over a horse-shoe magnet, similar to those I witnessed at Mr. BABBAGE'S, I made the following.

[C] A disk of drawing paper was suspended by the finest brass wire (no. 37) over the horse-shoe magnet, with a paper screen between. A rapid rotation of the magnet (20 or 30 times per second) caused no rotation in the paper, but it occasionally dipped on the sides, as if attracted by the screen, which might be the effect of electricity excited in the screen by the friction of the air beneath it.

A disk of glass was similarly suspended over the magnet: no effect produced by the rotation.

A disk of mica was similarly suspended: no effect.

The horse-shoe magnet was replaced by two bar magnets, each 7.5 inches long, and weighing 3 oz. 16 dwt. each, placed horizontally parallel to each other, and having their poles of the same name contiguous. These produced quick rotation in a heavy disk of copper 6 inches in diameter, and suspended by a wire, No. 20.

In this article, the author actually begins with a paragraph (A) written directly to the editor, addressing the editor directly as *you*. This is followed by a short paragraph (B) written in the first person, attributing the research reported in the

following paragraphs of the article to the author (i.e., *I made the following*). However, beginning with paragraph (C), there is a dramatic transformation of style, with absolutely no references to the author. Instead, the focus has shifted to the objects being studied and the events that occurred. Linguistically, this shift is realized in two ways:

1. by the use of agentless passive clauses rather than active clauses; for example:

   A disk of drawing paper was suspended
   A disk of glass was similarly suspended
   The horse-shoe magnet was replaced

2. by the use of active voice clauses with inanimate rather than human subjects; for example:

   A rapid rotation . . . caused no rotation
   it [i.e., the "paper"] occasionally dipped on the sides
   These [i.e., the "two bar magnets"] produced quick rotation

Other articles from the early nineteenth century do not adopt the textual conventions of a letter, but they follow the same rhetorical progression of beginning as a first-person narrative, and then shifting into an impersonal presentation of procedures and findings (as in Sample 8.12). The same two linguistic devices (agentless passives and inanimate subjects) are used for the impersonal presentation of information in these articles. Thus, in Sample 8.12, notice the abrupt shift between the first-person account in paragraphs (A) and (B) – *I shall be able to prove* – to the inanimate subject of the first sentence in paragraph (C) – *This enquiry has* . . .. Then, in paragraph (D), there is a further shift to passive voice: *The ova . . . which have been selected . . . are found* . . .. In this paragraph, the author also uses impersonal *we* to refer to anyone who performs these procedures.

Text Sample 8.12 Everard Home, Observation on the Changes the Ovum of the Frog Undergoes during the Formation of the Tadpole, 1852

[A] In the year 1822, I laid before the Society a series of observations on the progress of the formation of the chick in the egg of the pullet, illustrated by drawings from the pencil of Mr. Bauer, showing that in the ova of hot-blooded animals the first parts formed are the brain and spinal marrow. I have now brought forward a similar series on the progress of organization in the ova of cold-blooded animals, illustrated in the same manner by microscopical drawings made by the same hand.

[B] By comparing together the first rudiments of organization in the ova of these very distinct classes of animals, I shall be able to prove that, in both, the same general principle is employed in the formation of the embryo.

[C] This enquiry has its interest considerably encreased, by the ova not being composed of similar parts.

[D] The ova of the frog, which have been selected for this investigation, are found to have no yelk. If we examine these ova in the ovaria in which they are formed, we find them to consist of small vesicles of a dark colour; when they enter the oviducts they enlarge in size, and acquire a gelatinous covering, which increases in quantity in their course along those tubes; but the ova can neither be said to have acquired their full size, nor to have received their proportion of jelly, till they arrive at a cavity close to the termination of each oviduct, formed by a very considerable enlargement of those tubes, corresponding, in many respects to the cloaca in which the pullet's egg is retained till the shell becomes hard.

By the late twentieth century, two additional rhetorical changes have occurred in scientific research articles. First, the majority of the articles published in *PTRS* are no longer experimental or descriptive. Rather, most recent articles published in *PTRS* have theoretical concerns. This change reflects the high status of the *PTRS* as a general science journal, dealing with research issues that have fundamental theoretical importance. These theoretical articles have completely different genre conventions, which are outside the scope of the present description.

The second change, though, concerns the genre conventions and linguistic register characteristics of those research articles which are empirical and experimental, which are now published in thousands of scientific research journals. These experimental articles are the direct descendants of the observational/experimental articles published in the *PTRS* from the seventeenth to the nineteenth centuries. From a genre perspective, modern experimental science articles follow rigid rhetorical conventions: an abstract, followed by the main body of the article with four major sections (Introduction–Methods–Results–Discussion/Conclusion), followed by a bibliography. Further, even the organization of these major sections has become highly conventualized, being organized as a sequence of rhetorical "moves." These textual conventions are described in detail in Chapters 5 and 6. The shift to these textual conventions occurred quite recently, being essentially a twentieth-century development. As a result, experimental research articles can now be regarded as one of the most highly conventualized genres in English.

8.3.2 Historical Change in Research Articles: A Register Perspective

From a register perspective, there have also been major linguistic changes to the typical linguistic styles used in experimental science articles. Extending the trend begun in the nineteenth century, there are almost no first-person references in modern articles; rather, agentless passives and inanimate subjects are common. However, these two linguistic strategies have become more specialized: inanimate subjects are commonly used in the introduction and discussion sections of research articles, while agentless passives are used extensively in methods sections.

Introductions use relatively few passive-voice clauses but extensive active-voice clauses that have inanimate subjects; for example:

Text Sample 8.13 Genetic Identification of Spotted Owls . . ., *Conservation Biology*, 2004

Introduction.

Hybridization between species can severely affect a species status and recovery (Rhymer & Simberloff 1996). Threatened species (and others) may be directly affected by hybridization and gene flow from invasive species, which can result in reduced fitness or lowered genetic variability (Gilbert et al. 1993, Gottelli et al. 1994, Wolf et al. 2001). In other cases, hybridization may provide increased polymorphisms that allow for rapid evolution to occur (Grant & Grant 1992; Rhymer et al. 1994). Species can also be influenced indirectly, because hybridization may affect the conservation status of threatened species and their legal protection (O'Brien & Mayr 1991a, 1991b; Jones et al. 1995; Allendorf et al. 2001; Schwartz et al. 2004; Haig & Allendorf 2005). The Northern Spotted Owl (strix occidentalis caurina) is a threatened subspecies associated with rapidly declining, late-successional forests in western North America (Gutierrez et al. 1995). Listing of this subspecies under the U.S. Endangered Species Act (ESA) attracted considerable controversy because of concern that listing would lead to restrictions on timber harvest.

Similar to the pattern of use in nineteenth-century articles, the subject noun phrases of active-voice clauses sometimes refer to the physical objects of the investigation (e.g., *The Northern Spotted Owl*). But it is more common in modern articles to use inanimate subject noun phrases that refer to an abstract concept, such as:

hybridization between species can severely affect a species status
hybridization may provide increased polymorphisms
listing of this subspecies . . . attracted considerable controversy
the legal status of hybrids under the ESA is ambiguous
the ability to identify hybrids is the first step
visual and vocal identification of hybrids can be difficult

In contrast, the use of passive voice is especially prevalent in Methods sections. The following excerpt is typical, with all procedures for the study being described in the passive voice:

Text Sample 8.14 Extreme Sensitivity of Biological Function to Temperature in Antarctic Marine Species, *Functional Ecology*, 2004

[Passive verbs are shown in **bold**.]

Methods.

Experimental animals **were collected** by scuba divers from 8 to 15 m depth in Hangar Cove, Rothera Point, Adelaide Island (67°34'20"S, 68°07'50"W). Specimens of L. elliptica and N. concinna **were held** for 24 h in aquaria at ambient temperature before

being used in experiments. Constant low - light levels **were maintained**, to mimic Antarctic summer conditions. In studies at ambient temperature animals **were used** immediately after the 24 h acclimation period. For elevated temperatures animals **were held** in jacketed water baths and temperatures **raised** at 0 1 C h 1, until required temperatures **were reached**. Video recordings **were made** to determine burrowing or turning rate and times to completion. Data **were collected** using a Panasonic Ag6124hb 24 h time - lapse video recorder, and subsequently **analysed** using a Jvcbrs610e video analysis machine. At each temperature for each species 18 – 26 animals **were evaluated**.

In Chapters 5 and 6, we identify many other register features that are typical of modern research articles. Most of these linguistic characteristics are recent innovations, representing a shift from the typical linguistic styles of earlier periods. For example, the dense use of citations, referring to previous publications on related topics, is a linguistic device that came into use only during the twentieth century.

The register of scientific research writing has also changed dramatically in the kinds of nouns that it uses, and even the overall density of nouns. Science articles from earlier periods were mostly personal narratives of one kind or another. As a result, these texts were composed of numerous clauses with a high density of verbs. Thus, Text Sample 8.15 repeats the article beginning from Text Sample 8.10 (from 1725), while Sample 8.16 repeats the procedural description from Text Sample 8.8 (from 1675). The density of verbs in these samples is shown by **bold underlining**.

Text Sample 8.15 Dr. Nettleton, 1725

[Verbs are in **bold underlining**]

Being curious to **learn** by Observation, how far the Mercury **will descend** in the Tube at any given Elevation, for which there **is** sufficient Opportunity hereabouts, I **proposed** to **take** the Altitude of some of our highest Hills; but, when we **attempted** it, we **found** our Observation so **disturbed** by Refractions, that we **cou'd come** to no Certainty. **Having measur'd** one Hill of considerable height, in a clear Day, and **observed** the Mercury at the Bottom and at the Top, we **found**, according to that Estimation, that about 90 Feet, or upwards, **were required** to **make** the Mercury **fall** one Tenth of an Inch; [. . .]

Text Sample 8.16 Cristiaan Hugyens and M. Papin, 1675

[Verbs are in **bold underlining**.]

The method **was** this: I **caused** the edges of the side Orifice of my Recipient to **be** well ground, so as that **being applyed**, it every where **touches** the glass-plate, which **had** also **been** very smoothly ground to **serve** for a cover to the same; and I **spread** a piece of Lambskin **wetted** over the said plate, and **having** thus **applyed** it to the Engin, I **put** my Recipient over it: But in one place there **was** a Hail-shot of lead, which **kept** the Receiver from **being** exactly **applied** to its cover, that so the Air **might** more freely

get out. And **having** afterwards **whelmed** another great Receiver over all, I **caused** the Pump to **be plyed**. All **being** well **evacuated**, I **shook** the Engin, so as that the little Receiver **fell** off from the Hail-shot, and **stood** every where close to the skin, **expanded** over the cover of the Glass-plate.

In contrast, modern research articles tend to use few verbs but numerous nouns and complex noun phrases. For example, Sample 8.13 (from 2004) contains the following clauses having few verbs but complex noun phrases:

> [**Hybridization** between **species**] can severely affect [a **species status** and **recovery**]
>
> [Threatened **species** (and others)] may be directly affected [by **hybridization** and **gene flow** from invasive **species**]
>
> [**Hybridization**] may affect [the **conservation status** of threatened **species** and their legal **protection**]
>
> [The **Northern Spotted Owl** (strix occidentalis caurina)] is [a threatened **subspecies** associated with rapidly declining, late-successional **forests** in western **North America**]

We can find similar examples in any modern experimental research article. The most striking examples of this linguistic pattern are clauses that have only the minimal verb *BE*, connecting extremely complex noun phrases or adjectival phrases; for example:

> [The **cranberry fruitworm**, Acrobasis vaccinii Riley,] is [a major **pest** of Vaccinium spp. in the eastern **U.S.A.**]
>
> [The overwhelming **cause** of **HIV-1 infection** in **infants**] is [the **transmission** of **infection** from the **mother** during the **course** of **pregnancy** (in utero), **labor** (intrapartum) or through **breast milk** (postpartum)].
>
> Therefore, [**host selection**] is [a critical **decision moment** in the **Lepidoptera**], as [**offspring survival** and **development**] are [dependent on the **recognition** of a suitable **host** by the **adult female**]

One noteworthy characteristic of these examples is the frequent occurrence of nouns modifying other nouns, like *conservation status, cranberry fruitworm, host selection, decision moment*, and *offspring survival*. While these noun–noun sequences were grammatical in earlier historical periods, they were generally rare. This important historical change is discussed further in Section 8.4.

8.3.3 Genre/Register Change, or Change to a New Genre/Register?

We have shown in the previous sections how the scientific research article has undergone substantial change over the past four centuries, both with

respect to its textual conventions as well as in the characteristic linguistic features associated with science writing as a register. This case study raises a basic question: how can researchers distinguish between change within a genre/register and change to *become* a different genre/register? This question is especially perplexing because such changes are gradual, with numerous intermediate stages, and considerable variation attested within any given historical period.

Unfortunately, there is not a definitive answer to this question. If we compare the two ends of this tradition – seventeenth-century and twentieth-century research articles – it would be easy to argue that there are at least two distinct genres and registers. The two have dramatically different textual conventions, different typical linguistic styles, and they differ in communicative purpose: earlier studies are personal narrative accounts of research, often written with the textual conventions of a personal letter, while recent articles focus on the research findings themselves and their theoretical relevance in relation to related research studies, written with a strict Introduction–Methods–Results–Discussion conventional format.

However, the opposite conclusion is also reasonable: that these texts have always been identified as "scientific research articles," over their entire 350-year history. From this perspective, science research articles have shifted in their specific purposes, and they have become much more narrowly defined in terms of textual conventions, but throughout they have maintained the basic communicative goal of conveying the results of scientific inquiry.

It is interesting that the historical evolution of research articles has followed a different linguistic progression from the pattern of change for fictional novels. That is, Section 8.2 showed how novels used elaborated and structurally complex sentence structures in earlier centuries, and how this linguistic style evolved steadily towards simpler, more colloquial linguistic styles in modern novels. In contrast, the present section has shown that research articles changed in more complicated ways: from prose styles that relied on clauses (including many dependent clauses) towards a greater use of complex noun-phrase structures in present-day articles. In the following section, we explore these historical changes in the patterns of register variation in more detail.

8.4 Historical Change in the Linguistic Patterns of Register Variation

At the end of Section 8.3, we noted how fictional novels and science research articles have evolved to become more sharply distinguished from one another over the past three centuries. Such changes show that the patterns of register variation are not static: individual registers can take quite different evolutionary paths, and, as a result, the relations among registers can be quite different today from what they were centuries ago.

In the present section, we present two linguistic case studies illustrating the ways in which the patterns of register variation can change historically. In the

first, we focus on complexity in the noun phrase, providing more details about the differences between fiction and medical research articles that we noted at the end of the last section. Then we consider historical change in the expression of "stance" – features which express the author's evaluation of certainty and other attitudes – comparing four written and speech-based registers.

8.4.1 Historical Register Change in the Complexity of Noun Phrases

Although readers might not notice it, the structure of noun phrases has been one of the most dramatic areas of historical change in English over the past three centuries. Noun phrases can be elaborated through both "premodifiers" (which come *before* the head noun) and "postmodifiers" (which come *after* the head noun). There are two major kinds of premodifier in English:

- attributive adjectives:

  a ***special*** *project*; *an* ***internal*** *memo*

- nouns as premodifiers:

  the ***bus*** *strike*; *the* ***police*** *report*

There are several structural types of post-nominal modifiers, but two of these are especially important:

- relative clauses:

  the penny-pinching circumstances ***that surrounded this international event***

- prepositional phrases:

  compensation ***for emotional damage***; *this list* ***of requirements***

As described in Sections 8.2 and 8.3, informational written registers have steadily evolved to use more complex noun phrases over the last three centuries. Fiction, on the other hand, evolved to use less elaborated clause structures over this same time period. However, apart from relative clause constructions, fiction has remained relatively unchanged in its use of relatively simple noun phrases. Figures 8.1–8.2 document these patterns of change for medical research articles and fiction.

Figure 8.1 plots the patterns of change from the eighteenth to the twentieth century for noun premodifiers. In the eighteenth century, these two registers were very similar in their patterns of premodification: attributive adjectives were relatively common in both registers, while noun–noun sequences were comparatively rare in both registers. By the twentieth century, though, large register differences have developed: the use of both attributive adjectives and noun–noun sequences increased dramatically in medical research articles over this period,

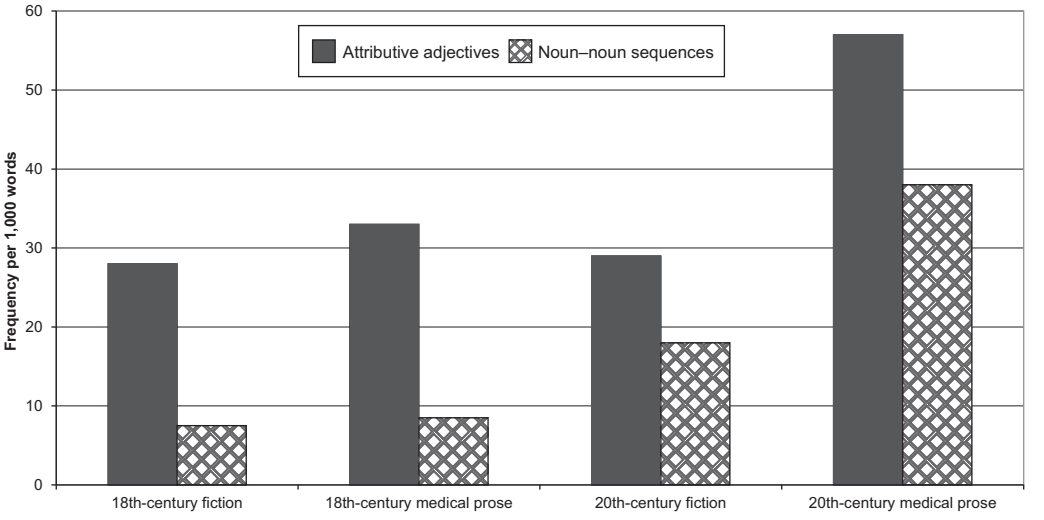

Figure 8.1 *Change in the use of noun premodifiers: fiction versus medical research articles*

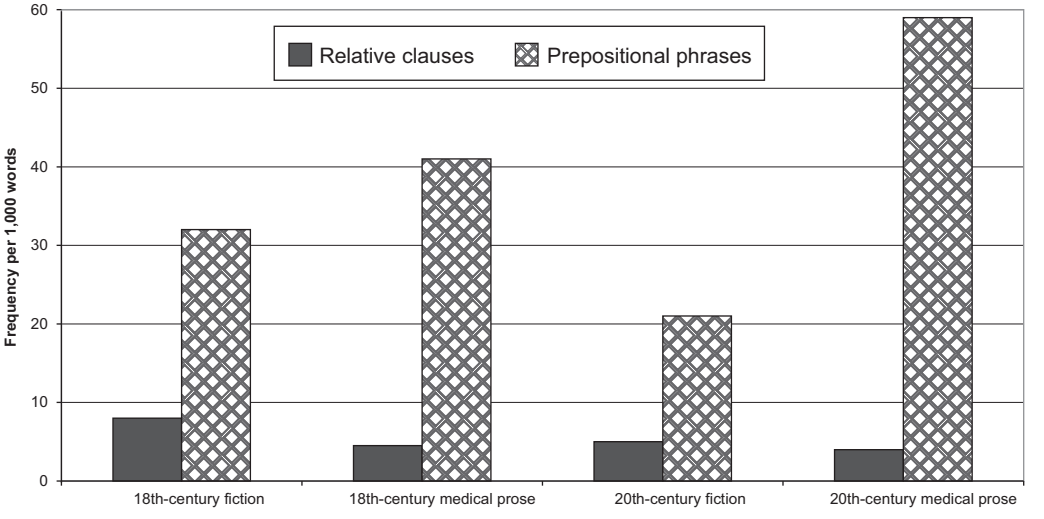

Figure 8.2 *Change in the use of noun postmodifiers: fiction versus medical research articles*

while fiction remained essentially the same (in the use of adjectives) or showed a modest increase (in the case of noun–noun sequences).

The historical patterns for postmodification, shown in Figure 8.2, are equally striking. Again, the two registers were similar in their linguistic patterns in the eighteenth century: relative clauses were somewhat more common in fiction than medical articles, but only moderately common overall; prepositional phrases were

considerably more common than relative clauses in both registers. In fiction, relative clauses decreased in use over the centuries, while the frequency of relative clauses remained essentially constant in medical articles. But extremely large register differences have developed in the use of prepositional phrases: a steadily decreasing use in fiction, but a large increase in use in medical research articles. Many of these prepositional phrases are *of*-phrases, especially in earlier historical periods. But the recent increase in research articles is mostly due to the use of other prepositional phrases (especially *in, with, for, to*), which are less commonly used in popular written registers. Text Sample 8.17 illustrates the dense use of these complex noun phrases in a recent research article:

Text Sample 8.17 Medical Research Article: N. Irvine et al., The Results of Coronary Arteriography . . ., *Scottish Medical Journal*, 1985

[Noun–noun sequences in are underlined; "of" is in ***bold italics***; other prepositions are in **BOLD CAPITALS**]

The case records ***of*** 50 consecutive male patients aged 40 years or under who were investigated by selective coronary arteriography **AFTER** myocardial infarction were reviewed. [. . .] The features ***of*** myocardial infarction **ON** the ECG were less marked in the group ***of*** patients **WITH** normal coronary arteriograms. [. . .]

Cigarette smoking was very common in the whole group, 86 per cent ***of*** patients being moderately heavy cigarette smokers. Five ***of*** the 14 patients **IN** the 'non-occlusive' group were non-smokers and only two ***of*** the 36 patients **IN** the 'occlusive' group were non-smokers (P <is less than> 0.01). The fasting serum cholesterol was significantly lower in the 'non-occlusive' group than in the 'occlusive' group. There was no significant difference **BETWEEN** the two groups regarding blood pressure, family history ***of*** ischaemic heart disease, obesity or alcohol consumption. There was, however, a high incidence ***of*** heavy alcohol consumption **AMONGST** patients who subsequently required coronary artery surgery.

[. . .]

The present study was carried out to investigate the pattern ***of*** coronary artery disease **IN** young men **IN** North East Scotland following myocardial infarction and to determine whether there is any relationship **BETWEEN** the clinical features ***of*** infarction, risk factors, post-infarction progress and the presence or absence ***of*** obstructive coronary artery disease.

You can contrast the noun phrases in Text Sample 8.17 with those in modern novels, such as Text Samples 8.2, 8.3, and 8.4 in Section 8.2. As described in the last section, one noteworthy characteristic of noun phrases in research writing is that they employ few verbs or clauses, even though they are extremely long and complex. The last noun phrase from Text Sample 8.17 – with the head noun *relationship* – is typical (frequent nouns are underlined and prepositions in ***bold italics***):

> any [relationship] ***between*** the clinical features ***of*** infarction, risk factors, post-infarction progress and the presence or absence ***of*** obstructive coronary artery disease

In sum, the present section has described a marked increase in the extent of register variation across time: fiction and medical research writing were relatively similar in their patterns of noun phrase modification during the eighteenth century, but they have evolved in opposite ways over the centuries. Thus, at present, there are large differences in the linguistic styles of noun phrase complexity in these two registers.

8.4.2 Historical Register Change in the Linguistic Expression of Stance

Modern registers in English differ considerably in their use of grammatical devices used to express "stance": epistemic or attitudinal comments on propositional information. We have discussed these characteristics in several previous chapters. For example, spoken registers (including conversation and classroom teaching) use frequent stance devices from multiple grammatical categories (e.g., modal verbs, semi-modals, hedges, emphatics). At the other extreme, academic writing uses comparatively few stance expressions. The present section traces historical change in the use of stance devices, to determine if speech-based and written registers have always been so sharply distinguished in the use of these features. The description is based on comparison of four registers, again taken from the ARCHER Corpus: drama, personal letters, newspaper reportage, and medical research articles.

Modal verbs (e.g., *can, may, must, should*) are a stance feature used widely across modern registers, expressing meanings related to possibility/permission/ability, logical necessity/obligation, and prediction/volition. In Chapter 4 (Figure 4.2), we discussed the use of modals in conversation, showing that they are considerably more common in conversation than in written registers like newspapers or academic prose. Figure 8.3 shows that interpersonal registers (drama and letters) were already sharply distinguished from informational written registers in the seventeenth and eighteenth centuries, with modals being common in the interpersonal registers but relatively rare in the informational registers. Text Sample 8.18 illustrates the dense use of modal verbs in a seventeenth-century letter:

Text Sample 8.18 Personal Letter from Valentine Greatrakes to Sir George Rawdon, 1665

[Modal verbs are in **bold underlining**.]

Sir

I WAS at your lodgings before I left Dublin, but missed the happiness of meeting you there, and my occasions not giving me leave to stay longer, made me depart so abruptly. I went home by the way of the Queen's Country, which caused me to stay so long that your letter was at my house before me, so that I **could** not answer it last post.

Sir, I thought fitting to send Dean Rust's letter unto you, which when you have perused, I **shall** desire you to return by the post to your servant, who resolves, by the first vessel, to sail for England: and therefore I **shall** desire you**'ll** take some speedy course for the payment of the œ155 which I desire **may** be paid to Sir Thomas Stanley, a Parliament man, now in Dublin, to my use (which I design for the purchasing of the thirds which by the bill I am to lose) and that on receipt he **would** signify so much to me by a line or two; but you need not let him know to what end you pay it, for it's my desire, according to Dean Rust's advice, that nothing in your affair **might** be known. I know it **will** seem strange to all that know me, that I who never received pension or gratuity from any man hitherto, **should** propose any thing of a reward to myself now:

[. . .]

I **must** desire you to let me know the name of my Lord Conway's house, and nigh what market town it lie, and what course I **must** take from Bristol thither. I **must** beg your pardon for my prolixity,

subscribing myself (Sir)
Your humble servant,
VA. GREATRACKS.

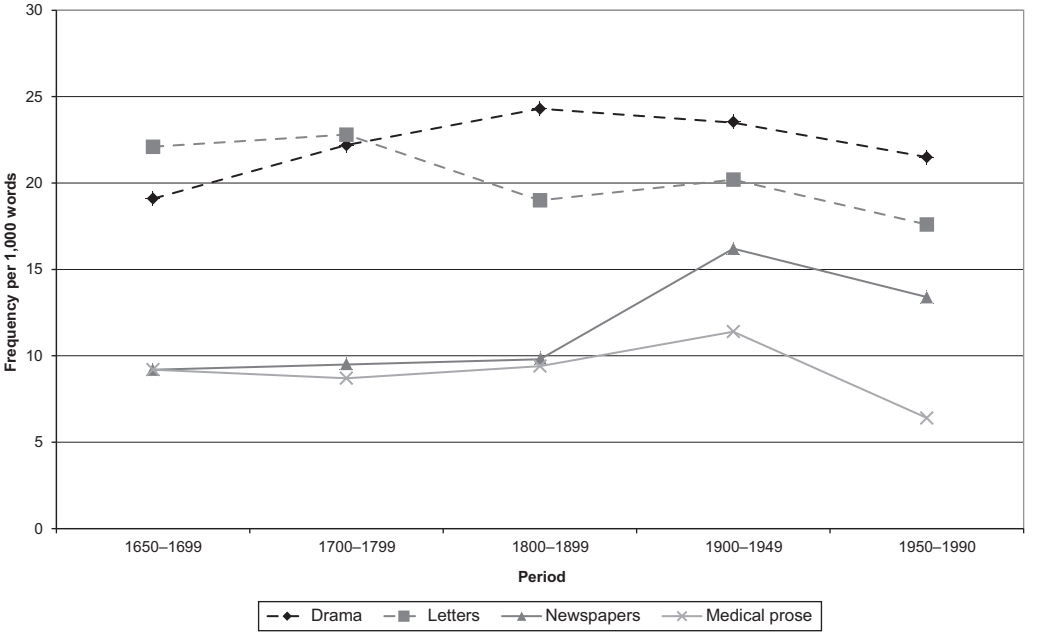

Figure 8.3 *Historical change in the use of modal verbs*

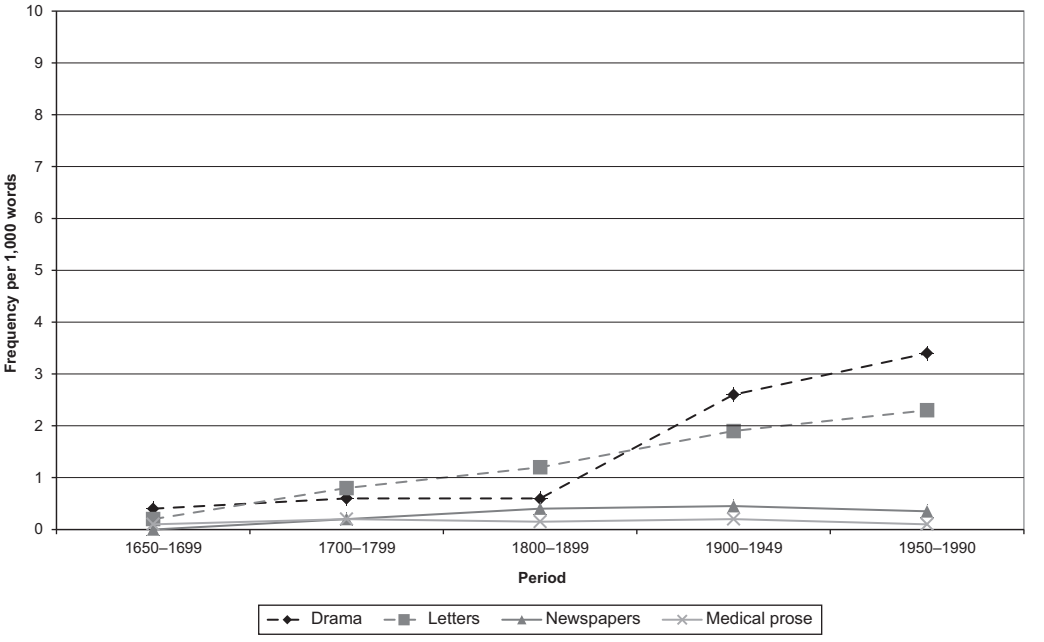

Figure 8.4 *Historical change in the use of semi-modal verbs*

There was a slight rise in the use of modal verbs in the early twentieth century, especially in newspaper reportage. But then modals decreased in all four of these registers in the period 1950–1990. Other studies have shown that this decrease is even more notable after 1990.

An obvious question is whether some other linguistic feature has increased in use to take the place of modals verbs. Semi-modal verbs (e.g., *have to, gotta, be going to*) are one likely possibility: semi-modals express many of the same meanings as core modal verbs, but they are especially common in the spoken interpersonal registers (see Chapter 4). Figure 8.4 shows that semi-modals have in fact increased in use over the past 100 years. However, this increase has been restricted primarily to drama and letters. Thus, the decline in modal use for newspapers and academic prose is not offset by a corresponding increase in semi-modal use in those registers.

Figures 8.3 and 8.4 show different historical register patterns for modals versus semi-modals: for the use of modal verbs, interpersonal registers were already sharply distinguished from informational registers in the seventeenth and eighteenth centuries. More recently, modals have declined in all registers, but less so in drama. In contrast, semi-modals were extremely rare in all registers in the seventeenth and eighteenth centuries. Over the past hundred years, semi-modals have increased in frequency, but only in the interpersonal registers; they are still rare in the informational written registers.

There are other grammatical devices used in English to express stance, and so it is possible that the informational written registers might be changing to use

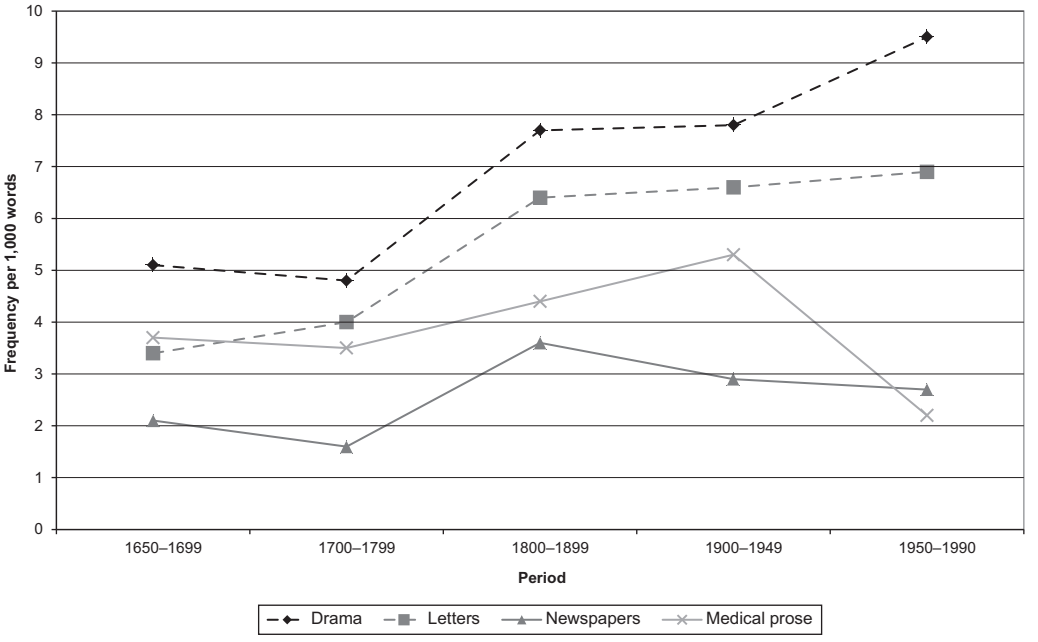

Figure 8.5 *Historical change in the use of stance adverbials*

some of these other devices more frequently. Stance adverbials are one of these other features, expressing meanings of certainty (e.g., *undoubtedly, obviously, certainly*), likelihood (e.g., *evidently, roughly*), or other attitudes (e.g., *surprisingly, hopefully*). As Figure 8.5 shows, stance adverbials have steadily increased in use across these periods. In the most recent period, this increase continued in drama and (to a lesser extent) personal letters. Following are some examples from 1950–1990 drama:

> You **never** can be **really** sure what's going on in their heads.
> So she **actually** talks of me as a drip, does she?
> No. **Matter of fact** . . . speaking as a professional politician . . . I **kind of** admire what he's doing.

> WOOD: It's a **sort of** code, is it?
> SIMON: **No doubt** it seems a rather squalid one, to you.
> [. . .]
> SIMON: I also realized that I couldn't **possibly** do her any harm.

In the nineteenth century, newspaper and medical prose participated in the increasing use of stance adverbials, in a similar way to drama and letters. However, Figure 8.5 shows that this increase was reversed in the twentieth century. Thus the present-day use of stance adverbials shows the same split as for other stance features, being common in the personal, colloquial registers

(drama and letters) but relatively rare in the informational written registers (news and medical prose).

In sum, the case study presented here has shown increasing patterns of register diversification in the use of stance features. Only modal verbs have undergone a general decrease in use, while semi-modals and stance adverbials have generally increased in use across the historical periods in this study. Thus overall, the findings suggest that stance meanings are being expressed more commonly, with the most notable increases occurring in the present century. These developments indicate a general shift in cultural norms: speakers and writers are more willing to express their personal attitudes and evaluations in recent periods than in earlier historical periods.

More importantly for our purposes here, the findings show increasing register diversification in the marking of stance. First, the popular registers included in this study – drama and personal letters – are clearly leading the way in the increased use of stance markers. News reportage uses these stance devices to a lesser extent, while medical prose actually shows a decrease in the use of these devices across time. Overall, the patterns of change are similar to those for noun modification, in that there are much greater differences among registers in the modern periods than there were during the eighteenth century. However, in this case the personal registers show increased use of these linguistic features, while research articles (and newspaper reportage) have declined in the use of stance features.

Chapter 8 Activities

Reflection and Review

1. Choose a textual variety that has had a continuous history in English for the past three centuries (e.g., drama, personal letters, newspaper reports). Does that textual variety represent the "same" register and genre in the seventeenth and twentieth centuries? Why or why not?

2. Choose one of the twentieth-century fiction excerpts in Activity Texts 18–21 and rewrite it in eighteenth-century style. Identify and justify the linguistic features that you changed.

3. The present chapter does not fully explain why personal registers have generally increased in use of stance features from the eighteenth to twentieth centuries, while research articles and newspaper reportage have decreased. There is no way to know for certain, but what possible explanations can you think of? What social conditions or factors may have had an impact?

4. All the case studies in this chapter deal with English-language registers from British/North American culture. Choose another culture/language that you know and outline the plan for a historical study of one or more registers. What is the focus of your study, and why? What texts or corpus will you need? What registers/genres are likely to be especially interesting? Do you have any expectations for the findings?

Analysis Practice

5. The language of drama is one of the best indications of what natural conversation might have been like in past historical periods. However, dramatic discourse is also influenced by the writer's ideals of what dialogue should be like, and by the needs to convey a narrative story through the dialogue of actors.

Table 8.3 compares findings from a small study of two excerpts from plays – one from 1819 (Activity Text 12) and the other from 1975 (Activity Text 13). If these data are typical, what historical changes have occurred in this register? Based on the descriptions in Chapter 4, to what extent do you think the language in these plays is representative of natural conversation? Write a short summary, referring to Activity Texts 12 and 13 for your interpretations and examples.

6. Expand the analysis that was started for Activity 5. Use the two drama samples (Activity Texts 12 and 13) to compare five to ten more features and expand your discussion of the changes (and consistencies) in the register. Remember to norm your counts.

7. Personal letters have the possibility of being extremely colloquial or extremely literate. They deal with the personal concerns and feelings of the author, and they are directly interactive (although in a less immediate way than conversation). But they are also written, and so they can be carefully planned, revised, and edited. The relative weighting of these factors is not necessarily constant across time periods (or even across authors). Consider two letters, Activity Texts 14 and 15 – one written by Lady Mary Wortley Montagu to her good friend Alexander Pope in 1716, and the other written by an anonymous woman to her best friend in 1989. Describe the characteristic linguistic features of each letter, and relate those to differences in the historical contexts of these texts.

8. Newspapers had a relatively small circulation in the early eighteenth century, but by the twentieth century, they were read by a large, popular audience. At the same time, mass communication resulted in there being more newsworthy topics to report every day, resulting in the need for space economy in modern newspapers.

Compare the two newspaper stories presented in Activity Texts 22 and 23, one from 1744 and the other from 1990. Pay attention to the use of both "oral" and "literate" linguistic features, including direct and indirect quotes, contractions, stance features,

Table 8.3 *Frequency of Selected Features in Two Plays from 1819 and 1975 (Normed per 100 Words)*

Linguistic feature	1819 sample *The Steward*	1975 sample *Otherwise Engaged*
questions (based on use of "?" to signal rising intonation)	0.8	4.1
contractions	1.3	6.8
modals	3.8	0.0
semi-modals	0.0	1.4
length of sentences (based on use of end punctuation)	15 words/sentence	7 words/sentence

verb tenses, and noun-phrase structures like relative clauses, noun–noun sequences, and appositive noun phrases.

Project Ideas

9. The general shift to more colloquial styles in fiction can be analyzed in greater detail, focusing on differences among sub-registers. For example, a casual reading of novels suggests the following development: authors in the eighteenth century used comparatively few contractions; authors in the nineteenth century used contractions in fictional dialogue but less often in narrative prose and description; authors in the twentieth century are more likely to use contractions in both dialogue, narration, and description (especially in first-person narratives). Another change is the shift to presenting unattributed dialogue in twentieth-century novels (e.g., speech that is not framed by a speech-act verb and is not overtly attributed to a speaker), while dialogue in earlier centuries is normally attributed to a character in the novel.

Choose five of your favorite novels from the eighteenth, nineteenth, and twentieth centuries, and identify dialogue, narrative, and descriptive passages from each novel. Then analyze those passages to evaluate the above generalizations and to identify additional ways in which each sub-register of fiction has changed historically.

10. Expand the analysis that was started for Activity 5, 6, or 7: collect additional texts representing the varieties from all historical periods, and analyze those texts to determine the extent to which these historical patterns are generalizable.

11. The register/genre of news reports has changed dramatically in the last twenty years. Until the end of the twentieth century, written news reports appeared almost exclusively in printed newspapers or magazines. Since that time, though, written news reports have become written and distributed in several other ways, including online articles distributed by mainstream news publishers, news blogs written by individuals, and news reports distributed on social media (from a variety of sources). Expand your analysis that was started for Activity 8 to incorporate the full range of written news reports that are currently accessible to readers. Is it possible to distinguish different registers or genres among the range of present-day news reports? If so, what are the situational and linguistic characteristics of those registers? Finally, attempt to document the historical evolution of one of these new registers.

12. Section 8.4.1 focused specifically on grammatical complexity, showing how medical research articles have changed historically: medical research articles from the nineteenth century employed frequent dependent clauses, while present-day medical research articles frequently use phrasal complexity features (e.g., premodifying nouns and prepositional phrases). Science research articles have similarly changed historically from a reliance on dependent clauses to a reliance on phrasal complexity features. Confirm this claim by conducting a quantitative analysis of complexity features in the pre-twentieth-century science texts in Chapter 8 (Text Samples 8.8–8.12), compared to present-day science research writing (Text Samples 5.10, 5.11, 6.5, 8.13, 8.14).

Then investigate whether similar historical changes have occurred in humanities academic prose. Begin with an analysis of complexity features in nineteenth-century versus present-day humanities prose, considering Activity Text 24 (from a historical biography published in 1851) versus Text Samples 5.12 and 6.4 (from contemporary history textbooks). To what extent has humanities academic prose shifted to reliance

on phrasal complexity features (similar to science academic prose)? To what extent does modern humanities academic prose employ dependent clause complexity features, similar to nineteenth-century texts?

Finally, evaluate whether these are generalizable historical developments by expanding your analysis to include other examples of nineteenth-century academic texts in the humanities (e.g., history or philosophy) versus contemporary academic texts from those same disciplines.

13. The register of magazine advertising has changed dramatically over the past few centuries. Collect eight to ten advertisements from your favorite magazine, and do a register analysis of their communicative purposes and typical linguistic features. Then compare and contrast those characteristics with the advertisements in Activity Text 25, from the April 11, 1772 edition of *The Censor*.