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Douglas Biber and Bethany Gray

Excerpt

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*Academic writing: Challenging the stereotypes***1.1 Academese: Obtuse or informational?**

Many speakers of English share the view that the language of academic writing is peculiar, not only different from everyday speech, but also different from most other registers of English. These perceived differences are not neutral. Rather, a common stereotype of academic prose is that it is deliberately complex, and more concerned with impressing readers than communicating ideas – all making it needlessly difficult to understand.

These attitudes are reflected in the label *academese*, which is usually defined with negative connotations. For example, the *Tameri Guide for Writers* (www.tameri.com) defines *academese* as ‘an artificial form of communication commonly used in institutes of higher education designed to make small, irrelevant ideas appear important and original. Proficiency in academese is achieved when you begin inventing your own words and no one can understand what you are writing.’

In fact, the suffix *-ese* seems to have taken on this broader meaning when attached to other roots. Thus, according to the on-line site www.wiktionary.org, *officialese* is ‘the typical language of [written] official documents, legalistic and pompous’; *legalese* is ‘wording that resembles how a lawyer writes, especially such that is confusing to the layperson’; and *bureaucratese* is ‘any language containing many non-essential words intended to imply more importance or intelligence than actually present’.

The primary focus of these negative attitudes is on the use of rare and obscure words and phrases. The perception is that these words are often chosen to impress readers rather than efficiently convey new information. The portrayal of academic prose in similar terms has been around for some time, as evidenced by Orwell’s famous critique in 1946:

The writer either has a meaning and cannot express it, or he inadvertently says something else, or he is almost indifferent as to whether

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his words mean anything or not. This mixture of vagueness and sheer incompetence is the most marked characteristic of modern English prose. . .

In certain kinds of writing, particularly in art criticism and literary criticism, it is normal to come across long passages which are almost completely lacking in meaning.

Orwell, George. 1946.
'Politics and the English Language'
Horizon, 13(76): 252–265

Here we see Orwell being especially critical of academic writing in the humanities (specifically art criticism and literary criticism). The enterprise of research in the humanities is focused on our everyday experience. Unlike scientists, humanities researchers are not discovering and documenting new natural phenomena and processes. Rather, their work is more interpretive, attempting to describe and understand the human experience. Like the author of *Ecclesiastes*, readers might believe that 'there is nothing new under the sun' when it comes to discussions of the human experience – and as a result, expect that there would be little need for new technical vocabulary and complex grammatical constructions to discuss these familiar ideas, relationships, and experiences. This seems to be Orwell's underlying complaint: humanities researchers mostly discuss phenomena that are already familiar to us all, but they do it in a style that is indecipherable to non-specialist readers.

These stereotypes about academese in humanities writing continue right up to the present. For example, Pinker (2014: para 4) discusses the question of 'Why academics stink at writing?', and notes that:

The most popular answer outside the academy is the cynical one: [...] Scholars in the softer fields spout obscure verbiage to hide the fact that they have nothing to say. They dress up the trivial and obvious with the trappings of scientific sophistication, hoping to bamboozle their audiences with highfalutin gobbledygook.

Texts that seem to illustrate this prose style are unfortunately not hard to find. For example, the journal *Philosophy and Literature* sponsored a 'Bad Writing Contest' from 1995–1998, which celebrated 'the most stylistically lamentable passages found in scholarly books and articles published in the last few years' (http://denisdutton.com/bad_writing.htm). The contest lampooned academese simply by quoting the academic prose of famous literary scholars. For example, the winner of the 1998 contest was Judith Butler, 'a Guggenheim Fellowship-winning professor of rhetoric and comparative literature at the University of California at Berkeley'. The first-prize sentence, singled out for its 'anxiety-inducing obscurity', reads as follows:

Text Sample 1.1
 Literary criticism article

The move from a structuralist account in which capital is understood to structure social relations in relatively homologous ways to a view of hegemony in which power relations are subject to repetition, convergence, and rearticulation brought the question of temporality into the thinking of structure, and marked a shift from a form of Althusserian theory that takes structural totalities as theoretical objects to one in which the insights into the contingent possibility of structure inaugurate a renewed conception of hegemony as bound up with the contingent sites and strategies of the rearticulation of power.

Judith Butler. 1997.
 'Further Reflections on the Conversations of Our Time'
Diacritics, 27(1): 13–15.

As noted earlier, the popular explanation for academese in humanities writing is that it represents a form of deliberate obscurity. Pinker (2014), however, proposes a slightly different explanation, based on the underlying goals of humanities versus science research writing. Pinker describes the primary goal of humanities writing as 'self-presentation' rather than the communication of information. This goal results in a 'self-conscious style', where the author's primary concern is 'to escape being convicted of philosophical naïveté about his own enterprise'. In contrast, science research writing is associated with a 'classic style' focused on the communication of information: 'The writer can see something that the reader has not yet noticed, and he orients the reader so she can see for herself. The purpose of writing is presentation, and its motive is disinterested truth. [. . .] The writer knows the truth before putting it into words; he is not using the occasion of writing to sort out what he thinks' (Pinker 2014: para 11).

The linguistic characteristics of the 'classic' style associated with science writing are dramatically different from the 'self-conscious' style of humanities writing. Science prose can be boring, relying on simple syntactic constructions, as in:

Text Sample 1.2
 Biology research article

The neurites are black on a yellow-brown background in the original preparation (see Figure 5). One neurite can be traced coursing through the basement membrane of the epidermis (arrow). The neurites appear to penetrate the cytoplasm of the epidermal cells (see also Fig. 11).

Bryce L. Munger. 1965.
 'The Intraepidermal Innervation of the Snout Skin of the Opossum'
Journal of Cell Biology, 26(1): 79–97.

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Although there are often technical terms in this style, those terms usually refer to physical entities rather than abstract concepts. The overall stylistic effect is to emphasize the direct communication of information (even if that information is still unclear to non-specialist readers because of the technical vocabulary).

Our goals in the present book are not to enter into the debate about ‘good’ and ‘bad’ academic writing, or the motivations for the ‘academese’ found in many academic texts. But we *are* interested in the linguistic characteristics of academic writing, including the differences between humanities writing and science writing. And we are especially interested in the ways in which academic writing has changed historically in its grammatical style.

Given the striking linguistic differences between present-day humanities writing versus science writing, readers probably will not be surprised to learn that academic writing styles have undergone major linguistic change over the past few centuries. In particular, it would be easy to assume that academic writing has become increasingly complex over time, and that humanities writing has been especially influenced by these changes, resulting in the grammatically-elaborated styles of academese illustrated in Text Sample 1.1. At the same time, it might be assumed that science prose has somehow resisted these historical changes, and thus retained the grammatically-simpler styles of earlier centuries.

It turns out that those expectations are wrong in nearly every way. In the following chapters, we show that:

- There are different types of grammatical complexity.
- Complexity in humanities writing is associated with structural elaboration.
- Humanities academic writing has changed little over the last few centuries in its structurally elaborated grammatical style.
- Complexity in science writing is associated with structural compression, not structural elaboration.
- Science writing has undergone extreme historical change related to the use of these structural compression features.

In the next section, we provide more detailed discussion of the grammatical features associated with academic writing, and the striking grammatical differences between humanities and science writing. This is followed by sections that set the stage for our analyses: previous research on grammatical change, and the discourse factors that influence change. In contrast to most previous research – which focuses on spoken interaction as the breeding ground for linguistic innovations – we argue here that historical

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change can occur in writing as well as speech. The following chapters present the results of empirical corpus analyses, showing that this theoretical possibility has indeed occurred. In fact, the corpus analyses in following chapters show that academic science writing has been the locus of some of the most dramatic grammatical changes that have occurred in English over the past three centuries.

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Researchers in the humanities would argue that they do not simply document human experiences that are familiar to us all; rather, they are constantly offering new interpretations of those experiences, and as a result, coining new terms that reflect those new interpretations. Thus, although these researchers discuss familiar situations and experiences, they do so in highly technical ways that are not easily understood by the non-expert. For example, consider the following excerpt from a literary criticism article:

Text Sample 1.3

Modern literary criticism article

THE MANUSCRIPT OF CHARLOTTE BRONTE'S "Villette" (1853)

Published in the wake of the Great Exhibition of 1851, it maps out the contours of interiority in a world newly captivated by the peculiar resonance of things. Though Bronte liked to think that her novel "touche[d] on no matter of public interest," its conception of the psychological interior was significantly inflected by its setting in mid century Thing City (Letters 3: 75). Villette places interiority in an intimate connection with object-filled interiors even as it hopes for an inner life that eludes the varied fetishisms of Thing City. This nostalgia for a more pristine and private form of psychological depth is, in turn, articulated in terms that reveal how entrenched persons are in the public empire of things. Villette constitutes an attempt to negotiate between a critique of commodity fetishism and a paradoxically fetishistic preoccupation with the traces and tokens of inner life. The novel suggests that the bourgeois subject, though it comes into being through its relations with things, is defined by the nostalgic notion that its true interiority has been lost under the pressure of things.

Eva Badowska. 2005.

'Choseville: Brontë's "Villette" and the Art of Bourgeois Interiority'

PMLA, 120: 1509–1523.

One of the most salient characteristics of this text is the highly specialized vocabulary. Abstract technical terms are common in this passage, such as *interiority* and *fetishisms*. In addition, relatively common words like *things*,

objects, contours, interior, depth, and life are used together with technical terms to produce complex phrases referring to highly abstract concepts, such as *the peculiar resonance of things, object-filled interiors, the contours of interiority, nostalgia for a more pristine and private form of psychological depth, the public empire of things, and a paradoxically fetishistic preoccupation with the traces and tokens of inner life*. Taken together, these abstract terms and complex phrases make it difficult for the non-specialist reader to understand the content of the literary analysis presented in the article.

Research writing in the sciences is probably even more difficult for the non-expert to understand, but its linguistic style is less often singled out for criticism. In part, this is because there is less of a mismatch between our expectations and the discourse style. The general goal of science research is to discover new information about the natural world, identifying new phenomena and explaining previously identified phenomena and patterns. Scientists require new words to refer to these previously undocumented phenomena and processes, resulting in prose that can be almost unintelligible to the non-expert. However, since the non-specialist reader has no prior experience with or existing knowledge of those phenomena and processes, we have little expectation that we should fully understand these texts. The following passage from a biochemistry research article illustrates:

Text Sample 1.4
Modern biochemistry article

Several kinases phosphorylate vimentin, the most common intermediate filament protein, in mitosis. Aurora-B and Rho-kinase regulate vimentin filament separation through the cleavage furrow-specific vimentin phosphorylation. Cdk1 also phosphorylates vimentin from prometaphase to metaphase, but its significance has remained unknown. Here we demonstrated a direct interaction between Plk1 and vimentin-Ser55 phosphorylated by Cdk1, an event that led to Plk1 activation and further vimentin phosphorylation. Plk1 induced the phosphorylation of vimentin-Ser82, which was elevated from metaphase and maintained until the end of mitosis. This elevation followed the Cdk1-induced vimentin-Ser55 phosphorylation, and was impaired by Plk1 depletion.

T. Yamaguchi et al. 2005.
'Phosphorylation by Cdk1 induces Plk1-mediated
vimentin phosphorylation during mitosis'
Journal of Cell Biology, 171(3): 431–436.

Similar to Text Sample 1.3, the most obvious characteristic of this biochemistry article is its technical vocabulary. Most readers of the present book have never encountered the verb *to phosphorylate*, or nouns like *kinases, vimentin, prometaphase, metaphase, and phosphorylation*. Since we

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have no idea what these terms refer to, the entire passage has little meaning for us. Thus, the vocabulary of science research writing is similarly technical to the vocabulary of humanities prose, supporting the stereotype that all academic writing is complex and hard to understand.

It is much more difficult to notice the typical grammatical structures used in these academic texts. However, when considered at the grammatical level, we discover that there are important linguistic differences among the various disciplines of academic prose; and in particular, the language of science research writing is quite different from the language of humanities prose. Such considerations lead in turn to other surprising findings that contradict previous claims and assumptions about academic writing. In particular, the corpus-based analyses presented in the following chapters challenge four major stereotypes about academic prose:

1. all kinds of academic prose are essentially the same
2. academic prose employs complex and elaborated grammar
3. academic prose is maximally explicit in meaning
4. academic prose is conservative and resistant to linguistic change

Along the way, we challenge two basic theoretical assumptions that have been widely adopted in previous linguistic research:

1. grammatical complexity is equivalent to structural elaboration, realized especially through the increased use of dependent clauses
2. grammatical changes are initiated in speech; grammatical innovations do not occur in writing

In the following sections, we briefly introduce each of these widely held beliefs and begin to challenge these assumptions.

1.2.1 Academic written texts: All basically the same?

Although writing researchers and students talk about ‘academic prose’ as if it were a well-defined construct, there are actually many ways in which academic texts differ from one another. For example, we discussed in preceding sections how humanities research writing differs in its goals and topics from science research writing. Despite those differences, though, all academic written texts can seem similar linguistically, especially in contrast to the discourse styles that we are familiar with in conversation or popular written registers like fiction.

Characteristics of this general academic-prose style are evident in both Text Samples 1.3 and 1.4 above. For example, both texts rely on specialized technical vocabulary, including many nominalizations (nouns that are formed from verbs or adjectives by the addition of a suffix):

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Literary criticism text:

*exhibition, interiority, resonance, conception, connection, fetishisms,
preoccupation, relations*

Biochemistry text:

separation, cleavage, phosphorylation, significance, interaction, activation, ability, elevation, depletion

The two texts also share a reliance on some specialized grammatical features, which contribute to the perception that the texts are somehow peculiar and difficult to understand. For example, passive voice – a grammatical feature often associated with academic prose – is commonly used in both of these texts:

Literary criticism text:

a world newly captivated by ... things
its conception ... was significantly inflected by its setting
this nostalgia ... is, in turn, articulated ...
*the bourgeois subject ... is defined by the nostalgic notion that its true interiority
has been lost*

Biochemistry text:

vimentin-Ser⁵⁵ phosphorylated by CdkI
*the phosphorylation of vimentin-Ser⁸² ... was elevated from metaphase and
maintained until the end of mitosis*
This elevation ... was impaired by Plk₁ depletion

However, a more careful analysis uncovers ways in which these two texts differ in their grammatical characteristics, reflecting the different norms of their academic disciplines. For example, attributive adjectives (i.e., adjectives that pre-modify a head noun) are very common in humanities academic writing, and Text Sample 1.3 above illustrates this characteristic:

Literary criticism text:

Great Exhibition
peculiar resonance
public interest

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psychological interior

intimate connection

inner life

varied fetishisms

a more pristine and private form of psychological depth

public empire

a paradoxically fetishistic preoccupation

nostalgic notion

Attributive adjectives are generally less common in science research writing, and Text Sample 1.4 is typical in this regard, with only two examples: direct interaction and further vimentin phosphorylation.

However, science prose tends to employ a more specialized grammatical device to modify noun phrases: nouns that occur as pre-modifiers of a head noun. Here again, Text Sample 1.4 illustrates the typical pattern:

Biochemistry text:

filament protein

vimentin filament separation

the cleavage furrow-specific vimentin phosphorylation

Plk1 activation

vimentin phosphorylation

Plk1 depletion

These pre-modifying nouns can sometimes be compounded with participles, as in:

Cdk1-induced vimentin-Ser55 phosphorylation

In contrast, pre-modifying nouns are much less common in humanities writing, as is illustrated by the literary criticism text, which employs only two occurrences:

Literary criticism text:

Thing City

commodity fetishism

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Further consideration of Text Sample 1.4 illustrates an additional grammatical device that is much more common in science writing than humanities writing: appositive noun phrases. These are noun phrases that modify the immediately preceding head noun, with no overt grammatical connector. For example:

Biochemistry text:

***vimentin**, the most common intermediate filament protein
 a direct **interaction** between PlkI and vimentin-Ser55 phosphorylated
 by CdkI, an event that led to PlkI activation and further vimentin
 phosphorylation*

Table 1.1 summarizes these differences in the preferred grammatical features of the humanities versus science writing, illustrated from Text Samples 1.3 and 1.4.

Comparing the grammatical structure of these two texts from a quantitative perspective uncovers additional differences. For example, the two passages have important differences in their preferred sentence structures. Texts Samples 1.3a and 1.4a below are copies of the two text samples, highlighting the verbs in both passages. Although the literary criticism text is considerably longer than the biochemistry text (179 words versus 94 words), both passages consist of six sentences. Thus, the sentences are much longer in the literary criticism text than the biochemistry text. A related difference is the density of verbs in the two passages: the literary criticism text utilizes three to four verbs in each sentence, while the biochemistry text uses only one to two verbs per sentence.

Text Sample 1.3a
 Literary criticism text (Badowska 2005)

Verbs marked in **bold underline**

Published in the wake of the Great Exhibition of 1851, it **maps** out the contours of interiority in a world newly **captivated** by the peculiar resonance of things. Though Bronte **liked** to **think** that her novel "**touche[d]** on no matter of public interest," its conception of the psychological interior **was** significantly **inflected** by its setting in mid century Thing City (Letters 3: 75). Villette **places** interiority in an intimate connection with object-filled interiors even as it **hopes** for an inner life that **eludes** the varied fetishisms of Thing City. This nostalgia for a more pristine and private form of psychological depth **is**, in turn, **articulated** in terms that **reveal** how **entrenched** persons **are** in