A History of Modern Linguistics: From the beginnings to World War II
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Errata and clarifications

Edinburgh University Press will soon release a revised version of *A History of Modern Linguistics*. This document contains what I consider to be the most significant revisions to the text. It is not a complete list of all corrections, but only of those changes to the text that I think readers of the original version of the book should be aware of. These are typically passages where I feel that the reader could come away from the original text with an inaccurate impression of the topic. In all cases, any inaccuracies are in details and do not affect the arguments presented in the respective passages.

– James McElvenny
23 October 2026

Chapter 2

p. 7, para. 5:
The passage appeared in Jones's third 'Anniversary Discourse' to the Asiatic Society in Calcutta (Jones 1807 [1786]), a scholarly club for learned British gentlemen stationed in India. Jones had long been a student of 'Oriental' languages, and going to India provided him with the perfect opportunity to deepen his Oriental researches. In Calcutta, he was central to European scholarship on India and the East and instrumental in the founding of the Asiatic Society.

p. 8, para. 3, l. 2–5:
Within a generation of Jones, such literal interpretations of biblical genealogy would start to lose their hold (cf. Hutton 2025: chap. 3) – even if some biblical terminology survived, such as the label for the 'Semitic' family (which includes such languages as Hebrew and Arabic), derived from the name of Noah's son Shem.

p. 11, para. 3, l. 4–7:
The first volume of *Mithridates* appeared in the year of Adelung's death, 1806, and the final volume in 1817, well into the period in which the parallel tradition of comparative-historical grammar was getting underway.

pp. 12–13, sentence over page break:
In his analyses of verb conjugations, Bopp broke down verbs into the root, corresponding to the idea attributed to the subject, and inflectional endings which he believed were ultimately derived from forms of the copula verb 'to be' and pronouns.

p. 15, from last sentence of first paragraph to end of page:
Jacob Grimm in fact dedicated his *Deutsche Grammatik* to Savigny, and Grimm's dedication to the book is written in the form of an open letter to Savigny.

A prime illustration of Savigny's historicism is the role he played in the so-called codification controversy that flared up in the wake of the Napoleonic Wars. Perhaps the most spectacular career to be made in the French Revolution was that of Napoleon Bonaparte (1769–1821). After rising to the top of the revolutionary leadership in the 1790s – which culminated in his self-coronation as Emperor of the French in 1804 – Napoleon embarked on the conquest of much of Europe. Most of the German-speaking territories that came under Napoleon's sway were organised into the Confederation of the Rhine, a league of states allied with France, many of which adopted social and legal reforms emanating from the French Revolution.

The French Revolution was infused with the ideals of the Enlightenment and put into practice in many spheres of life the thoroughgoing rationalisation of the world that Enlightenment thinkers advocated. One of these rationalising interventions was the introduction of a single, unified and, above all, explicitly codified system of laws, often referred to as the *Code Napoléon*. The *Code* was intended as a definitive guide to civil law in France, which would provide judges and officials with the principles needed to decide the cases before them. The *Code* became the basis of the law in many other European countries influenced by revolutionary France, including in several states of the Confederation of the Rhine.

But in 1813 the Confederation of the Rhine was broken up as Napoleon lost his hold on the German lands, and by 1815 Napoleon had been decisively defeated. German elites sought to throw off the French revolutionary yoke. However, at the same time, they recognised the inevitable modernisation effected by many reforms introduced under French influence. In the legal realm, the *Code Napoléon* had shown the advantages of having a shared system of codified laws, but it was a foreign imposition. Should the German states develop their own common code cleansed of its French character to replace it? In Prussia there was already a general legal code in force that was in fact slightly older than the *Code Napoléon*. Austria, too, had already implemented a civil law code. Or should the states revert to the ancient system of custom, obscure statutes and historical precedent that was in effect in many of these lands before the French conquest?

The Heidelberg law professor Anton Friedrich Thibaut (1772–1840) argued for the development of a common legal code for all of Germany (Thibaut 1814), a position that was vehemently opposed by Savigny (1814). According to Savigny, the law is an expression of the particular people that is subject to it, of their *Volksgeist*; the law cannot be derived from reason in the abstract, set down in a single document and applied universally. The only legitimate way to practise law is to study its evolution over time. This highly conservative principle had already been brought into the centre of the Prussian intellectual world when Wilhelm von Humboldt arranged for Savigny to become one of the first professors of law at the new University of Berlin in 1810.

p. 17, para. 3, l. 4–6:
But in the preface to the first edition of his *Deutsche Grammatik*, Grimm (1819: xviii) said that unfortunately he only came to read Rask's work as his own book was almost finished. In the second edition, Grimm set out his law for the first time.

Chapter 3

pp. 28–9, para. 3–4 / 1–3:
The overarching goal of *Völkerpsychologie* was to characterise the *Volksgeist* of each people; that is, the shared mind or spirit of a people (*Volksgeist* is a term we already encountered in Section 2.4, in the context of the Grimms' historicism). Lazarus and Steinthal's proposal was to take the psychological methods that had been developed to describe the mental goings-on in individual persons and apply these to the study of the supposed shared mentality of entire nations (we explore Steinthal and Lazarus's methods in greater detail in Section 11.1). The *Volksgeist* binds individuals together into a coherent *Volk* (a nation or people), but the *Volk* is also a voluntaristic entity: it exists because a group of individuals see themselves as belonging to the same *Volk*, for whatever reasons. There are no objective properties that define a *Volk* and delineate it from others, such as common descent or even common language (even though language is a key way in which the *Volksgeist* manifests itself; *see* Lazarus and Steinthal 1860: 32–6; Klautke 2013: 17–22). Lazarus and Steinthal's view was in stark contrast to racialist notions of the time, which sought to reduce each people to biologically defined 'races' (in Section 4.2, we see in the work of August Schleicher a conceptually kindred effort to reduce languages to biology, even if Schleicher was sceptical of much contemporary race science; cf. Hutton 2025: 166–7).

Lazarus and Steinthal's *Völkerpsychologie* was intertwined with their political views. Both Lazarus and Steinthal were Jewish and were part of a movement among nineteenth-century Jewish Germans who considered themselves to be first and foremost members of the German nation, but at the same time wanted to maintain their Jewish identity within it. Their voluntaristic conception of the *Volk*, where membership is determined by a mutual sense of belonging, provides a mechanism for constructing such an identity. This stance was visible – and attracted considerable criticism – in the so-called Berlin anti-Semitism controversy, sparked in 1879 by anti-Semitic comments from Heinrich von Treitschke (1834–1896), a professor of history in Berlin and member of the Reichstag (see Treitschke 1879: 572–6). In response to Treitschke, Lazarus (1880) deployed his voluntaristic arguments in support of diversity within the German nation and a unique Jewish identity inside it. Digging in against Lazarus, Treitschke (1880: 92) insisted that Judaism was 'the national religion of a tribe originally foreign to us'; Jewish Germans had to acknowledge and respect the Christian character of German society. But even some Jewish people objected to Lazarus's advocacy for pluralism. Hermann Cohen (1842–1918), a former student of Lazarus and Steinthal, argued that Judaism is not a foreign religion in Germany – in its character, it is much like a variety of Protestantism. As such, he concluded, Jewish Germans can retain their religion, but they should still seek to assimilate themselves in every other way – including in physiognomy – into majority German society (see Cohen 1880; cf. Klautke 2013: 22–7).

Even though Prussia and the North German states – where Lazarus and Steinthal lived and worked for the greater part of their lives – experimented fitfully with tolerance of their Jewish minority, both Lazarus and Steinthal suffered from discrimination, more or less overt. A striking example of this is Steinthal's given name. He is usually referred to as 'Heymann' Steinthal, although in contemporary literature and in some library catalogues he is also to be found under the names 'Heinemann' and even 'Hermann' and 'Heinrich'. In his memoirs, Steinthal explained the instability of his given name by the fact that at the time of his birth the Jewish population of his home town had no official register of births,

deaths and marriages. For this reason, no official version of his 'German' personal name was ever recorded and it was later 'altered arbitrarily', leading to the proliferation of variants (see Belke 1971: 379). Steinthal's own practice in stating his name in his publications was to simply use his initial, 'H.'. Within the Jewish community, Steinthal was known by the name 'Chajim'.

State-sanctioned anti-Semitism declined during Lazarus and Steinthal's lifetimes – with Jewish citizens of Prussia being granted full and equal rights in 1869 – but there remained an unofficial residue of anti-Semitism that would repeatedly flare up and impinge on the lives of Jewish Prussians (as, for example, in the Berlin anti-Semitism controversy), and which created a glass ceiling for many Jewish academics, Lazarus and Steinthal included. Despite their undisputed intellectual prominence, and the importance of their work to German academia, neither Lazarus nor Steinthal ever reached the rank of ordinary professor in Berlin, their ultimate career goal – and perhaps the greatest prize any German academic of this time could aspire to (cf. Klautke 2013: 15).

Chapter 4

pp. 38–9, para. 4 / 4:
Despite these terminological battles, Schleicher was clearly aligned, both personally and intellectually, with the movement of scientific materialism. Scientific materialism had its roots in biology. At the dawn of the nineteenth century, biological theory was dominated by Romantic *Naturphilosophie* (philosophy of nature; see Richards 2002a: 8–11). To our eyes, *Naturphilosophie* may seem to be indistinguishable from mysticism: in order to account for the functioning of living organisms, proponents of *Naturphilosophie* would appeal to such invisible powers as 'vital forces' or the soul (even if they often strove to reconcile these with ordinary physical forces). But with the rapid improvement in scientific instruments in the first half of the nineteenth century, in particular microscope technology, it became possible for biologists to more clearly see the individual cells that make up organisms and their minute goings-on. It was now possible to conceive of organisms as conglomerations of cells working on the same physical principles that can be observed on a larger scale; appeals to vital forces or the soul began to seem superfluous.

Of course, questioning the existence of the soul and other supernatural powers challenges the business model of some rather powerful social institutions, among them the church. While some scientific materialists trod carefully in this area, the most strident members of the movement weaponised their science and wielded it against religion and the conservative politics with which it was generally allied in this period. The political dimension of scientific materialism was most pronounced around 1848. In this year, simmering social tensions – between the upwardly mobile middle classes, downtrodden workers, and the aristocrats who ruled over them – came to the boil and resulted in revolts across Europe. In Germany – at this time still a loose collection of small states, mostly ruled by aristocrats – an activist 'pre-parliament', followed by an official National Assembly, came together in Frankfurt am Main in an effort to unite the various German-speaking lands into a single political entity.

An embarrassingly large proportion of the representatives in the pre-parliament and National Assembly were professors, who for the most part advocated 'liberal' political

positions. In this context, liberal politics meant in the first instance a belief in limiting the power of aristocrats and instituting constitutional government. But it also entailed a strong element of nationalism – the goal was after all to unite the German nation, understood as being all those who speak German, and excluding those who do not. We already encountered an expression of this kind of nationalism in Section 2.4, when we looked at the work of the Grimm brothers. In fact, the Grimm brothers were both members of the pre-parliament, and Jacob Grimm was also a prominent representative in the National Assembly.

The plans of the National Assembly were incompatible with the interests and rivalries of the ruling houses across the German-speaking world: its resolutions were ignored and the revolts put down by military force. It would be another twenty years before German unification would come about, and not from below through democratic agreement, but from above through the overwhelming power of Prussia – and without the participation of Austria, which continued its existence as the multi-ethnic Habsburg Empire.

p. 43, para. 3:
In his very first book, Schleicher (1848) presented this division of language evolution into prehistoric and historic periods in terms of the philosophy of history of G. W. F. Hegel (1770–1831). As an idealist philosopher, Hegel saw history as a teleological process, animated by the unfolding of 'spirit' (*Geist*) towards self-consciousness and 'freedom' (cf. Redding 2025). Elements of Hegelian idiom persist in Schleicher's later accounts (e.g. 1860: 33–7), even as his materialism became more explicit (see Koerner 1989). That Schleicher would incorporate idealist doctrine into his materialist theory should not be surprising, when we consider how ideas from *Naturphilosophie* were given a materialist rendering, as in Haeckel's general morphology. The theory of Marxist historical materialism – which we encountered in Section 4.2 – is similarly a reworking of Hegelian philosophy of history in materialist terms.

p. 45, para. 2–3:
Furthermore, Steinthal objected to the deterministic scheme of language evolution assumed in Schleicher's morphology. As we saw in the previous section, Schleicher claimed that the typological classes of isolation, agglutination and inflection represent successive stages in the evolutionary development of languages. In opposition to Schleicher's unilinear view of development, Steinthal (1860a: 105–6; 1860b) asserted a kind of historical particularism, in which every individual form has a unique identity that is the product of a complex developmental history, involving the interaction of numerous internal and external factors. This dispute between Steinthal and Schleicher is yet another example of the tension, which we first encountered in Section 2.2, between the desire to account for the development of all languages in terms of a single set of universal laws and the historicist belief that each language must be treated as an individual with its own unique story. Of course, Steinthal was also interested in fitting the world's languages into an overarching typological system, but Steinthal's typology was founded on the detailed study of individuals and their peculiarities.

We must note that Steinthal's objections to Schleicher are concerned specifically with Schleicher's materialism and his belief in the unilinear development of languages. Steinthal was not opposed to the analogy between languages and biological organisms, which had been a mainstay of nineteenth-century linguistics since at least Friedrich

Schlegel's first proposals for comparative grammar. In fact, Steinthal even appealed to biological analogy himself in critiquing Schleicher: he cited the *Allgemeine Physiologie* (General physiology; 1851) of the German philosopher Hermann Lotze (1817–1881). Lotze emphasised that biological organisms do not simply develop according to a predetermined scheme, but that their development is also shaped by functional factors (see Lotze 1851: 324), a position Steinthal (1860b: 434) described as 'truly Humboldtian'.

Chapter 6

pp. 58–9, sentence over page break:
As the historian of linguistics Olga Amsterdamska (1987: chap. 5) pointed out, the 1870s was a period of generational change in academic linguistics: the old guard was gradually dying out and the next generation of scholars was rising up to take their place, in a shifting and expanding university landscape.

pp. 61–2, para. 5 / 1:
Karl Verner's breakthrough was to look in greater detail at these problematic words and find a subtle difference in their phonetic structure which conditioned the divergent sound changes. Proto-Indo-European had a free and movable accent; that is, in polysyllabic words the stress could fall in different places. This movable accent was preserved in Sanskrit but was lost in Proto-Germanic, which developed a fixed accent on the first syllable. Verner noticed that in the Sanskrit words *mâtár-* 'mother' and *pitár-* 'father' the stress was on the second syllable, but in the word *bhrấtar-* 'brother' on the first syllable. With this additional phonetic information to hand, Verner was able to add a further clause to Grimm's Law dealing with the exceptions. Proto-Indo-European **t* first shifted everywhere to **þ* in Proto-Germanic, as postulated by Grimm's Law. But when **þ* was in a voiced environment in the middle of a word, subsequent shifts occurred, making it voiced and then a stop, yielding the forms **môdar* and **fadar*. These additional shifts did not occur, however, when **þ* immediately followed the stressed syllable, as in the case of **brôþar* (Verner 1877: 114–17). All that was required in order to save Grimm's Law was to refine it. Once the law was elaborated to include greater phonetic detail, the apparent exceptions disappeared.

p. 62, para. 4:
Citing the inspiration they had received from the analyses of their colleague August Leskien (1840–1916) in his 1876 book *Die Declination im Slavisch-Litauischen und Germanischen* (The declension in Slavic-Lithuanian and Germanic), Osthoff and Brugman (1878: 12–14) set up an opposition between analogy and sound laws as counteracting processes. In Neogrammarian research, analogy was routinely deployed to dispense with apparent exceptions to the sound laws: if a sound change had not occurred as expected, a common explanation among the Neogrammarians was to say that an analogical change had got in the way and interfered with the normal operation of the sound laws. As we see in Section 7.1, the Neogrammarians were widely criticised for being too lax in their application of analogy. It was said that for the Neogrammarians analogy was a *deus ex machina*, brought out whenever the sound laws broke down.

Chapter 7

p. 71, para. 2–3:
Schuchardt (1928 [1885]: 53–8) not only attacked the empirical adequacy of the Neogrammarians' approach, but also questioned the underlying apparatus of their explanatory model. He accused the Neogrammarians of setting up an overly simplistic antithesis between physiologically based, exceptionless sound laws and psychologically based, unpredictable analogies. The Neogrammarians, he implied, try to explain away any apparent exception to a sound law by pulling an analogy out of a hat. But the relationships between regular sound change and analogy are complex and open to numerous different analyses and interpretations.

The summary Schuchardt offers of Neogrammarian theory is something of a caricature. As we saw in Sections 6.2 and 6.3, the Neogrammarians painted a more nuanced picture of language and its functioning, and always hedged and acknowledged that processes in the real world are more complex than the idealisations they were putting forward. However, Schuchardt's critique did perhaps point to problems in Neogrammarian practice, the shortcuts they took when they came to apply their carefully articulated theory to the actual study of languages (see further Morpurgo Davies 1998: 255–9 for discussion and defence of the Neogrammarians' use of analogy).

pp. 74–5, paragraph over page break:
Johannes Schmidt sketched similar ideas at the scale of the whole Indo-European family in his 1872 book *Die Verwandtschaftsverhältnisse der indogermanischen Sprachen* (The family relations of the Indo-European languages). He observed, for example, that languages in the Balto-Slavic and Indo-Iranian groups have many features in common that they do not share with other Indo-European languages. But, on the other hand, Balto-Slavic languages and Germanic languages also share many features found only in those groups. If we insist that all shared innovations must be traced back to a single common ancestor, then does Balto-Slavic have a more recent common ancestor with Indo-Iranian or with Germanic? Schmidt's (1872: 15–19) answer was to declare this common ancestor an impossibility and instead to attribute the shared features to diffusion. Speakers of these languages had long lived in contiguous geographical regions and throughout this time were in continued contact with one another. Just as the Balto-Slavic languages are located geographically between those of the Indo-Iranian and Germanic groups, structurally they sit between Indo-Iranian and Germanic.

p. 78, para. 2–4:
But there is also a social dimension to this conflict between 'positivism' and 'idealism'. The positivism that Vossler complained about, the obsession with the meticulous ordering and classification of facts to the exclusion of deeper and more speculative questions, came to be seen as a growing problem in German academia around the turn of the twentieth century, when the Neogrammarian school was at the height of its institutional dominance. This feeling was tied to the broader social and political environment.

In 1871, after a resounding victory against the French in the Franco-Prussian War, Germany was finally united as a single empire under Prussian hegemony. The next twenty years were a period of the pragmatic but authoritarian rule of Otto von Bismarck (1815–1898), who systematically built up the power of the German imperial state, both internally

and externally. Academia largely toed the line in Bismarck's Germany and supported the new political order. The support of academia was important, because throughout the nineteenth century universities played a pivotal role in maintaining the apparatus of the German states and empire: they were the principal training grounds for civil servants, an expansive category that included not only government officials, but also Gymnasium (secondary school) teachers and university professors themselves. Those who had a university education were part of a cultured elite.

The foundation of the empire coincided with further changes in German society: the effects of industrial modernisation came to be felt ever more acutely, and universities began expanding rapidly (see the statistics in Amsterdamska 1987: 130–1). The age demanded training that privileged the inculcation of rote technical skills over the sort of creative and speculative talents that had been prized in the Romantic era just a few generations before, in which the modern German universities emerged. Worries about the professionalisation and technicisation of academic life, that universities were becoming little more than factories for specialised experts, were one of the factors driving debates about the nature of education and the humanities in which scholars and intellectuals were engaged.

The debates grew louder from the 1890s onwards, with an increasing reaction in academia against 'positivism' and its supposed utilitarian character (see Ringer 1969; Amsterdamska 1987: 164–75). This period saw a new wave of economic expansion, with intensifying modernisation and growth in 'mass society', developments that continued to demand and reward specialised technical expertise. It was also a period marked by a certain liberalisation of German politics and public discourse: in 1890, Bismarck had been forced out of his role as Reichskanzler after serious differences of opinion with the new Kaiser, Wilhelm II, and some of his more repressive policies were relaxed. For example, the social democrats were no longer outlawed – although they were still despised by the ruling elites. In this somewhat more open environment, social commentary proliferated, including among university professors.

Against this background, the Neogrammarians brought academic linguistics to the peak of technicisation, while Vossler fought this trend by trying to reintroduce something of the old Romanticism. Both endeavours could be considered conservative, but conservative in different ways. The Neogrammarians were perhaps engaged in a kind of quietism by pursuing highly specialised, technical research that was compatible with the prevailing climate (cf. H. Maaß 2003). Although positivism as a doctrine was generally associated with progressive causes, the mere adherence to its underlying scientism in the absence of any broader philosophical commitments could just as well serve the interests of the modernising imperial state and thereby support the existing order. This is arguably the position of the Neogrammarians, who did not call themselves positivists (that label was polemically foisted upon them by Vossler) but just thought of themselves as doing empirical science (see Section 6.3). Vossler and like-minded anti-positivists, on the other hand, were engaged in a restorative conservative project: they assumed the role of wise intellectuals seeking to reinstate the ideals of learning and personal cultivation that had been central to earlier academic life (cf. U. Maas 2022).

Chapter 8

p. 82, para. 1–3:
The reconstructions Saussure presented in his *Mémoire* were widely praised as a brilliant new analysis of Proto-Indo-European. But Saussure's book was not met with universal enthusiasm: Brugman and Osthoff, his Neogrammarian teachers in Leipzig, thought that it merely repeated points they had already made. The most innovative aspect of Saussure's analysis was the way in which he reconstructed Proto-Indo-European vowels in terms of a 'system': rather than focusing on the properties of individual vowel sounds, Saussure imagined how all the sound units would fit together to create a whole. This notion of 'system' would become one of Saussure's signature doctrines and is taken to be one of his chief contributions to the foundation of structuralism.

But a similar system-oriented approach was a feature of the reconstructions Brugman (1876a, 1876b) had published in Curtius's journal in the inaugural assault of the Neogrammarian movement a few years earlier. In his reconstructions, Brugman used a kind of algebraic notation to indicate the vowels he posited in Proto-Indo-European without specifying their precise properties. In Brugman's approach, these unspecified symbols served as placeholders rather than standing for concrete vowels. Brugman's ultimate aim was still to reconstruct the actual sounds of Proto-Indo-European, but his approach already evinced a sense that the sounds were subordinate to a system.

Brugman and Osthoff felt that Saussure, in his *Mémoire,* did not adequately acknowledge their prior work, especially the still unpublished analyses and examples they had presented in their lectures. There was even the suggestion of the much more serious charge that Saussure may have plagiarised his teachers. Looking back on this dispute, Saussure's defenders say he was simply treating their work as such common knowledge in the field as to not require citation.

p. 83, para. 4–5:
Crucially, Saussure did not write the published version of the *Cours* himself. Rather, it is derived from notes of students who attended his lectures and some surviving notes Saussure made himself. These various sources were edited into book form by two of Saussure's younger colleagues in Geneva, Charles Bally (1865–1947) and Albert Sechehaye (1870–1946). In the latter part of his career, Saussure published almost nothing, but instead constantly reworked manuscripts in an effort to capture the perfect representation of his ideas. We might speculate that his caution in later life was a response to the backlash he faced in his younger years, when he had rushed his *Mémoire* into print, to a somewhat mixed reception, as we observed in the previous section.

In its theoretical passages, Saussure's *Cours* is a rather concise, suggestive text that leaves a lot of room for interpretation and the fleshing out of the ideas it presents. Given the way in which it was composed – compiled posthumously by two colleagues from lecture notes – it is also a text that is open to challenge. We can always dispute whether that really is what Saussure said: indeed, there is a veritable cottage industry in the history of linguistics that produces competing interpretations of Saussurean doctrine. Whatever the details of Saussure's *Cours*, we can say that it puts forward a series of elegant conceptual distinctions that have become part of the general background to linguistic scholarship and continue to play a role in how linguists think about language today. In the rest of this section, we take a brief tour through the *Cours* and some of the key ideas it introduced.

Chapter 9

pp. 93–4, para. 2–5 / 1–2:
In his lectures throughout the 1870s, Baudouin de Courtenay recognised two perspectives on the study of sounds in language: sounds can be examined from an articulatory and acoustic point of view, or they can be treated in psychological terms for the role they play in a language. He noted that from the psychological perspective the sounds of every language constitute a system that is peculiar to that language, much like the tones of a musical scale. In his Program of Lectures for 1876 to 1877, a syllabus for his university course, Baudouin wrote: 'Physiologically identical sounds of different languages have a distinctive value depending on (their place within) the entire sound system, and their relation to other sounds. [. . .] Comparison with the tones of music' (Baudouin de Courtenay 1972 [1877]: 94).

This statement from Baudouin looks very much like a formulation of the central insight of present-day phonemic theory: that every language has its own arbitrary sound system which configures concrete sounds in different ways. But we have to be careful not to read too much into it. This statement appears in the section of Baudouin's course dedicated to comparative-historical reconstruction and is best understood in the context of contemporary research in that field. In these same years, the Neogrammarians were also making a distinction between physiological and psychological aspects of sound change – as we discussed in Sections 6.2 and 6.3 – and were using algebraic placeholders to represent hypothetical sounds in reconstructed sound systems. We will recall from Section 8.1 that when Saussure's *Mémoire* appeared, his Neogrammarian teachers felt that he had plagiarised them. Whatever the merits of those specific claims, we can definitely say that system-oriented thinking was widespread in 1870s linguistic scholarship.

Furthermore, Baudouin de Courtenay did not use the term 'phoneme' in these lectures. Of the two Polish linguists, it was Kruszewski who first used the term in a published analysis, in his 1881 master's thesis. A major topic of Kruszewski's thesis was what he called 'sound alternations', the regular variation in the sounds of a language. But Kruszewski's sound alternations went far beyond the allophonic variation we discussed in the introduction to this chapter: his alternations mixed synchronic and diachronic considerations, and were not strictly phonological in character, but included also morphological alternations.

In his thesis, Kruszewski (1881: 14–15) used the term 'phoneme' (фонема in Russian; *Phonem* in Kruszewski's own German translation) to designate the 'phonetic units' identified as participating in alternations, as opposed to speech sounds in their purely physical capacity, in line with the distinction that Baudouin de Courtenay was already making. According to Baudouin de Courtenay's later testimony (see Jakobson 1971 [1960]: 405), Kruszewski was inspired to call these units 'phonemes' because of Saussure's usage of this term in his *Mémoire*.

From the 1880s onwards, Baudouin de Courtenay also began using the term 'phoneme'. Initially, his usage tracked Kruszewski's closely in conceiving of the phoneme as a unit of analysis, but eventually Baudouin came to give the term an explicitly psychological cast by using it to name a mental representation that can be realised as various actual sounds (cf. Mugdan 2025: 141–2). In his 1895 *Versuch einer Theorie phonetischer Alternationen* (Attempt at a theory of phonetic alternations), Baudouin (1895: 9; English translation in Baudouin de Courtenay 1972 [1895]: 152) defined the

phoneme as the 'psychological equivalent of a speech sound'. Baudouin's phoneme was still not identical to our present-day notion – in particular, it continued to be tied up with morphology. Around the beginning of the 1880s, Baudouin introduced another term that he coined on the model of phoneme: 'morpheme'. In his *Versuch*, Baudouin (1895: 10; English translation in Baudouin de Courtenay 1972 [1895]: 153) defined the morpheme as 'that part of a word which is endowed with psychological autonomy and is for the very same reason not further divisible', subsuming the concepts of root, affix and so on. Despite the psychological vocabulary, Baudouin's term corresponds more or less to the morpheme as we understand it today, the minimal meaning-bearing unit of a word.

p. 96, para. 1, l. 3–5:
For his part, Whitney was commissioned to devise an alphabet for writing American languages by John Wesley Powell (1834–1902), who – as we see in Section 14.1 – would become the founding director of the US government Bureau of American Ethnology (see McElvenny 2019b: 39).

p. 97, para. 4, l. 1–4:
The driving force behind the founding of the Phonetic Teachers' Association was the French phonetician Paul Passy (1859–1940). And a particular inspiration to Passy in phonetic matters (and early member of the Association) was the English phonetician Henry Sweet (1845–1912).

Chapter 10

p. 102, para. 1, l. 9–11:
Jakobson, on the other hand, had a more ambivalent relationship to the revolution: although a keen participant in the early Soviet experiment, he soon felt the need to live abroad (cf. Toman 1995: 38–41).

pp. 103–4, 5–6 / 1:
Although Jakobson and his Prague Circle colleagues gave structuralism its name, they never claimed to have invented it. The great thinker to whom they attributed the chief insights animating their approach was Ferdinand de Saussure (1857–1913), specifically the Saussure of the *Cours de linguistique générale* (Saussure 1922 [1916]), which we examined in detail in Section 8.2. But Saussure was not the only source of inspiration for Jakobson and his colleagues. In fact, there are many ways in which Prague Circle doctrines differed from Saussure's, and even challenged his ideas (cf. Holenstein 1976 [1974]: 18–21; Percival 2011).

Even though Saussure's name is barely mentioned in the Prague Circle's 1929 'Thèses', the text itself is constructed around the central theoretical pillars of the *Cours*: synchrony and diachrony, *langue* and *parole*, and the notion of value. The 'Thèses' variously adopt and critique these Saussurean concepts in order to develop new theoretical positions. Two other programmatic texts from the same time, both co-authored by Jakobson, similarly engage with Saussure: a paper on formalist literary analysis by Juri Tynianov (1894–1943) and Jakobson builds on Saussurean ideas (Tynianov and Jakobson 1928), and the 'Proposition' presented to the First International Congress

of Linguists by Jakobson, Trubetzkoy and their colleague Serge Karcevsky (1884–1955) sketches an approach to phonological research set out as a critical adaptation of Saussurean doctrine (Jakobson et al. 1962 [1928]).

pp. 104–5, para. 3–4 / 1:
Throughout his career, Jakobson looked to Saussure as a key point of reference in linguistic theory, although always with a critical eye. And Saussure was not the sole antecedent Jakobson acknowledged: as we observed in the previous section, the concept of the phoneme that was central to Jakobson and Trubetzkoy's phonology owed a great deal to the work of Baudouin de Courtenay and his school. Indeed, there are respects in which Jakobson and Trubetzkoy's treatment of the phoneme is in tension with Saussure's views. From Section 8.2, we will recall Saussure's claim that signifiers in a language are defined solely by their differences from one another. Exactly how these differences are realised is, for Saussure, irrelevant to the analysis of the linguistic system. But, as we saw in the previous section, Jakobson and Trubetzkoy did look at how the differences between phonemes are instantiated through distinctive features. Although distinctive features function as a network of negative relations – that is, as a system of oppositions – they are couched in terms of specific acoustic and articulatory properties. Distinctive features therefore bridge the phonological and phonetic realms.

Once Trubetzkoy started examining the various kinds of opposition found in phonological systems, he was led to the discovery that not all phonemes are created equal. In German, for example, voicing is a common feature that serves to distinguish many consonants, such as /d/ and /t/, two phonemes that differ from one another only in that the former is voiced and the latter voiceless. But the voicing contrast between these phonemes disappears – or is 'neutralised' – when they appear at the end of a word. The words *Rad* 'wheel' and *Rat* 'council' are pronounced identically: [ʁaːt]. We know, however, that there is an underlying difference between the /d/ of *Rad* and the /t/ of *Rat* because when these phonemes are not at the end of the word, the contrast is retained: the plural form *Räder* is pronounced [ʁɛːdɐ], and the plural *Räte* [ʁɛːtə]. In analysing phenomena of this kind, Trubetzkoy (see 1939: 67, 73) would argue that of the /d/ and /t/ in German, /d/ is the 'marked' form because it is distinguished by a feature that can be neutralised. Jakobson went on to investigate markedness from the perspectives of typology and language acquisition and loss. Here he discovered recurring substantive patterns across languages. Marked sounds are, for example, less common cross-linguistically, tend to be learnt later by children, and are the first to be lost in cases of aphasia (see, e.g., Jakobson 1962 [1941]; 1963; cf. Joseph et al. 2001: 19–26).

pp. 105–6, para. 5 / 1–2:
Such ideas were widespread, but one of the most prominent strands of research that had a direct influence on Jakobson and Trubetzkoy was Gestalt psychology. This field was dominated by the so-called Berlin School (see Ash 1995), whose work Jakobson occasionally cited, but the chief influence on Jakobson and Trubetzkoy came via the Vienna psychologist Karl Bühler (1879–1963), who we meet properly in Chapter 13. The core area of Gestalt research was the psychology of perception. Gestalt psychologists carried out experiments designed to demonstrate how, when we encounter a phenomenon in the world, we perceive it as a whole, and any analysis we make of the phenomenon into parts is derivative and dependent on the whole. Gestalt psychologists generally contrasted their work to that of the philosopher and psychologist Wilhelm

Wundt. Although Wundt acknowledged Gestalt processes, he still preferred to build up perception from atomistic sense data.

Jakobson's structuralism had an acknowledged affinity with Gestalt psychology (see Holenstein 1976 [1974]: 16–18). In the previous section, we saw Trubetzkoy (1939: 35) employ the terminology of Gestalt theory – mediated by Bühler – in his discussion of phonemes. The recurring comparison of the phonological systems of languages to musical melodies and keys, made by both Baudouin de Courtenay and Trubetzkoy – as we saw in the previous section and Section 9.1 – provides another conceptual link between structuralism and Gestalt theory. Christian von Ehrenfels (1859–1932), professor of philosophy in Prague from 1896 until 1929 and an inspiration to the first generation of Gestalt psychologists, famously highlighted in his 1890 essay 'Über Gestaltqualitäten' (On Gestalt qualities) the fact that a musical melody can be transposed into different keys and still be recognised as the same melody (Ehrenfels 1890: 262). A melody therefore does not consist in the exact notes that are played but in the relations between the notes. The recurring analogy of phonemes in a phonological system to tones in a melody or musical scale makes precisely the same point.

Chapter 11

pp. 110–11, para. 3–5 / 1:
The details of Steinthal's psychological theory fluctuated over the decades in which it was developed, but in general we can say that Steinthal treated a linguistic expression as the externalisation of internal mental representations in the speaker. This picture is most clearly drawn in his 1871 *Einleitung in die Psychologie und Sprachwissenschaft* (Introduction to psychology and linguistics). Like many theorists of psychology in this era, Steinthal adapted the *Vorstellungsmechanik* (literally 'mechanics of representation') pioneered by Johann Friedrich Herbart (1776–1841) in the early years of the nineteenth century. Herbart's mechanics imagined human minds as a kind of space filled with mental representations that interact with one another in ways that can be modelled mathematically.

In Steinthal's theory, forms in language stand for the speaker's mental representations and serve to arouse corresponding representations in the hearer's mind. There is, however, a complication to this story. As we saw in Chapter 3, Steinthal was a follower of Wilhelm von Humboldt (1767–1835) and, like Humboldt, he did not believe language to be merely a passive medium. Rather, it is only by articulating our thoughts in language that they take on definite shape, and it is only when we see our interlocutors' reactions to our words that we come to understand ourselves (cf. Steinthal 1871: 385–7). How a language manifests the supposed collective mind of its speakers through these processes is one of the core areas of study of *Völkerpsychologie* (see further Nerlich and Clarke 1996: 160–5).

While Hermann Paul and his Neogrammarian colleagues distanced themselves from the idea of a collective mind in *Völkerpsychologie* – in Steinthal and Lazarus's and later Wundt's version – they very much embraced the *Vorstellungsmechanik* and language as externalisation of mental representations. Paul's (1880: 14–18) account essentially turns linguistic forms into a means for synchronising representations between individuals, but rejects consideration of collective consciousness. Given the influential

position of the Neogrammarians at this time, their conception became more or less the default view in mainstream linguistics. It was in this intellectual environment that Wegener, in 1885, presented his alternative conception of language.

p. 113, para. 2–3:
The great synthesis of Bréal's work in this area is his 1897 monograph *Essai de sémantique* (Essay on semantics), although he had already presented key aspects of his theory in prior decades, in particular in lectures that he gave at the Collège de France, where he was professor. The first of these lectures, from 1866, was 'De la forme et de la fonction des mots' (On the form and function of words), and the second, from 1868, *Les Idées latentes du langage* (Latent ideas in language). Bréal's central point in these two lectures is that meaning does not inhere in words themselves, but rather that words are a stimulus to get us thinking along certain lines. Our words do not so much contain meaning as evoke it. In order to engage in a successful exchange, people must constantly adapt the senses of their words, taking into account the assumed intentions of their interlocutors, their shared background knowledge about the world, and the present context in which they are communicating (see Nerlich and Clarke 1996: 243–5).

Bréal's position that words only acquire meaning through use in context may remind us of Wegener's discussion of situations. In fact, one contemporary reviewer of Wegener's *Untersuchungen*, Hermann Ziemer (1886), highlighted the similarities between Wegener's and Bréal's views, as well as those of other scholars, implicitly accusing Wegener of plagiarism. Wegener, for his part, claimed not to have known of Bréal and his work at all. It is, however, unlikely that Wegener was not aware of Bréal's work, given Bréal's prominence at the time. We know Wegener read other texts in which Bréal was cited, and so was exposed to his ideas, even if only at second hand (see Knobloch 1991: xxxv).

pp. 114–15, para. 3–5 / 1:
Around the turn of the twentieth century, hermeneutic principles received new emphasis in the work of the German philosopher Wilhelm Dilthey (1833–1911), who sought to make hermeneutic method, as he understood it, the basis of the *Geisteswissenschaften* (i.e. the humanities), as contrasted with the *Naturwissenschaften* (natural sciences). With the rising prestige of the natural sciences in this period, Dilthey and other like-minded philosophers felt the need to defend the humanities as a valid form of research. This struggle is in many respects a continuation of the mid-century debates surrounding materialism that we examined in Section 4.2, which similarly involved the encroachment of the natural sciences into the domain of spirit and culture.

Dilthey's position was to argue that the humanities have a special hermeneutic method that sets them apart from the natural sciences. While the aim of the natural scientist is to 'explain' (*erklären*) the phenomena of the natural world that they study, the humanities scholar seeks to 'understand' (*verstehen*) the inner experience of human consciousness (see Dilthey 1894: 1314). What exactly Dilthey meant by 'understand' is a matter of controversy, but at least this much is clear: Dilthey believed that to understand in this sense involves reconstructing the state of mind of the people we are studying, which we can only do with some knowledge of the physical and cultural world in which they live (see Beiser 2011: chap. 8).

A similar contrast between *Verstehen* and *Erklären* as the principal methodological difference between the humanities and the natural sciences had already

been set up by the German historian Johann Gustav Droysen (1808–1884) in the 1850s. A champion of historicism, Droysen pushed back against positivist historians who sought to discover 'laws' of history (see Beiser 2011: chap. 7). Dilthey's hermeneutic philosophy became a common point of reference in the philosophy of science from the 1900s onwards, but the debates through which Dilthey progressively developed his views extend back at least to the 1880s (see Dilthey 1883), and it is quite likely Wegener was aware of these. Wegener therefore drew on a number of proximal as well as more distant sources in formulating his ideas about language as action in a specific context.

p. 115, para. 2–4:
Although he advanced his conception of language as action in context as an alternative to mainstream views of the time, Wegener's proposals were not taken as an affront to accepted opinion. In fact, some of his ideas made their way into mainstream theory via Hermann Paul's *Principien der Sprachgeschichte*, the 'Neogrammarian Bible'.

If we look at successive editions of the *Principien*, we see that Paul adopted aspects of Wegener's work. In the second edition, from 1886, one year after the appearance of Wegener's *Untersuchungen*, Paul introduced a distinction between what he called 'usual' (*usuell*) and 'occasional' (*okkasionell*) meaning (see chap. 4 of the 1886 and all subsequent editions). On Paul's (1920 [1880]: 75) understanding, 'usual' meaning is the whole range of representations a member of a language community associates with a word, while the 'occasional' meaning is the specific set of representations a speaker has in mind in uttering a word, and which they expect the listener to also associate with the word. In line with Wegener, Paul points to the role of context in determining occasional meaning (ibid.: 78–81). For Paul, these concepts serve to account for meaning change: the usual meaning of a word can shift if the word is repeatedly deployed with a certain occasional meaning across different speech situations. The frequently occurring occasional meaning will gradually become entrenched, creating a new usual meaning.

However, despite Paul's adoption of Wegener's ideas, he seems to have felt that Wegener's work was only of marginal importance to linguistics proper. In a short review of Wegener's *Untersuchungen*, Paul (1885) commented that Wegener had much to say about the nature of communication, but little about language itself. The implication was perhaps that Wegener's writings had little bearing on the actual business of linguistics, which should be about studying historical changes in linguistic forms (see Knobloch 1991: xxxii). But Wegener did undertake some linguistic analysis, in the area of syntax, employing the two notions of 'logical subject' (or 'exposition') and 'logical predicate'.

Chapter 12

p. 121, para. 3–6:
But Firth was actually an opponent of phonemic theory: he felt that it was wrong to assume there is a single ultimate unit of analysis, such as the phoneme. Instead, the forms we see in languages are best analysed in terms of various distinct systems. The principles of Western alphabetic writing encapsulated in phonemic theory represent just one of many ways the stream of speech can be transcribed and analysed (on phonemic analysis as a theorisation of the alphabet, see Section 9.2). Firth noted:

> We A B C people, as some Chinese have described us, are used to the process of splitting up words into letters, consonants and vowels, and into syllables, and we have attributed to them such several qualities as length, quantity, tone and stress. (Firth 1957: 122)

Phonemic theory's emphasis on 'letters', on dividing the sound stream up into segments, is a poor fit for the phonology of Chinese (cf. Firth 1957: 127; chap. 7). In Chinese, 'tone' – the pitch contour of a syllable – can serve to distinguish one word from another, and is thus a primary phonological feature of the same degree of significance as any segmental phoneme. The traditional phonemic approach that treats the segment as the basic unit of analysis will have difficulty dealing with tone, since tone is a property of the entire syllable and cannot be reduced to the level of individual segments. Tone will have to be retrofitted into the phonological analysis as some sort of 'suprasegmental' feature.

Even the variation in segments captured in phonemic theory by 'allophones' (see Chapter 9) is conditioned by the position of sounds within syllables, words or phrases, and can be profitably analysed as a structural property of these higher-order units (Firth 1957: 123). In this connection, Firth proposed his alternative approach to phonology, 'prosodic analysis', so called because it recognises 'prosodies' – phonological features belonging to larger structures like syllables and words, or to specific positions within those structures – as primary units of analysis alongside 'phonematic' (essentially segmental) elements. Prosodic analysis proceeds by first splitting the stream of speech up into diverse structures with their characteristic prosodies, and then filling in the residual phonematic units that co-occur with those prosodies. It is 'polysystemic': instead of positing a single set of phonemes and rules for a whole language, the analysis consists of several separate prosodic and phonematic systems, each restricted to a particular structure (see further Anderson 2021 [1985]: 243–55).

Chapter 13

pp. 131–2, paragraph over page break:
Each of the three functions reflects one of the three main aspects of human psychology that Bühler identified in his 1927 book *Die Krise der Psychologie*, and which he accused existing schools of psychology of focusing on too narrowly (see Benetka 2023 [1995]: 129–31). The expression of the inner experience of the sender addresses the concerns of Freudian psychoanalysis, as well as *Denkpsychologie* (the school in which Bühler initially worked) and the closely related Gestalt psychology (which we encountered in Section 10.2). The appeal to the receiver, which directs the receiver's behaviour, answers to the interests of the behaviourists, who saw the study of externally observable behaviour as the key to a scientific psychology (we discuss behaviourism in greater detail in Section 16.2). Finally, the representation of things and states of affairs in the world relates to how we co-ordinate reference through our shared culture, a problem within the ambit of 'humanistic psychology' (*geisteswissenschaftliche Psychologie*). Oriented towards hermeneutics (on hermeneutics, see Section 11.2), scholars of this persuasion looked primarily at the relations between the minds of individuals and the cultural worlds in which they are embedded.

pp. 132–3, para. 3 / 1:
Gardiner developed a functional model of language very similar to Firth's and Malinowski's, which is set out definitively in his 1932 book *Theory of Speech and Language*. Interestingly, while Firth and Malinowski arrived at their functional theories through their study of living speech, Gardiner was driven to his theorising through his efforts to decipher texts in Egyptian hieroglyphs, the remnants of a language not only no longer spoken but also no longer well understood.

The fact that Gardiner's interest in linguistic theory came via his research into a dead language does not contradict the claim at the beginning of the previous chapter that it was British linguists' engagement with 'exotic' living languages – in contrast to Continental European scholars' focus on written texts – which led them to address questions of meaning in language. In line with the older philological tradition, Gardiner sought to understand the content of his texts, rather than treating them as sources of evidence for historical changes in linguistic form. While Firth and Malinowski took the perspective of outsiders thrown into a foreign cultural context, Gardiner found himself in the role of a researcher trying to interpret symbols created in a context that has disappeared through the passage of time and must be imaginatively reconstructed with the help of historical clues. And despite his background in dead languages, Gardiner recognised the primacy of living, spoken language: in developing his theoretical arguments, he looked to his native English as a chief source of evidence (see, e.g., Gardiner 1932: 4–5).

pp. 137–8, paragraph over page:
A functional model of language can already be found in the 1929 'Thèses' of the Prague Circle, the Circle's manifesto, which we discussed in Section 10.1. This 1929 model is not very clearly defined, but it does explicitly contrast a 'function of communication', directed to the signified, with a 'poetic function', directed to the sign itself (see Durnovo et al. 1929: 14). The model Jakobson published in 1960 had undergone significant evolution and elaboration since his Prague Circle days. One of the main influences that shaped the evolution of Jakobson's ideas was work in the new field of information theory, which grew out of American telecommunications research during World War II, and which Jakobson came in contact with after his arrival in the United States.

Chapter 14

p. 142, para. 1, l. 3–6:
The approaches to linguistics that emerged in America in this period are generally known as 'American structuralism', a term given its classic historiographic formulation by the linguistic anthropologists and historians of the field Dell Hymes and John Fought.

pp. 143–4, para. 4–6 / 1:
The main institution supporting anthropological research in America of the late nineteenth century was the Bureau of Ethnology, a US government-funded research unit attached to the Smithsonian Institution. The Bureau had been founded in 1879 by John Wesley Powell (1834–1902), a geologist, explorer and soldier – that is, an all-round adventurer-scholar. Under Powell's direction, the Bureau took over existing ethnographic

and linguistic survey work in America and branched out into new research. Much of Boas's early work in the United States was sponsored by the Bureau.

While new professorships in anthropology were established at several American universities in the last decades of the nineteenth century, the first viable graduate programme with a focus on ethnology and linguistics was that set up by Boas at Columbia University in New York in the late 1890s. Boas's programme helped to professionalise the field and produced a number of scholars who not only had an incomparable impact on the further development of anthropology but also became prominent public intellectuals. First among those who specialised in linguistics is Edward Sapir, the second of Hymes and Fought's 'principal figures' in American structuralism. In the next two chapters, we examine in detail some of Sapir's major contributions to linguistics.

Among Boasian ethnographers, we must mention the names of Ruth Benedict (1887–1948) and, above all, Margaret Mead (1901–1978). Benedict is a prime example of the anthropologist as public intellectual, a role well illustrated by her 1946 book *The Chrysanthemum and the Sword*, an ethnography of Japan written during World War II. Benedict's research had been commissioned by the US government, which wanted to understand the enemy. Her resulting report and subsequent book described the patterns of Japanese society with the aim of making the Japanese intelligible to Americans. The book became a key reference for Americans – and even many Japanese – as they embarked on the project of postwar reconstruction.

Benedict was also teacher and mentor, along with Boas, to Margaret Mead. Mead's first book, the 1928 *Coming of Age in Samoa*, was an immediate bestseller. In this book, Mead argued that Samoan teenagers were not subject to the same social pressures as their 'Western' counterparts and, as a result, adolescence in Samoa was not the difficult stage of life that it was in the West. Contributing in particular to the book's notoriety was Mead's controversial – and sensational – claim that Samoan teenagers enjoyed greater freedom in their love lives and so did not experience the repressed sexuality suffered by Western youth. This book launched Mead's lifelong career as a social commentator, in which she deployed insights she claimed to have won through her field research into supposedly 'primitive' cultures to diagnose and suggest remedies for social ills in America.

p. 147, para. 2:
Powell (1887: 614) concluded his response to Boas with the observation that 'the unity of mankind is the greatest induction of anthropology'. The implication of Powell's statement is that Mason's arrangement of the Smithsonian collections was preferable, since it attempted to tell a coherent story about the commonalities between different human groups, by fitting them into a single evolutionary scheme. Boas's approach, by contrast, offered no big picture – it would merely present an unordered selection of materials with no overarching narrative. Here we see that social evolutionists in fact also believed in the unity of mankind: all cultures develop along the same path, so they argued, precisely because all humans' mental faculties and predispositions are essentially the same. But some cultures are further along the path than others (see Koepping 1983: chap. 10; Darnell 1988: 72–5).

Chapter 15

p. 158, last line:
In a 1924 essay, Russell commented: (Russell 1924: 367–8)

Chapter 16

p. 169, para. 2–3:
The process of conditioning not only served the purpose of proving connections between stimulus–reaction pairs, but was also an instrument of regulating behaviour. As we can read in the quotation from Watson above, a key goal of behaviourism was to 'control' behaviour. This goal was part of the ethos of the social sciences in this era, especially in the United States. American society in the late nineteenth and early twentieth centuries was undergoing massive changes, with increasing industrialisation, urbanisation and immigration. In order to master the challenges presented by these changes, professional elites in America embarked on programmes of rational social reform, in a movement that is generally referred to as 'Progressivism'. While Progressives held diverse – and often conflicting – views, a common belief was that, given the right opportunities and guidance, every man, woman and child could acquire the necessary skills and moral virtues required to be a productive, upstanding member of society. As a mainstream political movement, Progressivism is usually considered to have gone into decline after World War I, although Progressive views continued to exercise an influence on American society and political discourse long after the movement's peak.

Social scientists – not least among them psychologists – eagerly aligned themselves with Progressive aspirations. Conditioning was marketed as a technique for efficiently raising children, correcting deviancy, or simply improving the behaviour of the average citizen (see Mills 1998). In a 1926 article in *Harper's Magazine*, a journal with a general middle-class readership, Watson (1926: 728) envisaged a future where behaviourism 'may be able to help the home, the school, the church, society to bring up a socialized but individual human product'.

p. 169, para. 5, l. 3–7:
The first of these, the 1914 *Introduction to the Study of Language*, looks to the writings of Wilhelm Wundt (1832–1920) for its psychological foundations – although at the same time highlights the Neogrammarian critique of Wundtian doctrine (see Bloomfield 1914: vi, 316; on the Neogrammarians' attitude to Wundt, see Section 6.3).

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