

Introduction

'Mechanic Art and Elocutionary Science'

Matter in Motion

In 1810, after nearly ten years lecturing on elocution, orator, poet, and elocutionist, John Thelwall published one of his most substantial treatises on 'the treatment of impediments of speech', *A Letter to Henry Cline*. In the *Letter*, Thelwall describes the conviction, held at the outset of his investigations into speech production, that 'mechanic art and elocutionary science might triumph over every other difficulty'.¹ In combining these two notions, that speech is an 'art' and a 'science', he suggests that elocution is not only a skill but also a system of knowledge founded on theoretical principles. Thelwall goes on to explain that he soon came to disapprove of the 'mechanic art' of crafting oral prosthetics which, he argued, were uncomfortable and inconvenient for the wearer and carried a serious risk of choking. However, the idea that speech might be to some degree 'mechanic' appears throughout his writing, and has as much to do with Thelwall's 'science' of speech as it has to do with its practice.² Moreover, concern with the 'mechanic' and scientific aspects of speech production is a feature not only of Thelwall's writing but also of Romantic-era treatments of speech more broadly.

The term 'mechanic' was heavily loaded in the late eighteenth and early nineteenth centuries and could variously refer to manual work or craft (and those, such as prosthetics makers, who carried it out), machinery, or 'physical properties, agents, forces'.³ What all these senses have in common, however, is a concern with physical movement, whether of the human hands, a constructed machine, or the material world. While 'mechanic' suggests, on one level, a concern with fixed physical laws, its meaning is not so stable. The notion of the 'mechanic' shifts depending on context and audience, and throughout the works discussed in this book, the term invokes each of its connotations, intentionally and unintentionally, variously and simultaneously. Moreover, for a number of Romantic-

era writers and thinkers who came to be associated with a philosophy of materialism, mechanic laws could be used to explain (whether directly or by analogy) a range of phenomena less obviously physical than either body or machine. For these writers, life, mind, imagination, and poetry could all be understood through reference to physical laws of motion.⁴ For example, in his medical treatise, *Zoonomia* (1794–1796), the doctor-poet Erasmus Darwin argues that the 'organs of sense possess a power of motion, and that these motions constitute our ideas'.⁵ Yasmin Solomonescu and Richard Sha have both discussed the ways in which Thelwall, and Romantic-era writers more broadly, conceived the imagination in particular as material, and for Darwin, mind and imagination can be explained using the same system of physical movements which describes the action of limbs or lips.⁶ This idea of the connection or even equivalence between mental phenomena and physical action, the process of thought and the movement of the lips, tongue, larynx, and lungs, appears repeatedly throughout Romantic-era writing on speech and often draws both directly and indirectly on Darwin's physiological and philosophical texts.

The idea that traditionally immaterial aspects of a person, including mental phenomena and life itself, might in fact be ascribable to the physical motion of matter suggests, as many contemporary and modern commentators have argued, a belief in mechanist or materialist philosophies. Although no two writers or thinkers can be said to exactly share a philosophy, eighteenth-century materialism in its most general sense is the theory that the universe is composed of matter and that even intangible aspects of it, such as life or thought, are products of the organisation and/or motion of this matter rather than formed of a separate, immaterial substance. Likewise, the definition of mechanism shifts depending on who is using the term, but can broadly be described as the philosophy that all phenomena, from bodily processes to thoughts or the workings of the extracorporeal universe, can be reduced to automatic physical and chemical processes. The distinction is subtle and in the eighteenth-century concern over either theory's incompatibility with the traditional Christian doctrines of free will and an immaterial and immortal soul led to their conflation in their detractors' minds. Additionally, as John W. Yolton writes:

With knowledge and understanding of the human physiology increasing, the notion of the *mechanism* of the body was becoming familiar. For many, the one definitive safeguard against mechanizing the mind was the assurance that the mind is immaterial. . . . To suggest that thought might be a property of the brain, or to suggest that man is one, not two substances, was

for most people unacceptable not only because of the force of tradition, but also because of the fear of turning man into an automaton.⁷

Yolton demonstrates how, for a philosophically orthodox eighteenth-century audience, a medical approach to human bodies which tried to understand them in terms of the mechanical interplay of material organs or parts was the beginning of a slippery slope towards turning thought into a purely physical or chemical process and thus humans into machines. The atheistic implications of mechanist or materialist philosophy range from the denial of an immaterial soul and free will and consequent undermining of the role of God in human life, to the suggestion, imaginatively realised in Mary Shelley's *Frankenstein*, that a functional, living body could be constructed by a human rather than a divine hand.⁸ Moreover, as heterodox materialist world views were seen to challenge the authority of God, they also came to be associated with political radicalism in their potential to undermine hierarchy altogether.⁹ The concerns surrounding these philosophies and the conflation of a materialist understanding of the body and a mechanisation of the mind also shows just how many strands are involved in the labelling of a writer as materialist. Investigation of the extent to which the body employs mechanical processes, theorisation of the mind as material, contention that the brain is the organ of thought, arguments for humans consisting of one (material) substance and wholesale automatism are all related yet ultimately separable stances which may appear in a given writer's work in virtually any combination.

One of the key ideas which separates late eighteenth-century materialism from broader mechanist philosophy is a theory of active matter or matter in motion, most notably propounded by the chemist and dissenting minister Joseph Priestley.¹⁰ In his 1777 treatise *Disquisitions Relating to Matter and Spirit*, Priestley challenges the notion that the universe and 'human nature' are composed of two separate substances – matter and spirit.¹¹ Arguing against widely held belief that matter is 'inert' and only immaterial spirit is 'possessed of the powers of *perception*, *intelligence*, and *self-motion*', Priestley makes the case for the existence of a single material substance which possesses an inherent capacity for motion and active power, specifically the powers of 'repulsion' or 'resistance' and 'attraction'.¹² Unlike a mechanist view according to which all matter is passive and beholden to physical and chemical forces, Priestley's theory and the philosophies of active matter which followed it suggested that matter could move on its own. Far from tempering the radical political implications of mechanism as a democratising force, materialist theories of matter in

motion cast politically suggestive concepts of resistance, autonomy, and self-governance as essential and inevitable laws of nature. Similarly, materialism allows for an understanding of the world in which ideas, imagination, poetry, and speech are not merely *moved* by mechanic 'physical properties, agents, forces', but have physical agency and power of their own.¹³ As movement is, in short, action, a materialist approach to mechanics can turn that which is seemingly intangible or insubstantial – imagination, poetry, utterance – into physical forces which move and move others with all the power of a body or a machine. Poetry, as Percy Bysshe Shelley concludes in *A Defence of Poetry*, 'moves'.¹⁴

This book focuses on three Romantic-era writers in particular – Erasmus Darwin, John Thelwall, and Percy Bysshe Shelley – each of whom engage with the mechanics of speech production in their work and, in doing so, present utterance as a form of motion – of bodies, of machines, and of matter itself. From an artificial speaking machine built by the doctor and poet Erasmus Darwin, to Thelwall's theory of elocution, founded on the 'law of all reiterated or progressive motion, organic or mechanical', to Shelley's poetry, voiced by both the 'heart and brain' and the 'inorganic voice' of The Earth, each of these writers demonstrates a sustained interest in the physical operation of speech.¹⁵ In adding my voice (for want of a better idiom) to scholarship which calls for a greater appreciation of the place of speech in Romantic culture, this book considers the pervasive concern with speech in the lectures, poetry, poetics, medical texts, political pamphlets, and letters of Darwin, Thelwall, and Shelley.¹⁶ Considering how pervasive the metaphor of the 'poetic voice' is within literary studies, it can be easy to take the relationship between voice or speech and writing for granted. Yet for these authors, the apparent correspondence of poetry and speech is deliberately and self-consciously founded on their understandings of the mechanics of speech production. Ideas about spoken utterance and the means and conditions of its production are equally central to Darwin's theories of body and mind in his medical treatise, *Zoonomia*, and to his vision of scientific and societal progress in his 'poem, with philosophical notes', *The Temple of Nature*, while for Thelwall, principles of poetic rhythm have the power to:

at the same time, loose the tongue of the stammerer, and enable the literary student to command, and the critic to comprehend, with certainty, the genuine sources of grace and melliflence.¹⁷

Similar ideas likewise underscore and valorise Shelley's attempts to define the work of the poet in *A Defence of Poetry* and to imagine an 'eloquent,

oracular' revolution in *The Mask of Anarchy*. For all these writers, then, ideas about speech are not limited to one type of writing or treated from one perspective but proliferate through their entire bodies of work.¹⁸ And over the course of the following chapters, I examine the wider implications of this focus on speech to show how discussions of speech production become a medium through which each author explores politically and philosophically unorthodox ideas.

While Darwin, Thelwall, and Shelley certainly engage with materialist philosophy in their writing on speech, it is important not to play down the ambivalence and contradictions involved in each writer's deployment of such ideas. All three writers, variously at different points, avow and deny the materialist implications of their writing on the human body, life, and mind. For example, although Darwin proposes in the opening chapter of *Zoonomia* that 'motions of matter' constitute 'all the motions of the animal and vegetable world; as well those of the vessels, which circulate their juices, and of the muscles, which perform their locomotion, as those of the organs of sense, which constitute their ideas', he elsewhere states that 'Mind is not Matter'.¹⁹ Similarly, while Thelwall asserts that his overall conception of life is founded on 'the simple principles of materialism' in his 1793 lecture, *An Essay Towards a Definition of Animal Vitality*, by 1813 he is keen to emphasise that materialism has 'nothing to do' with the investigations of body and mind which he conducts as part of his elocutionary work.²⁰ Shelley too appears to recant an earlier materialist stance in his later writing, stating that despite being 'early conducted' to it, 'materialism is a seducing system to young and superficial minds'.²¹ Consequently, modern criticism is largely fraught over the issue of whether Darwin, Thelwall, or Shelley can accurately be described as a materialist.²² Yet the frequency with which accusations of materialism were used in broader contemporary critiques of their writing and thought is significant. To be considered a supporter of materialism, and by association atheism and republicanism, could have dire consequences, ranging from government surveillance and exclusion from institutions to mob violence, imprisonment, and execution. In 1791, Shelley's 1811 treatise on *The Necessity of Atheism* instigated his expulsion from the University of Oxford, while Priestley's laboratory was destroyed by rioters who targeted him for his religious and political views, forcing him to flee to America, and most seriously of all, the political and philosophical views which Thelwall expressed in his writing and lectures resulted in his 1794 arrest for treason which, had he not been acquitted, would have carried a sentence of execution. It is not surprising then that explicit references to materialism

in Darwin's, Shelley's, and Thelwall's work, particularly their later writings, are often couched in defensive language. Paying closer attention to such uses of language, including moments of ambiguity, evasiveness, or obfuscation, however, can help us more precisely pinpoint their philosophical positions.

Ultimately, though, and despite the caginess of their language, these writers use approaches to speech which are both physiological and materialist to suggest and support radical political views.

Materialism encourages an embodied view of speech and this in turn enables Darwin, Thelwall, and Shelley to present spoken utterance as a form of action which is both imaginative and performative. Their attention to the material speaking body allows them to position speech, and by association poetry not merely as movement but as autonomous, unstoppable, and effective action. By investigating these writers' material treatments of speech, we can therefore come to more fully understand their sustained references to and pronounced faith in the use of the voice as a form of political action.

The Speaking Body

While of the authors discussed at length in this book, only Thelwall would describe his work on speech as elocutionary, the history of the study of elocution lays important foundations for all three. The teaching of elocution, or how to speak, developed rapidly in the first half of the eighteenth century, becoming immensely popular by the mid-1700s.²³ By far the most influential of these new elocutionists was Thomas Sheridan, whose lectures on elocution were immensely popular during the 1760s.²⁴ For Sheridan, the term 'elocution' did not just refer to the voice but also to the role of the whole body in oral communication. 'Elocution', he writes in his printed 1762 *A Course of Lectures on Elocution*, 'is just and graceful management of the voice, countenance, and gesture in speaking'.²⁵ In the later decades of the century, this idea that aesthetically pleasing and, as Sheridan writes, 'persuasive, or forcible elocution' relied on the combined action of body and voice was taken up by the elocutionist John Walker.²⁶ On the title page of the 1799 edition of his 1781 *Elements of Elocution*, for example, Walker advertises 'a complete system of the passions, showing how they affect the countenance, tone of voice, and gesture of the body'.²⁷ By the nineteenth century, then, elocution had long suggested more than a concern with the voice, but rather a system of speaking which employed the entire body.

It is against this backdrop, a culture of what Lucy Newlyn terms ‘bodily eloquence’, that Darwin first began his researches into the speaking body – a topic that would remain a recurring theme in his writing, culminating in the ‘Analysis of Articulate Sounds’ which forms the concluding entry to his posthumous 1803 poem *The Temple of Nature*’s appended notes.²⁸ While Darwin references the role of ‘gesture’ in speech in the main text of *The Temple of Nature*, considering how it affords ‘the enthusiast orator . . . Force to the feeble eloquence of words’, his notes on ‘Articulate Sounds’ are less concerned with how the bodily motion might enhance the style, grace, or persuasiveness of speech, than they are with deducing the role that the movement of the body plays in producing speech sounds themselves, showing ‘by what parts of the organs of speech they are modulated and articulated’.²⁹ Darwin suggests that bodily action is not just a facet of an utterance’s effect, but is also essential to understanding how speech is produced in the first place. For Darwin, all speech is body language. Attention to the body is also at the heart of Thelwall’s elocutionary writing. Thelwall’s ‘science and practice of elocution’ is both informed by and is developed in opposition to the culture of elocution teaching exemplified by Sheridan and Walker.³⁰ In *A Letter to Henry Cline*, which acts as a sort of manifesto for what he hopes he ‘may venture to call the New Profession’ of elocutionary science and practice, he is keen to emphasise how his approach to elocution differs from those which came before.³¹ Pointedly addressed to the renowned surgeon and medical lecturer Henry Cline, Thelwall’s text offers the understanding of physiology and anatomy as a groundbreaking addition to the study of elocution as he draws attention to ‘the importance of that connection [he] had discovered, between Physiological and Elocutionary Science’.³² In this respect, Thelwall clearly, and in places explicitly, builds on the work of Darwin – not only his work on speech sounds in *The Temple of Nature* but also his anatomical and philosophical ideas more broadly – as he makes the case for the importance of studying the human body.

While Darwin stops short of considering what the anatomy of speech might mean for ideas of elocution or rhetorical power, Thelwall makes the case that these two ‘sciences’ are intimately connected, through a concept which he terms ‘rhythmus’. Inspired, in part by the work of another mid eighteenth-century elocutionist, Joshua Steele, who suggested that speech followed the same system of rhythm and cadence as music, Thelwall’s theory of *rhythmus* is based on the idea that all speech should follow a rhythm of thesis and arsis or heavy and light weight.³³ However, where Steele’s work ascribed the pattern of thesis and arsis to ‘voluntary taste and

harmonic invention', Thelwall sought to prove that these same rhythms were a matter of physiology, and indeed physics.³⁴ For Thelwall, rhythmus is a 'universal principle of action and re-action' which operates on both the human body and the inanimate world around it and this theory allows him to unite the idea of the speaking body with concepts of rhythm and music, leading him to a concept of poetics that treats speech and poetry as essential to one another.³⁵ Although Shelley does not explicitly engage with these debates, questions of what role the body has to play in both poetic and spoken utterance run through many of his works, from his assertion that poetry is the 'uniform and harmonious recurrence of sound', to the refrain of *The Mask of Anarchy* which rings 'through each heart and brain'.³⁶ Shelley follows Darwin and Thelwall in his fascination with the rhythm and the physiology of speech, and this plays out in the poetics of *A Defence of Poetry* and his treatment of the speaking voice in the poems themselves.

Scholarship on eighteenth- and nineteenth-century elocution has mostly been divided into works which emphasise this central role that the body has traditionally played in elocutionary writing and works that present attention to anatomy as a later innovation which arises at the turn of the century, driven predominantly by Thelwall's writing. Newlyn, for example, charts the sustained interest in the application of 'bodily eloquence' to public speaking and reading aloud from Sheridan to Thelwall, while Paul Goring notes a similar fascination in the period with the 'eloquence of the body'.³⁷ On the other hand, 'the body' and 'anatomy' are not necessarily synonymous, and scholars, including Denyse Rockey and, more recently, Judith Thompson, have argued that Thelwall 'could claim novelty ... for drawing attention to the relevance of physiology, a subject hitherto neglected by elocutionists'.³⁸ What should now be clear, then, is that there is a significant distinction between the earlier elocutionary culture, which emphasises the importance of body language (i.e. the deliberate movement of the body involved in gesture) and a focus on anatomy and physiology, and the physical production of speech, an innovation which underscores Darwin, Thelwall, and Shelley's writing.

Fundamental to their innovations in the study of speech is the way they combine, engage with, and react to the previously unconnected traditions of materialist philosophy and elocution teaching. As these writers repeatedly seek to understand the human in relation to the universe around it, their understanding of the body's role in speech forms part of their wider political and philosophical understandings of the world. It is again Priestley who draws one of the first explicit links between elocution and

materialist philosophy in his 1777 *A Course of Lectures on Oratory and Criticism*. In the preface to the book, Priestley explains that the lectures have been published:

with a view to the illustration of the doctrine of the *association of ideas*, to which there is a constant reference through the whole work (in order to explain facts relating to the influence of Oratory, and the striking effect of Excellencies in Composition, upon the genuine principles of human nature) in consequence of having late endeavoured to draw some degree of attention to those principles, as advanced by Dr Hartley.³⁹

Two years previously, Priestley had published a reworking of philosopher David Hartley's theories on human nature.⁴⁰ Presenting an avowedly mechanist model of mind, Hartley's 1749 *Observations on Man* theorises that physical vibrations, strengthened by repetition or habit, provide the medium through which humans associate together various sensations and ideas.⁴¹ However, in his version of Hartley's 'association of ideas', Priestley chooses to omit any reference to an external mechanic force of vibration. Drawing instead on his own materialist conviction that matter possesses active powers of its own, he focuses instead on a model of association in which physical sensation influences or stimulates, but does not directly control, the movements of the mind that constitute thought. It is this materialist understanding of the human body and the extracorporeal world around it which, Priestley argues in the preface to his *Lectures on Oratory*, constitutes the 'genuine principles of human nature' and underpins his theory of the power of oratory. Priestley's materialism transforms descriptions of speech's 'influence' and 'striking effect' from metaphorical to literal, as it allows him to present speech as a movement of mind and mouth, body and sense, which has the power to physically impact or 'strike' the listener. Moreover, as Priestley explicitly publishes his lectures 'with a view to the illustration of the doctrine of the *association of ideas*', he presents studies of speech as uniquely well suited to the exposition of materialist philosophy. The mechanics of speech are just as integral to understanding materialism as materialist theory is to understanding the operation of effective oratory.

Priestley also highlights another central feature of many of the materialist understandings of speech discussed throughout this book: the capacity of speech to communicate in ways that go beyond the linguistic content of an utterance. He notes:

Speech consists of sounds divided by a great variety of *intervals*. All ideas, therefore, either of real sounds, or of intervals, and consequently all ideas

analogous to those of sounds and intervals, admit of a natural expression by words: that is, the words may not be arbitrary signs of such ideas, but bear a real *resemblance* to them; so that a person, without being previously acquainted with the meaning of the words, might be made sensible of it, by the pronunciation only: or, at least, if he could not perceive the *particular ideas* they denoted without an explanation, he might be *affected* by the sound of the words only, in a manner similar to what he would have been by the sentiment.⁴²

For Priestley (and, as we will see, Darwin, Thelwall, and Shelley), vocalisations and the patterns of sound and silence that make up the rhythms of speech can convey meaning through the physical, 'sensible' effect of sound and rhythm alone, regardless of any understanding of linguistic content. There has been a marked interest in recent years in the way sound, distinct from voice, operates in literature and in the role of the voice, distinct from language, particularly the musical or singing voice in Romantic writing.⁴³ Yet, as Priestley suggests, speech itself can carry communicative power that is not linguistic, and vocal utterance can bypass the conscious understanding to 'affect' the listener in ways that have as much to do with the body as they do the mind. As Darwin, Thelwall, and Shelley each engage, explicitly or implicitly, with Priestley's theory of matter in motion in their writing on speech, they similarly present a materialist model of utterance in which speech can be understood as a physical action with physical effects. Material spoken language can 'shake', 'agitate', and 'move' bodies, buildings and embodied ideas and emotions – 'heart[s] and brain[s]'.⁴⁴ Furthermore, materialism allows for an understanding of speech which is both, seemingly paradoxically, the result of inevitable natural laws and individual active power – a contradiction that the following chapters aim to unravel.

Extending the already pro-democratic and republican implications of materialist and mechanist philosophy, a materialist approach to spoken language which suggests that speech is a physical force that can materially alter the world, yet is not subject to the control of any external higher power including, as we will go on to see, the consciousness or will of the speaker, has decidedly political resonances. Jon Mee and Mary Fairclough have highlighted two such models of unconscious and non-linguistic communication – enthusiasm and embodied sympathy, respectively – which underpin ideas about political oratory in the period and were often considered to suggest and incite 'impulsive' or 'instinctive' transmission and action.⁴⁵ The communicative power of speech itself acts and moves in ways beyond the conscious understanding of either speaker or listener, and

is likewise politicised in the period. For the writers considered here, the human voice and its mechanics are central to their discussions of political oratory and freedom of speech. It is no coincidence that the period covered in this book includes two major flashpoints in the history of radical oratory and its suppression: the 1794 trials of a number of London Corresponding Society members, including Thelwall, and the subsequent passing of the Treasonable Practices Act and the Seditious Meetings Act or 'Gagging Acts' which extended the legal definition of treason and proscribed both meetings of over fifty people and lectures on political subjects; and the 1819 'Peterloo Massacre' of peaceful protestors gathered at St. Peter's Field in Manchester to call for reform and listen to radical orator, Henry Hunt. John Bugg has explored the way in which the political landscape in Britain after 1795 led to a culture in which there was 'as much silence as there is speech'.⁴⁶ Despite the increasingly oppressive and stifling rules over what could and could not be said in a public forum, for Darwin, Thelwall, and Shelley, speech remained a consistently powerful political tool for the cause of radical reform. And it is a materialist understanding of the speaking body that underpins their convictions that spoken utterance can have profound and potentially world-changing physical effects.

While the events of 1819 motivated Shelley's most well-known poem on political utterance, *The Mask of Anarchy*, a belief in the political power of speech can also be seen much earlier in his writing. In a passage from his 1811 *Poetical Essay on the Existing State of Things*, discussing the reformist efforts of politician Francis Burdett, Shelley describes how:

A powerful hand unrolls the guilt-stain'd veil
A powerful voice floats on the tainted gale,
Rising corruption's error from beneath,
A shape of glory checks the course of death;
It spreads its shield o'er freedom's prostrate form.⁴⁷

Here, Shelley places a physicalised model of speech in a political context, drawing an equivalence between voice and hand in terms of their capacity for force and action. Oratory here has the power to expose and overturn government corruption through a metaphor of physical movement and such instances of speech as political, and specifically radical, action recur throughout the texts discussed in this book. As the physical and physiological act of speech as a form of communication, distinct from language, is politicised in the period, a materialist understanding of speech as an active physical power informs ideas of agency and authority, instinct and impulse, autonomy and control.

Art and Science

Darwin, Thelwall, and Shelley all had some degree of medical training, from a formal medical degree in the case of Darwin, to Thelwall's membership of the Physical Society and frequent attendance of medical lectures at Guy's and St Thomas's Hospitals, to Shelley's early forays in learning surgery.⁴⁸ The influence of their medical study is ever-present in their writing on embodied speech, whether it is political oratory or poetic utterance. Yet in incorporating the fields of physiology and anatomy into those of poetry and oratory, they were not merely combining types of knowledge but blending knowledge-based fields of study with traditionally non-theoretical practices, including medicine and elocution. The attitude of each of these writers to the human body is consequently far more nuanced than what could be described as a strictly medical approach, as they engage with concepts of life sciences and theoretical physiology which were considered to be outside the scope of medical practice in the period.

In the introduction to his 1799 text *Contributions to Physical and Medical Knowledge*, Thomas Beddoes, a physician and friend of Darwin, writes:

The science of human nature is altogether incapable of division into independent branches. Books may profess to treat separately the rules of conduct, of the mental faculties and the personal condition. But the moralist and the metaphysician will each to a certain point encroach upon the province of the physiologist.⁴⁹

Beddoes's introduction places the physical body at the centre of all studies of humanity, from human behaviour and morality to philosophy and the mind, as he asserts that none of these fields can be properly understood 'without reference to the body'.⁵⁰ Yet, as the aforementioned passage demonstrates, such emphasis on the role of physiology in the study of traditionally abstract concepts does not necessarily reduce everything to a matter of medicine. 'The moralist and the metaphysician' may 'encroach' upon the field of medicine, but that does not mean that their work is that of a physician. Rather, as Beddoes suggests, a fundamentally physiological understanding of humanity will challenge the entire notion of the 'division' of knowledge. However, Beddoes's approach to an indivisible 'science of human nature' built upon physiological foundations was not a typical point of view. As several studies have noted, his aim to democratise knowledge by arguing against its compartmentalisation into specialised

fields was considered, both by his critics and Beddoes himself, to be an extension of his radical democratic politics.⁵¹

And while Beddoes was not conventional in his treatment of human nature, Darwin, Shelley, and Thelwall take a similar approach to blending fields of enquiry in their writing on the mechanics of speech. Furthermore, these writers deal with both normative and non-normative embodiments and ways of speaking and do not always pathologise physical, mental, and vocal difference. Darwin, for example, discusses speech impediments in his educational, as well as his medical, texts, while Thelwall emphasises the 'Impotency of mere medical treatment of Impediments'.⁵² Recent scholarship in disability studies, including the work of Emily Stanback, Michael Bradshaw, and Essaka Joshua, has emphasised how theory which understands disability according to a 'social' rather than a 'medical model' can enhance our reading of the body in Romantic-era texts.⁵³ And while it is anachronistic to suggest that Darwin, Thelwall, or Shelley might have conceived of disability in this way, modern disability theory can provide a useful lens through which to consider the ways that their texts present speech and speechlessness not as a matter for medical practice alone, but as part of a more expansive theory of how the speaking body interacts with the external world, both physical and social.

It is important here to acknowledge the extent to which the division of knowledge and the boundaries between ways of writing and thinking in the years around 1800 differed from the ways in which we now conceive them. Medicine, for example, was not yet firmly considered a science, but was often rather seen as a practice, separate from the theoretical developments which characterised other fields of intellectual study.⁵⁴ Similarly, as Jon Klancher has argued, 'mechanic art' (broadly defined as a range of 'useful', 'mechanical', or 'artisanal' practices), although treated together with 'elocutionary science' in Thelwall's *Letter to Henry Cline*, was increasingly being seen as distinct from scientific knowledge-making in the early nineteenth century.⁵⁵ Priestley draws attention to the perceived separation of 'mechanic art and elocutionary science' when he argues the work of linguists and elocutionists could be improved by greater appreciation that 'the art of language [is] founded upon science; and it is a matter both of curiosity and usefulness to enquire into natural powers of those sounds and characters which are instruments of it'.⁵⁶ Here Priestley positions studies of speech as both art and science, a matter of practical 'usefulness' and theoretical 'curiosity'. Practices of oratory and elocution should, for Priestley, be concerned not only with methods and effects or even theories of language, but with the 'natural powers' or physical laws of speech

sounds. What's more, he draws a direct equivalence between the current state of speech studies and that of medicine. He writes:

Thus Medicine is the art of curing diseases, and though the methods of cure, in most particular cases, might be found out by chance, and many tolerably successful practitioners never trouble themselves about the theory of Physic, yet cures certainly depend upon the nature of the human body and of the medicines applied to it: since their mutual action, with the beneficial consequences of it, must have been agreeable to the usual course of nature: it is worthy the attention of the professors of that art to consider it a science, to trace out the natural causes of the disorders of the human body. . . . In like manner is the *art of language* founded upon science.⁵⁷

Studies of the body at large also, Priestley suggests, need to move beyond a focus on practical effect to incorporate investigations of theoretical cause.

Approaches to physiology that treated it from a philosophical perspective such as those of Priestley, Beddoes, and, as we will see, Darwin and Thelwall were therefore innovative in a way that it is now easy to overlook. Many scholars, including Klancher, Catherine Packham, and Michelle Faubert, have observed that the lines between what we would now call 'disciplines' were beginning to 'solidify' (in Faubert's words) at the beginning of the nineteenth century, particularly through processes of institutionalisation and professionalisation.⁵⁸ However, we should be wary of placing too much emphasis on 1800 as a watershed moment in the formation of disciplinary thought.⁵⁹ As Klancher makes clear, the stratification of disciplines occurred 'unevenly'.⁶⁰ But while the 'uneven' process of disciplinary formation makes it reductive to divide the period between the 1770s and the 1820s into predisciplinary and disciplinary eras, work that drew on polymathic, or what we might now term interdisciplinary, methods and epistemologies gained new resonances from the 1790s onwards. Just as Beddoes's science came to be seen as emblematic of his radical politics in the wake of the French Revolution, so too did the materialist writing of Darwin, Thelwall, and Shelley, which sought to blend art and science, knowledge and practice. And just as they attempted to exploit the ambiguities of philosophical language to mask the materialism and political radicalism of their writing, they engage with linguistic and semantic issues, including the instability of philosophical terminology, figurative language, and discipline-related questions of style to blur the boundaries between different modes of enquiry, different ways of thinking and writing.

Darwin, Thelwall, and Shelley's work on speech is distinctive not in its focus on physiology alone, but in the way it incorporates investigations of

the speaking body with science, metaphysics, and poetry and through the way that this interdisciplinary approach supports and is supported by their materialist philosophies and political aims. Ultimately their approach to embodied utterance offers a way of understanding vocally figured poetry as something with physical and social effects and demonstrates how and why these thinkers and writers, immersed as they were in the worlds of politics, medicine, and science, maintained a belief in poetic expression as a progressive force for change. Combining each of these fields in a way that goes beyond observing the influence of one area of study on another, the writers at the centre of this book question the extent to which different theories and practices, ways of thinking and writing, could be considered distinct at all.

Mechanics, Physiology, Poetry

Discussions of how speech informs and is informed by mechanics, physiology, and poetry run throughout this book, and while my chapters bring each of these concepts into focus in turn, each chapter is inevitably about all three. Alongside examining many of the key ideas and debates concerning materialism which influence the philosophy of all three authors, Chapter 1 uses the case study of Darwin's speaking machine to demonstrate how such projects on the mechanics of speech were both new and controversial in the period in their potential to undermine the religious, political, and philosophical status quo. In Chapter 2, I move to explore Thelwall's early political and post-1800 elocutionary work alongside new archival research into unpublished later poetry from his 'Derby manuscript' to demonstrate how he variously engages with, exploits, and attempts to avoid these heterodox implications of materially figured speech, yet ultimately relies on materialist physiology to support his lifelong conviction that speech and its effects should not and cannot be suppressed. Chapter 3 presents a reappraisal of Shelley's poetry of speech which likewise draws on a Darwinian materialist understanding of the body and can be read alongside Thelwall's theory of rhythmus in its figuring of speech as unstoppable action. Finally, I conclude with a brief reading of Mary Shelley's *Frankenstein*, suggesting that Shelley draws on Darwin's, Thelwall's, and Percy Shelley's depictions of materialist, active speech in the novel's portrayal of speech production. Through this reading of Shelley's novel, I show how the models of speech discussed in this book operate beyond the work of my three central writers, and beyond poetic and political texts. Together, these chapters make the case for a theory of

spoken and poetic utterance, traceable from the physiological and philosophical writing of Darwin to the oratory and poetry of Thelwall and Shelley, which attends not only to style and substance but also to the bodily conditions of its production, and attests to the fundamental, material, and reciprocal connection between the speaking body and the physical, social, and political worlds around it.