CHAPTER 1

Concepts and Contexts

The Graphosphere

To begin with the jargon: the word 'graphosphere' in the title of this book is a near-neologism.[1] It needs explaining. For present purposes the graphosphere is the space of the visible word. The graphosphere, or *a* graphosphere, is formed wherever words are encoded, recorded, stored, disseminated and displayed through visible signs. The study of the graphosphere represents a holistic, non-hierarchical approach to the production, functions and dynamics of visible words in their environments. The decision to limit the graphosphere to words, rather than to include all forms of graphic representation, is pragmatic rather than principled. One can imagine a legitimately wider notion of the graphosphere that encompasses all graphic depiction, of which words are a subset. Not that the study of words excludes pictures or design. On the contrary, they will figure prominently; but only when they also relate to the space of visible words.

The purpose of using a near-neologism is not to promote an esoteric term for its own sake, or to expound a general theory of the visible word, or to stake a claim to a putatively nascent academic discipline. The justification lies in the extent to which the notion of the graphosphere can be useful in informing an approach to some practical questions of cultural history.[2] The validity derives from demonstration, not from assertion. Nevertheless some introductory framing is necessary, both with regard to the meanings, boundaries and implications of the study of the graphosphere as here understood, and with regard to how the 'graphospheric' approach relates to other disciplines and conventions applied to cultures of visible words.

Among the many ways of conceptualising the graphosphere, four should be highlighted in particular. In the first place, the graphosphere can be imagined as a whole, as a physical entity or system with properties such as

shape, borders, degrees of density and the like. Secondly, the graphosphere has to be analysed in terms of its specific components, the modes and materials and technologies of the visible words from which a graphosphere derives its existence. A third set of questions shifts attention from the formal to the functional: what are the social or political or cultural roles and implications of the particular components in the graphosphere and their configurations? Fourth come the subjective and even individual questions: what do graphospheric phenomena mean not just for those who produce them but for those who experience them or engage with them? And then there is time. Graphospheres emerge, graphospheres change, as do their components and their functions, as do perceptions and experiences of them. These four distinct but complementary aspects of the graphosphere – in themselves, in combination, and over time – help bring into focus its character in a given society and its variables in comparisons across societies. Some prefatory remarks should be made about each of them.

With regard to their overall physical shapes and textures, graphospheres can be mapped. They have external boundaries and internal zones, contours and landmarks. The external boundaries divide spaces with visible words from spaces with no visible words. Internal boundaries, and the zones that they delineate, can be marked by a variety of criteria. One can differentiate, for example, according to the types of space, such as the public and the private, or the interior and the exterior, or the urban and the rural, or spaces of routine work as opposed to spaces of periodic ritual or ceremony, and so on. Alternatively, zones on the graphospheric map may be distinguished from one another according to the density of verbal presence, shaded to indicate how they compare on a scale of relative saturation or sparseness. Or the map could be coloured according to the predominance or proportions of particular technologies or functions of verbal production, display or consumption. Or, applying a different set of criteria, one could map graphospheres primarily in relation to social or cultural landscapes, rather than primarily in relation to physical geography.

Whatever the cartographic principles, the maps will be dynamic. Over time the boundaries shift and the zones mutate. In general one would probably expect graphospheres to grow, and in general they do; but not always, and not consistently. Apart from macro-historical shifts in the locus and focus of civilisations, states or cycles of prosperity, there are more nuanced variables in, for example, taste, etiquette, custom or regulation, or in local social structures or market conditions.

As in cartography, so in graphospheric conceptualisation, one can choose the level of magnification, and hence the degree of amalgamation or separation, or of singularity or plurality: that is, the extent to which zones and fluctuations are represented as elements of a larger system or as their own local or temporary systems. Graphospheres emerge and develop independently of one another, and within each of them local graphospheres may form.

The larger the scale of the map, the more clearly it brings into view the second set of features: no longer the general shapes but the constituent elements, the physical objects and types of object with visible words, whose presence creates a graphosphere. For introductory purposes it makes sense to start with the larger picture, but the real study of the graphosphere begins with real objects. Before the age of electronic storage the most capacious repositories and potential displays of words tended to be sheets of absorbent materials that can retain signs traced in ink: papyrus, palm leaf, parchment, paper. However, the range of materials and techniques is huge. Visible words have been created in stone, in wood or bark, in ceramics from clay tablets to porcelain, in metals, glass, textiles, plaster, wax, even on the living body. They have been painted and drawn, scratched, chiselled and carved, moulded and cast, stamped and embossed, sewn, seared with heat or acid. The range and distribution of materials and techniques varies from time to time, from place to place, from society to society. Some modes of forming visible words occupy their own discrete zones of the graphosphere, others come into contact with each other, compete, advance, retreat, mingle, interact, form hybrids. Their existence and coexistence may be to varying degrees stable or unstable. Such shifts and drifts and swirls are part of the graphospheric ecology. Clearly the individual components have to be studied in themselves, but in a graphospheric perspective they are also viewed in their systemic connections. The graphospheric approach – holistic and non-hierarchical – must therefore be as inclusive as the evidence permits. For historians of the ancient world, this is obvious, normal, habitual. When written sources are comparatively scarce, all that survive are reckoned valuable. As the graphosphere diversifies and thickens, or as conditions for survival improve, so historians tend to become more selective. Some forms of visible words are privileged because they are regarded as especially significant as cultural artefacts or as historical sources, while objects reckoned routine or ephemeral can tend to be ignored. For exploration of the graphosphere as such, selectivity is in principle unacceptable, despite the fact that it is in practice unavoidable.

Inclusiveness, in a survey of a graphosphere's components, extends to their origins (i.e. whether locally made or imported), to the signs by which words are represented (i.e. the range of alphabetic or ideogrammatic conventions), and to the sounds which those signs are supposed to encode (i.e. the languages). With regard to origins: on the one hand, the objects in the graphosphere are products, and their modes and conditions of production are relevant; on the other hand, they are constituents of a graphosphere by virtue of their presence, not by virtue of their provenance. Thus the history of the formation of a local graphosphere is not just the history of the local production and distribution of the types of object found within it. In the formation of a graphosphere, import is a form of production. Variations in the origins of objects with visible words, and of their scripts and languages, may or may not have semantic resonance in a given graphospheric context.

The third aspect is function: social, political, cultural, economic, aesthetic. The first two sets of questions are still rooted in the physical. They involve synchronic and diachronic mapping of the graphosphere's overall shape and of the components, features, contours and variations in its internal terrain. Introduce the question of functions, and the focus switches from observation to explanation and hence (to a greater extent) to speculation. What accounts for the particular way in which a graphosphere emerges and mutates in a given society? What affects or determines the changing balances and imbalances in the production and uses of its components? What accounts for the particular patterns of ecological success and failure, the patterns of adaptation and accommodation? And how do we explain differences, both small and large, *between* graphospheric ecologies?

Still further along the path from the observable to the speculative, the fourth set of questions relates to meaning: to perceptions of the graphosphere by those who encounter it, move within it, experience it, engage with it. In a broad sense this could be reduced to a question of how graphospheres are read; but only in a very broad sense. Reading in its narrow and most habitual sense, which suggests the application of literate skills to re-encode graphic signs as words, is merely one among many forms of engagement with the graphosphere. Clearly there must be *some* correlation between the emergence and growth of graphospheres and the acquisition and spread of literacy, but visible words are not just signs to be deciphered verbally by the literate. In the first place, universal or near-universal personal literacy, whether as a fact or as an aspiration, is a feature of modernity, when illiteracy can be economically disabling and socially

stigmatised. In many pre-modern societies the idea of mass personal literacy would have seemed odd and unnecessary. The visual encoding and decoding of words was a job for the specialists. For the rest, access to the uses of the sign was available orally, through dictation and listening. Secondly, the semantics of objects with visible words are not purely verbal. They can mean more than they say, or more than they mean to say. Or, to invoke another of the lexical extensions favoured in cultural history, graphospheres are – and are constituted from – cultural texts, not just verbal texts.

Such, in skeletal outline, are some of the basic aspects of what is here implied by the word 'graphosphere'. A graphosphere is a thing, not a theory. However, to identify and focus on the graphosphere does imply a particular kind of approach to the study of visible words. What makes a graphospheric approach particular? How does it relate to other ways of looking at equivalent objects and their implications? I do not claim that the graphospheric approach is a radical innovation. No element of it is in itself new. It draws on many traditional disciplines and overlaps with several existing conceptual frameworks.

At the granular level, with regard to its components, the study of the graphosphere is the study of what are sometimes designated *material texts*. The 'material text' approach grew out of, or outgrew, what used to be (and often still is) called book history.[3] Book history is likewise concerned with real objects rather than with sets of words irrespective of their forms of embodiment. Moreover, book history as a field of study has come to include more than just books.[4] The label 'material texts' does away with the restrictive connotations of linkage to a particular form of object. The notion of the material text is appropriate to the study of the graphosphere since it is similarly inclusive and non-hierarchical. However, the notion of material texts is more open than the notion of the graphosphere. It is about things, not necessarily about spaces or systems or interconnections. It opens paths to the unrestricted study of all manner of objects. Naturally, material texts can be, should be and often are analysed contextually, but the label does not in itself imply an approach which is either spatial or holistic. Graphospheres are formed from material texts, but the study of material texts does not have to involve consideration of graphospheres. One could therefore say that a graphospheric approach is merely one way of thinking about material texts.

In its more systemic and dynamic aspects the study of the graphosphere has obvious affinities with the study of *information technologies*: their functions, their interrelations, the social and cultural implications of

innovation and change. Here, too, there is a choice of narrower or broader definitions. In modern popular lexicographical sources the phrase 'information technology' tends to be defined specifically, and often exclusively, with reference to computers: 'the study or use of systems (especially computers and telecommunications) for storing, retrieving and sending information'; 'the technology involving the development, maintenance and use of computer systems, software and networks for the processing and distribution of data'; 'the application of computers and telecommunications equipment to store, retrieve, transmit and manipulate data'.[5] The modern age is indeed distinctive in the rapidity with which information technologies develop and mutate, in the global range of their availability and accessibility, in the extent to which they put production and dissemination into the hands (literally) of every user and, partly in consequence, in the extent to which such transformations have stimulated reflection on their own implications, theories of the ways in which changes in information technologies may relate to changes in society and culture, in the political and economic order. For some influential commentators, such features of the contemporary leap in technologies justify the labelling of the present as *the* 'information age'.[6]

Despite the narrowness of the dictionaries, less 'presentist' understandings of information technology are well established. Technologies for the encoding, storage and communication of information can be traced back several millennia. All ages are, in their own ways, information ages, and the heightened contemporary awareness of links between technological and socio-cultural change has prompted fresh reflection upon analogous issues in relation to the past. One way of doing this is simply to project current concepts onto past practices, such as the idea that graffiti and other kinds of inscription can be seen as kinds of 'social media'.[7] More common are macro-historical schemata based on the identification of key, epoch-defining changes in dominant technologies of information.[8] Within this, by far the most attention has been paid to three moments, or three clusters of inventions and the ages that they are perceived to have facilitated: the invention and spread of writing, the invention and spread of printing, and the invention and spread of electrical and electronic media. In each case the modern experience throws up questions that can productively be posed of the past, while past analogies can usefully nuance and modify assumptions about the present and future.

As it happens, one such macro-historical scheme already uses the word 'graphosphere'. For the French philosopher and journalist Régis Debray the graphosphere is the age of print, which is preceded by the 'logosphere'

(the age of manuscript, of handwriting) and followed by the 'videosphere'.[9] This is not compatible with the holistic and inclusive notion of the graphosphere in the present study. Aside from the obvious etymological quibble (it might seem more natural to assume that the 'logosphere' should refer to the spoken word while the 'graphosphere' should refer to the written word), the main difference lies in the fact that Debray's graphosphere is one phase in a sequence of dominant technologies, whereas here it represents a general phenomenon of human history and culture. It may accommodate changes in dominant technologies, but at every stage it also encompasses their coexistence and interactions. It is a general framework, not a label for a particular period.

Writing is the application of a principle, not a technology as such. The principle is that sounds or words or thoughts can be represented through systems of visual signs. Writing turns words into objects, or renders them as parts of objects, as material texts. Writing separates message from messenger, speech from speaker. It allows the word to be contemplated, preserved over time, transported across distances, copied, corrected, distributed, bought and sold, independently owned. Interest in the social, cultural, political, economic and even psychological implications of writing has generated an enormous range of scholarly literature[10] exploring the ways in which the potential properties of writing have or have not been realised in a wide variety of media and through a range of technologies over more than five millennia.

Printing introduced a new technology, not a new principle. It was a particular way of making visible words: a type of writing, writing by type. Such, at any rate, is the shorthand generalisation. In fact, print can also be taken as a generic designation that covers several different and widely contrasting technologies. 'Impressions' can be and have been made from materials as disparate as stone and potatoes, linoleum and human skin (the finger-print). The Phaestos disk, with a spiral of symbols impressed in clay, possibly from the second millennium BCE, has been claimed as a specimen of the 'typographic principle'.[11] The particular technology of 'impression' that is associated with significant social and cultural change is the printing press with movable type. However, even this is perhaps too general. In the first place, the history of movable type can be traced, if not from the Phaestos disk, at least from medieval China and Korea. Studies of print as a technology associated with major socio-cultural change focus more specifically on the introduction of movable type using alphabetic script, as a phenomenon in Western and Central Europe from the mid fifteenth century.[12] Secondly, there is a major divide, from the mid

nineteenth century, between the dominance of the flat-bed hand press (where each impression had to be 'pulled' individually) and steam-driven rotary presses capable of producing many thousands of impressions per hour. Hand presses and industrial presses are forms of printing in the broad sense, but as methods of creating and replicating the visible word they are barely comparable. They are closer lexically than technologically.

Changes in technologies of the word have been linked to a range of societal and cultural processes: the emergence of bureaucratic administration and hence the emergence first of early states, then of complex centralised states; the emergence of analytical and critical thought, of textual fixity and canonicity; the Reformation; the rise of capitalism and/or absolutism; the paradoxes which mean that devices for the dispersal of knowledge are also devices for the centralisation of knowledge, and that technologies which extend the possibilities for self-expression and the individual construction of identity are likewise technologies of social control, of surveillance and regulation. Allowing for temporal and regional specificity, variations on such themes permeate discussion across the ages. A particular contribution of the historical and comparative study of information technologies is to modify the temptation to embrace, both in interpretation and in prediction, the ostensible 'logic' of technologies in relation to change. To what extent can new technologies (new in the present, new in the past) be reckoned as causes of socio-cultural change, or as catalysts or enablers or facilitators of change, or, in the most passive variant, simply as instruments whose innovative or transformative potential may or may not be activated depending on other circumstances? Do developments in information technology make things happen, do they help to shape the way things happen, or do they extend the range of things that *may* happen? Straightforward techno-determinism, while still common in popular futurology, has gone out of historiographical fashion.

If definitions and implications of technologies themselves are a distraction, they can be removed so as to leave just the study of information. Graphospheres are spaces of information: a graphospheric approach is necessarily concerned with the production, presence, uses, perceptions and history of visible information, and hence can draw on studies of information in history, whether or not these amount to a coherent field of *Information History*.[13] Again prompted in part by modern sensibilities, historians have begun to explore patterns and implications of the creation, gathering, storage, retrieval, use and dissemination of information. This tends to switch the focus (or, in a different perspective, to expand the definition) beyond technology as material artifice so as to include human

activities, strategies and institutions: from archival methods to intelligence organisations, from postal services to newspapers, from central ministries to informal networks. With regard to the early modern period, for example, aspects of the history of information have been invoked in accounts of the rise of (again) bureaucratic government, centralised states and early capitalism.[14]

The graphosphere is a space, not just an agglomeration of objects. In its spatial emphasis the graphospheric approach is partially analogous to a branch of sociolinguistics concerned with the *linguistic landscape*.[15] In principle linguistic landscapes must exist wherever there are visible signs that represent language: inside, outside, public, private, monolingual and monoscriptal, multilingual and multi-scriptal, in a single room, across the megalopolis. To this extent a linguistic landscape *is* a graphosphere, or a graphosphere must be a linguistic landscape. In practice, however, research on linguistic landscapes tends to focus on contemporary multilingual display in public spaces. Other words are available. 'Textscape' is sometimes used and could be an adequate equivalent, except that it has already been adopted for a wide range of quite different purposes: in advertising and PR, as a brand name in software or as an art concept.[16] 'Scriptural economy' is a phrase coined by Michel de Certeau while ruminating on the relations of writing and orality,[17] and the phrase is adopted by Lisa Gitelman referring to a 'totality of writers, writings and writing techniques',[18] but without the spatial or physical specificity of 'graphosphere'. Still more broadly, the graphosphere has affinities with, and owes an obvious lexicographical and conceptual debt to, what the semiotician Iurii Lotman termed the semiosphere.[19]

Thus, while the graphosphere is perhaps an unfamiliar word, it does not represent an entirely new set of concepts and concerns. It draws on a range of traditional and contemporary disciplines and approaches. Translated out of academese, it is simply a way of looking at words, at cultures of writing, at how and why words come to be where they are in the world around us. Indeed, just as a summary of the graphospheric concept can sound excessively and impracticably inclusive, so a summary of its disciplinary sources and affinities can sound excessively and impracticably eclectic. The graphospheric approach is capacious. This may be a virtue or a defect. The proof, one way or the other, lies not in the tightness or looseness of prefatory abstractions but in the usefulness or redundancy of the explorations prompted by them. However, before outlining the particular ways in which the concept is applied in the present study, it is appropriate to consider features of its context.

Russia, 1450–1850

By comparison with the abstractions of the graphospheric approach, the phrase 'Russia, 1450–1850' looks reassuringly safe: a place, a set of dates, clear boundaries in space and time; step inside and look around. In fact the phrase is slippery, elusive in a different way, and perhaps no easier to grasp. Some crude facts can illustrate the problem. In the mid fifteenth century the population of the principality of Moscow ('Muscovy') was around five million; in the mid nineteenth century the population of the Russian Empire was more than seventy million. In 1450 the principality of Moscow occupied an area of just over 400,000 square kilometres; by the second half of the nineteenth century the area of the Russian Empire was approximately fifty times larger, extending from the Baltic to the southern Caucasus, from Ukraine to Alaska. A visitor to Muscovy in 1450 would have seen and heard few traces of any language other than Slavonic: the East Slavonic vernacular and the Church Slavonic of the liturgy. By the mid nineteenth century the visitor could have seen dozens of written languages and could have heard hundreds of spoken languages and dialects. In 1450 training in the skills of reading and writing was largely (though by no means exclusively) for churchmen; by 1850 Russia had academies and universities, and the apartment blocks of St Petersburg and Moscow were packed with quill-pushing bureaucrats, while salons thronged with journalists, poets and ladies of letters. 'Russia, 1450–1850' is, so to speak, a moving target. The transformations are so striking, so radical, so fundamental, that one could legitimately wonder whether the phrase makes coherent sense, whether the Muscovy of 1450 and the empire of 1850 can properly be labelled with the same word, as if they were the same place. Graphospheres emerged and mutated within spaces that were themselves mutating.

This is not so unusual. Russia's geopolitical and demographic transformations were perhaps at the extreme ends of a spectrum, but there is barely a country where one would not expect to find major changes, and sometimes radical disruptions, in the course of four centuries. Nevertheless, the designation 'Russia, 1450–1850' looks peculiar even in the context of the historiography of Russia. Neither date coincides with the common chapter breaks in traditional narratives of Russian history. It ignores the grand divide that for well over two hundred years has not only structured a great deal of academic writing but has become embedded in popular imagination, even in language. The emblem and the perceived prime cause of the break between epochs is Peter I, Peter the Great. Russia divides into the