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Leibniz and geography: geologist, paleontologist, biologist, historian, political theorist and geopolitician

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Abstract. This article discusses the way that the German philosopher and mathematician Gottfried Leibniz (1646–1716) made a number of significant contributions to geography. In outlining his contributions as a geologist, palaeontologist, biologist, historian, political theorist and geopolitician, it challenges the straightforward way he is read in geography. Particular focus is on his *Protogaea*, the *Annales Imperii* and the *Consilium Aegyptiacum*, respectively a pre-history of the earth, a chronology of German nobility in the Middle Ages, and a military-strategic proposal to King Louis XIV. Making use of contemporary debates about ways of reading Leibniz, and drawing on a wide range of his writings, the article indicates just how much remains to be discovered about his work.

1 Introduction

How does Gottfried Leibniz relate to geography? If we were to read some of the standard accounts of the history of the discipline we find him almost entirely absent. Livingstone's exemplary overview mentions Leibniz briefly as a philosopher (1992, 342); the death of Leibniz is seen as one potential beginning of the period of Enlightenment for Withers (2007, 3) and he is briefly mentioned there as an early theorist of race (2007, 144). In Livingstone and Withers's edited collection *Geography and Enlightenment* he is mentioned only by two authors, and then only in passing (Carter, 1999, 308, 313; Gould, 1999, 408). His views on nature and life, and on the relation between place and space, are discussed in two of the outstanding histories of specific geographical ideas (Glacken, 1967, 505–508; Casey, 1997, 169–179). Robert Mayhew has painstakingly reconstructed the history of British geography in the period Leibniz lived and a century after his death (2000) but not much of this kind of work has been done for the continent (Mayhew, 2005, 2011; Ulltree, 1987). He is mentioned in Tang's study of geography, literature and philosophy in German Romanticism, though this is mainly a study of a later historical period (2008). He plays a more important role in some histories of physical geography (i.e. Rudwick, 1976), but even in this field his importance is underplayed.

This relative neglect is surprising, not least because Leibniz's notion of a relational notion of space has proved to be influential and is frequently mentioned in Geography, even if discussed much less. Leibniz developed these ideas in opposition to the absolute space proposed by Isaac Newton, and had a famous correspondence with Newton's colleague Samuel Clarke (Alexander, 1956). Leibniz claimed that the idea of absolute space, separated from anything in it, was nonsense. He suggested that "space without matter is something imaginary" (1903, 590). As he clarified in the correspondence with Clarke:

I don't say that matter and space are the same thing. I only say, there is no space, where there is no matter; and that space in itself is not an absolute reality. Space and matter differ, as time and motion. However, these things, though different, are inseparable. (1961, Vol. VII, p. 406; Alexander, 1956, 77)

Alongside this interest in his relational view of space there are some other brief discussions. Olsson mentions his work on logic (1980); Olwig's study of Germanic notions of space mentions him in relation to Kant (2002). More generally Leibniz is known as a mathematician and metaphysician, as an independent co-inventor of calculus alongside Newton

(see Bertolini Meli, 1993), and for his monadology¹. Leibniz also made significant developments in *analysis situs*, the science that is now known as topology (de Risi, 2007). His suggestion that this is the best of all possible worlds – initially ridiculed by Voltaire – has generated a small subfield of philosophical work (see Rutherford, 1995; Doležel, 1998). More recent inspiration has come from Deleuze's contrarian Leibniz in the book *The Fold* (1984; Law, 2004; Wylie, 2006), though the focus of such appropriations is squarely on Deleuze, not Leibniz himself.

Yet even those who today mobilise these ideas within Geography read quite selectively. David Harvey suggests in his early books that his relational view of space comes from Leibniz (1969, 196; 1973, 184, 286–287), though his fullest discussion is in the much later *Justice, Nature and the Geography of Difference* (1996, Ch. 3, p. 10; see 2006). This is a reading which is dependent on the *Monadology* and a few other texts and discussions by other philosophers of his ideas². Doreen Massey also refers to the relational sense of space (2005), but as Jeff Malpas has recently pointed out, their readings relate only tangentially to Leibniz himself (2012, 239). The best account of Leibniz with geography remains Bowen (1981, 186–190). Yet even this draws on a very small number of texts; far less than Leibniz wrote on geographical questions.

This article tries to open up the discussion of Leibniz in a way that is rather different from how he is commonly discussed in Geography. Rather than try to derive a more faithful theoretical model for thinking about relational space, which may be of use to geography, it instead looks at his writings on geographical topics. Leibniz wrote on geology, palaeontology, biology, history, domestic and international politics. In all of these there is an interest in questions of location, transformation, evidence and reason. Yet this wide-ranging set of interests perhaps helps to explain the neglect. Leibniz wrote a huge amount, much of it unpublished in his lifetime, and even what was is often in inaccessible places. Leibniz wrote predominantly in Latin, frequently in French and German, and sometimes in Italian, English and Dutch, so the challenges are daunting. Indeed, his writings are so voluminous that they have still not been entirely published, with the enormous Akademie edition (1923–) still in process. Leibniz famously declared that “he who knows me only from my publications does not know me” (1768, Vol VI.1, p. 65), meaning that in his lifetime most of his major contributions

¹The definitive edition of his writings is 1923–, but this is far from complete and other editions have often been used. Thematic treatments of the philosophical and mathematical ones are found in 1961 and 1962. A good English sampling can be found in 1989. For a series of essays on the standard Leibniz see Jolley (1995); and for a helpful overall discussion Jolley (2005).

²A couple of papers in the *David Harvey: A Critical Reader* note the importance of Leibniz to Harvey: Sheppard (2006) fairly briefly, while Thrift (2006) notes that the reading may not have been what Leibniz intended.

were unpublished. In English translation this is even more the case. His important *Protogaea* only became available in English recently and many other works remain unavailable. In part, then, the neglect of Leibniz is due to the complexities of working on him. But it is also due to the way that his most interesting writings, for geography, have been seen as marginal, peripheral within his overall thought. This article then, as well as arguing for the importance of Leibniz, is part of a call for a different way to understand him.

This article is therefore intended as a supplement to existing accounts of the history of geographical thought, with a suggestion that he be seen alongside more familiar figures. A larger situation or re-situation of his work within that wider story is impossible in a single paper. But some remarks on how Leibniz is seen within the history of philosophy may be helpful. Leibniz is usually seen as one of the key rationalist philosophers of the early modern period, along with Descartes and Spinoza (Phemister, 2006), and as an idealist (Adams, 1999). In recent years there has been a reevaluation of Leibniz's work, with a suggestion that he may have had a long interest in realism alongside idealism, and that his work is dependent on empirical detail much more than is generally acknowledged. Hartz (2007), for instance, maintains that Leibniz worked on idealist and realist views independently, but that they are incompatible parts of his work. Phemister says that she was forced to revise her “idealist assumptions” about Leibniz, and also came to believe that Garber's view of a “realist” period in Leibniz (roughly 1685–1704) was correct in itself but mistaken if simply applied to that period (Phemister, 2005, 2; see Garber, 1985; Woolhouse, 1993, Ch. 4). For Phemister, Leibniz believed in the reality of bodies until the end of his career, and the standard translation of a “monad” as a “soul-like being” needs to be resisted (2005, 3). Phemister therefore proposes a way of reading Leibniz as someone who brought together idealism and materialism, with a focus on corporeal substances. Phemister keeps predominantly to the more philosophical works, and rereads them without what she calls the distorting lens of idealist assumptions. What she accomplishes is to bring out an important different way of reading Leibniz. This is a rather different Leibniz to the ways he is usually understood. However, the details of how he worked this through in his politics, his historical work and empirical analyses are found in other sources.

These sources include a recent magisterial biography (Antognazza, 2009; which should replace Aiton (1985) as the standard account) in which his life and broad interests have been reappraised. They also include Justin Smith's *Divine Machines*, which provides a valuable correction to views of Leibniz as a rationalist, stressing his empiricism (i.e. 2011a, 17); and as an idealist, demonstrating his realism (i.e. 2011a, 101–102). For Garber, in another recent major work, Leibniz was working to reconcile these different elements in his late years, although he cautions about “realist” and “idealist” as terms, noting that they were neither used by nor available to

him (2009, 384–388). Smith is similarly cautious of labels, suggesting that “empiricism” in relation to Leibniz should be “understood broadly to mean the view that abstract or theoretical truths can be arrived at from the starting point of experience” (2011a, 17) and suggests that one of the problems of the idealism/realism debate is that it assumes that “‘realism’ is a transparent notion that remains fixed in its sense across the centuries” and the same with idealism (2011a, 102).

These debates help to make sense of his interest in geographical issues and contributions to geography. This is not to suggest that he would have self-identified as a geographer, and Leibniz was hardly alone among philosophers in taking geography seriously – take, for example, the recent re-appraisal of Immanuel Kant (Elden and Mendieta, 2011) and G. W. F. Hegel (Bond, 2014). However, with the possible exception of Kant, his engagement was perhaps the broadest and most sustained. Being attuned to his realism and his empiricism opens up new ways in which we can read and appreciate his work. The purpose of the reading here is not to try to mine Leibniz for a few choice concepts that are helpful as a contribution to geography today. Rather, it is an exercise in the history of ideas, to open up some ways in which Leibniz’s concerns relate to a range of the topics that form the background of our discipline. As far as possible, it attempts to read Leibniz in terms he would have understood, even if it reads him with the benefit of three hundred years of history between his words and our present. His work is discussed here in four registers: his writings on the earth, life, history and politics.

2 “A new science called natural geography”

Leibniz wrote an entire work to examine what he called “a new science called natural geography [*Geographiam Naturalem*]” (2008, 10/11). This was initially entitled *De ortu et antiquissimo statu rerum naturalium in regionibus Brunsvic.-Luneb. Dissertatio* [A dissertation on the origin and most ancient state of natural things in the Brunswick-Lüneburg regions] but was published posthumously as the *Protogaea* (1749), an extraordinary document, which makes good on the claim: he really does have a lot to say to discussions in geography and history³. Why did Leibniz devote so much attention to this topic?

Leibniz was employed for much of his career by the strand of the Brunswick dynasty which held the Duchy of Hanover. Although he was able to devote a great deal of time to his own projects, he was also tasked with various duties. A sometime political theorist for their interests, he was also asked to write

³When Leibniz refers to the “Protogaea” he meant a one-page text of 1693 (Smith, 2011a, 219). This can be found in Latin and English in Oldroyd and Howes (1978) and in Latin and French in Leibniz (1993, 198–201). On different texts related to this project see Stickler (1967, 250–251) and on the illustrations, see Yamada (2001).

the family history. Both of these aspects of his work will be discussed below. Yet despite his plans for an extensive genealogy, Leibniz thought that the work would be better prefaced with a historical document that went back much further than human history. This was to write a history of the place that the family came from, a prehistory of the very earth they inhabited.

The other inspiration for this work was more prosaic. Leibniz was asked by the family to take an interest in a potential major source of income, their mines in the Harz mountains. His interest in mining went far beyond simply doing his job, as it seems every time Leibniz travelled across Europe he went out of his way to visit mines. It has been estimated that he spent three full years of his life between 1680 and 1686 advising on operations at the mines. While there he tried to invent mining equipment using wind-power to pump water, though this was of limited success, whether due to the recalcitrance of the mine workers, or his own limited expertise (see 1923-series 1 Vol. III, 149–166; Meyer, 1952, 108–110; Elster, 1975a, Ch. III; see 1975b, Stiegler, 1968; Gottschalk, 2000; Wakefield, 2010). The project collapsed in the mid-1680s, though Leibniz attempted to develop a related project in the mid-1690s. Despite its debatable viability, it did provide him with some fascinating evidence on minerals, stratigraphy, and fossils. Leibniz was able to combine these interests and roles: he used the material gathered from his mine work to provide the inspiration and empirical detail for the geological and palaeontological preface to the history of the family.

The manuscript of the *Protogaea* was begun in 1691 and completed around 1693, but was not published until 1749, some time after Leibniz’s death. It can be compared to Descartes’s ruminations on earth history in the *Principia philosophiae* (1964–1974, Vol. VIII-1), but Leibniz offers an account informed by local sources as much by philosophical reasoning.

For we occupy the highest region of lower Germany, one that is especially rich in metals. Moreover our homeland is the source of remarkable speculations, and the rays of a public light emanating from here will also advance the exploration of other regions. But if we do not completely achieve our goal, then we will at least have a model, for when everyone contributes curiosity locally, it will be easier to recognise universal origins. (2008, 3)

Leibniz regularly moves swiftly from broader philosophical enquiries to reliance on external sources, to materials gathered himself in his travels or work in the mines. There are moments when the broader scale of his historical projects intrudes, such as when he talks of the caves beneath hills and mountains on which the Scharzfeld castle stands, “once occupied by its own counts, of whom our history will speak” (2008, 105). And at times the account resembles a travel narrative: “we spent the night in Elbingerode. The following day

we went to Braunlage, where iron ore is smelted, and from there to the village of Rübeland, where Baumann Cave is located. We entered the cave in the evening, since we did not need the sun” (2008, 109). But the overall focus of the study is on what would later become called the biological and geological, that is the study of life and earth.

Key themes include the history of the earth, from its formation and transformations, through long discussions of minerals, to the effects of fire and water and extensive fossil analysis. For Leibniz, fossils were documents, much as were the historical records he found in writing the family history, or those discovered in the research for a political-legal case. The narrowness of the received wisdom of Leibniz as a “rationalist” is clearly shown here. Leibniz reasons from the evidence he finds, suggesting that the presence of remains of animals, fish, and plants inside stones forces a rethinking of the Biblical narrative, and points to the vastness of time (2008, 51–53; 1768, Vol. II.2, 176–177; 2006, 142–143). He was dismissive of the idea that the resemblance between fossils and life was a result of “games of nature”, an idea widespread at the time and which he himself had previously held. In that earlier work he had declared:

I have difficulty in believing that the bones that are sometimes found in fields, or that are discovered while digging in the earth, are the remains of true giants: likewise, that the stones of Malta, which are so commonly called snake tongues, are parts of fish: and that the shells which are buried quite far from the sea are certain signs that the sea covered these places and that it left these shells as it withdrew, and that they have subsequently been petrified. If that were so, the earth would have to be much older than the holy histories suggest: but I do not want to dwell on this; we are concerned here with using natural grounds. I therefore believe that the forms of these animal bones and shells are often merely games of nature [*jeux de la nature*], which have been formed separately, without coming from animals. (in Leibniz in Cohen, 1998, 140; Leibniz, 2006, 138)⁴

It has been suggested that reading the Danish geologist Nicolaus Steno (see Steno, 1669, 1916, 1958) and then later meeting him had led to his change of mind; but it also shows his willingness to be convinced by new evidence (see Cutler, 2003, 160–162, 167–169; Cohen, 1998, 139). To take one striking passage from the *Protogaea*:

I have here in my hands a barbell, a perch, a bleak, sculpted in stone. Not long ago an immense pike was dug out of a quarry, its body bent and its mouth open, as it had been caught alive and turned to

⁴On this undated and recently discovered manuscript (reference LH 37, 4, 16) see also the introduction to the *Protogaea* (2008, xxvi–xxvii) and Cohen (1998).

stone by the power of the Gorgon. I have also seen sea fish like the ray, the herring, and the lamprey, the last one sometimes lying crosswise with a herring. Here most take refuge in games of nature, trying to use our ichthyomorphic stones as an indubitable example of the playful genius of nature, and hope thereby to resolve other controversies, in which they claim the great architect, as if in jest, had imitated the teeth and bones of animals, shells, or snakes. (2008, 45; Rappaport, 1997)

Leibniz is not content with simply cataloguing, attempting to hypothesise likely explanations from the evidence before him. While some of his theses seem likely, he obviously makes many errors, of which his attempted reconstruction of a unicorn skeleton is only the most striking (2008, 101; see Ariew, 1998; Cohen, 2002, Ch. 3; Strickland, 2005). But we would repay his efforts poorly if we focused simply on the mistakes. It is the combination of analysis of empirical materials with rationalizations that is so striking. Even the “unicorn” was one of the first attempts at vertebrate reconstruction, albeit mixing up proboscidean fossils, rhinoceros bones, and a mammoth tooth (2008, xxxix). And there is an earlier instance of his fascination of a goat with deformed horns, that others had suspected was a unicorn, but which he suggests was down to restricted movement during development; a judgment he comes to through a combination of observation and reason (1768, Vol II.2, 175–76; Smith, 2011a, 251).

The relation of geology to palaeontology is striking in the *Protogaea*, but an interest in biology more generally runs through much of Leibniz’s work. The most thorough examination of this interest can be found in Justin Smith’s *Divine Machines* (2011a; see also the catalogue in Smith, 2011b). Smith’s book provides a detailed account of Leibniz’s engagement with natural philosophy – medicine, animals, organic bodies, divine preformation, games of nature, and biological species. There are five appendices which translate short texts of Leibniz. Along the way there are discussions of Leibniz’s interest in alchemy, orang-utans, race, machines, deformed goats, vivisection, warrior slaves, and bodily fluids. Smith makes a crucial point about Leibniz’s “*philosophy of biology*”. He suggests that it is both everywhere and nowhere in the book, because Leibniz would not have distinguished between his studies of “for example, anatomy and embryology on the one hand, and on the other his deeper philosophical interests in the metaphysics of corporeal substance, the ontology of species, and such” (2011a, 20)⁵. This is a key point: we should not see his interest in such questions as separate from his other, better known work. Leibniz was a systematic thinker.

⁵For essays on this theme see Smith and Nachtomy (2011); Fichant (2003); Hartz and Wilson (2005); and on the wider context, see Smith (2006). On Leibniz and scientific academies, see the writings in 1969, Vol. VII; and Ramati (1996).

The *Protogaea* has been described as “one of the most outstanding works on geology and palaeontology of the century. Like Leonardo da Vinci’s earlier work on fossils, it was unfortunate that the *Protogaea* was not more extensively known at the time of its writing” (Haber, 1959, 87; see also Smith, 2011a, Ch. 6; see Cooper, 2003, 2007). But as the brief discussion of his broader biological interests demonstrates, the interest in these issues continues throughout his work, with even the forbiddingly abstract *Theodicy* having some passages on the earth (Leibniz, 1985).

3 “That which must be brought from the darkness”

In the 1690s, Leibniz declares that:

But besides natural history [*l’Histoire de la Nature*] it is also important to know human history, and the arts and sciences which depend on it. This comprises the universal history of time, the geography of places [*la Géographie des lieux*], the recovery of antiquities and of ancient records [*monuments*], such as medals, inscriptions, manuscripts etc.; the knowledge of languages and what is called philology (which also includes etymological origins); I would add literary history, which teaches us about the progress of our knowledge, and what we owe to the studies of others, as well as the means of finding in these authors an account of what there is which one can profitably use in the work of others... customs, positive laws, of which the most important are the Roman laws which serve as the basis for the public and private jurisprudence we use today; and also the fundamental laws of states, with coats of arms, genealogies and illustrious controversies or those due to the pretensions of princes... and the history of religions, above all that of the true revealed religion, with church history. (1923–, Series IV, Vol. 4, p. 616; see 1988, 107)

As mentioned above, the *Protogaea* was to serve as the prelude to his history of his employer’s family history. The aim of this was to establish the lineage of the family and provide the basis for future claims of inheritance of title. Between 1690 and 1692 he produced several outlines of this work, aiming to complete it by 1693 (Antognazza, 2009, xxi, xxii, 262; Spitz, 1952, 339). But this was a project that was to take up the rest of his life, remaining unfinished at his death in 1716. This research was ideal for Leibniz in that it gave him excuses to travel far and wide as he traced documents in libraries and archives. But given his encyclopaedic ambitions it was always destined to grow out of control. He ended up using it as a basis for some seemingly tangentially connected inquiries, of which the *Protogaea* is only the most striking example. The enormous project went back deep into the Middle Ages in tracing the roots of the family. It was intended

to begin in 768 with Charlemagne and go up until 1235, a date he later revised to 1024, that is the end of the Saxon line (Antognazza, 2009, 524; Spitz, 1952, 339). At Leibniz’s death, only a couple of decades of that revised plan were unwritten, but the manuscripts remained unpublished. It finally appeared in the mid-nineteenth century when Georg Heinrich Pertz edited the writings into the three volumes of the *Annales Imperii Occidentis Brunsvicenses* (Brunswick Annals of the Western Empire) on behalf of William IV (Leibniz, 1843–1846). Those three volumes, which comprise 2300 pages in total, break off in 1005.

Naturally, Leibniz published small elements and connected enquiries along the way. He wrote the *Lettre sur la connexion des maisons de Brunsvic et d’Este* (1695) on the marriage of the Duke of Modena and a princess of Brunswick, and a brief piece entitled *Dissertatio de origine Germanorum* appeared in 1697 (1768, IV.2, 198–205). Later in life he would assist with the Hanoverian claim of the future George I to the English throne in 1716, which had been prepared by the 1701 Act of Settlement. George was not Queen Anne’s closest living relation, but his Protestant faith was the deciding factor. All this was made possible because of Leibniz’s command of the relevant sources, for his work was not confined simply to the writing of the history. In doing the research, he compiled extensive collections of documents, many of which were published in his lifetime. These included the *Codex juris gentium diplomaticus* (1693, 1700) which compiles legal writings; *Specimen historiae arcanae sive anecdotae de vita Alexandri VI. Papae* (1696) which includes scandalous diary entries that shed light on the life of the Pope; Leibniz compares it to the “Secret History” of Procopius (1696, 1); the *Accessiones Historicae* (1698–1700) which brings together medieval imperial chronicles; and the *Scriptores rerum Brunsvicensium* (1707–1711) which is a collection of other documents. Leibniz added a sizeable preface to the *Codex Iuris Gentium* (1923–, series 4, Vol. V, 50–79; with excerpts in 1988, 165–176; see Berkowitz, 2005) which is itself an important work of political theory, discussed below. In the eighteenth century Johann Georg Eckhardt compiled two enormous 2000-page volumes of the *Corpus historicum Medii Aevi* (1723) and Christian Ludwig Scheidt published four volumes of the *Origines Guelficae*, with the fifth following after Scheidt’s death (Scheidt, 1750–1780). Both of these collections drew extensively on material Leibniz had gathered, and again served royal masters: the *Origines Guelficae* bears a frontispiece to George II. Spitz has suggested that one of Leibniz’s shortcomings as a historian was that “he refused to devote his life exclusively to editing sources and works of a purely critical nature” (1952, 336), but while it is certainly true that he did not just do this, what he accomplished is still enormous. The entire fifth series [*Reihe*] of the Akademie edition of Leibniz’s writings, the *Sämtliche Schriften und Briefe*, will be devoted to his historical and linguistic works, but to date

not a single volume has been published⁶. Antognazza suggests the *Annales* was written “in clear and economical language”, and compressed “an enormous mass of information drawn directly from the historical sources”. She argues that “any other scholar might well have regarded this impressive work as his most important contribution to the world of learning. Yet it is scarcely remembered among Leibniz’s achievements, eclipsed by so many other brilliant discoveries and innovations” (2009, 531).

The preface to the *Accessiones Historicae* sets out how Leibniz sees the purpose of history. It is threefold: satisfying our curiosity; providing rules for life; and showing us that the present emerged out of a chain of events from the past (1698, *Praefatio ad lectorum*, no page; see Spitz, 1952, 337–338). There is a balance between these in his work, with Leibniz frequently linking historical and geographical concerns, seeing his work as not merely a chronology but as a particular history concerned with facts within time and space (Davillé, 1909, 224, 343, 436). It is, above all, an archivist’s work of retrieval and gathering, bringing unknown and forgotten sources into the light, and arranging them in intriguing, insightful and politically useful ways. Davillé has even gone so far as to suggest that Leibniz was especially interested in historical geography (1909, 438, 563, 689), though it would perhaps be more accurate to say that he was attentive to geographical detail in his histories, rather than reconstructing the history of specific geographical issues. As Smith has suggested, his historical project “was ultimately one of genealogy, which is to say the explication of a generational series. In this connection, we might suppose that Leibniz’s official task of writing a *historia civilis* of his employer’s family could have been understood, by him if not necessarily by his employer, as part of a larger project of *historia naturalis* that would include, for example, contributions to botanical method or taxonomy” (Smith, 2011a, 270–271). We can see here the methodological link to his work on natural history, even if the explicit focus appears very different. Indeed, in his *Consilium de Encyclopaedia Nova*, Leibniz makes an important distinction between *geographica naturalis* and *geographicam civilem*. The former was concerned with the earth, the physical landscape, geology; the latter concerned the status of the human race in its relation to the earth and is what he calls *Cosmopolitica Geopolitica* (Leibniz, 1903, 38, 40, see 527; see Davillé, 1909, 346).

Davillé contends that the work of the *Annales Imperii* bears comparison to Hume’s *History of England* or Voltaire’s *Essay on the Manners and Spirit of Nations* (1909, 601), and has claimed that “Leibniz is one of the greatest historians of the modern epoch and of all time” (1909, 743). This generous judgment is refused by Spitz, who points out the limitations of his historical method (1952, 340). Spitz’s criticisms are not confined to Leibniz’s supposed lack of diligence with

sources. For Spitz Leibniz is problematic because he did not “use modern critical apparatus and supplied only a half dozen marginal annotations in the whole *Annales*... Moreover, there was little development in Leibniz’s basic critical conceptions during his own career as a professional historian, an indication that the problem never really received his serious attention, for he left few areas of knowledge which actually interested him unchanged” (Spitz, 1952, 336). Spitz additionally suggests that Leibniz did not unify “his theory of history and his philosophy”; that his method was comparable to his peers, but did not constitute a development; and that any impact of his historiography was “almost entirely negated” by the time it took to publish it after his death and the intervening contributions of others. Nonetheless he recognises the debt Edward Gibbon had to Leibniz, and the way that medievalists still use his work of the *Annales* and his sourcebooks (1952, 340).

Gibbon himself suggests that “the genius and studies of Leibnitz have ranked his name with the first philosophic names of his age and country; but his reputation, perhaps, would be more pure and permanent, if he had not ambitiously grasped the whole circuit of human science...” He claimed he was “a bold and original spirit” (1796, 402), but one whose credentials as a historian are marred by the breadth of his attempts:

Such an example may display the extent and powers of the human understanding, but even *his* powers were dissipated by the multiplicity of his pursuits. He attempted more than he could finish; he designed more than he could execute: his imagination was too easily satisfied with a bold and rapid glance on the subject which he was impatient to leave; and Leibnitz may be compared to those heroes, whose empire has been lost in the ambition of universal conquest. (1796, 400–401; see Spitz, 1952, 340 and 340, no. 33)

Leibniz may not have devoted enough of his life to his historical work, either to satisfy his employers or later historians, but his labours were certainly immense. It must have been difficult for him to accept that he was so close to completing the *Annales* but to have known it would remain unfinished and, potentially, unpublished. We get a sense of the disappointment he must have felt, a few days before his death, in writing the preface to the *Annales* when he quotes the phrase “I leave to the diligence of others that which must be brought from the darkness [*quos ex tenebris eruendos aliorum diligentiae relinquo!*]” (1843, Vol. I, xxii; see Spitz, 1952, 348).

4 “A sovereign or a sovereign power”

The editor of the only English collection of his political works has suggested that “while it is true that no one can pretend that Leibniz’s political writings are equal to those

⁶On Leibniz’s historical work see Davillé (1909); Conze (1951); Spitz (1952) and Eckert (1971).

of such contemporaries [as Hobbes, Spinoza and Locke], or even to his own writings on logic, metaphysics and theology, they are at least intriguing and worthy of some attention” (Riley, 1988a, ix). But this is to substantially undersell Leibniz’s importance. From his correspondence and writings it is clear that he knew the political writings of Hobbes, Spinoza and Locke, and those of German contemporaries such as Johannes Althusius, Andreas Knichen and Samuel Pufendorf. He offered detailed critiques of some of these figures, and drew on the others in important and productive ways. This was largely as part of his role for the Duke of Hanover. Political concerns come through in seemingly disconnected inquiries. For example he wrote some brief *Gedanken zur Landwirtschaft* [Reflections on Agriculture] in 1678 for the Duke (1923–, Series I, Vol. II, 78–79), which was “an account of the relation between mining, fiscal policy and economics in general, and these again he related to political issues” (Meyer, 1952, 110). Meyer sees this as part of his larger transfer of “geological and historical topics into the realm of political speculation” (1952, 110) All this means that, as Dascal suggests, “unlike many political philosophers, Leibniz was an active participant – as a diplomat and counsellor to princes and kings – in the political events of his time” (1993, 387). Crucially he was involved in the power struggles within the Holy Roman Empire. One of the most striking episodes was when the Duke asked him what powers he had in the wake of the Peace of Westphalia.

The Duke, as other rulers of constituent parts of the Holy Roman Empire, was left in a somewhat ambiguous position. Leibniz clarified the status in some documents written for the peace negotiations at the town of Nijmegen that led to treaties between 1678–1679, which ended fighting in the Franco-Dutch War. The key question, which arose out of a dispute concerning representation at the congress, concerned the basis of the Duke’s power. The Duke wanted to be both an elector of the Empire, and thus part of its structures and present in its discussions, while at the same time he wished to be functionally independent. Leibniz initially began work on a Latin treatise entitled *De Jure Suprematus ac Legationis Principum Germaniae* under the pseudonym “Caesarinus Fürsterinius” (Prince as Emperor), as a briefing for the peace talks (1923–, Series 4, Vol. II, 15–270; excerpts in 1988, 111–120). Dascal has described this as “a remarkably nuanced analysis of basic political concepts such as state, commonwealth, city, territory, jurisdiction, union, confederation, and also sovereignty” (1993, 392). It draws on his historical work for the justification of some of the arguments (Davillé, 1909, 35). As was common with his projects, this quickly grew far beyond the bounds he had set for it, let alone what was practicable for the discussions. He then began work on a separate piece on the same theme, this time in French, in the form of a dialogue (1923–, Series 4, Vol. II, 289–338). Between these two pieces, and some supplementary materials, some key themes can be discerned.

Leibniz argues that the powers of the Emperor and the other rulers were separate and could be clarified. The Emperor had, he said, majesty, *majestas*, which was the power to command and expect obedience. It is important to see that he reserved some powers for the emperor, but more importantly for Leibniz the rulers within the Empire had a more practical and everyday power, which he described as sovereignty, using the Latin *suprematus* and the French term *souveraineté*. Leibniz was therefore drawing a distinction between majesty and sovereignty which earlier writers, foremost among them Bodin who used *majestas* in his Latin works as an equivalent of *souveraineté* in his French, had not made (1586, 1986, 1955). For Leibniz, the power of the ruler was crucially tied to place, suggesting that the rulers within the Empire were as powerful “in their territories [*in suo territorio*] as the Emperor in the Empire” (1923–, Series 4, Vol. II, p. 66), and the sovereign was he who was “master of a territory” (1923–, Series 4, Vol. II, p. 360). Leibniz’s importance in the story of the history of the concept of territory is of the first rank: this is the first time in the history of western political thought that the sovereignty-territory link is made quite this explicitly⁷. The temporal power theorists of the late Middle Ages had struggled to articulate what the power of which they were speaking was exercised *over*. The Roman lawyers of a slightly later period had articulated the relation between *territorium* and jurisdiction in a way that developed classical Roman formulations for parts of a wider *imperium* to apply to independent (or would-be-independent) polities. But Leibniz brings the political theory and the law together, and does so in a way that is strikingly modern in its form of the relation between territory and sovereignty.

Crucially, and in opposition to Hobbes and Pufendorf, he saw sovereignty not as an absolute but as a relational power, although he agreed that the state was an “aggregation”, built up out of individual elements “like a herd or an army” (Riley, 1988b, 26; see Drischler, 2011). It is here we can see the link between his philosophy and his political work: “the doctrine of substance, of course, requires that only individuals be real, and thus on this point Leibniz’ metaphysics and politics coincide exactly” (Riley, 1988b, 26). Leibniz summarises some of these key points in his preface to the *Codex iuris gentium*:

He possesses a personality in international law [*juris Gentium*] who represents the public liberty, such that he is not subject to the tutelage or the power of anyone else, but has in himself the power of war and of alliances; although he may perhaps be limited by the bonds of obligation toward a superior and owe him homage, fidelity and obedience. If his authority, then, is sufficiently extensive, it is agreed to call him a Potentate [*Potentatus*], and he will be called a sovereign or a sovereign power

⁷Leibniz is indebted to 17th century German writers who had been grappling with similar issues. See Althusius (1610) and Knichen (1613). For a helpful discussion, see Gross (1973).

[*Souverain et potentat*]; from which arises the law called *souveraineté* in French and *suprematus* in Latin and which, nevertheless, does not exclude the existence in the Republic of a superior any more than in the Church primacy excludes the existence of a prior. Those are counted among sovereign powers [*potentatus*], then, and are held to possess sovereignty [*suprematum*], who can count on sufficient freedom and power to exercise some influence in international affairs [*rebus Gentium*], with armies or by treaties. (1923–, Series 4, Vol. V, 74–75; 1988, 175)

These claims, at least, should indicate the importance of Leibniz to political geography (see Elden, 2013, Ch. 9). Of the thinkers of this period he is the key advocate of the relation between the political and the spatial. Those interrogating the way geographical concerns relate to political questions would be better advised to look to his texts – rather than the better known ones of Spinoza, Hobbes and Locke – to understand the situation on the European continent. But it perhaps does not yet establish him as a political geographer himself. He is actually closer to a geopolitician, that is someone who proposes grand strategies for the interrelation of politics and geography, and this can be found in his many other political writings⁸. Leibniz was a tireless proposer of plans, an inveterate commentator on contemporary events, especially in his correspondence, and not afraid to seek to influence events in which he was not directly involved.

5 “The Holland of the East”

In 1671–1672 he wrote to the French King Louis XIV with an audacious proposal entitled the *Consilium Aegyptiacum* [The Egyptian Plan]⁹. The idea was that France should desist from targeting the Netherlands, and instead turn its attention to Egypt. Leibniz’s years in France had given him close proximity to Louis’s expansionist aims. As well as removing some of the pressure on eastern Europe from the Ottoman Empire, a large part of Leibniz’s point was that France’s being involved in the eastern Mediterranean would remove it from the affairs of the German Empire. Given that Louis XIV’s expansionist desires were evident; Leibniz felt it was worth redirecting them in another direction. He therefore suggests:

Egypt, in the present moment, offers a more preferable conquest than all the other countries of the world. It is the principal isthmus of the world, uniting the two most important seas of the globe. It is

⁸On the broader context of his political thought, see Hertz (1957); Robinet (1973); Hostler (1975); Brown (1995); and Riley (1996).

⁹The various plans can be found in 1840; 1864; 1923–, Series 4, Vol. I; 1969, Vol. V. See also (1803) which is an English summary; and Meyer (1952), Ch. V; Dascal (1993, 390–391).

the route, without which it is necessary to circumnavigate the whole of Africa; it is the link between West and East, the meeting-point of trade, the necessary depot for the restocking of ships, for commerce between India and Europe; it is effectively the ‘eye’ of the surrounding countries, flourishing alone among their deserts, with an incredible fertility of soil and populous inhabitants. It was in ancient times the granary of the Roman empire, as it is now of the Turks... It is the Holland of the East; as France is the China of the West.” (1969, Vol. V, 6/319–320; sec. VII)

Leibniz suggests that recent discoveries in geography in the region point to both its scientific and strategic interest (1923–, Series 4, Vol. I, p. 243). One of the geo-strategic issues is that “all land-bound journeys between Asia and Africa pass through Egypt” (1923–, Series 4, Vol. I, p. 245).

Elsewhere he suggests that “of all the countries in the world [*globe*], Egypt is the best situated for acquiring Empire on land and sea [*du monde et des mers*]” (1840, 3). Leibniz suggests that this will be straight-forward – “Holland is well fortified, Egypt is almost without defence” (1840, 8) – and that it will have wide geopolitical implications: “the conquest of Egypt is easier than the conquest of Holland, that of the entire East easier than that of Germany alone. The houses of France and Austria can divide the world: to one the East, the other the West. Italy and Germany can be delivered from fear of the Turks, and the Moors will no longer disturb the peninsula” (1969, Vol. V, 7/321; sec. VII). The House of Austria is more commonly known as the Habsburgs, who ruled Spain, and who provided the Holy Roman Emperors for most of the early modern period, including at the time of Leibniz’s writing, Emperor Leopold I, first cousin of Louis XIV. The Ottoman Empire is, he suggests, decadent and fractious, its navy weak and insignificant. Europe must be saved from the “Mohammedian perfidy [*perfidie mahométane*]” (1840, 4; see Almond, 2006).

In the plan, Leibniz spends some time discussing the physical geography of the region, looking at the Nile, weather, the natural defences of Egypt with the sea and deserts, and the castles and cities. Although easy to capture, it is also defensible, as it is surrounded by the Arabian, Numidian, Nubian and Ethiopia deserts, and the Mediterranean sea and ocean (1969, Vol. V, 78–79). He argues that “the possession of Egypt would open up fast communication with the richest countries of the Orient; and would link the trade of the Indies with that of France” (1840, 32). Leibniz notes that the (unspecified) history and geography he had studied in his youth had led to these conclusions (1840, 10).

The plan came to nothing, and Leibniz would soon turn against the King, describing him as *Mars Christianissimus*, the most Christian war-god, in a text of 1683 (1923–, Series 4, Vol. II, 451–502; excerpts in 1988, 121–145). This was a pun on his address in the Peace of Westphalia as *Rex*

Christianissimus – the most Christian King – a phrase Leibniz himself had used in the writings linked to the *Consilium Aegyptiacum* (1923–, Series 4, Vol. I, p. 217, 252, etc.).

The *Consilium* was made available in English a century later, five years after Napoleon had conquered Egypt, to suggest that this was “only the eventual accomplishment and exact execution of this very plan, which had been laid up at Versailles, for above a century, among the secrets of state” (“Prefatory Note”, in Leibniz, 1803, viii). As the editor notes after the presentation of the summary: “It is impossible that the reader should not have already traced a direct connection between that plan [i.e. Leibniz’s] and the present situation of affairs” (editor in Leibniz, 1803, 74–75). In that summary we find a presentation of Leibniz’s view that pushes beyond what he actually says, but surely presents what he meant: “A war with Christian states can only lead to the acquirement of small accessions of territory; a tedious process for those who aspire after great things” (Leibniz, 1803, 29). It also makes a less warranted extrapolation, presumably shaped more by Napoleon and Louis: “The conquest of Egypt would likewise produce great and important changes in Europe... for the King of France might then of incontrovertible right, and doubtless with the full consent of the Pope, assume the style and prerogative of Eastern Emperor” (Leibniz, 1803, 37).

Leibniz’s geo-strategic plans can also be seen in a range of writings including ones on the importance of China – already seen as the most significant site alongside Egypt. Leibniz, almost alone of European thinkers of his time, had a keen interest in China, and had many correspondents there. He admired Chinese philosophical insights and derived some of his mathematical advances from engaging with their work, notably the binary notation from the *I Ching* (see Perkins, 2004; especially Ch. 3). In his preface to a collection of reports from travellers to China, the *Novissima Sinica historiae nostrae temporis illustratura*, Leibniz suggested:

I consider it a singular plan of the fates that human cultivation and refinement should today be concentrated, as it were, in the two extremes of our continent, in Europe and in Tschina (as they call it), which adorns the Orient as Europe does the opposite edge of the earth [*terrae*]... I do not think it an accident that the Muscovites whose vast realm connects Europe with China and who hold sway over the deep barbarian lands of the North by the shore of the frozen ocean, should be led to the emulation of our ways through the strenuous efforts of their present ruler and their Patriarch, as I understand it, in agreement with him. (1923–, Series 4, Vol. VI, p. 395; 1994, 45–46)

In an important piece on Leibniz’s racial thinking, Peter Fenves has shown how Leibniz knew the work of François Bernier (1684, 2000) who is often credited with the “first use of the term *race* as a technical term of anthropological speculation” (Fenves, 2005, 74; see Smith, 2011a, 271–272).

His specific analysis is of a brief addendum to the *Consilium Aegyptiacum*, which remained unpublished for many years (1923–, Series 4, Vol. 1, 408–410). The title of this would translate as “A Method for Instituting a New, Invincible Militia that can Subjugate the Entire Earth, easily seize Control over Egypt or establish American Colonies” (after Smith, 2011a, 269). For Fenves

The addendum is even more audacious than the *Consilium*, since it is, as it were, a universalization of the particularism that gives shape to the latter. And this particularism no longer has anything to do with religious doctrine; instead, it is based solely on physiological characteristics. Leibniz does not use the term *race*, which is hardly surprising since it has no exact Latin equivalent; but as a young jurist and would-be diplomat – he was only twenty-five at the time of its composition – he presupposes a racially defined division of the globe, according to which the rulers of Europe have a right to dominate the original inhabitants of the other continents. (2005, 77; see Dascal, 1993, 391–392; Smith, 2011a, 269–270)

As Fenves notes, the editor of the Akademie edition “dubs it – without any evidence – a mere ‘fantasy’, although it is no more fantastic than the *Consilium*, which Leibniz certainly proposed in deadly earnest” (2005, 77). As Dascal puts it, “phantasy or not, this text reveals the young Leibniz’s deep Eurocentric bias” (1993, 391).

By any standards this is unpleasant stuff. It talks of expelling native populations, of transporting slaves from ‘barbarian regions’ and breeding and training them into an elite force of soldiers entirely dependent on their masters. Peoples from a range of places are listed: “Africa, Arabia, America and New Guinea... without any distinction Ethiopians, Nigerians, Angolians, Caribbeans [*Cannibals*], Canadians, Hurons can be used”. Leibniz describes them as “a beautiful group of semibeasts [*pulchrum concilium semibestiarum*]” (1923–, Series 4, Vol. 1, p. 408). The ideal group would be males of about 12, that could be organised with no possibility of revolt. However, as Fenves notes, they have language skills in order to follow orders, and the division within this force is linguistic, as there should be no mixing of language groups. Smith has suggested that the racist criticisms of Fenves or Dascal tend to miss the influence of contemporary travel reports that Leibniz probably used as his basis for the martial arts passages about the skills the warriors would learn from the Tenerifeans (2009; see Leibniz, 1923–, Series 4, Vol. 1, p. 409). The racial aspect itself is not my especial concern: Leibniz’s views are not appealing but nor are they unusual for his, or indeed later, times. More importantly, it seems to me, this text showcases for Fenves, a wider and systematic geographical thinking:

The list of potential captives corresponds in large part to Leibniz's geopolitical imaginary, which accords a certain superiority to the civilizations at the far ends of the Eurasian landmass: Western Europe and China. Leibniz took an interest in the work of [Johan Gabriel] Sparwenfeld for precisely this reason: the lands inhabited by the Slavic peoples are a bridge between the two extremes. (Fenves, 2005, 79)¹⁰

6 Conclusions

Leibniz therefore is not an unproblematic thinker. In addition, as Meyer has claimed, despite his advocacy of a relational form of sovereignty Leibniz plays an important role in the establishment of an "absolutist principality" for Hanover in a range of registers: as a lawyer, historiographer, technician and minister for education (1952, 31). Yet his writings on these topics have long been marginalised within the traditional philosophical accounts of his work. And, as the introduction suggested, his role within the history of geography has been minimal. Almost three centuries after his death, geographers still have a very partial sense of Leibniz. While the new edition of the *Protogaea* opens up a small window on the unknown Leibniz, it equally provides geographers with a valuable text in the history of the discipline (see Rossi, 1984, 59–65; Cohen, 1996; Hamm, 1997). Set alongside his work on biology, history and politics, new ways of thinking about the history of seventeenth and eighteenth century thought and their connections to geography become possible. This work, in part contrast to the idealist, rationalist Leibniz, shows a realist, empiricist Leibniz. If we are to understand the importance of Leibniz to geography, his works on topics within the breadth of the discipline are a stronger place to start.

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¹⁰On Sparwenfeld in this regard, see Bagrow (1947). A letter to him from Leibniz can be found in (1969, 419–420).

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Arguments about the political effects of geography—particularly climate, topography, arable land, and access to the sea—have appeared in Western political thought since at least the ancient Greek era and were prominent in the writings of philosophers as diverse as Aristotle (384–322 bc) and Montesquieu (1689–1745).⁴ The emergence of the airplane led some geopoliticians (e.g., Giulio Douhet) to downplay the role of both naval and land power in favour of air superiority. During World War II some even predicted that technological developments would render naval power obsolete. Get unlimited access to all of Britannica's trusted content.