

From Empirics to Empiricists

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This is an Accepted Manuscript of an article published by Taylor & Francis Group in *Intellectual History Review* on 17/06/2014, available online: <http://tandfonline.com/10.1080/17496977.2014.914650>

Although the notion of empiricism looms large in many histories of early modern philosophy, its origins are not well understood. This paper aims to shed light on them. It argues that the notion of empiricism which is used in many histories of early modern thought does not have early modern, pre-Kantian origins. It first appeared and became widely used in Germany during the last two decades of the eighteenth century, in the course of the early debates on Kant's Critical philosophy.

The paper has seven sections. Section 1 locates the present inquiry within current debates on the historiography of early modern philosophy. Section 2 discusses Francis Bacon's notions of empirical philosopher, physician, and politician, in order to establish whether Bacon employs or adumbrates the standard historiographical notion of empiricism. Sections 3 to 5 compare the notions of empirical philosopher, physician, and politician that can be found in seventeenth- and eighteenth-century texts, alongside related notions (e.g. "experimental philosophy") and methodological stances, with the standard notion of empiricism. Having argued that none of those pre-Kantian notions anticipates the standard notion, I locate its origins in Kant's Critical works and the early debates on his philosophy in late eighteenth-century Germany (Section 6). Some conclusions are drawn in Section 7.

The paper focuses on two geographical areas: Great Britain and Germany. The focus

on Great Britain is due to the alleged Baconian and British roots of the distinction between rationalism and empiricism (RED) and of the notion and movement of empiricism. The focus on Germany is due to what I will argue are the German origins of the standard notion of empiricism.

1 Background

Throughout the twentieth century, most English histories of early modern philosophy followed a familiar narrative.¹ It can be summarized in six tenets:

- 1** The main philosophical movements of the early modern period are empiricism and rationalism.
- 2** The most important empiricists are Locke, Berkeley, and Hume. The most important rationalists are Descartes, Spinoza, and Leibniz.
- 3** Empiricism can be characterized, in broadly epistemological terms, as the conjunction of two claims: first, all of our (humans') concepts derive from experience; second, all of our substantive knowledge can only be proven to be true *a posteriori*. Accordingly, empiricists deny that we have innate concepts and that we can have any substantive *a priori* knowledge.² By contrast, rationalists claim that we have innate concepts and that we can have some substantive *a priori* knowledge.
- 4** Successive figures within each movement developed with increasing rigour the assumptions of their predecessors within that movement. For instance, Berkeley's denial of the existence of material substance and Hume's scepticism on the existence of

spiritual substances are said to derive from Locke's doctrine of the "veil of perception". As an early proponent of the narrative stated, "Hume is Locke made logically consistent. Berkeley went only halfway".³

5 Philosophers in each movement rejected central claims of philosophers in the other movement. For instance, Locke criticized Descartes' theory of innate ideas in the first book of the *Essay*, and Leibniz in turn criticized Locke's theory of ideas in his *New Essays*.

6 The early modern period came to a close once Immanuel Kant, who was neither an empiricist nor a rationalist, combined insights of both movements in his new Critical philosophy. In so doing, Kant inaugurated the new eras of German Idealism and late modern philosophy.

A few scholars expressed misgivings about this standard narrative before the 1980s.⁴ However, it is only after Louis E. Loeb⁵ and David Fate Norton⁶ attacked the narrative in two influential studies that an increasing number of scholars rejected it.⁷ With some exceptions,⁸ historians who still follow the narrative feel bound to introduce it with a number of prefatory disclaimers in acknowledgement of his limitations.⁹ Others have renounced to articulate any overarching narrative or replace the RED with alternative categories: "continental metaphysicians",¹⁰ "British sceptical realism",¹¹ "experimental philosophy",¹² and so on.

Disagreements about the *usefulness* of the standard narrative centred on the RED have been accompanied by divergences on its *origins*. Supporters of the narrative sometimes claim that the RED was drawn or clearly prefigured as early as the seventeenth century. For instance, Stephen Priest holds that the RED

was explicitly drawn using the words “empiricists” and “rationalists” at least as early as 1607, when the British empiricist Francis Bacon (1561–1626) wrote: “Empiricists are like ants; they collect and put to use; but rationalists are like spiders; they spin threads out of themselves” and: “Those who have handled sciences have been either men of experiment or men of dogmas. The men of experiment are like the ant; they only collect and use; the reasoners resemble spiders, who make cobwebs out of their own substance.”¹³

By contrast, critics of the narrative concur that the RED was introduced and popularized sometime between the late eighteenth and early twentieth century. However, there is no consensus as to who is responsible for this. Candidates include thinkers as diverse as Thomas Reid,¹⁴ Immanuel Kant,¹⁵ “German historians of philosophy of the late 18th and early 19th century”,¹⁶ and “Hegelian idealism in Germany and Great Britain in the second half of the nineteenth century”,¹⁷ especially Kuno Fischer¹⁸ and Thomas Hill Green.¹⁹

These divergences on the origins of the standard narrative should not be taken to be merely a matter of historical curiosity. On the one hand, the alleged early modern origins of the narrative are sometimes seen as authorizing its use as a legitimate historiographical tool. On the other hand, those who reject the narrative often do so on the ground that it projects the agendas and concerns of the philosophers who first coined and popularized it onto authors whose outlook was radically different. For instance, according to Stephen Gaukroger, the RED “serves the purely Kantian interest of providing a genealogy of all earlier philosophy whereby certain problems irresolvable in earlier systems can be seen to be finally and definitively resolved only by adopting the

Kantian project”. However, “[t]he way in which epistemology functions in the Kantian project is [...] very different from the way in which it functions in the seventeenth and eighteenth centuries”. As a result, “[t]he traditional contrast between rationalism and empiricism [...] harbours too many misunderstandings to be serviceable”. It must be abandoned, together with the standard narrative.²⁰ Understanding when the narrative was first framed and popularized is a necessary first step to assess the competing claims on its legitimacy and the distortions that it carries with itself.

Before we begin our historical survey, three clarifications are in place. First, one may hold that the focus of this paper on the notion of empiricism, as defined in tenet 3, is arbitrary and unjustified. The recent literature has witnessed the appearance of several alternative characterizations of empiricism²¹ and distinctions between various kinds of empiricism.²² To what extent this proliferation of empiricisms is really helpful is an issue that I will not discuss. I only note that the focus on the notion of empiricism defined in tenet 3 is justified because a very large number of texts still employ it and follow the received narrative (tenets 1-6), of which that notion is part. These texts include multi-volume histories of early modern philosophy,²³ anthologies,²⁴ surveys for students²⁵ and laypeople,²⁶ university and high-school curricula,²⁷ as well as studies on specific topics²⁸ and movements.²⁹ The aim of this paper is not to establish which, among the various notions of empiricism which can be found in the current literature, were employed or instantiated in the early modern period, but only to establish whether, as some upholders of the received narrative claim and their opponents deny, the standard, still widely used notion of empiricism has early modern origins.

Second, one may think that, in addressing this question, the paper proceeds in a circular manner, because it focuses on a Kantian notion of empiricism in order to

conclude that it has Kantian origins. The paper is not circular because it does not *assume* from the beginning that the notion of empiricism at stake was introduced by Kant. This conclusion will be reached only at the end of a survey of pre-Kantian notions (“empiric”, “empiricism”, “experimental philosophy”) and methodological stances.

Third, one might take the paper to be circular in a broader sense. It may be thought that the choice to focus on an epistemological notion of empiricism unavoidably leads us to the conclusion that its origins were Kantian, rather than pre-Kantian, because the standard notion of empiricism reflects a concern with a kind of pure epistemology that was foreign to pre-Kantian authors.³⁰ The paper establishes the claim that the standard, epistemological notion of empiricism was introduced by Kant. However, the claim that pre-Kantian authors were not concerned with pure epistemology is broader and stronger. This paper is not circular because it does not assume or rely on its truth.

2 Bacon, Empirics and Empiricists

In assessing whether Bacon was the father of the standard notion of empiricism, it is helpful to start with a terminological point. *Pace* Priest, Bacon never used the word “empiricist”. The earliest recorded occurrence of this term is in Shaftesbury’s *Philosophical Regimen*,³¹ which was written at least seven decades after Bacon’s death, between 1698 and 1712. The terms used by Bacon are “empiricus” and “philosophia empirica” in Latin, “empiric” and its variants (e.g. “emperique”) in English. Early modern translations and paraphrases of Bacon’s Latin texts routinely use the term “rationalist” as the English equivalent of “rationalis”.³² However, they never use

“empiricist” to render Bacon’s “empiricus”. They use the expressions “empiric”,³³ “empirical philosopher”³⁴ or “empirical sect”.³⁵

Although Bacon did not use the term “empiricist”, his employment of “empiric” and “empiricus” may still provide “a clear and early precedent for the use of ‘empiricist’”, as Bas Van Fraassen claims.³⁶ Ironically, however, the so-called father of empiricism insists that the philosophy of the empirics is “weak and past cure”.³⁷ It is a “false philosophy”, on a par with the “sophistic” and the “superstitious philosophy”³⁸ – not very respectable company. To understand why Bacon rejects the philosophy of the empirics, we must unpack his notion of empirical philosopher.

Like empiricists in the modern sense, Bacon’s empirics rely on experience – not, however, in their reflections on the origins and sources of knowledge, but in their attempts to attain knowledge. They do not deny that we have innate concepts or substantive *a priori* knowledge, nor do they claim that all of our knowledge derives from experience. Nevertheless, they do seek *scientia* – understood as general, firmly established knowledge that can ground conclusions about, intervention upon, and production of particular things – within the realm of experience.³⁹ Sometimes, Bacon claims that empirics devote themselves to “the darkness and narrowness of a handful of experiments”,⁴⁰ but then they are taken by “the premature and precipitate onrush of the intellect and its tendency to jump the gun and fly off towards the generalities and principles of things”.⁴¹ They “have had the nerve to extract and fabricate philosophies, and wondrously twist everything else to fit them”.⁴² Other times, Bacon claims that empirical philosophers did not even try to extract philosophies from their experiments. They derived “experiments from experiments”, but they did not “convert and digest” them properly to derive principles from them.⁴³ In either case, Bacon’s empirics failed to

derive true theories from experience.

As can be gathered from the references to experiments, the field in which Bacon's empirical philosophers operate is natural philosophy, broadly understood. In the *Novum organum*, Bacon writes that "a good example" of the empirical school of philosophy "is to be found in the chymists and their dogmas, but not much elsewhere nowadays except perhaps in the philosophy of *Gilbert*", that is, in his work on magnetism.⁴⁴ And in the *Phænomena universi* he associates empirics to "the chymists and the whole pack of mechanics".⁴⁵

Although Bacon's empirics rely on experience, it is not for this reason that Bacon qualifies them as empirics. Bacon's model of natural-philosophical inquiry relies extensively on experience, yet he contrasts it with the way of proceeding of the empirics. Bacon calls some chymists, Gilbert, and the mechanics empirics because, although they relied on experience in their inquiries, they failed to derive true theories from it as they lacked the right method of knowledge acquisition. By contrast, Bacon holds that his model of natural-philosophical inquiry allows its practitioners to derive true theories from experience. It avoids the opposite shortcomings of the empirics and the *rationales* – the ants and the spiders of the famous simile. The former are grounded on experience, but lack in theory. The latter develop articulate natural-philosophical systems, but do not base them on extensive empirical inquiries.⁴⁶

Besides empirical philosophers, Bacon mentions two other kinds of empirics: empirical physicians and empirical politicians. Like empirical philosophers, empirical physicians lack good theories and principles. They "commonly haue a few pleasing receipts, whereupon they are confident and aduenturous, but know neither the causes of diseases, nor the complexions of Patients, nor perill of accidents, nor the true methode of

Cures”.⁴⁷ Hence, “we see it is accounted an error, to commit a naturall bodie to Emperique Phisitions [sic]”.⁴⁸ It is equally mistaken to rely on empirical politicians, who lack any learning, for the government of the State. It is like “to rely vpon Aduocates or Lawyers, which are onely men of practise, and not grounded in their Bookes, who are many times easily surprised, when matter falleth out besides their experience, to the prejudice of the causes they handle”.⁴⁹

Having surveyed Bacon’s notions of empirical philosopher, physician, and politician, we can establish to what extent they anticipate the standard historiographical notion of empiricism. Empiricists endorse specific views on the origin of concepts and the foundations of knowledge. Bacon’s empirical philosophers are concerned neither with the former, nor with the latter. As for the origin of concepts, Bacon’s empirical philosophers can consistently hold that experience is our only source of substantive natural-philosophical knowledge, and yet that we have some innate concepts – a view shared by several seventeenth-century experimental philosophers.⁵⁰ Moreover, empiricists are often concerned with the origins of concepts in relation to the issue of what can become object of meaningful thought, but Bacon’s empirical philosophers are not interested in this issue. As for the foundations of knowledge, Bacon’s empirical philosophers may make the empiricist claim that we cannot acquire any substantive knowledge of the world *a priori*. However, many of them did not make that claim.⁵¹ Making it is neither sufficient, nor necessary for them to be classed as empirical philosophers in Bacon’s sense. It is not sufficient because Bacon’s empirical philosophers are also characterized by their failure to derive true natural-philosophical theories from experience. It is not necessary because as long as, say, certain chymists move from an experiment to another without drawing true theories from them, Bacon

would class them as empirics, regardless of whether they think that it is also possible to attain some knowledge *a priori*. Bacon's empirical philosophers are identified by their *practice*, rather than their beliefs on concepts and knowledge. This is not to say that beliefs are irrelevant to natural-philosophical practice, but only that they do not determine whether one counts as an empirical philosopher in Bacon's sense.

This is *a fortiori* true for Bacon's empirical physicians and politicians. Their lack of learning makes it unlikely that many of them took any stance at all on the existence of innate concepts or substantive *a priori* knowledge. An empirical physician in Bacon's sense could deny that treatments should be based on *a priori* knowledge, but he need not deny that. He could simply deny that treatments should be based on general principles, regardless of their empirical or non-empirical origin, and claim that they can only be based on analogical inferences from statements about past cases to statements on future cases.⁵² Alternatively, he could grant that medicine based on *a priori* principles offers some sound knowledge, without relying on it in his practice. A physician will qualify as an empiric in Bacon's sense even if he does not make any of these claims, as long as he acts merely on the basis of past experience. The failure to endorse specific views on the relation between *a priori* or doctrinal knowledge and treatment does not prevent physicians from being empirics in Bacon's sense. This is because what makes them empirics is their practice, not their beliefs. For the same reason, the failure to take a stance on the relation between *a priori* or doctrinal knowledge and political action does not prevent a politician from being an empirical politician in Bacon's sense.

On the whole, Bacon's empirics, whether in natural philosophy, medicine or politics, share two features: a certain *practical* stance – a reliance on experience – and a failure to develop true theories and doctrines (for philosophers) or to rely on them in their actions

(for physicians and politicians). This explains why the qualification of empiric was so unpalatable for the so-called father of empiricism. It also makes clear that, *pace* Van Fraassen, Bacon's use of "empiric" hardly provides "a clear and early precedent for the use of 'empiricist' ".⁵³

3 Between Bacon and Kant: Empirical Philosophers

Bacon's notion of empirical philosophy has little in common with empiricism as it is currently understood. One may think that the expression "empirical philosophy" came to designate what is now called empiricism later on in the early modern period, when empiricism is said to have flourished. This section will assess that hypothesis by surveying British and German uses of the expressions "empirical philosophy" and "empirical philosophers". It will also consider the contrast between empirical and rational people, that can be regarded as an extension of Bacon's contrast between empirical and rational philosophers, and its relation to the RED.

In Britain, "empirical philosophy" retained the meaning that Bacon had given it. Several authors who used that expression, like Colin MacLaurin and Thomas Reid, would later be called empiricists. However, they did not regard their philosophy as an example of empirical philosophy. They only mentioned empirical philosophy when referring to Bacon's well-known passages on the sophistical, empirical and superstitious philosophy or on the ants and spiders.⁵⁴ To them, as to Bacon, empirical philosophy was a "false philosophy" which failed to derive true theories from experience.

As for "empiricism", I could only find one explicit association of this term with

philosophy in the English literature prior to the publication of Kant's first *Critique* in 1781. It occurs in Joseph Priestley's criticism of the chymist Bryan Higgins. His

long-exploded, and crude notions (so many of which I believe were never thrown together into the same compass since the age of Aristotle or Cartesius) are delivered [by Higgins] in a manner and phrase so quaint, and a tone so solemn and authoritative, as gives me an idea that I cannot express otherwise than by the term *Philosophical Empiricism*.⁵⁵

Here, "empiricism" is used to highlight the crudeness of the Higgins' notions. "Philosophical" may allude, somewhat ironically, to the solemn tone with which they were presented. This is hardly the sense in which Locke, Hume, or Priestley himself would be later called empiricists. It would be vain to find the roots of the standard meaning of empiricism in their linguistic usage.⁵⁶

German authors in the seventeenth and eighteenth century were generally aware of Bacon's contrast between empirical and rational philosophers.⁵⁷ However, German writers did not typically contrast empirical and rational philosophers, but empirical and rational *people*. Leibniz famously states in the *Monadology* that

[w]e are all mere Empirics [*Empiriques*] in three fourths of our actions. For example, when we expect that the day will dawn tomorrow, we act like an Empiric, because until now it has always been thus. Only the astronomer judges this by reason.⁵⁸

Leibniz's empirical people have noticed certain regularities in the succession of mental images stored in their memory. On this basis, not on the basis of "demonstrative

syllogisms” [*syllogismes demonstratifs*] and “necessary truths” [*verités nécessaires*],⁵⁹ they expect that future chains of events will resemble past chains.⁶⁰

The empirics’ method of belief-formation is all we can often go by.⁶¹ However, Leibniz criticizes those who act as empirics in areas in which they can rely on demonstrative reasonings. For instance, as long as “empirical people” eschew demonstrative “reasonings” within natural philosophy, “they will not understand the true analysis of bodies and they will be unable to predict future phenomena by means of reason”.⁶²

Leibniz’s contrast between empirical and rational people found a place in the chain of axioms, definitions, and demonstrations that forms Christian Wolff’s philosophical system. Wolff’s empirical people do not act on the basis of reasons, but only of the expectation that the future will resemble the past. Rational people act on the basis of reasons, even when they imitate others.⁶³ Wolff’s disciples extended Leibniz’s distinction to other areas, for instance to people who are empirical or rational in religious matters.⁶⁴ A myriad of publications by Wolff and his followers inundated the German cultural scene, providing a stock of notions that learned persons would be familiar with for decades. As a result, when Kant introduced what would become the standard distinction between empiricists and rationalists, he was well aware of Leibniz’s and Wolff’s contrast between empirical and rational people.

How does the Leibnizian and Wolffian notion of empirical people relate to the standard notion of empiricism? Both notions involve reliance on experience, but in disparate domains. Empirical people rely solely on experience as the basis for their actions. Empiricists take experience to be the sole source for the acquisition of concepts and the justification of beliefs. The epistemological stance of empiricists bears the same

weak relation to the practical attitude of empirical people that it bears to that of Bacon's empirics. On the one hand, empiricists can derive practical principles that provide reasons for action from experience. Insofar as they act on the basis of those reasons, they do not behave as empirical people. On the other hand, an empirical person can consistently hold that we have *a priori* concepts and knowledge, as long as they do not provide reasons for action.

Although German writers typically contrasted empirical and rational people, rather than philosophers, the expression "empirical philosophy" did find a place in the German literature. Early eighteenth-century historians of philosophy, like Christoph August Heumann and Jakob Brucker, employed it to locate to the earliest forms of wisdom within their narratives, without placing them on a par with the more recognizably philosophical views of the Presocratics and Socrates.⁶⁵ For instance, Heumann characterized the thought of the Jewish Patriarchs as merely "empirical philosophy" [*philosophia empirica*], as opposed to authentic or "scientific philosophy" [*philosophia scientifica*]. Although the Patriarchs were "reasonable and very wise people" [*vernünfftige und hochweise Leute*], it would be wrong to "let them be regarded for [true] philosophers" [*vor Philosophos passieren lassen*].⁶⁶ This is because their wisdom failed to take the form of a *scientia* based on demonstrative reasonings from principles.

This peculiar, slightly disparaging use of the expression "empirical philosophy" has little to do with the later notion of empiricism. However, it was introduced in the early eighteenth century. It might be thought that most German philosophers, at that time, were still hostile to empiricism, and that "empirical philosophy" might have taken on a new meaning around the 1770s, when the tide turned in favour of the empirically-minded followers of Hume and Reid.

A survey of the philosophical works published in Germany in the 1770s shows that this was not the case. The sympathisers of Hume and Reid – writers like Johann Georg Heinrich Feder, Christian Garve, or Johann Christian Lossius – did not employ the expressions “empiricism” or “empirical philosophy” to describe their own views. They employed the expressions “observational philosophy” [*beobachtende Philosophie*] or “observational method” [*beobachtende Methode*],⁶⁷ which they used as equivalent of the English phrase “experimental philosophy”. As we shall see in Section 6, it is only after Kant introduced the new, standard notion of empiricism that self-professed observational philosophers started to be called and to call themselves empiricists or empirical philosophers.

It may be thought that this was a merely verbal change and that all Kant did was relabeling what his peers called experimental or observational philosophy as empiricism. If this were correct, the *notion* of empiricism that is used in standard histories of early modern thought would have early modern origins, even though the *term* “empiricism” was only used to express that notion from the late eighteenth century onward.

Experimental philosophers shared several features. For instance, they identified the same authors as their heroes and foes (Bacon, later Newton; the Scholastics, later Descartes) and they used a distinctive rhetoric. However, what motivated their choice of heroes and foes and what their rhetoric aimed to express were certain *methodological* commitments. Experimental philosophers and their allies in other disciplines, such as medicine, criticized the premature endorsement of systems and hypotheses and stressed the importance of experiments and observations as sources of substantive knowledge. More precisely,

[E1] they held that we should firmly commit only to those substantive claims and theories that are warranted by experiments and observations,

[E2] and they promoted extensive experiments and observations as the starting point for acquiring knowledge of the natural world and of moral laws.

As we saw above, the standard notion of empiricism is the conjunction of the claims that (a) all of our concepts derive from experience and that (b) all of our substantive knowledge can only be proven to be true *a posteriori*. As for (a), some upholders of experimental philosophy like Locke and Hume rejected concept innatism. However, one can consistently endorse [E1] and [E2] while claiming that we have innate ideas, as some experimental philosophers did. For instance, Robert Boyle endorsed innatism in several passages.⁶⁸ Lorenzo Magalotti endorsed innatism and the Platonic doctrine of recollection in a text strongly aligned with experimental philosophy, the proem of the Cimento's *Saggi di naturali esperienze*.⁶⁹ And although Locke famously criticized innate ideas, it is significant that, as Peter Anstey has recently argued,⁷⁰ his main target in the first book of the *Essay* were innate *principles*. The first draft of the work did not even mention innate ideas.

As for (b), the view that all of our substantive knowledge can only be proven to be true *a posteriori* provides a natural underpinning for [E1] and [E2]. Nevertheless, there is more than a merely verbal difference between (b) on the one hand, [E1] and [E2] on the other. [E1] and [E2] reflect a concern with the method that we should follow in the *acquisition* of knowledge, whereas (b) reflects a concern with the *justification* of knowledge claims. We can conclude that Kant and his followers did not merely relabel

the notion expressed by “experimental philosophy” as empiricism. This is because the (post-)Kantian notion of empiricism focuses on the justification of knowledge, rather than its acquisition, and it includes the rejection of concept innatism, whereas experimental philosophers can consistently be innatists.

4 Between Bacon and Kant: Empirical Politicians

We saw in Section 2 that Bacon mentioned empirical politicians. One can easily find other, usually disparaging, mentions of empirical politicians and even of political *empiricism* in the English literature.⁷¹ However, it is in Germany that the notion of empirical politician was regularly discussed. German texts throughout the seventeenth and eighteenth centuries contrasted empirical politicians with dogmatic, rational, or speculative politicians.⁷² This, combined with the evidence provided in Section 6 for the Kantian origin of the RED, might lead one to suppose that the contrast between empirical and dogmatic politicians represents a significant precedent of the RED. To assess this hypothesis, we should look at the context of discussions of empirical politicians.⁷³

Politics appeared as an academic discipline in the German arts faculties in the early seventeenth century. Its first exponents were concerned to vindicate its importance and distinctiveness.⁷⁴ Their defence of politics amounted in part to the rehearsing of well-known Aristotelian distinctions between authentic and pseudo-politicians, like rhetoricians and sophists.⁷⁵ More importantly, their defence of politics amounted to a vindication of its autonomy from jurisprudence. This was directed against the jurists

who identified the good politician with the good legal expert and denied that there was any need to introduce the study of politics within the arts faculty, in addition to what one could learn in the legal study.⁷⁶

Besides detailing the differences between law and politics, academic writers on politics stressed that it is more than a mere set of practical precepts. It is *doctrina*, or even *scientia*,⁷⁷ based on general principles – a doctrine that one must master to rule well or provide good counsel to rulers.⁷⁸ Political prudence, the political virtue *par excellence*, cannot arise solely from conversations with counsellors, practice of government, and memory of past lessons. One can acquire it only by learning the *doctrina* that was taught in academic courses on politics.⁷⁹

In this context, the phrase “empirical politician” was used to designate the politicians who act and speak only on the basis of experience. They may be skilled in governing the State. However, since they do not master the doctrine of politics, they are unable to justify their actions and statements by means of demonstrative reasonings.⁸⁰ They are also incapable to teach others how to rule.⁸¹ Since they base their decisions only on past experience, they have no means to act wisely when faced with novel, unexpected situations.⁸² According to some authors, empirical politicians do not even deserve the title of politician⁸³ or they can be called politicians only in a weak, analogical sense.⁸⁴

In the eighteenth century, politics was firmly established as an academic discipline and the distinction between empirical and dogmatic politicians was widely known outside the academia. At the same time, the discipline of politics experienced a transformation that placed empirical politicians in a far better light. What used to be the theoretical and general part of politics started to be dealt with within universal public law (*ius publicum universale*). By the second half of the century, treatises and lectures

identified politics with what used to be its applied and practical part, that is, the art of ruling the State [*Staatskunst*] or the art of government [*Regierungskunst*].⁸⁵ Politics became concerned with identifying the most effective ways to administer the State and to achieve aims established by universal public law.⁸⁶ The necessity of being versed in a demonstrative philosophical doctrine for achieving these aims was no longer obvious. Moreover, natural law theory had replaced Aristotelianism as the main theoretical framework for political writers. Traditional discussions of political prudence had largely been supplanted by discussions of the more fashionable and pragmatic topic of reason of State.

As a consequence, whereas seventeenth-century writers wondered whether any good politician could not be versed in political doctrine, late eighteenth-century writers wondered whether any philosophical or even ethical doctrine is at all relevant to politics.⁸⁷ On the one hand, Ernst Ferdinand Klein argued for the usefulness of philosophy to politicians.⁸⁸ On the other hand, Klein's reviewer warned against "speculative politicians" [*spekulativen Politiker*] who rely on "philosophical hypotheses and unilateral [i.e. insufficient] observations" [*philosophischen Hypothesen und einseitigen Beobachtungen*].⁸⁹

It is in the context of these debates that Immanuel Kant contrasts "rationalists" [*Rationalisten*] and "empirics concerning the principles of the State" [*Empiriker in Staatsprincipien*].⁹⁰ Kant dismisses empirics in politics, as in all other sciences. In his view, those who "pretend to be practically proficient" and "scorn theory", eschewing systems and principles, are "an ignoramus" and cannot "get further than theory could take" them.⁹¹ Additionally, the maxims of empirical politicians (*fac et excusa; si fecisti, nega; divide et impera*) and their reliance on reason of State contradict the foundations

of public law, which hold true *a priori* and can only be established by way of philosophical reflection.⁹²

Kant's references to empirics and rationalists in politics show that the notion of political empiricism was known at the time and in the environment in which, as we shall see below, the RED was introduced. However, the distinction between empirical and dogmatic politicians cannot have been a significant source for the RED because there are only tenuous similarities between them.

Empiricists and rationalists take opposite stances on the origins of cognitions and foundations of knowledge, the former appealing to experience and the latter appealing to the *a priori*. Empirical politicians too rely on experience. However, their reliance on experience was not contrasted with reliance on the *a priori*. It was contrasted with "doctrinal precepts and rules derived from the learned schools",⁹³ on whose basis dogmatic politicians justified their views and actions.⁹⁴

Dogmatic politicians would bear a significant resemblance to rationalist philosophers if the doctrine on which they rely were warranted independently of experience. Yet, in the first place, the role of experience in the establishment of principles was the subject of significant divergences. Even for some Aristotelians, principles could not be warranted independently of experience.⁹⁵ In the second place, characterizations of dogmatic politicians did not mention the empirical or non-empirical foundations of political doctrine. Politicians qualified as dogmatic if their views and actions relied on doctrine, regardless of its origin. Empirical politicians relied on experience as opposed not to the *a priori*, but to a theoretical apparatus of any sort. Like Bacon's empirical philosophers, empirical politicians were not identified by their views on *a priori* knowledge and non-empirical concepts. They were identified by their pragmatic reliance on experience,

rather than theories or doctrines. For this reason, the contrast between empirical and dogmatic politicians cannot be a significant source of the RED.

Although the pre-Kantian *notions* of empirical and dogmatic politician were not a source of the RED, the *views* of eighteenth-century Scottish authors – especially David Hume – on the proper foundation of political theory recall the standard notion of empiricism. Hume does not praise empirical politicians, understood as those who reject theory and rely only on practice. On the contrary, he is concerned with the development of a political theory based on general maxims. In his views, the general maxims of politics, like those of all “moral subjects”, must be “deduc[ed] [...] from a comparison of particular instances”⁹⁶ that we can know by “observation and experience”.⁹⁷ History provides the experiential basis of politics:

These records of wars, intrigues, factions, and revolutions, are so many collections of experiments, by which the politician or moral philosopher fixes the principles of his science, in the same manner as the physician or natural philosopher becomes acquainted with the nature of plants, minerals, and other external objects, by the experiments which he forms concerning them.⁹⁸

Hume’s discussion of political maxims is consistent with their empirical basis. Hume refrains from formulating maxims concerning issues on which, in his view, there is insufficient empirical evidence, such as whether mankind is moving toward or away from perfection.⁹⁹ Additionally, Hume endeavours not to extend the scope of maxims beyond what empirical evidence warrants. For instance, he applies maxims regarding political parties, which he derived from British history, only to issues concerning British politics. Finally, since Hume admits that empirical generalizations may be susceptible of

exceptions, he allows for exceptions to specific political maxims. For instance, he claims that the prosecution of ancient Athenian demagogues for instigating unjust laws was a just exception to an otherwise binding political maxim.¹⁰⁰

Given Hume's emphasis on the empirical foundation of politics and the extent to which this shapes his discussion of political maxims, it is understandable that scholars often qualify his stance as political empiricism. Nevertheless, there is no evidence for the claim that a Humean stance within politics was a source of the standard *notion* of empiricism. As we shall see in Section 6, the standard notion of empiricism was introduced in Germany during the 1780s. This was with reference to issues concerning epistemology, without even a mention of politics. In the late 1780s, Kant, Kantians, and anti-Kantians started to employ the standard notion of empiricism in other fields than epistemology. These were ethics, aesthetics, and natural theology,¹⁰¹ but not politics. It is telling that Kant, who was one of the first to employ the new notion of empiricism within ethics and aesthetics, retained the *old* notion of empiric within politics. He did not characterize empirics as Humean political theorists, who derive general maxims from experience and eschew *a priori* reasonings, but as those who reject political theory altogether, regardless of its empirical or non-empirical foundation.

5 Between Bacon and Kant: Empirical Physicians

Like empirical politicians, empirical physicians were portrayed throughout the early modern period as unlearned practitioners who relied merely on experience.¹⁰² They were said to be unqualified, ignorant of medicine, and to prescribe cures only because they

thought they witnessed their efficacy or they found it recorded in collections of disparate recipes whose title, not by chance, often contained the term “empirical”.¹⁰³ The title of physician was often denied to these medical practitioners,¹⁰⁴ who were associated with “[m]ountebanks, [...] quacksalvers, mineralists, wizards, alchemists, cast-apothecaries, old wives, and barbers”.¹⁰⁵ Although the terms “mountebank” and “charlatan” designated a specific kind of socially accepted, sometimes legally authorized medical practitioner,¹⁰⁶ when they were associated with “empiric” they typically carried a negative connotation. Positive evaluations of medical empirics were rare to find,¹⁰⁷ as were authors who called themselves empirics.¹⁰⁸

The vigour of early modern criticisms of empirics¹⁰⁹ may surprise those who are familiar with ancient empirical physicians. These were in many ways the ancestors of early modern empirics and were regarded as such in the early modern period. Although *early modern* empirics often had a merely practical attitude, disjoined from explicit epistemological assumptions, their *ancient* counterparts made distinctive epistemological claims. They held that knowledge of medical cures derives entirely from experience, as opposed to insight into “hidden natures, causes, and actions, not open to observation, but only accessible to reason, e.g., atoms, invisible pores, functions of organs, or essences”.¹¹⁰

These views of ancient empirical physicians were remarkably close to those of the early modern physicians and philosophers who were associated with the new experimental philosophy, like Thomas Sydenham and John Locke. They too rejected reasonings from principles and speculations on hidden essences and claimed that cures should be derived from experience alone.¹¹¹ Early modern writers occasionally acknowledged that, since empirical physicians eschew speculation and rely on

experience, their teachings contain “something that is certaine & experimentall”.¹¹² One might then suppose that the standard notion of empiricism derives from the uptake of the *medical* notion of empiricism by early modern authors whose epistemological outlook was close to that of ancient empirical physicians. This is in keeping with scholars’ claims that “empiricism is essentially a medical invention”¹¹³ and that the “rationalism-empiricism debate” originated within medicine;¹¹⁴ with the widely held early modern view that medicine is closely linked to philosophy;¹¹⁵ and with the fact that “observation” too transitioned from medical to philosophical vocabulary in the early modern period.¹¹⁶

Indeed, some physicians who were associated with the new experimental philosophy – those physicians who would be now called empiricists – portrayed their views as continuous with those of ancient empirical physicians. These include the seventeenth-century chymical physician George Thomson and the eighteenth-century German physician Johann Georg Zimmermann. For instance, Thomson, who regarded himself as a follower of experimental philosophy, associated medical empiricism with verbs belonging to the jargon of experimental philosophers and qualified empirical physicians as “experimental physicians”:

[The word “*Empirick*”] arises from *πειράζω* *vel* *πειράω* *experior*, *vel* *exploro*, to *try*, *assay*, or *prove*, to review or find out any thing by diligent searching: so then *ἐμπειρικός* is but an *Experimental Physician* [...], one of a Sect very well allowed by the Antients [...]¹¹⁷

Thomson’s (and Zimmermann’s) statements show that some physicians who are now

classed as empiricists aligned themselves with empirical physicians. However, the significance of this fact should not be overstated for two reasons. The first is that neither Thomson, nor Zimmermann endorsed medical empiricism as such. Their praises were limited to *ancient* empirical physicians. Zimmermann, for instance, contrasted their “reasonable experience” with the “false” [*falsche*], “foolish” [*dumme*] experience of modern empirics.¹¹⁸ The second reason is that Thomson’s and Zimmermann’s positive comments on empirics were exceptions to the general trend. Typically, those physicians that we would now call empiricists rejected medical empiricism. Consider for instance Thomas Sydenham. In the same passage in which he praises experience, “the best guide and teacher that a physician can follow”, Sydenham criticizes empirical physicians for practising medicine on the basis of “speculations” – a capital sin in the eyes of self-professed experimental, anti-speculative physicians.¹¹⁹

Sydenham’s praise of experience may sound as a profession of empiricism to modern ears. In the face of this, it is interesting to note that English writers attempted to prevent any move from experience to empiricism. For instance, Francis Guybon denied that modern empirics can recruit Sydenham or Baglivi in their ranks because they referred to *literate* experience, an experience filtered through the theoretical medical knowledge that empirics lack or disregard.¹²⁰ On the whole, experimental physicians and their supporters distanced themselves from medical empiricism.

Why did experimental physicians see themselves as the opponents, rather than allies, of medical empiricism? One can find an answer in the works of Friedrich Hoffmann, a leading medical systematist of the early eighteenth century, and John Gregory, who taught in Edinburgh in the latter half of the century. Hoffmann and Gregory lamented that, “notwithstanding their pretension of relying upon experience alone”, empirics

“have in truth abandoned it”.¹²¹ They do not carefully inquire into the circumstances of individual patients. Having noted few symptoms, they hastily prescribe familiar remedies. This “obtuse and most dangerous *empiria*” [*stolida ac perniciosissima empiria*] is deeply flawed because the “efficacy of a cure” [*sanationis efficacia*] does not reside in the nature of the medicine, but in the way it interacts with the specific circumstances of the patient.¹²² Since modern empirics failed to rely on extensive trials and observations, they violated the methodological prescriptions of experimental philosophers (especially [E2]). Hence, praises of the latter went hand in hand with criticisms of the former.

Gregory’s preferred alternative to flawed medical empiricism is the application of the Newtonian method to medicine. Gregory praised a medical theory that “is produced by practice, is founded on facts alone, and constantly appeals to them for its truth”.¹²³ Hypotheses must be proposed “in the modest and diffident manner that” makes them “mere suppositions or conjectures”, that is, Newtonian queries. They can only be accepted if a “proof from experience” is available.¹²⁴ It is striking that Gregory portrayed this method, now associated with Newtonian empiricism, as an *alternative* to medical empiricism. Only much later, after “empiricism” took on a new meaning, did it come to be regarded as a positive stance even within medicine. Before establishing when this change took place, let us sum up the result of the survey of early modern attitudes towards empirical physicians.

Early modern literature on medical empiricism does not provide evidence of a medical origin of the standard notion of empiricism. The epistemological views of *ancient* empirical physicians were similar to those of the early modern physicians that are now classed as empiricists. However, the latter rarely associated themselves with

medical empiricism. Those who did praised *ancient* empirical physicians, but did not endorse empiricism as such and distanced themselves from early modern empirical physicians. This is because, during the early modern period, the medical notion of empiricism lost the epistemological connotations that were important to ancient empirical physicians and came to be associated with an insufficient reliance on experience. Since this is what many would regard as an un-empiricist attitude, it should not surprise that the standard notion of empiricism did not derive from it. As we shall see in the next section, the origins of that notion are not to be found in medical writings, but in the works of Immanuel Kant and his early followers.

6 The Genesis of Empiricism

The three main uses of the term “empiric” and its cognates in the early modern period were to designate empirical philosophers, politicians, and physicians. Having ascertained that none of them carries the epistemological implications that define the standard notions of empiricism, we are ready to establish when that notion became part of the philosophical vocabulary.

It first appeared in a printed work in 1781, in the last section of Kant’s *Critique of Pure Reason*, entitled “The History of Pure Reason”.¹²⁵ Kant had used the term “empiricism” earlier on in the first *Critique*, in the Antinomy chapter,¹²⁶ but it is in the History of Pure Reason that he employed it precisely in the sense that would become standard. Kant states that philosophers can be empiricists or noologists “with regard to the origin of pure cognitions of reason”.¹²⁷ Empiricists claim that those cognitions “are

derived from experience”. Noologists claim that, “independent from” experience, pure cognitions of reason “have their source in reason”.¹²⁸ The cognitions that Kant is referring to are concepts and judgements. As for concepts, empiricists “take all concepts of the understanding from experience”.¹²⁹ As for judgements, empiricists claim that no synthetic judgements can have an *a priori* justification. In Kant’s view, his proof that such judgements exist makes empiricism “wholly untenable”.¹³⁰ Since Kant’s empiricists deny that there are innate concepts and substantive *a priori* knowledge, they are empiricists in the standard sense of the term. Similarly, Kant’s noologists – called rationalists in later texts¹³¹ – are rationalists in the standard sense of the term: they hold that we have non-empirical concepts and substantive *a priori* knowledge.

The publication of the *Critique of Pure Reason* did not suffice to make the standard notion of empiricism an integral part of the philosophical vocabulary. Indeed, the first *Critique* was largely ignored in the first two years after its publication. Its first substantive reviews were published in 1783. From that moment, the *Critique* would slowly move towards the centre of attention. By 1787, the Kantian

insurrection exploded everywhere; war was declared in all corners of Germany. There were manuals, dictionaries, commentaries, new expositions of “the only true viewpoint”, letters, even poems: all to explain Kant’s philosophy or to praise it.¹³²

As the metaphor of the insurrection suggests, not everybody was singing praises of Kantian philosophy. Kant was often criticized for ascribing new, technical meanings to a large number of terms: “intuition”, “idea”, and also “empiricism” and “rationalism”.¹³³ A critic took them to be useless: “How rich is Critical philosophy of new technical terms:

‘topic’, ‘empiricism’, ‘mysticism’, ‘rationalism of practical reason’! And what is gained with this whole terminology? Sentences of the same kind as those that we already know” to be true.¹³⁴ Another critic complained that “empiricist” and “rationalist” were often used as terms of abuse, diverting philosophers from a dispassionate search for truth.¹³⁵

Despite these criticisms, “empiricism” and “rationalism” appeared in an increasing number of expositions, textbooks, commentaries, and lexica of Kant’s philosophy,¹³⁶ as well as outlines of new philosophical positions compared to Kant’s.¹³⁷ These works were written by authors influenced by Kant, who employed “empiricism” and “rationalism” in Kant’s sense. The anti-Kantians too contributed to spreading the use of “empiricism” and “rationalism”. They did so by engaging in a dispute with Kantians, to which I shall now turn.

In 1784 Christian Gottlieb Selle, a respected physician and a member of the Berlin Academy, published an “Attempt at a Proof That There Are No Pure Concepts of Reason That Are Independent of Experience”.¹³⁸ Although this article makes no mention of Kant, its target was his claim that we have non-empirical concepts, namely the categories. Four years later, Selle published a new edition of his *Principles of Pure Philosophy*, which develops a Lockean alternative to Kant’s first *Critique*.

Selle’s *Principles* prompted the reply of a Kant exegete, Carl Christian Ehrhard Schmid, entitled “Some Remarks About Empiricism and Purism in Philosophy”. Schmid’s “Remarks” is “a critical parallel of two opposed philosophical modes of thought”: Selle’s “general empiricism” and Kant’s “rationalism or *purism*”.¹³⁹ Schmid contrasts Kant’s and Selle’s views on sensibility, understanding, and reason; whether we have non-empirical intuitions and concepts; whether reason can operate independently from sensory inputs; our knowledge of the laws of nature; whether they depend on the

constitution of the world or of our mind; the foundations of the moral law and natural theology.

Schmid's essay prompted similar point-by-point comparisons by the anti-Kantians Selle and Pistorius.¹⁴⁰ Being widely read, the texts pertaining to this debate contributed to popularizing the terms "empiricism" and "rationalism" or "purism". "Purism" gave way to "rationalism" in the 1790s as the standard designation for the adversary of empiricism.

In Schmid's, Pistorius', and Selle's texts, "empiricism" and "rationalism" were not historiographical categories, imposed on earlier thinkers who did not employ them. They were actors' categories, used to single out certain positions within the then current debates. Within those debates, "empiricism" no longer carried negative connotations, unlike the old notions of empiricism that were only applied to others, never to oneself. To my knowledge, Selle and Pistorius are the first authors to use the standard notion of empiricism to designate their own views, at whose core were frontal attacks against Kant's claims that we have non-empirical concepts and that we can warrant some synthetic judgements *a priori*. Together with Kant's followers,¹⁴¹ they recycled the old expressions "empirical philosophy" as a synonym of "empiricism" and "empiric" [*Empiriker*] as a synonym of "empiricist" [*Empirist*], claiming for instance that Kant unjustly humiliated "empirical philosophy".¹⁴² They no longer identified empirical philosophers with natural philosophers like Gilbert or proto-philosophers like the Jewish patriarchs. They identified them with Locke, Hume, and all those who reject innate concepts and substantive *a priori* knowledge.

The change in meaning of "empiricism" or "empirical philosophy" was accomplished by 1800. The debate between Kantians and empirical philosophers gave way, on the one

hand, to the debate between Kantians and the Wolffians writing in the *Philosophisches Magazin* and, on the other, to the post-Kantian idealisms that were rising to prominence. By the second half of the 1790s, Kantian and post-Kantian philosophers had largely eclipsed the “observational philosophy” that they had renamed “empiricism”.¹⁴³ The introduction of the new notion of empiricism went hand in hand with the retreat of self-professed empiricists from the German philosophical arena.

A parallel shift took place within the historiography of philosophy. The most prominent historians of philosophy in Germany between the 1770s and the early 1790s, like Christoph Meiners and Dieterich Tiedemann, favoured experimental philosophy.¹⁴⁴ Their histories of philosophy discussed prominent early modern thinkers one after another, in chronological order, eschewing any classificatory schema and emphasizing the slow, steady progress of philosophy toward the truth.¹⁴⁵ By contrast, the Kantian authors of multi-volume histories of philosophy which were published at the turn of the nineteenth century, Johann Gottlieb Buhle and Wilhelm Gottlieb Tennemann, divided key early modern thinkers into empiricists and rationalists. They developed a historical narrative based on the contrast between empiricism and rationalism and their higher synthesis in Kant’s philosophy.¹⁴⁶ It is this narrative that would eventually become standard in the English-speaking world. Its origins, like those of the standard notion of empiricism, are to be found in the works of Kant and its early followers.

7 Conclusion

The inquiry into early modern meanings of “empiricism” and cognate terms supports a

negative and a positive conclusion. The negative conclusion is that the pre-Kantian uses only display a faint similarity with the standard notion of empiricism. Hence, those who defend the legitimacy of the standard narrative cannot appeal to the fact that “empiricism” or the RED were in use in the early modern period.

The positive conclusion is that the standard notion of empiricism was first used by Kant and his contemporaries and became widespread in Germany in the 1780s and 1790s. Given his admiration for Bacon’s philosophy,¹⁴⁷ Kant was very likely to be familiar with Bacon’s uses of “empiric”. Kant and his peers were also aware of the pre-Kantian uses of “empiric” and “empiricism” to designate empirical people, politicians, and physicians, as they were still common in late eighteenth-century Germany. Nevertheless, the focus on non-empirical concepts and substantive *a priori* knowledge that characterizes the standard notion of empiricism is absent from the pre-Kantian uses. It was first introduced by Kant. An inquiry into the evolution of his thought might trace the beginnings of this focus on non-empirical concepts and substantive *a priori* knowledge back to his notes of 1769, the year of the “great light”.¹⁴⁸ However, proving this claim will have to be postponed to another occasion.

The evidence assembled here establishes that the standard notion of empiricism, like the notion of rationalism, was widely used before Hegel, Kuno Fischer, or Thomas Hill Green published any works. This makes it likely that the received narrative of early modern philosophy too, as a whole, has its roots in the works of Kant and his early followers, rather than those of later authors as it is often claimed. Additionally, if the RED projects any biases onto the history of early modern philosophy, they are more likely to be Kantian biases than those of the Hegelians or of philosophers-psychologists like James.

Of course, the fact that the RED was first employed by the Kantians does not entail that it projects their biases onto early modern thinkers. Similarly, the fact that the RED was not in use in the early modern period does not entail that it is not a legitimate historiographical tool. Nevertheless, identifying the origins of the RED allows us to set aside some of the arguments employed in the debates on the usefulness of the standard narrative of early modern philosophy and is a necessary step to understand its history and presuppositions.

Acknowledgements

I would like to thank Peter Anstey, Tom Sorell, and participants in the 2012 Reading Early Modern Studies Conference for helpful comments on an earlier version of this paper. I am also grateful to Li Ling for discussion and for carrying out a survey of early modern dictionaries during her Undergraduate Research Scholarship at the University of Birmingham. This research was supported by a Marie Curie International Incoming Fellowship within the 7th European Community Framework Programme.

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¹e.g. Adamson, *Development*; Russell, *History*; Copleston, *Descartes to Leibniz*; Copleston, *Hobbes to Hume*; Copleston, *Wolff to Kant*; Shand, *Philosophy and Philosophers*, chs. 4–6; and the texts cited in notes 24–26 below.

²See e.g. Brown, “Introduction,” 10; Priest, *The British Empiricists*, 5.

³Cushman, *Modern Philosophy*, 175.

⁴e.g. Popkin, “Did Hume Read Berkeley?,” 533–45. Ewing (“Some Points,” 33–34) highlighted the difficulties involved in drawing a satisfactory distinction between empiricism and rationalism as early as 1937.

⁵Loeb, *From Descartes to Hume*.

⁶Norton, “Myth.”

⁷e.g. Buckle, “British Sceptical Realism,” 1–2; Haakonssen, “History”; Gaukroger,

Collapse of Mechanism, 155–57.

⁸Priest, *The British Empiricists*.

⁹Huenemann, *Understanding Rationalism*, 1–2.

¹⁰Loeb, *From Descartes to Hume*.

¹¹Buckle, “British Sceptical Realism.”

¹²Anstey, “Experimental”.

¹³Priest, *The British Empiricists*, 8.

¹⁴Norton, “Myth,” 331–33.

¹⁵Engfer, *Empirismus versus Rationalismus?*, 357, 411.

¹⁶Piaia, “European Identity,” 603–4.

¹⁷Loeb, *From Descartes to Hume*, 31.

¹⁸Gaukroger, *Collapse of Mechanism*, 155.

¹⁹Garrett, “Philosophy and History,” 49.

²⁰Gaukroger, *Collapse of Mechanism*, 155–56, see 98. For a similar argument, see
Haakonssen, “History.”

²¹e.g. Ayers, “Berkeley.”

²²e.g. Garrett, *Cognition and Commitment*, 29–38.

²³See e.g. Parkinson, *The Renaissance*; Brown, *British Philosophy*.

²⁴Copenhaver, “Recent Anthologies.”

²⁵Francks, *Modern Philosophy*.

²⁶Scruton, *Short History*.

²⁷AQA, “Specification.”

²⁸Thomas, *The Minds*.

²⁹e.g. Huenemann, *Understanding Rationalism*.

³⁰Gaukroger, *Collapse of Mechanism*, 155–56.

³¹In Rand, *The Life*, 207. This occurrence of “empiricist” may derive from the editor’s tendency to modernize Shaftesbury’s writing. If so, the term “empiricist” would have been introduced even later.

³²e.g. Bacon, *Novum Organum Scientiarum*, 392.

³³*Ibid.*, 392, 405.

³⁴MacLaurin, *Account*, 60.

³⁵Pemberton, *Newton’s Philosophy*, 10. They do not call the philosophy of that sect empiricism, but empirical philosophy. See Bacon, *Novum Organum Scientiarum*, 362; Reid, *Essays*, 541.

³⁶Van Fraassen, *The Empirical Stance*, 203.

³⁷*Phænomena universi*, OFB 6:3.

³⁸*Novum organum*, OFB 11: I, 62.

³⁹On Bacon’s notion of *scientia*, see Selcer, “From *Scientia Operativa*.”

⁴⁰*Novum organum*, I, 64, see I, 62.

⁴¹*Ibid.*, I, 64.

⁴²*Ibid.*, I, 62.

⁴³*Ibid.*, I, 95.

⁴⁴*Ibid.*, I, 64 (trans. modified).

⁴⁵*Phænomena universi*, OFB 6:2–3 (trans. modified).

⁴⁶*Ibid.*, 21.

⁴⁷*The Advancement of Learning*, OFB 4:10–11.

⁴⁸Ibid., 10. Throughout this paper, I follow Bacon in using the term “physician” in a broad sense. I include practitioners lacking a university degree among physicians.

⁴⁹Ibid., 11.

⁵⁰See note 68, 69 below.

⁵¹This is noted in Stuart et al., “Locke’s Experimental Philosophy,” 17.

⁵²This appears to be the view of Buonafede Vitali, a well-known medical empiric. See his *Lettera*, 13–14.

⁵³Van Fraassen, *The Empirical Stance*, 203.

⁵⁴e.g. Reid, *Essays*, 670; MacLaurin, *Account*, 60.

⁵⁵Priestley, *Philosophical Empiricism*, 59.

⁵⁶The first positive comment on philosophical empiricism that I could find in the English literature appeared only in 1795, in the review of a pamphlet on Kant. See Micheli, “Early Reception,” 243.

⁵⁷See e.g. Leibniz’s echo of the *Novum Organum* (OFB 11:21) in *Grundriß eines Bedenckens von Aufrihtung einer Societät in Teutschland zu auffnehmen der Künste und Wißenschafften* (1669–1670), A VI.i.538.

⁵⁸“Ohne Ueberschrift, enthaltend die sogenannte Monadologie” (1714), G 6:611, trans. in *Philosophical Essays*, 216–17.

⁵⁹“Extrait du Dictionnaire de M. Bayle article Rorarius p. 2599 sqq. de l’Edition de l’an 1702 avec mes remarques” (1702), G 4:526.

⁶⁰*Nouveaux Essais sur l’entendment humain* (1704–1705), A VI.vi.50, trans. in *New Essays*.

⁶¹Ibid., A VI.vi.271.

⁶²“[T]amdiu homines empirici ab omnibus illis ratiocinationibus abhorrebunt, [...] quamdiu vera corporum analysis non patebit, & phaenomena futura non poterunt ratione praedici”. “Leibnitiana,” 318. Although Leibniz notes that we all act as empirics, he identifies specific people as *empirici* in this and other passages (e.g. *Grundriß*, A IV.i.535).

⁶³Wolff, *Psychologia empirica*, §501–2; *Philosophia practica universalis*, §205–8, 285.

⁶⁴Canz, *Consensus*, 797–801, 806.

⁶⁵Seventeenth-century accounts of the origins of philosophy by Georg Horn (*Historiæ philosophicæ libri septem*), Thomas Stanley (*The History of Philosophy*, vol. 1, Preface), and Christian Thomasius (*Introductio ad philosophiam aulicam*) do not mention empirical people or empirical philosophers.

⁶⁶Heumann, *Acta philosophorum*, 5:760, 764. See Gentzken, *Historia philosophiae*, 4; Brucker, *Historia critica philosophiae*, 1:40, 63.

⁶⁷e.g. Lossius, *Physische Ursachen des Wahren*, 6; Tetens, *Speculativische Philosophie*, 1, 69.

⁶⁸e.g. *The Christian Virtuoso*, 300–1.

⁶⁹Magalotti, *Saggi di naturali esperienze*, sig. +1 2.

⁷⁰Anstey, “Locke on the Understanding,” 315.

⁷¹e.g. *Political Empiricism*; Mackintosh, *Vindiciae Gallicae*, 145, 148; Goodwin, *Enquiry*, 2:565.

⁷²e.g. Faber, *De politicis empiricis*, 14, and Kant’s passages cited at note 90 below.

⁷³This section is indebted to Scattola, *Dalla virtù alla scienza*.

⁷⁴e.g. Piccart, *Commentarius*, 5.

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- ⁷⁵e.g. Scherbe, *Discursus*, second pagination, 9–12.
- ⁷⁶e.g. Bodin, “Oratio,” 17a.
- ⁷⁷Goclenius, *Politica*, 3.
- ⁷⁸Melander, *Idea*, 3–4.
- ⁷⁹Bose, *Diatribae*, 1–2.
- ⁸⁰Scherbe, *Discursus*, second pagination, 10.
- ⁸¹Piccart, *Commentarius*, 6.
- ⁸²Conring, *De Civili Prudentia*, 111–12.
- ⁸³e.g. Piccart, *Commentarius*, 6.
- ⁸⁴Walm, *Aphorismi de politico pragmatico*, sig. B^v–C1^r.
- ⁸⁵e.g. Schumann, *Doctrina prudentiae*, 3–4.
- ⁸⁶See Scattola, *Dalla virtù alla scienza*, 509 on Achenwall.
- ⁸⁷e.g. Garve, *Abhandlung*.
- ⁸⁸Klein, “Brauchbarkeit,” 148–67.
- ⁸⁹Review of Klein, *Aufsätze*, 325.
- ⁹⁰Kant, “Vorarbeiten und Nachtrag zu Über den Gemeinspruch: Das mag in der Theorie richtig sein, taugt aber nicht für die Praxis” (1793), Ak. 23:127; see *Über den Gemeinspruch: Das mag in der Theorie richtig sein, taugt aber nicht für die Praxis* (1793), Ak. 8:302; Weyland, “Reinschriftfragment,” 9.
- ⁹¹*Gemeinspruch*, Ak. 8:276. Quotes from the *Gemeinspruch*, the *Critique of Pure Reason*, the *Progress of Metaphysics* and the *Metaphysik Mrongovius* are from *Cambridge Edition*.
- ⁹²*Zum ewigen Frieden* (1795), Ak. 8:373–75.

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- ⁹³“[D]octrinæ præceptis & regulis scholis Doctorum haustis”. Faber, *De politicis empiricis*, 15.
- ⁹⁴Acker, “De politicis empiricis,” 19.
- ⁹⁵Heßbrüggen-Walter, “Scientific Knowledge.”
- ⁹⁶Hume, *Principles of Morals*, 6.
- ⁹⁷Hume, *Human Understanding*, 44.
- ⁹⁸*Ibid.*, 83–84.
- ⁹⁹Hume, “Popolousness,” 378.
- ¹⁰⁰“Of Some Remarkable Customs”, 367; Wulf, “Skeptical Life,” 87–88.
- ¹⁰¹e.g. Kant, *Kritik der praktischen Vernunft* (1788), Ak. 5:71; *Kritik der Urtheilskraft* (1790), Ak. 5:347; Schmid, “Bemerkungen,” trans. in Sassen, *Critics*, 233–54.
- ¹⁰²e.g. Chambers, *Cyclopaedia*, 303.
- ¹⁰³e.g. Ruland, *Thesaurus Rulandinus*.
- ¹⁰⁴Cook, “Philosophy and Medicine,” 398.
- ¹⁰⁵Ford, *The Lover’s Melancholy*, 65–66.
- ¹⁰⁶Gentilcore, *Medical Charlatanism*.
- ¹⁰⁷They can be found in Leibniz’s epistolary, e.g. A III.vi.125 (1694), III.vii.951 (1698).
- ¹⁰⁸e.g. Vitali, *Lettera*.
- ¹⁰⁹They were called impostors, murderers and robbers. See e.g. Hiatrophilus, *Kluger und lustiger Medicus*, 12.
- ¹¹⁰Frede, “Method,” 262.
- ¹¹¹e.g. Sydenham, “Epistolæ,” 196, trans. in *Works*, 1:22; *Correspondence of John Locke*, 4:563 (1692), 628–29 (1693).

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- ¹¹²Copy of an undated letter, possibly from Benjamin Worsley to Robert Boyle.
University of Sheffield, Hartlib Papers, MS 42/1/30A.
- ¹¹³Wolfe, “Empiricist Heresies,” 333.
- ¹¹⁴Marcum, “Medicine, Philosophy of,” §2a.
- ¹¹⁵Wear, *Knowledge & Practice*, 362–65.
- ¹¹⁶Pomata, “A Word of Empirics.”
- ¹¹⁷Thomson, *Misochymias Elenchus*, 5. See Zimmermann, *Von der Erfahrung*, 36–38.
- ¹¹⁸*Ibid.*, 12, 36, 38.
- ¹¹⁹Sydenham, “Epistolæ,” 196, trans. in *Works*, 1:22. On the experimental/speculative distinction, see Anstey, “Experimental.”
- ¹²⁰Guybon, *Empiricism*, 28–32.
- ¹²¹Gregory, *Lectures*, 141.
- ¹²²Hoffmann, “Dissertatio,” 191.
- ¹²³Gregory, *Lectures*, 149.
- ¹²⁴*Ibid.*, 149, 150.
- ¹²⁵A852–56/B880–84.
- ¹²⁶A466/B494; Vanzo, “Kant on Empiricism,” 56–58.
- ¹²⁷A854/B882.
- ¹²⁸*Ibid.*
- ¹²⁹*Metaphysik Mrongovius* (lectures from 1782–83), Ak. 29:763.
- ¹³⁰*Welches sind die wirklichen Fortschritte, die die Metaphysik seit Leibnizens und Wolf’s Zeiten in Deutschland gemacht hat?* (1793), Ak. 20:275.
- ¹³¹e.g. *Fortschritte*, 20:275.

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- ¹³²“[L]’insurrection éclata partout ; la guerre fut déclarée aux quatre coins de l’Allemagne. Voilà des précis, des dictionnaires, des commentaires, des nouveaux exposés du ‘point de vue seul juste,’ des lettres, des poésies même, pour éclaircir la philosophie de Kant, ou pour en faire l’éloge”. Feder, *Précis*, §2, quoted in *Feders Leben*, 353.
- ¹³³Review of Kant, *Prolegomena*, as quoted in Kuehn, “Kant’s Critical Philosophy,” 642.
- ¹³⁴“Wie doch die kritische Philosophie an neuen Kunstwörtern so reich ist! Typik, Empirismus, Mysticismus, Rationalismus der practischen Vernunft! und was gewinnen wir wohl mit dieser ganzen Terminologie? Sätze von der Art, wie wir sie schon kennen”. Brastberger, *Untersuchungen*, 132.
- ¹³⁵Garve, review of Kant, *Kritik*, 839, trans. in Sassen, *Critics*, 59–60.
- ¹³⁶e.g. Schultz, *Erläuterungen*, 186; Schmid, *Wörterbuch*, 156–57, 162.
- ¹³⁷e.g. Maimon, *Versuch*, 433–38.
- ¹³⁸Selle, “Versuch,” trans. in Sassen, *Critics*, 193–98.
- ¹³⁹“Bemerkungen”, 2–3, 8, trans. in Sassen, *Critics*, 233, 236.
- ¹⁴⁰Pistorius, review of Schmid, *Critik*, trans. in Sassen, *Critics*, 255–69; Selle, “De la réalité,” 577–612; Eberhard, “Auszug.”
- ¹⁴¹e.g. Reinhold, *Briefe*, 177–78.
- ¹⁴²Feder, *Ueber Raum und Caussalität*, ix–x.
- ¹⁴³This shift is noted in Garve, “Beobachtungen,” 399–400.
- ¹⁴⁴See Longo, “Scuola di Gottinga.”
- ¹⁴⁵e.g. Meiners, *Grundriss*; Tiedemann, *Geist der speculativen Philosophie*, vol. 6.
- ¹⁴⁶e.g. Buhle, *Lehrbuch*; Tennemann, *Geschichte der Philosophie*.

¹⁴⁷The second edition of the *Critique of Pure Reason* starts with a quote from Bacon
(Bii).

¹⁴⁸Kant, *Reflexion* 5037 (1776–78), Ak. 18:68.