Introduction

There is one question that is crucial to any understanding of Friedrich Nietzsche's philosophical thought: what does it mean to "translate humanity back into nature" (*BGE* 230)?[1] Although he explicitly formulates this question only in the volumes of *The Gay Science* (1882/7) and *Beyond Good and Evil* (1886), it is difficult to overlook that its implications were present right from the beginning, even before his essay "On Truth and Lying in a Non-Moral Sense," written in 1872/3. Focusing on only this question, this book has three aims, and it will be good to outline them at the beginning.

The first aim is to reconstruct Nietzsche's philosophical naturalism. The latter's central concern, I argue, is the problem of normativity. How can we obtain an understanding of the sources of normativity without appealing to normativity as a standard separate from the agency, affects, conceptual commitments, and also cells and organs, that make us natural beings? At its core, Nietzsche's naturalism holds that what we regard as normative – as belonging to the world of knowledge and morality but also to the world of affect – is already constitutive of our existence and agency as natural beings. We cannot appeal to concepts of either normativity or nature that are external to our existence as natural beings, nor can normativity be located outside the historically emerged contexts within which we engage with what we regard as the world we inhabit. This is a difficult position to hold, precisely because it seeks to overcome the traditional opposition between materialism and idealism that, in one way or another, remains at the heart of modern philosophy. Nietzsche's position is perhaps best understood as a naturalized version of Kantian epistemology, and his naturalism indeed develops in dialogue with the first generation of neo-Kantians. This claim departs in many ways from standard readings of Nietzsche's naturalism that often present his thought as opposed to Kant and the neo-Kantians.[2] Such

[1] See also *GS* 109.
[2] See, for instance, Christoph Cox, *Nietzsche: Naturalism and Interpretation* (Berkeley, CA: University of California Press, 1999), 176–84.

standard readings, I argue, rest on a historical misunderstanding. There are, in short, different kinds and different generations of neo-Kantians, and Nietzsche's naturalism is of a rather particular kind, which continues to make his arguments relevant for current philosophical discussions about normativity.

The second aim of this book is to show that there are specific historical reasons why Nietzsche came to adopt a position best understood in terms of philosophical naturalism. These reasons are not only to be found in his encounter with early neo-Kantian thought, but also in his continued and surprisingly detailed engagement with the contemporary life sciences. The latter's evolutionary framework, Darwinian and otherwise, forces Nietzsche to revisit Kant's discussions of teleology and causality in order to reach a philosophical understanding of development in nature that adequately takes into account new kinds of biological knowledge about such things as cells, organs, and the development of embryos. The reconstruction of Nietzsche's naturalism requires thick historical contextualization, and the historical perspective of this book parts ways with many analytic reconstructions of Nietzsche's naturalism. While the latter often tend to project our current knowledge of evolution, together with a shorthand notion of what constitutes "science," into Nietzsche's writings, I will foreground the uncertain and conflicting nature of knowledge in the nineteenth-century life sciences as emerging disciplines. One consequence of this approach is the conclusion that Nietzsche's naturalism is neither of a Darwinist kind, nor anti-Darwinian in orientation and, as such, his work reflects the uncertain outlook of the contemporary life sciences as it can also be found in the work of scientists such as Darwin, Wilhelm Roux, August Weismann, Rudolf Virchow, and Carl von Nägeli, to name but a few. Moreover, relating Nietzsche's engagement with the life sciences to the Kantian and neo-Kantian background of his naturalism allows us to recognize the inherently historical dimension of Nietzsche's project: development in nature, and therefore also the development of our normative commitments as human beings, is neither teleological, nor completely arbitrary and random; it is open toward the future and inherently unpredictable, but the range of future possibilities is limited by the constraints that the past places on this development. This, to be sure, will require some explanation.

Nietzsche's mature project of a genealogy of values, in terms of both moral values and epistemic commitments, only makes sense on the grounds of this intersection of Kantian thought and the new life sciences of the nineteenth century, and in *Daybreak* (1881) he described his project in

terms of a "natural history" of these values (*D* 112). Following from this, the third aim of this book is to show how Nietzsche's naturalism and his understanding of the life sciences tie in with genealogy. If the neo-Kantian dimension of his naturalism is to hold much water, genealogy has to be understood as a philosophical critique that seeks to deliver a natural history of normativity. As such, genealogy has to fulfill three demands. It has to show how the world of values really is constitutive of our existence and agency as natural beings and how the normative force of our commitments has come about in the first place. Genealogy also has to answer how we could have come to hold norms and values that seemingly go against, and often even deny, some of the basic conditions of our existence and agency as natural beings, such as our hope in the autonomy of reason. Finally, as a philosophical practice that, in line with Nietzsche's naturalism, must be part of the world it seeks to describe and criticize, genealogy has to be able to open up possibilities for the emergence of new kinds of values. As a normative enterprise, genealogy is only significant because it is able to point to further development, including the possibility of overcoming past normative claims that have appeared to be self-contradictory, such as the moral canon of virtue ethics. Nietzsche's conception of the "will to power" plays an important role here, since it describes a merely formal normative standard that he regards as constitutive of the agency of living things, namely the overcoming of resistance.[3]

Against this background, I reach two conclusions. First, Nietzsche's genealogy is the inevitable outcome of the intersection of Kantian ideas with the new life sciences that stands at the center of his naturalism. Second, genealogy reaches beyond the traditional metaethical distinction between moral realism and an anti-realism about values. From the perspective of genealogy, the normative force of our commitments is neither independent of our existence as natural beings, nor is it specific to our humanity. This conclusion, once again, distances the argument of this book from many current discussions of Nietzsche's naturalism that either ascribe to him, in various forms, an anti-realism about values, or conclude that he oscillates between anti-realist and realist claims about values.[4]

To make the argument of this book more cogent, three clarifications are necessary. The first relates to Nietzsche's neo-Kantian stance, the second

[3] See, along similar lines, Paul Katsafanas, *Agency and the Foundations of Ethics: Nietzschean Constitutivism* (Oxford: Oxford University Press, 2013), 145–82.

[4] Most recently, similar issues have also been raised from a more analytic perspective. See Nadeem J. Z. Hussain, "Nietzsche's Metaethical Stance," in Ken Gemes and John Richardson (eds.), *The Oxford Handbook of Nietzsche* (Oxford: Oxford University Press, 2013), 389–414.

to the question of what kind of naturalism Nietzsche adopts, and the third is concerned with the general outlook of the life sciences in the nineteenth century. In the remainder of this introduction, I will address each of these issues in turn.

Attributing to Nietzsche's naturalism a neo-Kantian stance certainly invites misunderstanding, and it is important to be precise. If Nietzsche's neo-Kantian stance were simply to imply that he happens to be interested in authors that are critical of traditional metaphysics and open to advances in the biological sciences of the time, then it would have little to do with Kant; his relationship to neo-Kantian philosophers would merely be a coincidence, a sign of the times, as it were. What is crucial to point out, rather, is the fact that early neo-Kantian philosophy – in contrast to both Kant and a simple rejection of traditional metaphysics – begins to recognize the paradoxical nature of normativity, and therefore of human agency, as soon we accept our existence as natural beings: in the realms of both knowledge and ethical judgment, normative commitments are co-emergent with our existence as acting natural beings that intervene in, and interact with, a world of which we are already a constitutive part. Normatively binding knowledge about evolution, for instance, partakes in processes that contribute to the evolution of the species which advances such epistemic claims about evolution in the first place. While German idealism and materialism both attempt to resolve such paradoxes either by deferring to the autonomy of human reason or by reducing norms to natural kinds, early neo-Kantian thought endeavors to reach beyond the opposition of idealism and materialism.

It is crucial to point out, however, that I refer here to the first generation of neo-Kantians in the period between the late 1840s and the 1880s whose work is largely, albeit not exclusively, marked by the direct intersection of Kantian epistemology and the life sciences. This first generation of neo-Kantians, roughly speaking, begins with Hermann von Helmholtz, includes Nietzsche's contemporaries Friedrich Albert Lange, Otto Caspari, and Otto Liebmann, among others, and ends with Ernst Mach's *Beiträge zur Analyse der Empfindungen* [*Contributions to the Analysis of Sensations*], published in 1886, whose last chapter offers the outline of a naturalistic philosophy of science that does not even mention Kant any more. Lange, Liebmann, and Caspari, in their work during the 1860s and 1870s, are concerned with naturalizing Kant's theory of knowledge. As such, this first generation of neo-Kantians is different from those more famous neo-Kantian philosophers, like Hermann Cohen and Paul Natorp, who gave up naturalism in favor of new transcendental arguments. This difference

between the naturalistic interests of the early neo-Kantians and the transcendental claims of the later neo-Kantians is all too often glossed over in many current accounts of neo-Kantian thought.

There is, of course, a range of problems that such an approach has to face. Bernard Williams once remarked that Nietzsche's writings are characterized by a "resistance to the continuation of philosophy by ordinary means."[5] Nevertheless, the persistent interest in Nietzsche's thought seems to suggest that he has become somewhat more ordinary, and less of a scandalous deviation from the history of modern philosophy, than often proclaimed. This is not only the case among those working in the so-called continental tradition, or among intellectual historians, but also among many commentators who situate themselves in the tradition of analytic philosophy.[6] Since the mid-1990s Nietzsche's name has appeared in seemingly surprising places, especially in the context of debates about nature and normativity. Leaving aside the considerable influence he had on Williams, who took over genealogy as a fruitful model to examine the way we speak about truth, sincerity, and values, his impact can also be traced in the work of Robert Brandom.[7] Recently, Huw Price placed Nietzsche, together with David Hume, in the tradition of a specific kind of naturalism, "subject naturalism," which holds that, whatever else human beings are, they always remain natural beings, but it was Joseph Rouse who explicitly described his discussion of normativity in the natural sciences as marked by a "Nietzschean commitment."[8]

On the one hand, naturalism has become the central focus of the current discussion of Nietzsche's work. On the other hand, analytic approaches often ignore the complexity of Nietzsche's historical context: they reduce this context to one or two dominant themes, such as Darwinism, and they also tend to take at face value the self-description of the natural sciences within this context.[9] Moreover, they often view Nietzsche's

[5] Bernard Williams, "Nietzsche's Minimalist Moral Psychology," in *The Sense of the Past: Essays in the History of Philosophy*, ed. and introd. Myles Burnyeat (Princeton, NJ: Princeton University Press, 2006), 299–310: 300.

[6] See, for instance, Simon Robertson and David Owen, "Nietzsche's Influence on Analytic Philosophy," in Gemes and Richardson (eds.), *The Oxford Handbook of Nietzsche*, 185–206.

[7] See Bernard Williams, *Truth and Truthfulness: An Essay in Genealogy* (Princeton, NJ: Princeton University Press, 2002), 12–40, and Robert Brandom, *Reason in Philosophy: Animating Ideas* (Cambridge, MA: Harvard University Press, 2009), 133 and 153.

[8] See Joseph Rouse, *How Scientific Practices Matter: Reclaiming Philosophical Naturalism* (Chicago: University of Chicago Press, 2002), 3–4, 95, 303, and 359–60, and Huw Price, *Naturalism without Mirrors* (Oxford: Oxford University Press, 2011), 186.

[9] A particularly influential example is Brian Leiter, *Nietzsche on Morality* (London: Routledge, 2002).

naturalism as merely focusing on psychological questions, such as the will.[10] As I shall argue throughout the following chapters, the intellectual fields within which Nietzsche's naturalism develops are far more complex than such readings suggest. Of course, an approach that seeks to do justice to both Nietzsche's philosophical import and his historical context might be contentious. To some it may even seem quarrelsome. Philosophically inclined readers might despair about the thick historical contextualization that guides the argument. Historians, meanwhile, could very well raise complaints about the way in which I occasionally draw on more technical work in the philosophy of science that seems not always directly connected to the historical contexts at stake. I believe, though, that this is a risk worth taking.

Naturalism, needless to say, can mean many things, but at its very core it generally holds, first of all, that human beings are no special case vis-à-vis the rest of nature and, second, that the way we think philosophically about our position in the world should entertain a close relationship to the natural sciences broadly conceived. A naturalized account of our knowledge about the world cannot successfully be detached from the problem of normativity. Asking what we know, and how we know it, leads to normative claims about the world, which govern the realm of our knowledge as much as they guide our ethical commitments. Whatever distinctions we might draw between different kinds of naturalism, the latter remains connected to the most efficient, and the only reasonable, way of thinking about nature, that is, the sciences. This was not lost on Nietzsche, who often praised what he called, in *The Gay Science*, the "'severity of science'" (*GS* 293).

The way in which our normative commitments are grounded in nature, of course, is open to debate. Fine distinctions have been drawn between more substantive versions of naturalism and varieties that merely emphasize philosophy's methodological continuity with the sciences. Substantive forms of naturalism have run into serious difficulties, however: to verify the meaning of analytical statements about the world by appealing to physicalist reductionism, that is, by assuming that such statements can only be correct if they are based on a logic derived from an immediate access to empirical reality, is virtually impossible in most cases. It is, as Willard Van Orman Quine once noted, ultimately "an unempirical dogma of empiricists, a metaphysical article of faith."[11] Nietzsche's criticism of

[10] See, most recently, Maudemarie Clark and David Dudrick, *The Soul of Nietzsche's Beyond Good and Evil* (Cambridge: Cambridge University Press, 2013).

[11] Willard Van Orman Quine, "Two Dogmas of Empiricism," in *From a Logical Point of View: Nine Logico-Philosophical Essays*, 2nd edn., rev. (Cambridge, MA: Harvard University Press, 1961), 20–46: 37.

nineteenth-century scientific materialism pointed to exactly the same problem. Quine's naturalism, however, is also based on a continuity between philosophical inquiry and scientific method that Nietzsche would have found more difficult to endorse.[12] Philosophy, for Quine, can only be worth our while if it focuses on the cognitive aspect of the way we gain knowledge about the world, and it needs to be guided by the very same formal methods that Quine regarded as unifying the natural sciences.[13] Where does the normative force of the sciences come from, however, Nietzsche would ask. Indeed, work in the nineteenth-century physiological research laboratory, not unlike today's benchwork in molecular biology, rarely if ever conforms to the neat formal methodological commitments assumed by Quine. Nietzsche's image of science, of how the sciences work, is shaped, rather, by the "mangle" of scientific practice.[14] His description of genealogy, in *Beyond Good and Evil*, largely draws on the kinds of practices that can be found in the biological and medical sciences: "examination, dissection, interrogation, vivisection" (*BGE* 186). While Quine's understanding of what constitutes scientific method is indebted to the mathematical and physical sciences of the mid twentieth century, Nietzsche's understanding of science is shaped by the untidy experimental endeavors of the nineteenth-century life sciences and by the ensuing debates about the reach of biological explanations.

The reason why this distinction is important, is that there is no unity of method among the nineteenth-century life sciences. Although all the life sciences subscribe to an evolutionary model of development, and conceive life as an exclusively biological phenomenon, they do so in very different ways and with very different outcomes: natural selection, animal morphology, cell theory, experimental psychology, and research in physiological laboratories tend to overlap only partially.[15] Seen from this perspective, it is also inherently problematic to give too much weight to the question whether, or not, Nietzsche accepted Charles Darwin's theory of evolution. Whether he is a Darwinist strictly speaking, and whether his claims are therefore more reasonable than otherwise, is not the crucial issue. It

[12] See Willard Van Orman Quine, "Epistemology Naturalized," in *Ontological Relativity and Other Essays* (New York: Columbia University Press, 1969), 69–90.

[13] See *ibid.*, 82.

[14] See Andrew Pickering, *The Mangle of Practice: Time, Agency, and Science* (Chicago, IL: University of Chicago Press, 1995).

[15] See Lynn K. Nyhart, *Biology Takes Form: Animal Morphology and the German Universities, 1800–1900* (Chicago: University of Chicago Press, 1995), and Robert J. Richards, *The Meaning of Evolution: The Morphological Construction and Ideological Reconstruction of Darwin's Theory* (Chicago, IL: University of Chicago Press, 1992).

would be wrong to assume that, by the 1880s, all biological questions were answered by reference to natural selection and adaptation.[16]

Nietzsche, to be sure, does accept a Darwinian framework, and there are, as we shall see, good reasons for him to do so. But the modern evolutionary synthesis emerges only in the early twentieth century; it simply was not yet in place in the second half of the nineteenth century. Darwin is just Darwin; he is not a neo-Darwinian or even a Darwinist. Indeed, Darwin's program overlaps and competes with other approaches of, at the time, equal explanatory value. Cell theory and animal morphology, for instance, often addressed issues – for example, cell division, genetic inheritance, or the morphological development of embryos – that natural selection could not yet integrate into its overall theoretical claims. There is, in short, no unity to the life sciences of the nineteenth century, and this is as true around 1800 as it is during the 1880s. It would be a historical misunderstanding to view the life sciences of the nineteenth century through the lens of the neo-Darwinian synthesis of evolution, but it is a common misunderstanding. What makes the contemporary life sciences philosophically interesting for Nietzsche and the neo-Kantians, are precisely the tensions between different explanatory models and the messy conceptual arsenal that always mark emerging disciplines, but also the unclear status of the concrete knowledge the life sciences produce through fieldwork, experiment, and observation.

Moreover, as emerging disciplines with an uncertain vocabulary the life sciences in the second half of the nineteenth century continued to be marked by the language of earlier *Naturphilosophie*. This is not a specifically German phenomenon. The circulation of ideas between Britain, Germany, and France is a feature common to the sciences in nineteenth-century Europe.[17] Darwin, in his famous second notebook on the transmutation of species from 1838, refers freely, and with enthusiasm, to authors in close proximity to Romantic *Naturphilosophie*, such as Gottfried Reinhold Treviranus and Carl Gustav Carus, speculating about a possible "spirit of life"

[16] For the assumption that Nietzsche is a critic of Darwinian accounts of evolution see, for instance, Dirk R. Johnson, *Nietzsche's Anti-Darwinism* (Cambridge: Cambridge University Press, 2010), and Gregory Moore, "Nietzsche and Evolutionary Theory," in Keith Ansell-Pearson (ed.), *A Companion to Nietzsche* (Oxford: Blackwell, 2006), 517–31.

[17] British biologists and philosophers were sufficiently familiar with German Romantic *Naturphilosophie*, for instance, through J. B. Stallo, *General Principles of the Philosophy of Nature, with an Outline of Some of Its Recent Developments among the Germans, Embracing the Philosophical Systems of Schelling and Hegel, and Oken's System of Nature* (London: Chapman, 1848), and Samuel Taylor Coleridge, *The Idea of Life: Hints Towards the Formation of a More Comprehensive Theory of Life*, ed. Seth B. Watson (London: Churchill, 1848).

and a "thinking principle" that ordered "the endless forms of the natural beings."[18] Thus, when Nietzsche and Darwin refer to evolution, they have something in mind that is rather different from what we, today, understand by the very same term. Nietzsche is not more, or less, influenced by the German tradition of biological research than by Darwin and Darwinism. Rather, he draws on both in equal measure precisely because the apparent differences among these strands of biological thought are less relevant in the nineteenth century than they might appear to be today. Nietzsche's relationship to Darwin, then, is as intricate as his relationship to Kant, and when he seems to criticize Darwin, such criticism is often directed against popularized versions of Darwinism rather than against Darwin's program of evolution.

Nietzsche's interest in the life sciences is central to the development of his philosophical project as a whole. In a letter he sent in the summer of 1881 from Sils Maria to his close friend Franz Overbeck in Zurich, he noted emphatically: "Said in confidence: the little I can work on with my eyes belongs almost exclusively to physiological and medical studies (I am so badly informed! – and really have to *know* so much!)" (*KGB* III/1, 117). A sober historical understanding of this interest in the life sciences began to gain traction only fairly recently.[19] Nevertheless, the philosophical discussion is often still influenced by Martin Heidegger's claim that Nietzsche's notion of "science" bore little relation to the contemporary natural sciences as they took shape over the course of the nineteenth century.[20] Also, Heidegger's famed lectures at the University of Freiburg im Breisgau, delivered between 1936 and 1940, argued that Nietzsche's proper philosophy was to be found in his notes, creatively compiled and published in 1901, and subsequently in several revised formats, as *The Will to Power*. There is little doubt that this has done much damage, so much so that one recent commentator noted that Nietzsche's will to power was merely a "wild-eyed speculation not untypical in nineteenth-century German metaphysics, which simply

[18] See Charles Darwin, "Notebooks on Transmutation of Species, Part II: Second Notebook (February to July 1838), edited with an Introduction by Sir Gavin de Beer," *Bulletin of the British Museum (Natural History): Historical Series* 2/3 (May 1969), 75–118: 93, 98, and 108. Darwin refers here to Gottfried Reinhold Treviranus, *Biologie, oder Philosophie der lebenden Natur für Naturforscher und Aerzte* (Göttingen: Röwer, 1802–22), and Carl Gustav Carus, "On the Kingdoms of Nature, their Life and Affinities," *Scientific Memoirs Selected from the Transactions of Foreign Academies of Science and Learned Societies and from Foreign Journals* I (1837), 223–54.

[19] See, for instance, the contributions in Gregory Moore and Thomas H. Brobjer (eds.), *Nietzsche and Science* (Aldershot: Ashgate, 2004).

[20] Martin Heidegger, *Nietzsche*, trans. David Farrell Krell, Joan Stambaugh, and Frank A. Capuzzi, ed. David Farrell Krell (New York: Harper & Row, 1979–87), II, 20.

does not merit serious attention."[21] Despite such reservations, I will argue that Nietzsche posed the right questions about the reach of naturalism and about normativity – questions that continue to be relevant today. He is not always able, however, to deliver convincing solutions. To a considerable degree, he shares this fate with Kant, but asking the right questions is already a good way forward.

[21] Bernard Reginster, *The Affirmation of Life: Nietzsche on Overcoming Nihilism* (Cambridge, MA: Harvard University Press, 2006), 104.