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Peels, Rik

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Epistemic Values in the Humanities and in the Sciences

Rik Peels, *Vrije Universiteit Amsterdam*

ABSTRACT

Some scholars have defended the academic legitimacy of the humanities by drawing attention to their distinct goals or methods. In this essay, I argue for their legitimacy by doing the opposite: I defend the view that they pursue the same epistemic values as the sciences. I distinguish three different kinds of epistemic values: first, properties of theories, ideas, hypotheses; second, properties—more specifically intellectual character traits—of individual scholars and research groups; and, third, relations between individual scholars or groups of scholars and reality, such as knowledge and understanding. I use a variety of historical examples to argue that the humanities aim at the same epistemic values as the sciences, even though some epistemic values have more weight in the humanities while others have more weight in the sciences. Moreover, in opposition to the sciences, the humanities actually study these epistemic values themselves. When we compare the humanities with the sciences when it comes to epistemic values, then, the humanities do at least as good or even better than the sciences. I conclude by sketching the ramifications of this on three important topics: the marginalization of the humanities that many universities face nowadays; the doctrine of scientism, that is, the idea that only the natural sciences provide reliable knowledge; and the alleged cultural gap between the sciences and the humanities.

The aim of this article is to explore whether the humanities pursue the same epistemic values as the sciences. When I say “pursue,” I mean that in their research they aim at these values, that they try to reach or acquire them. By “epistemic values,” I mean, roughly, values from the perspective of getting at the truth,

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that is, grasping and knowing reality or, at least, getting as close to grasping and knowing it as possible. Examples of such epistemic values are rational belief, knowledge, understanding, insight, coherence, and open-mindedness. For, these are all phenomena that are truth-conducive: they generally help scholars in getting (closer) to the truth in the sense of being informed about the world in and around us.¹

There are at least three reasons why the issue of epistemic values in the humanities has become important and is even urgent nowadays. First, as the American classicist and philosopher Martha Nussbaum (born 1947) has argued in detail, especially in her influential essay *Not for Profit: Why Democracy Needs the Humanities*, the humanities have been marginalized in comparison with the natural sciences, such as physics and biology, and the social sciences, such as economics and psychology. This is true for many Western countries, such as the United States, but also for several Asian countries, such as India.² This marginalization is reflected in the economic pressure that many departments of humanities face nowadays. For example, in 2015, significant political and economic pressure was placed on Japan's sixty national universities by the Japanese government. Consequently, twenty-six closed or scaled down their humanities faculties.³ As a result of this marginalization, universities tend to focus on epistemic values that can easily be pursued by the sciences, such as practical knowledge and technological knowledge (*technè*), at the cost of epistemic values for which the humanities seem better equipped, such as wisdom, intellectual character formation, and un-

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1. Below I list epistemic values that are often thought to be truth-conducive. This is somewhat controversial for a couple of those values, such as open-mindedness (see, e.g., J. Adam Carter and Emma C. Gordon, "Openmindedness and Truth," *Canadian Journal of Philosophy* 44, no. 2 [2014]: 207–24), but since many consider them to be epistemic values, I have included them in the list.

2. See Martha Nussbaum, *Not for Profit: Why Democracy Needs the Humanities* (Princeton, NJ: Princeton University Press, 2010).

3. See Jack Grove, "Social Sciences and Humanities Faculties 'to Close' in Japan after Ministerial Invention," *Times Higher Education*, September 14, 2015. Of course, science departments often also face significant economic pressure. To the extent that that has negative consequences, though, it usually primarily leads to distorted and unreliable scientific practices rather than the marginalization of the sciences; see, e.g., Daniel Greenberg, *Science for Sale: The Perils, Rewards, and Delusions of Campus Capitalism* (Chicago: University of Chicago Press, 2007); Hans Radder, *The Commodification of Academic Research: Science and the Modern University* (Pittsburgh: University of Pittsburgh Press, 2010).

derstanding.⁴ If the humanities pursue the same epistemic values as the sciences and are sufficiently successful in doing so, then governments and university boards should revisit or even fight this marginalization.⁵

Second, a highly influential idea—or cluster of ideas—that we find nowadays in academia is *scientism*. Scientism says, roughly, that only the natural sciences provide rational belief and knowledge and that they do so reliably, whereas, for example, the humanities do not—either not reliably so or not at all. This scientific view may remind the reader of early twentieth-century logical positivism, as developed by members of the Vienna Circle such as Otto Neurath (1882–1945) and Rudolf Carnap (1891–1970). There is a crucial difference, though: logical positivism meant to eradicate pseudo-science by providing a criterion of meaning. Its core statement is, therefore, a semantic one, namely, that only those sentences that are empirically verifiable or that are tautologies are meaningful. This meant that there was still some place for the humanities at the university—even though many of them would have to go, including metaphysics and ethics, since they are mostly not concerned with what is empirically verifiable or tautological. It would leave room for, say, history and certain kinds of linguistics. Scientism, however, is a more recent movement—we find it since the 1990s—and, more importantly, it is more radical in that it is primarily an epistemological thesis that says that only the natural sciences provide knowledge.⁶ This leaves (virtually) no place for the humanities. According to American philosopher of science Alex Rosenberg (born 1946), for instance,

If we're going to be scientific, then we have to attain our view of reality from what physics tells us about it. Actually, we'll have to do more than that: we'll have to embrace physics as *the whole truth about reality*. . . . We trust science as the only way to acquire knowledge. [Scientism] . . . is the conviction that the methods of science are the only reliable ways to secure knowledge of any-

4. See David F. Ford, *Christian Wisdom: Desiring God and Learning in Love* (Cambridge: Cambridge University Press, 2007); Anthony Kronman, *Education's End: Why Our Colleges and Universities Have Given Up on the Meaning of Life* (New Haven, CT: Yale University Press, 2008); Nicholas Maxwell, *From Knowledge to Wisdom: A Revolution in the Aims and Methods of Science* (Oxford: Blackwell, 1984); Mary Midgley, *Wisdom, Information, Wonder: What Is Knowledge For?* (London: Routledge, 1989).

5. This is not to deny that there may be further reasons for fighting this marginalization. The humanities may, of course, also have great moral and aesthetic significance in addition to the epistemic significance they have in virtue of pursuing certain epistemic values.

6. For exposition and discussion of scientism, see Maarten Boudry and Massimo Pigliucci, eds., *Science Unlimited? The Challenges of Scientism* (Chicago: University of Chicago Press, 2017); Jeroen De Ridder, Rik Peels, and René van Woudenberg, eds., *Scientism: Prospects and Problems* (New York: Oxford University Press, 2018); Richard N. Williams and Daniel N. Robinson, eds., *Scientism: The New Orthodoxy* (London: Bloomsbury Academic, 2015).

thing; that science's description of the world is correct in its fundamentals. . . . Science provides all the significant truths about reality, and knowing such truths is what real understanding is all about. . . . Being scientific just means treating science as our exclusive guide to reality, to nature—both our own nature and everything else's.⁷

Rosenberg does not hesitate to spell out the radical ramifications of this for the humanities:

When it comes to real understanding, the humanities are nothing we have to take seriously, except as symptoms. But they are everything we need to take seriously when it comes to entertainment, enjoyment, and psychological satisfaction. Just don't treat them as knowledge or wisdom.⁸

He goes on to defend this kind of scientism in detail in his book *The Atheist Guide to Reality*. Others have defended similar claims, either as general statements about any kind of knowledge (e.g., British chemist Peter Atkins)⁹ or more specific claims about areas that are traditionally considered to be domains in which the humanities have a legitimate say, such as metaphysics (e.g., the philosophers Don Ross, James Ladyman, and David Spurrett).¹⁰ Now, if the humanities do not pursue such epistemic values as rational belief, knowledge, and understanding, then scientism may well be right that the humanities cannot provide these. In fact, in that case it may be that because the humanities cannot provide knowledge and understanding, they do not pursue these values. If the humanities do pursue these values, though, everything comes down to arguments for and against the idea that the humanities do so sufficiently successfully.¹¹ Let me stress that I will not provide these arguments here, as I have already done so elsewhere.¹² Here, my focus is on the issue of whether the humanities actually pursue and have been pursuing these epistemic values.

7. Alex Rosenberg, *The Atheist's Guide to Reality* (New York: Norton, 2012), 6–8.

8. *Ibid.*, 307.

9. See Peter W. Atkins, "Science as Truth," *History of the Human Sciences* 8, no. 2 (1995): 97–102.

10. See Don Ross, James Ladyman, and David Spurrett. "In Defence of Scientism," in *Every Thing Must Go: Metaphysics Naturalized*, ed. James Ladyman, Don Ross, David Spurrett, and John Collier (Oxford: Oxford University Press, 2007), 1–65.

11. For various arguments for and against this claim, see De Ridder, Peels, and Van Woudenberg, *Scientism*.

12. See Rik Peels, "The Empirical Case against Introspection," *Philosophical Studies* 173 (2016): 2461–85, "Ten Reasons to Embrace Scientism," *Studies in History and Philosophy of Science A* 63 (2017): 11–21, "The Fundamental Argument against Scientism," in *Science Unlimited? The Challenges of Scientism*, ed. Maarten Boudry and Massimo Pigliucci (Chicago: University of Chicago Press, 2018), and "Scientism and the Argument from Self-Referential Incoherence" (unpublished manuscript).

Third, ever since the early 1960s, or maybe going back as far as the *Methodenstreit* in German universities in the 1890s, a debate has been raging about whether the humanities, on the one hand, and the sciences, on the other, are doing the same sort of thing or whether we should take them to be two radically different cultures. In 1959, British scientist and novelist C. P. Snow (1905–80) delivered at Cambridge his famous Rede lecture “The Two Cultures,” in which he argued that the humanities and the sciences have become two completely separate cultures and criticized the idea that humanistic scholars need not know anything about, say, the Second Law of Thermodynamics. Literary critic F. R. Leavis wrote a rather sharp reply *Two Cultures? The Significance of C. P. Snow*.¹³ Ever since, scientists and scholars in the humanities have been worried about a (growing) divide between the sciences and the humanities. However, if the humanities and the sciences pursue the same epistemic values, that sheds important light on this debate. They may still pursue those values with respect to different objects or different properties of the same objects and they may still use different methods,¹⁴ but at least they would aim at the same epistemic values. In that case, there would be crucial similarities that make it hard to truthfully talk of two entirely different cultures.¹⁵ After the discussion in the ensuing sections of various kinds of epistemic values, I return to each of these three points and show how what we have uncovered bears on each of these them.

This article is structured as follows. Section I covers some preliminaries: What kinds of epistemic values are we talking about? What are the humanities? And what are the sciences? After that, I zoom in on the core notion of “epistemic value.” In Section II, I explain in more detail what makes a value epistemic rather than moral or social and then go on to distinguish three crucially different kinds of epistemic values: (1) properties of theories, (2) properties—more specifically, dispositions that are virtues—of researchers and research groups, and (3) relations between scholars, on the

13. C. P. Snow, *The Two Cultures: And a Second Look* (New York: The New American Library, 1963) and F. R. Leavis, ed., *Two Cultures? The Significance of C. P. Snow* (New York: Pantheon Books, 1963). For a description of the controversy, see Otto A. Bird, *Cultures in Conflict: An Essay in the Philosophy of the Humanities* (Notre Dame, IN: University of Notre Dame Press, 1976), 114–32.

14. See, e.g., Bird, *Cultures in Conflict*, 162–63: “The distinguishing feature of the humanities in both method and subject matter, especially in comparison with the sciences, is the centrality, generality, or commonness of their concern in that they are open to all human experience through all the ways of awareness available to man.”

15. One may wonder exactly how these three points relate to each other. It seems to me that the second and third reasons may explain the first: there is a marginalization of the humanities partly because of the doctrine of scientism and the idea of two cultures. But, of course, there may be other explanations of the marginalization, such as the fact that the humanities don’t directly deliver ready-to-use products like medicine and technological tools.

one hand, and reality, on the other, such as knowledge and understanding. Subsequently, in Section III, I explore for each of these three different kinds of epistemic values whether the humanities and the sciences differ in whether they pursue and have pursued these epistemic values. I argue that in each case there is no substantial difference between the humanities and the sciences when it comes to whether or not they pursue these epistemic values, although there are, of course, differences in weight that they place on various epistemic values. By that, I mean that some epistemic values are more important in the humanities than in the sciences, and vice versa, and that their research focus may therefore vary somewhat. Yet, I argue that all the epistemic values that the sciences pursue are also pursued to some degree or other by the humanities.

I also argue that, from an epistemic point of view, the humanities in some sense do even better, because, more than the sciences, they study these epistemic values themselves. Thus, they pursue these values by trying not only to reach the relevant goals but also to reflect on those goals and thus, in this case, aim to reach those goals (knowledge, understanding, etc.) about those goals. At each stage of my argument, I illustrate the relevant claims and arguments with a variety of historical examples. I conclude that when it comes to epistemic values, the humanities are on a par with the sciences or do even better, because they pursue the exact same epistemic values but also study these values themselves. This is crucial to take into account in debates about the marginalization of the humanities, scientism, and the humanities versus the sciences divide.

I. PRELIMINARIES

There is a much to be said about exactly what makes something a discipline that falls in the humanities category rather than in the science category: things about their objects, their methods, the aspects or levels of reality they deal with, and so forth. It is up for debate whether clear necessary and sufficient criteria can be formulated for something to count as a humanities discipline, or whether we should think of it in terms of a Wittgensteinian family resemblance¹⁶ (where the humanities have a series of overlapping similarities while no feature is common to all of them), or something else.

Rather than entering that debate here, I will simply stipulate for the sake of argument that I take the following disciplines to belong to the humanities: anthropology; classics; ethics; history; geography; linguistics and languages; law and politics; literature; the study of the performing arts, such as music, theater, and dance; the study of the visual arts, such as drawing, painting, and film; philosophy; theology; and religious studies. The humanities are to be distinguished from the sciences, where I take

16. See Ludwig Wittgenstein, *Philosophical Investigations* (1953; London: Blackwell, 2001), §§65–71.

the sciences to include the applied sciences, such as medicine, engineering, computer science, and applied physics; the formal sciences, such as decision theory, logic, statistics, systems theory, theoretical computer science, and mathematics; the natural sciences, such as physics, chemistry, earth science, ecology, oceanography, geology, meteorology, astronomy, life science, biology, zoology, and botany; and the social sciences, such as criminology, economy, and psychology.

One could debate whether logic is a formal science or part of philosophy, and so on. I realize that these are mere generalizations, indicating what I take the humanities and the sciences to be. But this list makes sufficiently clear that there is a rough distinction between the humanities, on the one hand, and the sciences, on the other—with probably a fairly large gray area in between.

Let me also explain some of the most important terms. I will assume (uncontroversially, for most people) that there is a reality: there is or at least was a past, there is a present, and there is or will be a future. Reality, I take it, consists of facts: certain states of affairs that are actualized. I will not take a stance on the issue of whether there are also normative facts: facts about how things ought to be rather than merely about how things are—ever since the Pythagoreans, it has been thought that there are aesthetic normative facts, and the idea that reality includes moral normative facts is at least as old as Plato.¹⁷ I will leave the possibility open, though, because many scholars in the humanities assume or argue that reality includes such normative facts.

Now, there are, of course, movements and strands of thought in the humanities that have a more complicated picture than this, what one could call a “commonsense” picture of reality. Here, I am thinking of what is labeled as postmodernism, social constructivism, subjectivism, certain kinds of postcolonialism, and relativism. Many different schools and approaches fall under these catchphrases.

I would like to make an important distinction here though. On the one hand, we find lines of thought, frameworks, and approaches that seem to pursue the same kinds of epistemic values as those that are pursued on a commonsense picture of the world. Here, I think, for instance, of those who, in the wake of the German philosopher Immanuel Kant (1724–1804), argue that we cannot know reality as it is in itself, but merely as it appears to us. Others embrace the view that many facts which we take to exist independently of us are in fact socially construed phenomena: certain ways we classify and taxonomise the world, without there being anything out there which actually corresponds to it. It seems to me that many of the epistemic values that I discuss

17. See, respectively, Władysław Tatarkiewicz, “Objectivity and Subjectivity in the History of Aesthetics,” *Philosophy and Phenomenological Research* 24, no. 2 (1963): 157–73; Russ Shafer-Landau, *Moral Realism: A Defence* (Oxford: Oxford University Press, 2003).

below are still pursued by adherents of these schools of thought: they as well strive after knowledge, understanding, insight, coherence, open-mindedness, and so forth. The difference with those who embrace the commonsense picture of reality is to be sought elsewhere, for instance, in what the object of certain epistemic values is. When it comes to knowledge, for instance, they think that in many cases at least, it is not reality in itself, but reality as it appears to us or socially construed reality that we know. I do not think this is a problem for the issue at hand; even the Austrian-British philosopher of science Karl Popper (1902–94) thought that in scientific research we should strive for verisimilitude: we approximate truth by ruling out falsehoods, but we can never know that we have actually attained the truth.¹⁸

However, certain other approaches that reject that commonsense picture of reality and that are sometimes also referred to as “postmodernism” and “relativism” do seem to be rather skeptical of the epistemic values mentioned earlier. Some have advocated the view that significant parts of academic talk about “knowledge” and “understanding” are primarily cover-up for struggles for power and other social factors. The Edinburgh-based program in the sociology of science, including such people as David Bloor, and the Bath School, that includes such members as Harry Collins, have been influential here.¹⁹ If they are right, then it is up to debate in what sense epistemic values are normally pursued in the university, both in the sciences and in the humanities. Since this would, according to many sociologists, historians, and philosophers of science, threaten the reliability of the whole academic enterprise rather than merely the humanities, I leave this school of thought aside and focus on the other approaches.

Thus, I will carry out the project under consideration without paying much attention to alternative approaches than the commonsense approach sketched in the previous paragraph, as most of what I say also pertains to alternative pictures to the extent that they embrace the idea that the humanities pursue epistemic values. I will return to social constructivism, though, when we consider specific epistemic virtues, because one might think that certain epistemic values, such as skepticism, are deemed more important in these alternative approaches than in mainstream, commonsense approaches.

Now, in defending the legitimacy of the humanities, some people, such as Martha Nussbaum, have argued for the distinctness of the humanities by appealing to the specific objects or methods of the humanities in comparison with those of the sciences.²⁰ The objects of the humanities and the sciences are, of course, phenomena in reality. It

18. See Karl Popper, *Conjectures and Refutations* (New York: Harper, 1965), 215–50.

19. See, for instance, Harry M. Collins and Trevor Pinch, *The Golem: What You Should Know about Science* (Cambridge: Cambridge University Press, 1993).

20. See, e.g., Wilhelm Dilthey, “Abgrenzung der Geisteswissenschaften,” in *Gesammelte Schriften*, vol. 7 (Leipzig: Teubner, 1921), 79–87; Nussbaum, *Not for Profit*.

may well be that the objects of the humanities are crucially different—some of those objects have meaning, for instance, and one might think that the objects of the sciences lack such meaning—or that the properties of the objects that the humanities scrutinize differ crucially from the properties of the objects that the sciences investigate. Also, the methods of the humanities and those of the sciences may differ crucially or only overlap—for example, do the sciences ever employ the hermeneutic method?²¹ I will not take a stance on these controversial issues. Rather, I will defend the legitimacy of the humanities in a rather different way: I will argue that they pursue the same epistemic values as the sciences.

II. WHAT ARE EPISTEMIC VALUES?

Values are phenomena that are deemed important and worthwhile and that are pursued by those who embrace those values. Epistemic values are values that are epistemic in virtue of their relationship to truth. We could therefore also call them *alethic* values (from the Greek *alètheia* ‘truth’). The Greek word *epistèmè* means “knowledge” or “insight,” and, of course, knowledge and insight imply standing in the right sort of relationship to truth. Now, the American psychologist William James (1842–1910) famously distinguished between two epistemic goals: believing the truth and avoiding falsehood, that is, holding true beliefs and not holding false beliefs.²² If this is right, then “standing in the right sort of relationship to truth” can be taken to comprise at least the following: believing the truth and not believing falsehood. Below, we will see that both aims are important in reflecting on epistemic values.

Epistemic or alethic values ought to be distinguished from other kinds of values, such as aesthetic, moral, economic, prudential, social, and political values. Such values have to do, roughly, with ethical goodness and badness (moral values), with what is useful from a cost-benefit point of view (economic values), with what is practical or useful (prudential values), with what serves the well-being of a group of people or society (social values), and with what has to do with the functioning of a society or nation (political values). Of course, this is only a very rough sketch, but it suffices for our purposes here, which is to point out how epistemic or alethic values are crucially distinct from these other kinds of values. Our focus here will be on epistemic values.

The reason for this is simple. Hospitals take care of people’s physical and mental well-being, courts aim at justice, and governments seek political order and stability. Universities, however, were founded for the purposes of acquiring knowledge, gaining

21. For more on this, see René van Woudenberg, “The Nature of the Humanities,” *Philosophy* 93 (2018), forthcoming.

22. See William J. James, “The Will to Believe,” in *The Will to Believe and Other Essays in Popular Philosophy* (Cambridge, MA: Harvard University Press, 1979), 24.

insight, understanding reality, and transferring that knowledge, insight, and understanding to new generations and to larger audiences beyond academia. Of course, epistemic values are also pursued by many people and institutions outside of the academy—for example, one has to find out truth or likely truth in order to do justice—but the university’s primary purpose is to pursue such epistemic values, as cardinal and Oxford don John Henry Newman (1801–90) already argued in his 1852 series of lectures “The Idea of a University.”²³

Now, what epistemic values are pursued in academic research and university education? A quick glance at the literature—I give some references below—already reveals that there is a long list of epistemic values. Here are some representative examples:

- academic integrity;
- coherence;
- empirical adequacy;
- explanatory truth;
- insight;
- intellectual thoroughness;
- justified belief;
- knowledge;
- making sense of things;
- open-mindedness;
- rational belief;
- responsible belief formation;²⁴
- tradition and tradition transmission;
- true belief;
- trust among peers;
- understanding;
- wisdom.²⁵

There is good and bad news regarding this list. The good news is that it brings together a wide variety of epistemic values: each of these is essentially linked to truth. The bad

23. John Henry Newman, *The Idea of a University* (1852; New Haven, CT: Yale University Press, 1996). This is not to deny that they pursue other values in addition to epistemic values; see Donald Kennedy, *Academic Duty* (Cambridge, MA: Harvard University Press, 1990).

24. For an account of how this value is to be construed, see Rik Peels, *Responsible Belief: A Theory in Ethics and Epistemology* (New York: Oxford University Press, 2017).

25. Wisdom is better understood as a virtue consisting of certain abilities than as a relation between a person and reality; see René Van Woudenberg and Rik Peels, “The Metaphysics of Degrees,” *European Journal of Philosophy* 26 (2018), forthcoming.

news is that it brings together some radically different epistemic values. This is because the literature on epistemic values, in using the term “epistemic value,” lumps together three ontologically rather different sorts of things. It will turn out to be helpful for our purposes to distinguish these three ontologically distinct categories. In the following three sections, I will discuss each of them and see to what extent the humanities can properly be said to pursue these values in comparison with the sciences. But before I do so, let me first lay out what the three categories are.²⁶

First, some items on the list are properties of theories, ideas, or hypotheses. Here, we can think of such things as

- coherence, with other theories or background knowledge;
- explanatory power;
- predictive power;
- simplicity.

Second, some items on the list are properties of scholars or groups of scholars. More specifically, they are what are called intellectual virtues that these scholars or groups of scholars can have or fail to have. These are dispositions or character traits that individuals or collectives (groups of scholars in this case) can exemplify in their research and education and that are helpful in getting to the truth or transmitting it to new generations. Here, we can think of such things as

- academic integrity;
- intellectual humility;
- open-mindedness;
- trust among peers;
- wisdom.

Finally, some items on the list are relations that hold between (groups of) scholars and reality, such as

- insight;
- justified belief;

26. For examples of the use of “epistemic value” for each of the three categories, see, respectively, (1) Wayne C. Myrvold, “Epistemic Values and the Value of Learning,” *Synthese* 187 (2012): 547–68; (2) Philip Olson, “Putting Knowledge in Its Place: Virtue, Value, and the Internalism/Externalism Debate,” *Philosophical Studies* 159, no. 2 (2012): 241–61; and (3) Adrian Haddock, Alan Millar, and Duncan Pritchard, eds., *Epistemic Value* (Oxford: Oxford University Press, 2009). From an ontological point of view, it might be preferable to say that, strictly speaking, the phenomena that fall under (1) and (2) *have* epistemic value, whereas the phenomena that we find in category (3) *are* epistemic values. Here, I will leave this issue aside.

- knowledge;
- rational belief;
- true belief;
- understanding.

It is, of course, controversial in many cases as to what exactly these epistemic values amount to, but that there are three ontologically distinct categories of epistemic values should be clear by now. In the following sections, I return to each of these categories and discuss the nature of some of these epistemic values in more detail when I discuss whether the humanities can properly be said to have pursued these values in the past and to pursue them in the present in comparison with the sciences.

III. EPISTEMIC VALUES

A. PROPERTIES OF THEORIES

A first kind of epistemic value lies in the properties that ideas, conjectures, hypotheses, theories, statements, claims, and so forth can have in scholarship. These are all things that express propositions: they can be true or false. We deem such things as coherence and explanatory power epistemically valuable because we take it that when a theory exemplifies these properties, it is *ceteris paribus* more likely to be true. The list of properties that are considered—by many at least—as epistemic values is long and has grown ever since the American historian of science Thomas Kuhn (1922–96) started to distinguish them:²⁷ internal consistency, coherence with background knowledge, coherence with other theories, explanatory power, predictive power, refutability, simplicity.

Of course, it will be controversial for at least some of these epistemic values to what extent a theory's exemplifying that property contributes to the probability that it is true. There is a large debate in the philosophy of science, for instance, as to whether simplicity increases the probability that the theory in question is true²⁸ and one might wonder whether explanatory scope is not more of a practical than an epistemic value: one might think it does not make it more likely that the theory is true but merely practically counts in favor of the theory because it explains more. The issue here, however, is not whether each of the values often listed as an epistemic value is indeed an epistemic value, but rather whether these epistemic values—if they are indeed epistemic—are pursued by the humanities.

27. See Thomas S. Kuhn, "Objectivity, Value Judgment, and Theory Choice," in *The Essential Tension* (Chicago: University of Chicago Press, 1977), 320–39.

28. See, for instance, Guillaume Rochefort-Maranda, "Simplicity and Model Selection," *European Journal for Philosophy of Science* 6, no. 2 (2016): 261–79.

Now the important thing to note is that it seems rather obvious that the humanities do pursue these epistemic values. Philosophers of religion and theologians write books with titles such as *The Coherence of Theism*²⁹ because they think it would be a problem for theism if it were incoherent. Michael A. Babcock did careful philological analysis and on that basis provided a theory in terms of an ecclesiastical cover story, in which Emperor Marcian was the primary political figure that brought about Attila's death, that aimed to explain (aiming at explanatory power) why there was a widespread account at the time of a natural death of Attila the Hun.³⁰ And so on.

I would like to stress that, of course, some of these epistemic values bear more weight in the sciences than in the humanities and the other way around. Even within the humanities or within the sciences, some epistemic values bear more weight in some disciplines than in other disciplines. Thus, predictive power is often crucial in physics. For instance, Einstein predicted in 1915, based on his general theory of relativity, that light bends around the sun. This was confirmed by a research team, led by Sir Arthur Eddington in 1919 on the island of Principe, that observed such bending during a solar eclipse. This is not a core epistemic value in, say, the study of history, as it is mostly concerned with the past.

However, here are two important caveats. First, we do not find such a thing in other sciences either, such as in evolutionary biology. Evolutionary biology largely does not make any predictions either, as it is based on the idea that the existence of future species crucially depends on random mutations that we, humans, cannot predict. To the extent that it makes predictions (if that word can be used in this context), they are conditional and rather unspecific: for example, if the circumstances substantially change during a sufficiently long period of time, then new species will arise. Second, predictive power plays some role even in humanistic disciplines such as history. For, it can make predictions about what we will find or are likely to find if we do certain kinds of excavations in certain places. For example, since Gordon Willey's work in the mid-1950s in the Virú Valley of Peru, historians and archeologists have used data on the covariability of cultural remains and natural features such as slope, soil type, elevation, vegetation, geology, geomorphology, and proximity to water. Various agencies, such as the US Bureau of Land Management and the Department of Defense have successfully used these models to make predictions and large numbers of archeological sites have been found in this way.³¹ Most models or theories in archeology, art history, and so on make certain

29. See Richard Swinburne, *The Coherence of Theism* (Oxford: Clarendon, 1993).

30. See Michael A. Babcock, *The Night Attila Died: Solving the Murder of Attila the Hun* (New York: Berkley Books, 2005).

31. See Gordon R. Willey, *Prehistoric Settlement Patterns in the Virú Valley, Peru*, Bulletin 155 (Washington, DC: Bureau of American Ethnology, 1953).

claims about the past and have ramifications for what we are likely to find about the past in the future.

The first category of epistemic values, then, is likewise pursued by some of the humanities and some of the sciences. There is an important difference between the two, though. The humanities actually study these epistemic values in detail, whereas the sciences (largely) do not. Let me explain. The philosophy of science studies what these values—often criteria for theory selection—amount to. The philosophy of science, however, is, of course, itself not a science, but part of the humanities. The history of science studies how these various epistemic values have been understood throughout the history of science and how they came to be pursued in the first place. They scrutinize, for instance, how, since the work of the English philosopher, scientist, and statesman Francis Bacon (1561–1626), scientists have gradually become convinced that a good empirical theory makes certain predictions that can turn out to be true or false. In comparison with the philosophy of science and the history of science, hardly any empirical work has been done on these epistemic values. Moreover, relatively little empirical work could be done; one could at most scrutinize—say, on the basis of questionnaires—what humanities scholars and scientists nowadays take each of these virtues to amount to, to the extent that they have any articulated concepts of them at all. Surely such work would be valuable, but as things stand, it pales in comparison with work from the philosophy and history of science on these epistemic values. Thus, the humanities not only embrace this first category of epistemic values but also make them the object of their study: they try to understand understanding and know what knowledge is and what kinds of knowledge there are.

I take it this means that in some sense, at least with respect to this first kind of epistemic value, the humanities do even better than the sciences. This is where epistemic values are different from, say, economic and moral values. If one pursues economic values but also studies them, then that studying itself need not be of any economic value, for one then pursues an epistemic value (say, understanding) with regard to economic values. And if one pursues moral values and studies them, that as such does not add moral value, for one then pursues an epistemic value with regard to a moral value—an ethicist who leads a good life but also studies the moral values she pursues does not thereby lead a better moral life than the person who merely pursues those same values without studying them. However, if one pursues epistemic values but also studies those epistemic values, one does do better from an epistemic point of view, for one then pursues an epistemic value with regard to epistemic values. Surely, when you compare two disciplines from an epistemic point of view and they both pursue epistemic values, but the one also pursues those epistemic values with respect to those epistemic values themselves, then there

is a sense in which from the epistemic point of view that one discipline does even better than the other.

B. INTELLECTUAL VIRTUES

Second, dispositions or, more specifically, intellectual virtues of individual scholars and research groups are epistemic values. Virtues have played a core role in ethical theorizing ever since Aristotle (384–322 BC), especially in his *Nicomachean Ethics*, but also his *Eudemian Ethics* and *Magna Moralia*. His virtue ethics was highly influential throughout Patristic times and among the scholastics; Thomas Aquinas, for instance, was one of many theologians and philosophers to write a commentary on the *Nicomachean Ethics*. Yet, for centuries after that, virtue ethics would play a subservient role in comparison with Kant’s deontologism and Jeremy Bentham’s utilitarianism. However, since G. E. M. Anscombe’s 1958 essay “Modern Moral Philosophy,” this has changed quite drastically.³² Virtue ethics has gained again a prominent place among ethicists. In philosophy, Philippa Foot, Martha Nussbaum, and especially Alasdair MacIntyre in his essay *After Virtue* have been influential.³³ In theology, Paul Ricoeur and Stanley Hauerwas use all sorts of concepts and ideas from virtue ethics.

The important thing to notice is that philosophers with a background in epistemology, such as Linda Zagzebski and Jason Baehr, have started to apply some core ideas from virtue ethics to epistemic values, resulting in theories of intellectual virtues.³⁴ Here, we should think of such classical virtues as intellectual humility, thoroughness, open-mindedness, curiosity, originality and creativity, intellectual conscientiousness, intellectual courage, and intellectual generosity. However, ever since the seminal work of Brian Martinson in 2005,³⁵ it is clear that we should also think of the positive correlates of what many consider to be “questionable research practices,” namely, those issuing from research integrity: all sorts of dispositions with respect to transparency, disclosure, and honesty. These are not only moral but also epistemic values since they are truth-conducive: they lead to more reliable science and scholarship.

32. See G. E. M. Anscombe, “Modern Moral Philosophy,” *Philosophy* 33, no. 124 (1958): 1–19.

33. See Alasdair MacIntyre, *After Virtue: A Study in Moral Theory* (Notre Dame, IN: University of Notre Dame Press, 1981).

34. See, for instance, Linda T. Zagzebski, *Virtues of the Mind: An Inquiry into the Nature of Virtue and the Ethical Foundations of Knowledge* (Cambridge: Cambridge University Press, 1996); Jason Baehr, *The Inquiring Mind: On Intellectual Virtues and Virtue Epistemology* (Oxford: Oxford University Press, 2011).

35. See Brian C. Martinson, Melissa S. Anderson, and Raymond de Vries, “Scientists Behaving Badly,” *Nature* 435 (2005): 737–38.

Now, it should be clear that these intellectual virtues, both on an individual level and on a group level, are essential to good humanistic scholarship and education. Of course, a classicist has to be curious, creative, and meticulous in analyzing Herodotus's account of the Greco-Persian wars in his *Histories*. Open-mindedness is essential to an anthropologist's analysis of the rituals of a newfound tribe in the Amazonian rainforest. It requires intellectual courage to provide a novel account of the birth of science in the West—which primarily belongs to the humanities rather than the sciences themselves—and intellectual humility in trusting one's peers and building on an old tradition in one's field.

Again, though, the humanities have special relevance here when we approach them from an epistemic angle, for even though the sciences and the humanities both aim at these intellectual virtues, the humanities actually study them and have been studying them for ages—even Aristotle already distinguished some intellectual or cognitive virtues. The intellectual virtues of individuals have received plenty of attention in epistemology lately and those of groups of researchers much attention in social epistemology and philosophy of science.³⁶ This is not to deny that they have received some attention in the sciences. However, the sciences—social science in particular—have focused on scientific misbehavior and what is called “questionable research practices.” They have only just started to think about the positive correlates: what intellectually good scientific behavior amounts to. Moreover, whether a research practice is questionable or not is, of course, a deeply normative question. Hence, even this empirical work heavily relies on prior philosophical work.

As I said in the preliminary comments, I would return to what one might think of as the epistemic virtue of skepticism. The reason for this is that one might think that in certain social constructivist and postmodernist schools of thought, skepticism plays a more crucial role, both in research and education, than in commonsense approaches. This is because it is thought that we should be careful not to think that we can know reality as it is in itself or reality that is not in any way construed by human concepts. Undeniably, this line of thought plays a more important role in the humanities than in the sciences. One might think of this as a virtue and even an epistemic virtue because one might think with William James (as I pointed out in Sec. II) that we not only have an obligation to hold true beliefs, but also an obligation to avoid holding false beliefs and that a healthy amount of skepticism is instrumental to reaching this aim. In response, let me grant that wide-scale skepticism will play a role in certain approaches

36. See, for instance, Reza Lahroodi, “Collective Epistemic Virtues,” *Social Epistemology* 21, no. 3 (2007): 281–97.

in the humanities, whereas it plays virtually no role in the sciences.³⁷ Yet, small-scale skepticism will also occur in the sciences and be pursued as an epistemic value. American philosopher of science Bas van Fraassen, for instance, has argued that science aims at empirical adequacy rather than truth. We should, therefore, be skeptical of claiming that our theories are true and that we know them to be true.³⁸ And there is substantial discussion on the ontological status of theoretical entities. On this view, we should thus be skeptical about believing that those theoretical entities truly exist.³⁹

C. EPISTEMIC RELATIONS BETWEEN SCHOLARS AND REALITY

The third and final category of epistemic values that scholars pursue consists of relations that hold between them and reality. Of course, this is a particular kind of relation, namely, an epistemic relation. Epistemic relations, however, come in many varieties. There is holding a true belief about reality. There is holding a rational belief about reality, that is, roughly, a belief that is in accordance with the evidence one has—where that belief may be true or false. There is holding a justified true belief about reality, where I take that to mean a true belief about reality that is formed in a reliable way, that is, in a way that produces true belief in a large portion of cases, including the case at hand in that particular situation. And there is knowing something about reality, where one could take knowledge to be holding a reliably formed true belief that is true and where the fact that one believed the truth is not a matter of luck. There is knowledge by acquaintance of something in reality: one may know a person, a country, a particular smell. There is knowledge how: one can know how to interpret an ancient Syrian codex, or one may know how to set up a particular experiment that measures a quantum fluctuation. There is understanding; exactly what this amounts to is, again, controversial, but it is often taken to go beyond mere knowing: one can know quantum mechanics without actually understanding it and one can know much about, say, “The Young Man with the Carnation,” one of Karen Blixen’s *Winter’s Tales*, without actually understanding it. Several scholars in the humanities emphasize that under-

37. What philosophers of science who stress that a characteristic of good scientific practice is “organized skepticism” (see, e.g., Robert K. Merton, “The Normative Structure of Science,” in *The Sociology of Science: Theoretical and Empirical Investigations* [1942; Chicago: University of Chicago Press, 1973], 277–78) have in mind is not that we cannot know reality as it is, or that it is extremely difficult to know reality as it is, but that in doing science, we should adopt a highly critical attitude and not accept anything on authority.

38. See Bas Van Fraassen, *The Empirical Stance* (New Haven, CT: Yale University Press, 2002).

39. See, e.g. Mohamed Elsamahi, “Could Theoretical Entities Save Realism?,” *PSA: Proceedings of the Biennial Meeting of the Philosophy of Science Association* 1 (1994): 173–80.

standing—such as understanding what it is to be human, or understanding why in the summer of 1994 in Rwanda the genocide of 800,000 Tutsi by Hutu soldiers took place⁴⁰—is a core epistemic value that the humanities pursue.⁴¹

As many others have pointed out, it is unfortunate that the English language uses one word for the sciences and another for the humanities, suggesting that there is a radical difference between them. A term such as the German *Wissenschaft*, which denotes both the sciences and the humanities, is more helpful here, in that it incorporates *wissen* (to know), drawing attention to one of the core epistemic values that unites these fields of research and education.

It seems that each of these values are pursued in the sciences but equally in the humanities. One can understand quantum relativity—at least the theory and, to some extent, the phenomena as well—and one can understand French existentialism. Some philosophers, such as Linda Zagzebski, have argued that understanding something requires that one sees certain patterns in the phenomena in question.⁴² This is controversial, but even if it is true, it is not uncommon in the humanities to seek understanding. As Rens Bod explains, medieval and early Renaissance philology, theory of art, and music theory meticulously searched for norms, laws, regularities, and patterns to such an extent that they heavily influenced the sciences and led to a similar search for norms, regularities, laws, and patterns in the movements of planets and for their mathematical foundations.⁴³

Yet, again, the humanities actually study these particular epistemic values. At least since Plato, epistemology has extensively dealt with the question of what rational belief, true belief, justified belief, and knowledge are. Social epistemology and philosophy of science have started to address questions regarding group belief and group knowledge.⁴⁴ And understanding has been put on the agenda of the humanities. The sciences, though, especially psychology, have also started to study these phenomena—partly in response to encouragements from philosophy. For example, since 2013 various philosophers, theologians, and psychologists, led by Fordham University philosopher Ste-

40. See, e.g., Jürgen Zimmerer, “The Value of Genocide Studies,” in *The Public Value of the Humanities*, ed. Jonathan Bate (New York: Bloomsbury Academic, 2011), 208–18.

41. Bird, *Cultures in Conflict*, 171.

42. See Linda T. Zagzebski, “Recovering Understanding,” in *Knowledge, Truth, and Duty: Essays on Epistemic Justification, Responsibility, and Virtue*, ed. Matthias Steup (Oxford University Press, 2001), 235–52.

43. See Rens Bod, *A New History of the Humanities: The Search for Principles and Patterns from Antiquity to the Present* (Oxford: Oxford University Press, 2013).

44. See, e.g., Jeroen de Ridder, “Epistemic Dependence and Collective Scientific Knowledge,” *Synthese* 191, no. 1 (2013): 1–17.

phen Grimm, have been working on varieties of understanding.⁴⁵ Attention to this topic in the sciences, however, is clearly only a very recent development.

It follows from what I have argued in this section that a common characterization of what is thought to be the primary epistemic value of the humanities in comparison with that of the sciences is misguided. Let me clarify this. It is not infrequently claimed that the sciences are concerned with explaining whereas the humanities aim at understanding. This seems to have been the view of the German historicist philosopher Johann Gustav Droysen (1808–84), who claimed that the natural sciences aim at explanation (*erklären*), whereas the humanities (*Geisteswissenschaften*) have understanding (*verstehen*) as their purpose,⁴⁶ a view that resonated to a certain extent with the German philosopher Wilhelm Dilthey (1833–1911). This view might have been put forward partly in virtue of early instances of pressure on the humanities in comparison with the sciences; claiming that the two kinds of academic disciplines have different epistemic purposes may have been thought to provide a safe haven for the humanities.

If what I have argued above is correct, then the opposite move should be made: rather than claim that they pursue radically different epistemic values, it should be pointed out that the humanities and the sciences pursue pretty much the same epistemic values—or, at least, that the epistemic values that are pursued by the sciences are also pursued by the humanities. This is, of course, not to deny that they do so with different emphases. Thus, explanation may play a more important role in the sciences than in the humanities. Yet, we also find it in the humanities. For example, historians provide explanations of why Caesar crossed the Rubicon in 49 BC, and scholars of art explain why impressionists often placed wet paint into wet paint without waiting for successive applications first to dry. This is because there are not only *causal* explanations (explanations in terms of prior events that caused the relevant state of affairs) but also *intentional* explanations (that appeal to beliefs, desires, and intentions).

IV. CONCLUSION AND FUTURE WORK

Let me draw the threads of this article together. I have argued that there are three different kinds of epistemic values: (1) properties of theories, ideas, hypotheses; (2) properties—more specifically intellectual character traits—of individual scholars and research groups; and (3) relations between individual scholars or groups of scholars and reality, such as

45. For more information about the various subprojects, see <http://www.varietiesofunderstanding.com>.

46. See J. Gustav Droysen, *Historik: Vorlesungen über Enzyklopädie und Methodologie der Geschichte* (1858; Stuttgart: Frommann-Holzboog, 1977), 22, 150.

knowledge and understanding. I have argued and used a variety of historical examples to defend the claim that the humanities pursue these epistemic values as much as the sciences do, even though some epistemic values have more weight in the humanities while others have more weight in the sciences. Moreover, in opposition to the sciences, the humanities actually study these epistemic values themselves. When we compare the humanities with the sciences with respect to their epistemic values, then, the humanities do at least as well as, or even better than, the sciences.

At the outset of this article I mentioned three reasons why this is important, a point to which I would now like to return. First, I mentioned the economic pressure and the ensuing marginalization of the humanities. If what I have argued is correct, this marginalization is highly problematic, given that the very purpose of the university is to pursue these epistemic values. Such drastic measures would be justified only if it had been shown that, even though the humanities pursue these epistemic values, they (too) often fail to obtain them—and maybe it would also have to be shown that the humanities are unlikely to obtain these epistemic values in the future. As things stand, we are a far cry from this situation. *Au contraire*, it seems undeniable that in history, linguistics, the study of art, philosophy, and many other humanistic disciplines we actually find the epistemic values they pursue: they provide theories that are internally consistent, that cohere with our background knowledge, that explain phenomena we encounter in reality; we find that humanistic scholars display all sorts of intellectual virtues; and we find that their research and education lead to insight, knowledge, and understanding.

Second, an influential philosophical view or doctrine defended nowadays is scientism, which says that only the natural sciences deliver rational belief and knowledge. If what I have argued is correct, the humanities aim at the same epistemic values as the sciences, such as rational belief, knowledge, and understanding. Moreover, they aim at the same kinds of criteria for theory selection (another kind of epistemic value) and seek to exemplify the same kinds of intellectual virtues (a final kind of epistemic value) in order to reach the aim of rational belief, knowledge, and understanding. Thus, it cannot be the case that scientism is correct in virtue of the fact that the humanities do not aim at these values—because they do. Hence, in order to show that scientism is correct, the adherent of scientism would have to show that there is something about the methods or the objects of the humanities such that rational belief or knowledge about those objects is not possible or unlikely, or that rational belief or knowledge by employing those methods is not possible or unlikely. Elsewhere, I have discussed arguments for this conclusion in detail.⁴⁷

47. See Peels, “Empirical Case,” and “Ten Reasons to Embrace Scientism”; and see also various essays in De Ridder, Peels, and Van Woudenberg, *Scientism*.

Finally, I pointed out that, at least since the 1960s, there has been a serious debate about whether the humanities and the sciences exhibit radically different cultures and whether both of them should have the university as their home. I have argued that they pursue the same epistemic values. This, I believe, is important, for it means that, even if they study different objects or employ different methods (or both), they at least pursue the same kinds of things and that, as elsewhere in life, creates common ground that can prove to be fruitful when the two meet. Of course, the fact that the humanities pursue the same epistemic values as the sciences does not as such show that the cultures of science and the humanities are similar. After all, journalistic inquiry and criminal investigation also aim at knowledge and understanding but their culture is still quite different from the culture that we find in academic disciplines. What I have argued, though, provides an important argumentative step for thinking that the cultures of science and the humanities are not radically different: if the humanities are sufficiently often successful in attaining these epistemic values and if their methods show significant similarities to those that we find in the sciences, then the cultures could not be that radically different, and this might give us good reason to think that both deserve a proper place at the institution that we call the university.

I hope the approach that I have advocated in this article sets the agenda for more historical and empirical work on epistemic values in the humanities in comparison with the sciences. For example, to what extent were these values originally articulated and pursued in the sciences and then transferred to the humanities, or vice versa? Which epistemic values take a more prominent place in various fields in the humanities and which in the sciences? To what extent has work in the humanities, in various eras and areas, been appraised in accordance with these epistemic values and what explains the prominence of particular epistemic values at that time? In what ways are the importance of and balance between these epistemic values taught or handed down to new generations of humanistic scholars, and how has this been done in the past? Such empirical and historical material would be valuable for strengthening the case that, despite important differences, there are crucial similarities between the humanities and the sciences, at least partly in virtue of the fact that they pursue the same epistemic values.

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