

noninstrumental value of *X*—at least in the context of the one life you know best. Mistakes are possible; but so also (if this line of thought is sound) is knowledge, and the knowledge may well be particular rather than general.

See also Good, The; Intrinsic Value; Value and Valuation.

Bibliography

DETERMINING WHAT IS DESIRABLE IN LIFE

Griffin, James. *Well-Being: Its Meaning, Measurement, and Moral Importance*. Oxford, U.K.: Clarendon Press, 1986. A nuanced and subtle study of value and issues related to value which repays repeated readings.

Kupperman, Joel. "The Epistemology of Noninstrumental Value." In *Philosophy and Phenomenological Research*, 66 (2005). A defense of claims that there can be knowledge of non-instrumental value.

FACT AND VALUE

Anscombe, G. E. M. "On Brute Facts." In *Analysis*, 18 (1958): 69–72. A strong attempt to undermine the widely assumed opposition between facts and values.

Rundle, Bede. *Facts*. London, 1993. An examination of facts that is subversive of some widely accepted philosophical ideas.

OBJECTIVITY AND CORRECTNESS IN JUDGMENTS OF VALUE

Harman, Gilbert. *The Nature of Morality: An Introduction to Ethics*. New York: Oxford University Press, 1977. This contains an argument for relativism, presented with some panache.

Miller, Richard W. "Three Versions of Objectivity: Aesthetic, Moral, and Scientific." In *Aesthetics and Ethics*, edited by Jerrold Levinson. Cambridge, U.K.: Cambridge University Press, 1998: 26–58. An exceptionally careful and nuanced discussion of varieties of objectivity.

Williams, Bernard. "The Truth in Relativism." In *Moral Luck: Philosophical Papers, 1973–1980*. Cambridge, U.K.; New York: Cambridge University Press, 1981. A subtle and provocative attack on some ideas of objective truth in ethics.

PSYCHOLOGICAL INVESTIGATIONS

Argyle, Michael. *The Psychology of Happiness*. London; New York: Methuen, 1987. A clear account of factors relevant to happiness.

Brickman, P., D. Coates, and R. Janoff-Bulman. "Lottery Winners and Accident Victims: Is Happiness Relative?" In *Journal of Personality and Social Psychology*, 37 (1978): 287–302. The classic study of the hedonic treadmill.

Csikszentmihalyi, Mihaly. *Flow: the Psychology of Optimal Experience*. New York: Harper & Row, 1990. A study of experiences that are prized in people's lives.

Kahneman, Daniel. "Objective Happiness." In *Well-Being: the Foundations of Hedonic Psychology*, edited by D. Kahneman, E. Diener, and N. Schwartz. New York: Russell Sage Foundation, 1999. A strong general account of recent research.

Oatley, Keith, and Mitra Gholamain. "Emotions and Identification: Connections between Readers and Fiction." In

Emotion and the Arts, edited by Mette Hjort and Sue Laver. New York, 1997. A fine example of psychological investigation that sheds light on the production of aesthetic value.

Joel J. Kupperman (2005)

VALUE JUDGMENTS

See *Value and Valuation*

VALUE OF KNOWLEDGE AND TRUTH, THE

See *Knowledge and Truth, The Value of*

VAN FRAASSEN, BAS

(1941–)

Bas van Fraassen was born in Goes, in the Netherlands, on April 5. He lived in Holland until he was fifteen years old, when he moved with his family to Canada. After finishing his undergraduate studies in philosophy (with honors) at the University of Alberta in 1963, he went to the University of Pittsburgh for his Ph.D., which he completed in 1966 with a dissertation on the causal theory of time that was supervised by Adolf Grünbaum. He taught at Yale University, the University of Toronto, and the University of Southern California before moving to Princeton University, where he has been a Professor of Philosophy since 1982.

Van Fraassen has made seminal contributions to several areas of philosophy, and his work can be roughly divided into three major "periods": (i) the philosophical logic phase (1966–1979); (ii) the constructive empiricist period (1980–1993); and (iii) the empirical stance phase (1994 to the present). But throughout these periods, there has been a unified vision underlying his approach, with two crucial features: (a) the search for an empiricist (anti-realist and, in a sense, antimetaphysical) approach to science and philosophy more generally; and (b) an attempt to preserve through this empiricism "classical" features of the domain under consideration—by taking scientific theories literally, retaining classical logic whenever possible, and resisting the need for introducing causally irrelevant items (such as possible worlds).

In the philosophical logic phase, this vision is articulated through the development of several proposals

guided by techniques from philosophical logic. For instance, van Fraassen's method of supervaluations provides a way of retaining classical logic (or, at least, classical logic's theorems), even in the presence of truth-value gaps. This method can then be used to accommodate logical paradoxes, such as the Liar ("This sentence is not true"). Van Fraassen's early work on space-time theories also illustrates the empiricist component of the vision, with the development of interpretations of space-time theories that do not presuppose the existence of absolute space (1970). Moreover, in his development of a semantics for free logic, van Fraassen assumed only existing individuals in the domain, thereby avoiding a commitment to nonexistent objects that early work in the area had presupposed. Finally, van Fraassen's early theory of meaning relations among predicates and modality does not involve any commitment to real modalities in nature.

Several of these problems can be approached from a unified perspective with the development of constructive empiricism (van Fraassen 1980). This is a view about the aim of science: the search for empirically adequate theories. The constructive empiricist articulates something novel: an empiricist alternative to scientific realism that avoids the early pitfalls of logical positivism. As opposed to logical positivism, the constructive empiricist takes scientific theories literally; there's no attempt to reformulate such theories in some formal language. And as opposed to scientific realism, the constructive empiricist puts forward an interpretation of science in which scientific theories need not be true to be good, as long as they are empirically adequate (and informative). To flesh out the proposal, van Fraassen argues that it is possible to make sense of scientific methodology from this viewpoint, and highlights, in particular, the crucial role played by models in scientific theorizing. He develops a new version of the semantic approach to scientific theories, insisting that to present a theory is to specify a class of models rather than to provide a list of axioms in a formalized language. As opposed to earlier positivist proposals, van Fraassen's work articulates a theory of the pragmatics of explanation that does not require scientific theories to be true for them to be explanatory. He also advances a new interpretation of probability that is compatible with the rejection of real modalities in nature.

Constructive empiricism's lack of commitment to metaphysically dubious notions (at least from an empiricist perspective)—such as laws of nature, possible worlds, and real modalities in nature—is developed further in van Fraassen's book *Laws and Symmetry* (1989). The book argues that attempts to characterize the notion of

law of nature are doomed to failure because either they are unable to justify the inference from *It is a law that P* to *P*, or they fail to identify the features that make *P* a law in the first place. As an alternative, van Fraassen suggests that many roles that traditional philosophical proposals have assigned to laws of nature can be accommodated without commitment to the latter—provided we examine the role played by symmetry (roughly, transformations that leave certain structures invariant). A detailed case for this proposal in the context of quantum mechanics and a thorough development of an empiricist view of quantum theory is then articulated in *Quantum Mechanics: An Empiricist View* (1991).

After the development of the details of constructive empiricism, a more general question arises: How is it possible to be an empiricist instead of just developing an empiricist approach to science? To elaborate a broader perspective on empiricism that includes constructive empiricism as a particular case is a major goal of van Fraassen's empirical stance (2002). Instead of articulating empiricism as a doctrine (a set of beliefs), van Fraassen insists that empiricism should be conceptualized as a stance: an attitude, an epistemic policy. This move has several advantages. First, it avoids the incoherence of certain earlier empiricist proposals that failed to meet their own empiricist standards and ended up being meaningless or lacking any content. Second, the move also provides a novel way of understanding our practice, in particular the role of experience in our epistemic life, and how to make sense of scientific revolutions as a decision problem. The crucial features of van Fraassen's earlier works are also found here, notably in the development of an empiricist perspective that preserves the "classical" features of the phenomena under consideration.

See also Empiricism; Laws of Nature; Liar Paradox, The; Logical Paradoxes; Philosophy of Science, Problems of; Pragmatics; Presupposition; Realism.

Bibliography

- Churchland, P. M., and C. A. Hooker, eds. *Images of Science: Essays on Realism and Empiricism, with a Reply by Bas C. van Fraassen*. Chicago: The University of Chicago Press, 1985.
- van Fraassen, B. C. *The Empirical Stance*. New Haven, CT: Yale University Press, 1991.
- van Fraassen, B. C. *An Introduction to the Philosophy of Time and Space*. New York: Random House, 1970.
- van Fraassen, B. C. *Laws and Symmetry*. Oxford: Clarendon Press, 1989.
- van Fraassen, B. C. *Quantum Mechanics: An Empiricist View*. Oxford: Clarendon Press, 1991.

van Fraassen, B. C. *The Scientific Image*. Oxford: Clarendon Press, 1980.

Otávio Bueno (2005)

VANINI, GIULIO CESARE (1584 or 1585–1619)

Giulio Cesare Vanini was born in Taurisano, in the province of Lecce, Italy, in 1584 or early in 1585. After completing a course of study in law in Naples, he proceeded to Padua to study theology. He entered the order of the Carmelites, and he visited various Italian cities—Venice, Genoa, and perhaps Bologna—and traveled in Germany, England, and France. In 1612, in England, he abjured, but, having aroused suspicion because of his ideas, he moved on again. In 1615, in Lyon, he published his *Amphitheatrum Aeternae Providentiae* (published by the widow of Antoine De Harsy), and in 1616, in Paris, the dialogues, in four books, *De Admirandis Naturae Reginae Deaeque Mortalium Arcanis* (published by Adrian Périer). Both works were given the regular permission of the ecclesiastical authorities but nevertheless aroused suspicions. Vanini then went to Toulouse, where he taught and practiced medicine. In August 1618 he was arrested by the Inquisition. He was condemned, and then in February 1619 burned to death after horrible torture.

Vanini's work, which shows repeatedly a kinship with that of Averroes, reflects above all the influence of the writers of the fifteenth and sixteenth centuries, among whom he had a particular predilection for Pietro Pomponazzi, whom he called his master, the prince of the philosophers of his century, and a second Averroes ("in his body Pythagoras would have placed the spirit of Averroes"). Next to Pomponazzi he placed Girolamo Cardano, Julius Caesar Scaliger, and numerous others, whom he drew from freely. His liberal use of other sources, long passages of which he inserted, even verbatim, into his own works, has caused several recent historians to speak of plagiarism and of writings that are "devoid of originality and scientific integrity." In reality, his attitude toward using the writings of others was common in his time; the present-day preoccupation with the citation of sources did not exist (certain Latin writings of Giordano Bruno are a case in point). Furthermore, the writings from which Vanini borrowed generally underwent a marked transformation in his pages.

Intensely critical of all revealed religions (his "atheism" stemmed from this), Vanini believed strongly in the divinity of nature and in the immanence of God in

nature, which is eternal and eternally regulated by strict laws ("Natura Dei facultas, imo Deus ipse"). He held that the world is without origin, at least so far as could be established by natural religion. The human spirit is material, the soul mortal. Using arguments and themes taken from Cardano, Vanini stated that there is a natural explanation for all supposedly exceptional and miraculous phenomena in universal determinism; and thus, going back to Pomponazzi, he interpreted rationally all the aspects and forms of religious life.

Despite his frequent declaration that, as a Christian, he would continue to accept on faith even that which reason had disproved, the radical bent of Vanini's criticism escaped no one, and, as the seventeenth century progressed, he became almost a symbol of "atheistic and libertine" thought.

See also Atheism; Averroes; Bruno, Giordano; Laws of Nature; Pomponazzi, Pietro.

Bibliography

WORKS BY VANINI

Luigi Corvaglia, ed., *Le opere di Giulio Cesare Vanini e le loro fonti*, 2 vols. (Milan: Società Anonima Editrice Dante Alighieri, 1933–1934), is a reprint of the original editions with the texts of the "sources" printed alongside to show the "plagiarism." See also Guido Porzio, *Le opere di Giulio Cesare Vanini tradotte per la prima volta in italiano con prefazione del traduttore*, 2 vols. (Lecce, Italy, no date; published 1913), which includes biography, documents, complete bibliography.

WORKS ON VANINI

See F. Fiorentino, "Giulio Cesare Vanini e i suoi biografii," in *Studi e ritratti della rinascenza* (Bari, Italy: Laterza, 1911); E. Namer, "Nuovi documenti su Vanini," in *Giornale critico della filosofia italiana* 13 (1932): 161–198; E. Namer, *Documents sur la vie de Jules-César de Taurisano* (Bari, Italy, no date; published 1965); John Owen, *The Skeptics of the Italian Renaissance* (London: Sonnenschein, 1893), pp. 345–419; G. Spini, "Vaniniana," in *Rinascimento* 1 (1950): 71–90; G. Spini, *Ricerca dei libertini* (Rome: Editrice Universale de Roma, 1950), pp. 117–135.

Eugenio Garin (1967)

Translated by Robert M. Connolly

VARISCO, BERNARDINO (1850–1933)

Bernardino Varisco, the Italian metaphysician, was born at Chiari (Brescia). It was only in the later part of his long life that he developed his philosophy, for he began as a teacher of science and his early outlook was characterized