

Büchner, Friedrich Karl Christian Ludwig (Louis) (1824--99)

Ludwig Büchner wrote one of the most popular and polemical books of the strong materialist movement in the later nineteenth-century Germany, his Kraft und Stoff (Force and Matter) (1855). He tried to develop a comprehensive worldview, which was based solely on the findings of empirical science and did not take refuge in religion or any other transcendent categories in explaining nature and its development, including human beings. When Büchner tried to expose the backwardness of traditional philosophical and religious views in scientific matters, his arguments had some force, but the positive part of his programme was not free of superficiality and naivety. Büchner's writings helped to strengthen progressive and rational traditions inside and outside philosophy, but they can also serve as the prime example of the uncritical nineteenth-century belief in science's capacity to redeem humankind from all evil.

Büchner is commonly grouped together with Karl Vogt and Jacob Moleschott as one of the classical triumvirate of materialist philosophers in nineteenth-century Germany. Their special variant of materialism is often distinguished from other brands as 'mechanical', 'bourgeois', 'scientific' or 'vulgar' (see MATERIALISM §3). Büchner's *Kraft und Stoff* (Force and Matter) became the most popular and enduring work of the materialist movement. Up to the First World War, it went through twenty-one editions and was translated into seventeen foreign languages, where it often saw numerous editions of its own.

Ludwig Büchner was born in Darmstadt, Germany. Like his brothers and sisters, he had a predilection for literary and journalistic activity and was engaged in republican and revolutionary opposition against the oppression of the *Vormärz* era. Büchner took up medicine at the university of Gießen in 1843 and became active in the revolutionary democratic movement of the time. In 1848 he entered his father's medical practice. In 1852 he became lecturer in medicine at the university of Tübingen, but soon lost his post when *Kraft und Stoff* appeared. He returned to Darmstadt where he stayed for the rest of his life, practising medicine, popularizing science and writing on materialist philosophy, political and social issues.

In *Kraft und Stoff*, Büchner set out to formulate the philosophical consequences which he saw in the science of his day. He propagated a thorough empiricism, rejected metaphysics and speculative philosophy and every aprioristic tendency. No supranaturalism or idealism was to be allowed in the explanation of natural events and processes.

The arguments of the book are more or less all derived from its central claim, taken from Moleschott, that there is 'no matter without force and no force without matter'. Force is inseparably bound to a material substrate and thus cannot be regarded as a kind of supernatural, transcendent entity. All changes and events follow mechanical laws. These laws are not imposed on nature from outside, but are built into matter itself. Matter is eternal and has no bounds, neither on a microscopic nor on a macroscopic scale. It is ruled by rigid and universal laws which do not allow for miracles. Soul or mind, as well as organic life, are the product of specially combined materials that are endowed with special mechanical forces. There is neither an immaterial spiritual substance, nor a vital force, nor an externally set purpose of nature.

Neither Büchner's claims nor his supportive arguments can be said to be original. *Kraft und Stoff* was less an elaborated philosophical essay than a racily written summary of the materialistic trends of his time which did not mince its words and was intelligible to the layperson. At the same time, it carried a strong political significance. The flourishing of research in the natural sciences and technology was seen as a new and effective form of opposition against

the reactionary political powers which had defeated all liberal-republican and national aspirations by suppressing the revolution of 1848. The growing labour movement took Büchner's materialism as a refutation and exposure of the ideology of the ruling classes and devoured his book. This sort of writing also quenched the thirst for knowledge of several generations of students at the *Gymnasium*. By appealing to the impartiality and the common sense of the autonomous reader and leaving the intricacies and obscurities of German speculative philosophy behind, Büchner's work gave rise to a new genre of popularizing literature in which a rational and empiricist *Weltanschauung* is developed on the basis of natural science. Ernst Haeckel, Wilhelm Ostwald, Wilhelm Bölsche, the early Vienna Circle and to a certain extent even Ludwig Wittgenstein in his *Tractatus* all continued this tradition. As Büchner put it: 'Philosophical elaborations not accessible to every educated person are not worth the printer's ink used for them. What is thought out clearly can be said clearly and plainly' (1855).

In the course of time Büchner enlarged the topics of his writings mainly in two respects. After the rise of Darwinism he emphasized its intimate relation to or even virtual identity with materialism and tried to show its positive implications for a general theory of progress. The other attempt at expanding the realm of his philosophy was to erect a humanistic and rational sociopolitical theory on his materialism which still owed very much to his liberal ideas of 1848. After the foundation of the new *Reich* he did not succumb to the temptations of nationalism, although his social and political ideals started to become obsolete and did not find a large number of supporters. His considerations included a far-sighted condemnation of the anti-Semitism of his time.

Büchner's work met with harsh opposition from many different quarters. From a philosophical point of view, the most important and momentous criticism was expressed by Friedrich Albert LANGE (§2) in his *Geschichte des Materialismus und Kritik seiner Bedeutung in der Gegenwart* (History of Materialism and Criticism of Its Present Importance) (1866). While standing up for Büchner against the accusation that materialism leads to immorality, and conceding a materialist methodology as even a necessity for the working scientist, Lange gave a penetrating analysis of the internal difficulties, weaknesses and inconsistencies of the philosophy of Büchner and other materialists.

This kind of criticism formed a crucial motive for rising Neo-Kantianism and led to a general recovery of philosophy's standing in Germany. Even among those who admitted the centrality of science for modern society and saw much truth in materialism, the conviction arose that philosophy had more to say than is contained in *Kraft und Stoff* and that it had not lost the right of autonomy *vis-à-vis* science.

List of works

Büchner, L. (1848) *Beiträge zur Hall'schen Lehre von einem excito-motorischen Nerven-System* (Contributions to Hall's theory of an excito-motorous nervous system), Gießen: Schild. (Büchner's medical dissertation from 9 September 1848.)

----- (1855) *Kraft und Stoff. Empirisch-naturphilosophische Studien. In allgemein-verständlicher Darstellung*, Frankfurt am Main: Meidinger; trans. J.F. Collingwood, *Force and Matter, or Principles of the Natural Order of the Universe*, London: Trübner 1864. (Subtitle is changed in later editions. 5th German edn, 1858, 21st German edn, Leipzig: Thomas 1904. The 4th English edn, London: Asher and Leipzig: Thomas 1884, was much reprinted.)

----- (1857) *Natur und Geist. Gespräche zweier Freunde über den Materialismus und über die real-philosophischen Fragen der Gegenwart. In allgemeinverständlicher Form* (Nature and Mind. Conversations of Two Friends on Materialism and the Real Philosophical Questions of the Presence), Frankfurt am Main: Meidinger.

----- (1861, 1875) *Physiologische Bilder* (Physiological images), Leipzig: Thomas, 2 vols. (On physiological topics.)

----- (1862, 1884) *Aus Natur und Wissenschaft. Studien, Kritiken und Abhandlungen* (About Nature and Science. Studies, Critiques and Treatises), Leipzig: Thomas, 2 vols. (A collection of essays on different subjects.)

----- (1863) *Herr Lasalle und die Arbeiter. Bericht und Vortrag über das Lasalle'sche Arbeiterprogramm, erstattet auf dem Arbeitertag in Rödelheim am 19. April 1863, im Auftrag des Central-Comités der Arbeiter des Maingaus* (Herr Lasalle and the workers. Report and address on Lasalle's Worker-programme), Frankfurt am Main: Baist. (A discussion and criticism of the views of Ferdinand Lasalle, an early proponent of the social-democratic movement in Germany.)

----- (1868) *Sechs Vorlesungen über die Darwin'sche Theorie von der Verwandlung der Arten und die erste Entstehung der Organismenwelt* (Six Lectures on Darwin's Theory of the Transformation of Species and the Origin of the Organic World), Leipzig: Thomas. (Lectures on Darwin's theory of evolution.)

----- (1869) *Die Stellung des Menschen in der Natur, in Vergangenheit, Gegenwart und Zukunft. Oder: Woher kommen wir? Wer sind wir? Wohin gehen wir?*, Leipzig: Thomas; trans. W.S. Dallas, *Man in the Past, Present and Future*, London: Asher, 1872 (A popular account of the results of recent scientific research as regards the origin and prospects of the human race.)

----- (1884) *Der Fortschritt in Natur und Geschichte im Lichte der Darwin'schen Theorie* (Progress in Nature and History in the Light of Darwin's Theory), Stuttgart: Schweizerbart.

----- (1885) *Der neue Hamlet. Poesie und Prosa aus den Papieren eines verstorbenen Pessimisten* (The New Hamlet. Poetry and Prose from the Papers of a Deceased Pessimist), Zürich: Verlags-Magazin, J. Schabelitz. (This is a collection of early literary work by Büchner which includes an interesting autobiographical fragment on 189--196. It appeared under the pseudonym Carl Ludwig. A second edition appeared under the author's real name in Gießen, E. Roth, 1901.)

----- (1889) *Das künftige Leben und die moderne Wissenschaft. Zehn Briefe an eine Freundin* (Life beyond Death and Modern Science. Letters to a Female Friend), Leipzig: Spohr.

----- (1890) *Fremdes und Eigenes aus dem geistigen Leben der Gegenwart* (Notes from Myself and Others on the Spiritual Life of the Presence), Leipzig: Spohr. (A collection of essays on different subjects.)

----- (1894) *Darwinismus und Sozialismus, oder: Der Kampf ums Dasein und die moderne Gesellschaft* (Darwinism and Socialism, or: the Struggle for Existence and Modern Society), Leipzig: Günther.

----- (1894) *Meine Begegnung mit Ferdinand Lasalle. Ein Beitrag zur Geschichte der sozialdemokratischen Bewegung in Deutschland. Nebst fünf Briefen Lasalles* (My Encounter with Ferdinand Lasalle. A Contribution to the History of the Social-Democratic Movement in Germany. With five letters by Lasalle), Berlin: Hertz & Süßenguth. (Recollection of his encounter with the founder of the German social-democratic party, Lasalle.)

----- (1898) *Am Sterbelager des Jahrhunderts. Blicke eines freien Denkers aus der Zeit in die Zeit*, Gießen: Roth; partly trans. J. MacCabe, *Last Words on Materialism*, London: Watts, 1901. (A collection of essays on different subjects; chapter 12 is on the Jewish question.)

----- (1900) *Im Dienste der Wahrheit. Ausgewählte Aufsätze aus Natur und Wissenschaft* (In the Service of Truth. Selected Papers on Nature and Science), Gießen: Roth. (Again a collection of essays. Contains a biography of Ludwig Büchner by his younger brother Alex.)

----- (1901) *Kaleidoskop. Skizzen und Aufsätze aus Natur und Menschenleben* (Kaleidoscope. Sketches and Essays from Nature and Human Life), Gießen: Roth. (This collection contains an appreciation of Büchner's work by Wilhelm Bölsche: 'Zur Geschichte der volkstümlichen Naturforschung' ('On the history of popular research of nature').)

Wittich, D. (ed.) (1971) *Vogt, Moleschott, Büchner: Schriften zum kleinbürgerlichen Materialismus in Deutschland* (Vogt, Moleschott, Büchner: Writings of vulgar materialism), Berlin: Akademie, 2 vols. (This reprint of the important writings of materialists includes also a reprint of the 1855 edition of *Kraft und Stoff*. The editor gives a useful 82-page introduction.)

References and further reading

Berglar, P. (1976) 'Der neue Hamlet -- Ludwig Büchner in seiner Zeit' (The New Hamlet -- Ludwig Büchner in his Time), *Archiv für Kulturgeschichte* 58 (1): 204--26. (An account of Büchner's development.)

Büchner, A. (1963) *Die Familie Büchner. Georg Büchners Vorfahren, Eltern und Geschwister* (The Büchner Family: Georg Büchner's Ancestors, Parents, Brothers and Sister), Hessische Beiträge zur deutschen Literatur, Darmstadt: Roether. (On the background of Büchner's family. 64-81 gives an account of Büchner's life by his grand-nephew and a reprint of Büchner's autobiographical fragment.)

Gregory, F. (1977) *Scientific Materialism in Nineteenth-Century Germany*, Dordrecht: Reidel. (Standard account, comprehensive and very readable.)

----- (1977) 'Scientific versus Dialectical Materialism: a Clash of Ideologies in Nineteenth-Century German Radicalism', *Isis* 68: 206-23. (Deals with the relation of Büchner's brand of materialism with that of Marx and Engels.)

Janet, P. (1864) *Le Matérialisme contemporain en Allemagne, examen du système du docteur Büchner*, Paris: Baillière; trans. G. Masson, *The Materialism of the Present Day. A Critique on Dr. Büchner's System*, London, 1865. (Criticism of Büchner's work by a French philosopher which was also influential in its German translation.)

* Lange, F.A. (1866) *Geschichte des Materialismus und Kritik seiner Bedeutung in der Gegenwart*, Iserlohn: Baedeker; augmented and altered 2nd edn, 2 vols, 1873--75; trans. E.C. Thomas, *The History of Materialism and Criticism of its Present Importance*, London: The English & Foreign Philosophical Library, 1877--9, 3 vols; reprinted with intro. by B. Russell, London: Kegan Paul, 1925, 1 vol. (The second edition was particularly influential in its criticism of mechanical materialism. Lange's account of the relation of science and philosophy after Kant is still extremely valuable today.)

Lübbe, H. (1963) *Politische Philosophie in Deutschland. Studien zu ihrer Geschichte* (Political Philosophy in Germany: Studies of its History), Basel: Schwabe, repr. München: Deutscher Taschenbuch Verlag, 1974. (The 3rd part deals with the intimate relation of scientific materialism

with politics/political philosophy and its transformation into the movement of ‘scientific monism’ in Germany in later years.)

* Moleschott, J. (1852) *Der Kreislauf des Lebens. Physiologische Antworten auf Liebig’s Chemische Briefe* (The Circulation of Life: Physiological Answers to Liebig’s Chemical Letters), Mainz: Zabern. (Response to a book by the chemist J. von Liebig. This book of a fellow materialist was of particular influence on Büchner.)

Negri, A. (1981) *Trittico materialistico: Georg Büchner, Jakob Moleschott, Ludwig Büchner* (A Materialist Tryptych: Georg Büchner, Jakob Moleschott, Ludwig Büchner), Roma: Cadmo. (Valuable information on Marx’s and Engel’s comments on Büchner and on the concept of death in nineteenth-century materialism.)

Schnädelbach, H. (1983) *Philosophie in Deutschland 1831--1933*, Frankfurt: Suhrkamp; trans. E. Matthews, *Philosophy in Germany 1831--1933*, Cambridge: Cambridge University Press, 1984. (A useful introductory text which gives a wider context of the materialistic movement in nineteenth-century German philosophy. See 66-108 on science.)

Schreiner, K. (1977) ‘Der Fall Büchner. Studien zur Geschichte der akademischen Lehrfreiheit an der Universität Tübingen im 19. Jahrhundert’ (Büchner’s Case: Studies in the History of Academic Freedom at the University of Tübingen in the Nineteenth Century), *Beiträge zur Geschichte der Universität Tübingen 1477--1977*, ed. H. Decker-Hauff, Tübingen: Attempto, 307-346. (An account of Büchner’s time at Tübingen, his dismissal from his academic position and its influence on the general political development. Based on extensive archival sources that give a vivid account of the circumstances.)

Ziegler, T. (1899) *Die geistigen und sozialen Strömungen des neunzehnten Jahrhunderts* (The Intellectual and Social Movements of the Nineteenth Century), Berlin: Bondi. (Chapter 11: ‘Naturwissenschaft und Philosophie um die Mitte des Jahrhunderts’ gives a vivid, still readable and valid account.)

MICHAEL HEIDELBERGER