



Durham E-Theses

The Human-Animal Boundary: Adding a New Perspective to the Pre-Modern History of the Nervous System

EICHBERG, STEPHANIE

How to cite:

EICHBERG, STEPHANIE (2011) *The Human-Animal Boundary: Adding a New Perspective to the Pre-Modern History of the Nervous System*, Durham theses, Durham University. Available at Durham E-Theses Online: <http://etheses.dur.ac.uk/641/>

Use policy

The full-text may be used and/or reproduced, and given to third parties in any format or medium, without prior permission or charge, for personal research or study, educational, or not-for-profit purposes provided that:

- a full bibliographic reference is made to the original source
- a [link](#) is made to the metadata record in Durham E-Theses
- the full-text is not changed in any way

The full-text must not be sold in any format or medium without the formal permission of the copyright holders.

Please consult the [full Durham E-Theses policy](#) for further details.

Academic Support Office, Durham University, University Office, Old Elvet, Durham DH1 3HP
e-mail: e-theses.admin@dur.ac.uk Tel: +44 0191 334 6107
<http://etheses.dur.ac.uk>

References

Primary Sources (printed, reprinted and archival)

Charles Adam and Paul Tannery (eds.) *Oeuvres de Descartes*. 12 vols. Paris: Léopold Cerf, 1897-1910.

Alquié, Ferdinand (ed.) *Œuvres Philosophiques de Descartes*. 3 vols. with annotations. Paris: Éditions Garnier Frères, 1967.

Aristotle. *De Animalibus*. With an English translation by A.L. Peck. Reprinted Loeb edition (Aristotle XII). Cambridge et al.: Harvard University Press, 2006 (first 1937, revised and reprinted 1961).

-----, *On the Soul and other Treatises of Aristotle*. Vol. 4 of the Works of Aristotle. Edited and translated from the Greek by Thomas Taylor (vol. XXIV of The Thomas Taylor Series). Wiltshire, England: The Prometheus Trust 2003 (first 1808).

Bacon, Francis. *The Philosophical Works of Francis Bacon*. 3 vols. Edited by Robert L. Ellis, together with English translations of the principal Latin pieces. London: Longman, 1861.

Bayle, Pierre. *Dictionnaire Historique et Critique*. 4 vols. Amsterdam: chez Reinier Leers, 1695-1697; enlarged edition 1702.

-----, *An Historical and Critical Dictionary*. By Monsieur Bayle. Translated into English, with many additions and corrections, made by the author himself. 4 volumes (London: printed for C. Harper et al., 1710).

Bernier, François. *Abrégé de la Philosophie de Gassendi*. Lyon: Anisson, Posuel et Rigaud, 1684.

Charleton, Walter. *Physiologia Epicuro-Gassendo-Charltoniana: Or a Fabrick of Science Natural, upon the Hypothesis of Atoms. Founded by Epicurus, Repaired by Petrus Gassendus, Augmented by Walter Charleton*. London: Printed by T. Newcomb, 1654.

Descartes, René. *L'Homme ... et un Traitté de la Formation du Foetus. Du Mesme Auteur. Avec les Remarques de l'Luys de la Forge ... sur le Traitté de l'Homme*. Edited by Claude Clerselier with his preface and that of Florentius Schuyl. First edition published in 1662 in Latin under the title: *De Homine*. Paris: Charles Angot, 1664.

-----, *The Philosophical Writings of Descartes*. 3 volumes. Vol. 1 and 2 edited and translated by John Cottingham, Robert Stoothoff and Dugald Murdoch. Volume 3 edited and translated by idem and John Kennedy. Cambridge: Cambridge University Press, 1984-1991.

- Gabriel, Daniel. *A Voyage to the World of Cartesius*. Written originally in French, and now translated into English. London: Printed, and sold by Thomas Bennet, 1692.
- Galen. *On Anatomical Procedures (De Anatomicis Administrationibus)*. Translation of the surviving books with an introduction and notes by Charles Singer. London et al.: Oxford University Press, 1956.
- . *Galen on the Usefulness of the Parts of the Body (De Usu Partium)*. Translated from the Greek with an introduction and commentary by Margaret Tallmadge May. 2 volumes. Ithaca, New York: Cornell University Press, 1968.
- . *On the Doctrines of Hippocrates and Plato*. Edition, translation and commentary by Phillip de Lacy. 2 Volumes. Berlin: Akademie -Verlag, 1978.
- Gassendi, Pierre. *The Selected Works of Pierre Gassendi*. Edited and translated by Craig B. Brush. London and New York: Johnson Reprint Corporation, 1972.
- . *Petri Gassendi Opera Omnia in Sex Tomos Divisa, Opera Omnia... haetenus edita auctor ante obitum recensuit... posthuma vero, totius naturae explicationem complectentia, in lucem nunc primum prodeunt ex bibliotheca... Henrici-Ludovici-Haberti Mon-Morii... [Accessit Samuelis Sorberii praefatio, in qua de vita et moribus Petri Gassendi disseritur.]* Lyon: Laurent Anisson and Jean Baptiste Devenet, 1658.
- Haller, Albrecht von. *Primae Lineae Physiologiae in Usus Praelectionum Academicarum*. Göttingen: A. Vandenhoeck, 1747.
- . *A Dissertation on the Sensible and Irritable Parts of Animals by Albrecht von Haller* (London, 1755). Edited by Owsei Temkin. Baltimore: Johns Hopkins Press: Baltimore 1936.
- . 'Untersuchung der empfindlichen und reizbaren Theile des menschlichen Körpers von Albrecht von Haller', in *Der Königl. Schwedischen Akademie der Wissenschaften neue Abhandlungen aus der Naturlehre, Haushaltungskunst und Mechanik*, vol. 15 (1756), pp. 14-39.
- . *Memoires sur la Nature Sensible et Irritable des Parties du Corps Animal*. 4 vols. Lausanne: M.-M. Bousquet & Ce. and A. D'Arnay, 1756-60.
- . *Elementa Physiologiae Corporis Humani*. 8 vols. Lausanne and Bern: M.-M. Bousquet & Ce. and S. D'Arnay etc., 1757-66.
- . 'Sensibilité', in *Supplément à L'Encyclopédie, ou Dictionnaire Raisonné des Sciences, des Arts et des Métiers, par une Société de Gens de Lettres*. 4 Vols. Amsterdam: M. M. Rey, 1776-1777, vol. IV (1777): pp. 776-779.
- Harvey, William. *Disputations Touching the Generation of Animals* (1651). Translated with an introduction by Gweneth Whitteridge. Oxford: Blackwell Scientific Publications, 1981.

- . *The Anatomical Lectures of William Harvey: Prelectiones Anatomie Universalis; De Musculis*. Edited with an introduction, translation and notes by Gweneth Whitteridge. Published for the Royal College of Physicians, London. London and Edinburgh: E.& S. Livingstone LTD, 1964.
- Hartley, David. *Observations on Man, His Frame, His Duty, And His Expectations*. London: Printed for S. Richardson, 1749.
- Hippocrates. *Hippocrates*. With an English translation by W.H.S. Jones. Vol. 2, Loeb edition. London: William Heinemann, 1923.
- Hobbes, Thomas. *Leviathan, Or The Matter, Form, and Power Of a Commonwealth Ecclesiastical and Civil*. London: Printed for Andrew Crooke, 1651.
- . *Elements of Philosophy*. London: Printed by R. & W. Leybourn for Andrew Crooke, 1656.
- Le Grand, Antoine. *An Entire Body of Philosophy According to the Principles of the Famous Renate Des Cartes, in Three Books: I. The Institution...II. The History of Nature...III. A Dissertation of the Want of Sense and Knowledge in Brute Animals, in II. Parts, Giving a Mechanical Account of their Operations*. Translated by Richard Blome. London: printed by Samuel Roycroft, London, 1694.
- Locke, John. *An Essay Concerning Human Understanding*. With an introduction, critical apparatus and glossary by Peter H. Nidditch. Oxford: Clarendon Press, 1975.
- Locke, John. *An Essay Concerning Humane Understanding in Four Books*. London: printed for Thomas Basset, 1690.
- Magendie, François. *Leçons sur les Fonctions et les Maladies du Système Nerveux*. 2 vols. Paris: Ébrard, 1839.
- Morton, Charles. *Of the Souls of Brutes (1684)*. Unpublished treatise in *Morton, Charles (1627-1698), and others* [archive item WMS 4 MS. 3637] 1682-1686.
- Pereira, Gometius. *Antoniana Margarita. Opus Nempe Physicis, Medicis, ac Theologis non Minus Utile, quamNnecessarium. Per Gometium Pereiram... nunc primum in lucem aeditum*. In *Officina Chalcographica Guillielmi de Millis in Methymnae Campi*, 1554.
- Plato. *Timaeus*. Translated with an introduction by Donald J. Zeyl. Cambridge et al.: Hackett Publishing Company, 2000.
- Ray, John. 'An Account of the Dissection of a Porpess, Promised Numb. 74; Made, and Communicated in a Letter of Sept. 12 1671, by the Learned Mr. John

Ray, Having therein Observ'd Some Things Omitted by Rondeletius',
Philosophical Transactions (1665-1678), Vol. 6 (1671), pp. 2274-2279.

Steno, Nicolaus. *Nicolaus Steno's Lecture on the Anatomy of the Brain*. Edited by
Gustav Scherz. Copenhagen: Nyt Nordisk Forlag, 1965.

Tyson, Edward. *Phoecaena, or the Anatomy of a Porpess, Dissected at Gresham
Colledge: with a Praeliminary Discourse concerning Anatomy, and a
Natural History of Animals*. London: Printed for Benjamin Tooke, 1680.

-----. *Orang-Outang, Sive Homo Sylvestris: Or, The Anatomy of a Pygmie,
Compared with that of a Monkey, an Ape, and a Man*. Printed for Thomas
Bennet: London, 1699.

Unzer, Johann August. *Grundgebäude von der Sinnlichkeit der thierischen Körper:
nebst einem Vorberichte wegen der auf Subscription zu druckenden neuen
Auflage der medicinischen Wochenschrift: „Der Arzt“*. Lüneburg and
Rinteln: Gotthilf Christian Berth, 1768.

Vesalius, Andreas. *On the Fabric of the Human Body*. A translation of *De Humani
Corporis Fabrica Libri Septem* by William F. Richardson in collaboration
with John B. Carman. 5 vols. San Francisco and Novato, California: Norman
Publishing, 1998-2009.

-----. *Vesalius on the Human Brain*. Edited with an introduction and translation of
the original text by Charles Singer. London et al.: Oxford University Press
(Published for the Wellcome Historical Medical Museum), 1952.

-----. 'Some Observations on the Dissection of Living Animals', translated by
Benjamin Farrington. *Transactions of the Royal Society of South Africa*,
Capetown, 20 (1931), pp. 1-14.

-----. 'The Preface of Andreas Vesalius to De Fabrica Corporis Humani 1543'.
Translated by Benjamin Farrington. *Proceedings of the Royal Society of
Medicine* 25 (1932), pp. 1357-1366.

Willis, Thomas. *Dr Willis's Practice of Physick, Being the Whole Works of that
Renowned and Famous Physician: Containing Eleven Several Treatises*,
translated into English, by Samuel Pordage. London: printed by T. Dring, C.
Harper, and J. Leigh, 1684 (first 1681).

-----. *De Anima Brutorum quae Hominis Vitalis ac Sensitive est, Exercitationes
Duae. Prior physiologica ejusdem naturam, partes, potentias & affections
tradit; altera pathologica morbos qui ipsam, & sedem ejus primariam, nempe
cerebrum & nervosum genus afficiunt, explicat, eorumque therapeias
instituit, cum figures aeneis. Studio Thomae Willis M.D. natural philosophiae
profess. Oxon. nec non inclyti Medic. Colleg. Londin. & Societ. reg. Socii,
Londini: Prostant apud Guliel. Wells & Rob. Scot, 1672.*

- . *Cerebri Anatome cui Accessit Nervorum Descriptio et Usus. Studio Thomae Willis, ex AEde Christi Oxon. M.D. & in ista celeberrima Academia Naturalis Philosophiae Professoris Sidleiani.* Londini: typis Jo. Flesher, impensis Jo. Martyn & Ja. Allestry apud insigne Campanae in Coemeterio D. Pauli, 1664.
- . *Diatribae Duae Medico-Philosophicae. Quarum prior agit de fermentatione sive de motu intestino particularum in quovis corpore. Altera de febris, sive de motu earundem in sanguine animalum. His accessit dissertatio epistolica de urinis. Studio Thomae Willis Medici Oxoniensis.* Londini: Typis Thomas Roycroft; impensis Jo. Martyn, Ja. Allestry, & Tho. Dicas, ad insigne Campanae, in Coemeterio D. Pauli, 1660.

Winkler, Johann Heinrich. *Die verschiedenen Meynungen einiger Weltweisen von der Existenz der Seelen der Thiere in einer Gesellschaft guter Freunde untersucht.* 6 Abhandlungen. Dritte Auflage. Leipzig: Bernh. Christ. Breitkopf, 1741-1745.

Secondary Sources

- Annas, Julia E. 'Epicurus on Agency', in Jacques Brunschwig and Martha C. Nussbaum (eds.) *Passions and Perceptions: Studies in Hellenistic Philosophy of Mind.* Cambridge: Cambridge University Press, 1993, pp. 53-71.
- Ashley Montagu, M. F. *Edward Tyson, M.D., F.R.S., 1650-1708 and the Rise of Human and Comparative Anatomy in England.* Foreword by George Santon. Philadelphia: The American Philosophical Society, 1943.
- Balfour, Dianne and Hank Davis. *The Inevitable Bond: Scientist-Animal Interactions.* Cambridge: Cambridge University Press, 1992.
- Bandrés, Javier and Rafael Llavona. 'Minds and Machines in Renaissance Spain: Gómez Pereira's Theory of Animal Behavior'. *Journal of the History of the Behavioral Sciences* 28 (1992), pp. 158- 168.
- Beare, John I. *Greek Theories of Elementary Cognition. From Alcmaeon to Aristotle.* Oxford: Clarendon Press, 1906.
- Benini, Arnaldo and Joyce A. DeLeo. 'René Descartes' Physiology of Pain'. *SPINE* 24: 20 (1999), pp. 2115-2119.

- Berkel, Klaas van. 'Descartes' Debt to Beeckman: Inspiration, Cooperation, Conflict', in Gaukroger, Schuster and Sutton (eds.) *Descartes' Natural Philosophy*, pp. 46-59.
- Bertoloni, Domenico and Guerrini, Anita. 'The Representation of Animals in the Early Modern Period'. *Annals of Science* (Special Issue) 67:3 (2010).
- Bitbol-Hespériès, Annie. 'Cartesian Physiology', in Gaukroger, Schuster and Sutton (eds.) *Descartes' Natural Philosophy*, pp. 349-382.
- Bliquez, Lawrence and Alexander Kazhdan. 'Four Testimonia to Human Dissection in Byzantine Times'. *Bulletin of the History of Medicine* 58 (1984), pp. 554-557.
- Boury, Dominique. 'Irritability and Sensibility: Key Concepts in Assessing the Medical Doctrines of Haller and Bordeu'. *Science in Context* 21: 4 (2008), pp. 521-535.
- Brazier, Mary A.B. *A History of Neurophysiology in the 17th and 18th Centuries*. New York: Raven Press, 1984.
- Brown, Nik and Mike Michael. 'Switching between Science and Culture in Transpecies Translation'. *Science, Technology, & Human Values* 26:1 (2001), pp. 3-22.
- Brown, Theodore. *The Mechanical Philosophy and the "Animal Oeconomy"*. New York: Arno Press Inc., 1981.
- Buckingham, Hugh W. and Robert B. Glassman. 'David Hartley's Neural Vibrations and Psychological Associations', in Finger, Smith and Whitaker (eds) *Brain, Mind and Medicine. Essays in Eighteenth Century Neuroscience*, pp. 177-190.
- Buldt, Bernd. 'Genus Proximum', in Jürgen Mittelstraß (ed.) *Enzyklopädie Philosophie und Wissenschaftstheorie*. Second Edition, vol. 3 (Stuttgart and Weimar: Metzler, 2008), pp. 85-86.
- Buscaglia, Marino. 'The History of the Experimental Method in the Life Sciences as an Illustration of Versatility in Interpretation', in Jacques Montangero et al. (eds.) *Conceptions of Change over Time*. Genève: Jean Piaget Archives Foundation, 1993, pp. 45-64.
- Bynum, William F. 'The Anatomical Method, Natural Theology, and the Functions of the Brain'. *Isis* 64: 4 (1973), pp. 445-468.
- , "'C'est un Malade": Animal Models and Concepts of Human Diseases'. *Journal of the History of Medicine and Allied Sciences* 45 (1990), pp. 397-413.

- Canguilhem, George. *La Connaissance de la Vie*. Deuxieme edition revue et augmentee. Neuvieme triage. Paris: Librairie philosophique, 1992.
- Carlino, Andrea. *Books of the Body: Anatomical Ritual and Renaissance Learning*. Chicago and London: The University of Chicago Press, 1999 (first 1994).
- Caton, Hiram. *The Origin of Subjectivity. An Essay on Descartes*. New Haven and London: Yale University Press, 1973.
- Neuburger, Max. *The Historical Development of Experimental Brain and Spinal Cord Physiology before Flourens* (1897). Translated and edited by Edwin Clarke. Baltimore and London: The John Hopkins University Press, London, 1981.
- Clarke, Edwin and Charles D. O'Malley. *The Human Brain and Spinal Cord: A Historical Study Illustrated by Writings from Antiquity to the Twentieth Century*. Revised and enlarged edition. San Francisco: Norman Publishing, 1996 (first 1968).
- Cohen, Leonora D. 'Descartes and Henry More on the Beast-Machine - A Translation of Their Correspondence Pertaining to Animal Automatism'. *Annals of Science* 1:1 (1936), pp. 48-61.
- Cohen Rosenfield, Leonora. *From Beast-Machine to Man-Machine. Animal Soul in French Letters from Descartes to La Mettrie*. New and enlarged edition. New York: Octagon Books, Inc., 1968 (first 1940).
- Cole, Francis Joseph. *A History of Comparative Anatomy. From Aristotle to the Eighteenth Century*. London: MacMillan & Co. LTD, 1944.
- Conrad, Lawrence I., Michael Neve, Vivian Nutton, Roy Porter and Andrew Wear (eds.) *The Western Medical Tradition 800 BC to AD 1800*. Cambridge et al.: Cambridge University Press, 1995.
- Cottingham, John. "A Brute to the Brutes?": Descartes' Treatment of Animals'. *Philosophy* 53 (1978a), pp. 551-559.
- . 'Descartes on 'Thought''. *The Philosophical Quarterly* 28: 112 (1978b), pp. 208-214.
- . 'Cartesian Trialism'. *Mind* (New Series) (1985) 94: 374, pp. 218-230.
- Creager, Angela N.H. and William Ch. Jordan (eds.) *The Animal/Human Boundary: Historical Perspectives*. Studies in Comparative History 2. Woodbridge: University of Rochester Press, 2002.
- Crist, Eileen. *Images of Animals: Anthropomorphism and Animal Mind*. Philadelphia: Temple University Press, 1999.

- Cummings, Brian. 'Animal Passions and Human Sciences: Shame, Blushing and Nakedness in Early Modern Europe and the New World', in Fudge, Gilbert and Wiseman (eds.) *At the Borders of the Human*, pp. 26-50.
- Cunningham, Andrew. *The Anatomist Anatomis'd: An Experimental Discipline in Enlightenment Europe*. History of Medicine in Context. Farnham (UK): Ashgate, 2010.
- . 'The Pen and the Sword: Recovering the Disciplinary Identity of Physiology and Anatomy before 1800 - II. Old Anatomy – the Sword'. *Studies in History and Philosophy of Biological and Biomedical Sciences* 34 (2003), pp. 51-76.
- . 'The Pen and the Sword: Recovering the Disciplinary Identity of Physiology and Anatomy before 1800 - I: Old Physiology – the Pen', *Studies in History and Philosophy of Biological and Biomedical Sciences* 33 (2002), pp. 631-665.
- . *The Anatomical Renaissance. The Resurrection of the Anatomical Projects of the Ancients*, Aldershot: Ashgate, 1997.
- Daston, Lorraine and Gregg Mitman (eds.) *Thinking with Animals: New Perspectives on Anthropomorphism*. New York: Columbia University Press, 2005.
- Dewhurst, Kevin. *Willis' Oxford Lectures*. Oxford: Sandford Publications, 1980.
- Dolan, Brian. 'Soul Searching: a Brief History of the Mind/Body Debate in the Neurosciences'. *Neurosurgical Focus* 23 (1): E2 (2007), pp. 1-7.
- Dror, Otniel. 'The Affect of Experiment: The Turn to Emotions in Anglo-American Physiology, 1900-1940'. *Isis* 90 (1999), pp. 205-237.
- Dudley Sylla, Edith. 'Richard Swineshead', in Jorge J. E. Gracia and Timothy B. Noone (eds.) *A Companion to Philosophy in the Middle Ages*. Oxford et al.: Blackwell Publishing Ltd., 2003, pp. 593-596.
- Duncan, Grant. 'Mind-Body Dualism and the Biopsychosocial Model of Pain: What did Descartes Really Say?'. *Journal of Medicine and Philosophy* 25: 4 (2000), pp. 485-513.
- Easton, Patricia. 'Antoine Le Grand', in *The Stanford Encyclopedia of Philosophy*. URL= <http://plato.stanford.edu/entries/legrand/> [accessed 10.08.09].
- Eichberg, Stephanie. 'Constituting the Human Via the Animal in Eighteenth-Century Experimental Neurophysiology: Albrecht von Haller's Sensibility Trials'. *Medizinhistorisches Journal* 44 (2009), pp. 274-295.
- . 'Ambivalente Analogien: Die Auslotung der Mensch-Tier-Grenze im neurophysiologischen Experiment des 18. Jahrhunderts'. *Traverse. Zeitschrift fuer Geschichte – Revue d'histoire* 15:3 (2008), pp. 17-28.

- , "*Vivisection Investigated and Vindicated*" (1842): *A Scientific Assessment of the Vivisection Debate in Early Victorian Britain*. Unpublished M.A. Dissertation. Freie Universität Berlin, 2005.
- Finger, Stanley, C. U. M. Smith and Harry Whitaker (eds.) *Brain, Mind and Medicine: Essays in Eighteenth-Century Neuroscience*. New York: Springer US, 2007.
- Finger, Stanley. *Minds behind the Brain: A History of the Pioneers and Their Discoveries*. Oxford et al: Oxford University Press, 2000, pp. 13-19.
- . 'Descartes and the Pineal Gland in Animals: A Misinterpretation'. *Journal of the History of the Neurosciences* 4: 3/ 4 (1995), pp. 166-182.
- , *Origins of Neuroscience. A History of Explorations into Brain Function*. Oxford et al: Oxford University Press, 1994, pp. 6-7.
- Fisher, Saul. "Pierre Gassendi", in Edward N. Zalta (ed.) *The Stanford Encyclopedia of Philosophy* (Winter 2009 Edition)
URL = <http://plato.stanford.edu/archives/win2009/entries/gassendi/>;
accessed 26.08.10.
- Frampton, Michael. *Embodiments of Will: Anatomical and Physiological Theories of Voluntary Animal Motion from Greek Antiquity to the Latin Middle Ages, 400 B.C.-A.D. 1300*. Saarbrücken: VDM Verlag Dr. Müller Aktiengesellschaft & Co. KG, 2008.
- Frank, Robert G. *Harvey and the Oxford Physiologists, 1980: Scientific Ideas and Social Interaction*. Berkely et al.: University of California Press, 1980.
- Franklin, Adrian. *Animals and Modern Cultures: A Sociology of Human-Animal Relations in Modernity*. London: Sage Publications, 1999.
- French, Richard D. *Antivivisection and Medical Science in Victorian Society*. Princeton: Princeton University Press, 1975.
- French, Roger K. *Dissection and Vivisection in the European Renaissance*. Aldershot and Brookfield, VT: Ashgate, 1999.
- , *William Harvey's Natural Philosophy*. Cambridge: Cambridge University Press, 1994.
- , *Robert Whytt, the Soul, and Medicine*. London: The Wellcome Institute of the History of Medicine, 1969.
- Fudge , Erica. *Brutal Reasoning: Animals, Rationality, and Humanity in Early Modern England*. Ithaca and London: Cornell University Press, 2006.
- (ed.) *Renaissance Beasts. Of Animals, Humans, and Other Wonderful Creatures*. Urbana and Chicago: University of Illinois Press, 2004.

- , 'A Left-Handed Blow: Writing the History of Animals', in Nigel Rothfels (ed.) *Representing Animals*. Bloomington and Indianapolis: Indiana University Press, 2002, pp. 3-18.
- , *Perceiving Animals: Humans and Beasts in Early Modern English Culture*. Basingstoke: MacMillan Press LTD, 2000.
- , Ruth Gilbert and Susan Wiseman (eds.) *At the Borders of the Human: Beasts, Bodies and Natural Philosophy in the Early Modern Period*. Basingstoke: MacMillan Press LTD, 1999.
- Galert, Thorsten. *Vom Schmerz der Tiere. Grundlagenprobleme der Erforschung tierischen Bewußtseins*. Paderborn: mentis, 2005 [Marburg Univ. Diss. 2004].
- Gaukroger, Stephen, John Schuster and John Sutton (eds.). *Descartes' Natural Philosophy*. London: Routledge, 2000.
- Gaukroger, Stephen. *Descartes: An Intellectual Biography*. Oxford: Clarendon Press, 1995.
- Gertler, Brie and Lawrence Shapiro (eds.) *Arguing About the Mind*. New York and London: Routledge, 2007.
- Gill, Christopher. 'Psychology', in James Warren (ed.) *The Cambridge Companion to Epicureanism*. Cambridge et al.: Cambridge University Press, 2009, pp.125-141.
- Gray Hardcastle, Valerie. *The Myth of Pain*, London et al.: MIT Press, 1999.
- Guerrini, Anita. *Experimenting with Humans and Animals: From Galen to Animal Rights*. Baltimore and London: The Johns Hopkins University Press, 2003.
- , 'The Ethics of Animal Experimentation in Seventeenth-Century England'. *Journal of the History of Ideas* 50:3 (1989), pp. 391-408.
- Hächler, Stefan, Luc Lienhard and Martin Stuber (eds.) *Hallers Netz. Ein europäischer Gelehrtenbriefwechsel zur Zeit der Aufklärung*. Studia Halleriana, vol. 9. Basel: Schwabe, 2005.
- Haigh, Elizabeth L. 'Vitalism, the Soul, and Sensibility: The Physiology of Théophile Bordeu'. *Journal of the History of Medicine and Allied Sciences* 31: 11 (1976), pp. 30-41.
- Hagner, Michael. *Homo cerebrialis - Der Wandel vom Seelenorgan zum Gehirn*. Frankfurt am Main and Leipzig: Insel Verlag, 2000 (first 1997).
- Harré, Rom. *Pavlov's Dogs and Schrödinger's Cat: Scenes from the Living Laboratory*. New York: Oxford University Press, 2009.

- Harrison, Peter. 'Reading Vital Signs: Animals and the Experimental Philosophy', in Fudge (ed.) *Renaissance Beasts*, pp. 186-207.
- Hobson-West, Pru. 'Beasts and Boundaries: An Introduction to Animals in Sociology, Science and Society'. *Qualitative Sociology Review* III:1 (2007), pp. 23-41.
- Hochdoerfer, Margarete. *The Conflict between the Religious and the Scientific Views of Albrecht von Haller (1708-1777)*. Lincoln, Nebraska: University of Nebraska Studies in Language (Literature and Criticism, no. 12), 1932.
- Hodges, Devon L. *Renaissance Fictions of Anatomy*. Amherst: The University of Massachusetts Press, 1985.
- Hodgkiss, Andrew. *From Lesions to Metaphor: Chronic Pain in British, French and German Medical Writings, 1800 - 1914*. Amsterdam and Atlanta: Rodopi (Clio Medica 58), 2000.
- Holmes, Frederic L. 'The Old Martyr of Science: The Frog in Experimental Physiology'. *Journal of the History of Biology* 26:2 (1993), pp. 311-328.
- Ingensiep, Hans Werner. 'Zur Lage der Tierseele und Tierethik im Deutschland des 19. Jahrhunderts', in Friedrich Niewoehner (ed.) *Die Seele der Tiere*. Wiesbaden: Harassowitz (Wolfenbütteler Forschungen, vol. 94) 2001, pp. 283-331.
- 'Seelenordnungen und Neurozentrik: Auf den Spuren der Seelenlehren in der Antike, der frühen Neuzeit und der Gegenwart', in Ute Kindermann and Almuth Hattenbach (eds.), *Die Sonderstellung des Gehirns - eine biologische Tatsache?* Gießen: Focus, 1997, pp. 11-31.
- 'Tierseele und tierethische Argumentationen in der deutschen philosophischen Literatur des 18. Jahrhunderts', *NTM N.S.* 4: 2 (1996), pp. 103-118.
- Ingold, Tim (ed.) *What is an Animal?* London and New York: Routledge, 1994 (first 1988).
- Isler, Hansruedi. *Thomas Willis 1621-1675: Doctor and Scientist*. London and New York: Hafner Publishing Company, 1968.
- Kennedy, John S. *The New Anthropomorphism*. Cambridge: Cambridge University Press, 1992.
- King, Lester S. *The Philosophy of Medicine*. London et al: Harvard University Press, 1978.
- Knoeff, Rhina. 'The Reins of the Soul: The Centrality of the Intercostal Nerves to the Neurology of Thomas Willis and to Samuel Parker's Theology'. *Journal of the History of Medicine and Allied Sciences* 59:3 (2004), pp. 413-440.

- Knoll, Elizabeth. 'Dogs, Darwinism and English Sensibilities', in Robert W. Mitchell, Nicholas S. Thompson and H. Lyn Miles (eds.) *Anthropomorphism, Anecdotes, and Animals*. New York: State University of New York Press, 1997, pp. 12-21.
- Kretzmann, Norman. 'Philosophy of Mind', in Norman Kretzmann and Eleonore Stump (eds.) *The Cambridge Companion to Aquinas*. Cambridge: Cambridge University Press, 1993, pp. 128-159.
- Kruger, Lawrence. 'Edward Tyson's 1680 Account of the 'Porpess' Brain and its Place in the History of Comparative Neurology' *Journal of the History of the Neurosciences* 12:4 (2003), pp. 339-349.
- Kuksewicz, Zdzisław. 'Criticisms of Aristotelian Psychology and the Augustinian-Aristotelian Synthesis', in Norman Kretzmann et al (eds.) *The Cambridge History of Later Medieval Philosophy. From the Rediscovery of Aristotle to the Disintegration of Scholasticism 1100-1600*. Cambridge: Cambridge University Press, 2003 (first 1982), pp. 623-628.
- Lega, Bradley C. 'An Essay Concerning Human Understanding: How the Cerebri Anatomie of Thomas Willis Influenced John Locke'. *Neurosurgery* 58 (2006), pp. 667-576.
- Lewis, C. S. *The Problem of Pain*. London: Harper Collins, 1940.
- Leys, Ruth. *From Sympathy to Reflex. Marshall Hall and his Opponents*. New York and London: Garland, 1990.
- Lloyd, G. E.R. *Science, Folklore and Ideology. Studies in the Life Sciences in Ancient Greece*. Cambridge: Cambridge University Press, 1983.
- Lokhorst, Gert-Jan. 'Descartes and the Pineal Gland', in Edward N. Zalta (ed.) *The Stanford Encyclopedia of Philosophy* (Spring 2009 Edition). URL=<http://plato.stanford.edu/archives/spr2009/entries/pineal-gland/> [accessed 15.12.09]
- LoLordo, Antonia. *Pierre Gassendi and the Birth of Early Modern Philosophy*. Cambridge et al: Cambridge University Press, 2007.
- Lovejoy, Arthur O. *The Great Chain of Being: A Study of the History of an Idea*. Cambridge, Massachusetts: Harvard University Press, 1936.
- Lowe, E. Jonathan. *John Locke*. London and New York: Routledge, 2005.
- Lynch, Michael. 'Sacrifice and the Transformation of the Animal Body into a Scientific Object: Laboratory Culture and Ritual Practice in the Neurosciences'. *Social Studies of Science* 18:2 (1988), pp. 265-289.

- Maehle, Andreas-Holger. 'Cruelty and Kindness to the 'Brute Creation: Stability and Change in the Ethics of the Man-Animal Relationship, 1600-1850', in Aubrey Manning and James Serpell (eds.) *Animals and Human Society: Changing Perspectives*. London and New York: Routledge, 1994, pp. 81-105.
- 'The Ethical Discourse on Animal Experimentation, 1650-1900', in Andrew Wear, Johanna Geyer-Kordesch and Roger French (eds.) *Doctors and Ethics: The Earlier Historical Setting of Professional Ethics*. Amsterdam: Rodopi (Clio Medica 24), 1993.
- *Kritik und Verteidigung des Tierversuchs. Die Anfänge der Diskussion im 17. und 18. Jahrhundert*. Stuttgart: Franz Steiner Verlag, 1992.
- Manning, Aubrey and James Serpell (eds.) *Animals and Human Society: Changing Perspectives*. London and New York: Routledge, 1994.
- Martensen, Robert L. *The Brain takes Shape: An Early History*. Oxford et al.: Oxford University Press, 2004.
- McCance, Dawne. 'Anatomy as Speech Act. Vesalius, Descartes, Rembrandt or; The Question of "the animal" in the Early Modern Anatomy Lesson', in Jodey Castricano (ed.) *Animal subjects: an ethical reader in a posthuman world*. Waterloo (Ontario, Canada): Wilfrid Laurier University Press, 2008, pp. 63-95.
- McCormick, Ted. *William Petty and the Ambitions of Political Arithmetic*. Oxford and New York: Oxford University Press, 2009.
- Melzack, Ronald and Patrick Wall. 'Pain mechanism: A new theory'. *Science* 150: 699 (1965), pp. 971-979.
- Michael, Fred S. and Michael, Emily. 'The Theory of Ideas in Gassendi and Locke'. *Journal of the History of Ideas* 51:3 (1990), pp. 379-399.
- 'Gassendi on Sensation and Reflection: A Non-Cartesian Dualism'. *History of European Ideas* 9: 5 (1988), pp. 583-595.
- Miles, H. Lyn, Robert W. Mitchell, and Nicholas S. Thompson (eds.) *Anthropomorphism, Anecdotes, and Animals*, Albany: State University of New York Press, 1997.
- Möller, Hans-Jürgen. *Die Begriffe "Reizbarkeit" und "Reiz": Konstanz und Wandel ihres Bedeutungsgehaltes sowie die Problematik ihrer exakten Definition*. Stuttgart: Gustav Fischer Verlag, 1975.
- Morel, Pierre-Marie. 'Epicurean Atomism', in James Warren (ed.) *The Cambridge Companion to Epicureanism*. Cambridge et al.: Cambridge University Press, 2009, pp. 65-83.

- Morris, David B. *The Culture of Pain*, London: University of California Press, 1991.
- Morris, Katherine. 'Bêtes-Machines', in Gaukroger et al, *Descartes' Natural Philosophy*, pp. 401-419.
- Mykhalovskiy, Eric, Melanie Rock and Thomas Schlich. 'People, Other Animals and Health Knowledges: Towards a Research Agenda'. *Social Science & Medicine* 64 (2007), pp. 1970-1976.
- Neuburger, Max. *The Historical Development of Experimental Brain and Spinal Cord Physiology before Flourens* (1897). Translated and edited, with additional material, by Edwin Clarke. Baltimore and London: Johns Hopkins University Press, 1981.
- Nigst, Henry. *Das anatomische Werk Johann Jakob Wepfers (1620-1695)*. Aarau: Verlag H.R. Sauerländer & Co. (Veröffentlichungen der Schweizerischen Gesellschaft für Geschichte der Medizin und der Naturwissenschaften XVI), 1947.
- Nutton, Vivian. *Ancient Medicine*. London and New York: Routledge, 2004.
- , 'Roman Medicine, 250 BC to AD 200', in Lawrence I. Conrad et al (eds.) *The Western Medical Tradition*, pp. 39-70.
- Ochs, Sidney. *A History of Nerve Functions: From Animal Spirits to Molecular Mechanisms*. Cambridge: Cambridge University Press, 2004.
- O'Connor, James P.B. 'Thomas Willis and the Background to Cerebri Anatome'. *Journal of the Royal Society of Medicine* 98 (2003), pp. 139-143.
- O'Malley, C. D. *Andreas Vesalius of Brussels, 1514-1564*. Berkeley: University of California Press, 1964.
- Osler, Margaret J. *Divine Will and the Mechanical Philosophy. Gassendi and Descartes on Contingency and Necessity in the Created World*. Cambridge and New York: Cambridge University Press, 1994.
- Pickstone, John V. *Ways of Knowing: A New History of Science, Technology and Medicine*. Manchester: Manchester University Press, 2000.
- Porter, Roy. *Flesh in the Age of Reason*. London et al.: Allen Lane, 2003.
- , *The Greatest Benefit to Mankind. A Medical History of Humanity from Antiquity to the Present*. London: Fontana Press, 1999 (first 1997).
- Pranghofer, Sebastian. "'It could be Seen more Clearly in Unreasonable Animals than in Humans": The Representation of the Rete Mirabile in Early Modern Anatomy'. *Medical History* 53 (2009), pp. 561-586.

- Price, Elfed Huw. *The Emergence of the Doctrine of the 'Sentient Brain' in Britain, 1650-1850*. Unpublished Ph.D. thesis. Oxford University, 2005.
- Reiber, Mathias. *Anatomie eines Bestsellers: Johann August Unzers Wochenschrift „Der Arzt“*. Göttingen: Wallstein Verlag, 1999.
- Rey, Roselyne. *The History of Pain*, Paris: Editions la Decouverte, 1993.
- Rheinberger, Hans-Joerg. 'History of Science and the Practices of Experiment'. *History and Philosophy of the Life Sciences* 23 (2001), pp. 51-63.
- Richards, Robert J. 'The Emergence of Evolutionary Biology of Behaviour in the Early Nineteenth Century'. *British Journal for the History of Science* 15 (1982), pp. 241-280.
- . 'Instinct and Intelligence in British Natural Theology: Some Contributions to Darwin's Theory of the Evolution of Behavior'. *Journal of the History of Biology* 14: 2 (1981), pp. 193-230.
- . 'Influence of Sensationalist Tradition in Early Theories of the Evolution of Behavior'. *Journal of the History of Ideas* 40:1 (1979), pp. 85-105.
- . *The Evolution of Behavior: Theories of Instinct in the Nineteenth-Century with an Essay on Animal Instinct and Intelligence before Darwin*. Unpublished Ph.D. thesis. University of Chicago, 1978.
- Richardson, Alan. *British Romanticism and the Science of the Mind*. Cambridge: Cambridge University Press, 2001.
- Ritvo, Harriet. 'History and Animal Studies'. *Society & Animals* 10:4 (2002), p. 403-406.
- . *The Animal Estate: The English and other Creatures in the Victorian Age*. Cambridge, Mass.: Harvard University Press, 1987.
- . *The Platypus and the Mermaid: And Other Figments of the Classifying Imagination*. Cambridge, Mass. and London: Harvard University Press, 1997.
- Rocca, Julius. *Galen on the Brain: Anatomical Knowledge and Physiological Speculation in the Second Century AD*. Leiden and Boston: Brill (Studies in Ancient Medicine 26), 2003.
- Rose, Clifford. 'European Neurology from its Beginnings until the 15th century: An Overview'. *Journal of the History of the Neurosciences* 2:1 (1993), pp. 21-44.
- Rounseville Alger, William. *A Critical History of the Doctrine of a Future Life*. With a Complete Bibliography of the Subject. George W. Childs: Philadelphia, 1864.

- Rupke, Nicolaas (ed.) *Vivisection in Historical Perspective*. London and New York: Routledge, 1990 (first 1987).
- Sarasohn, Lisa T. 'Motion and Morality: Pierre Gassendi, Thomas Hobbes and the Mechanical World-View'. *Journal of the History of Ideas* 46 (1985), pp. 363-379.
- Sawday, Jonathan. *The Body Emblazoned: Dissection and the Human Body in Renaissance Culture*. London and New York: Routledge, 1995.
- Scarry, Elaine. *The Body in Pain: The Making and Unmaking of the World*. Oxford et al: Oxford University Press, 1985.
- Schäfer, Rainer. *Zweifel und Sein: Der Ursprung des modernen Selbstbewusstseins in Descartes' cogito*. Würzburg: Verlag Königshausen & Neuman GmbH, 2006, pp. 94-95.
- Schaffer, Simon and Steven Shapin. *Leviathan and the Air Pump: Hobbes, Boyle, and the Experimental Life*. Princeton: Princeton University Press, 1985.
- Shapiro, Barbara and Robert G. Frank. Jr. *English Scientific Virtuosi in the 16th and 17th Centuries*. Los Angeles: University of California Press, 1979.
- Smith, C. U.M. 'Brain and Mind in the 'Long' Eighteenth Century', in Finger Smith, and Whitaker (eds.) *Brain, Mind and Medicine*, pp. 15-28.
- . 'Descartes' Pineal Neuropsychology'. *Brain and Cognition* 36 (1998), pp. 57-72.
- Staden, Heinrich von. *Herophilus: The Art of Medicine in Early Alexandria*. Edition, translation and essays. Cambridge: Cambridge University Press, 1989.
- Stahnisch, Frank W. 'On the Use of Animal Experimentation in the History of Neurology', in Stanley Finger, François Boller and Kenneth L. Tyler (eds.) *History of Neurology*. Handbook of Clinical Neurology series, vol. 95 (3rd series). Edinburgh and Amsterdam: Elsevier B.V., 2009, pp. 129 -148.
- . 'Historical and Philosophical Perspectives on Experimental Practice in Medicine and the Life Sciences'. *Theoretical Medicine and Bioethics* 26 (2005), pp. 397-425.
- Steinke, Hubert. *Irritating Experiments: Haller's Concept and the European Controversy on Irritability and Sensibility, 1750-90*. Amsterdam and New York: Rodopi (Clio Medica 76) 2005.
- Stettler, Antoinette. 'Sensation und Sensibilität: Zu John Lockes Einfluß auf das Konzept der Sensibilität im 18. Jahrhundert'. *Gesnerus* 45 (1988), pp. 445-460.

- Sutton, John. 'The Body and the Brain', in Gaukroger et al (eds.) *Descartes' Natural Philosophy*, pp. 696-722.
- Tester, Keith. *Animals and Society. The Humanity of Animal Rights*. London and New York: Routledge, 1991.
- Thomas, Keith. *Man and the Natural World. Changing Attitudes in England 1500-1800*. London: Allen Lane, 1983.
- Turner, James. *Reckoning with the Beast: Animals, Pain, and Humanity in the Victorian Mind*. Baltimore and London: The Johns Hopkins University Press, 1980.
- Ullersperger, Johann Baptist. *Die Geschichte der Psychologie und der Psychatrik in Spanien*. Würzburg: Darmstadt, 1871 (BiblioBazaar Reproduction Series).
- Uston, Cagatay. 'NEUROwords. Dr. Thomas Willis' Famous Eponym: The Circle of Willis'. *Journal of the History of the Neurosciences* 14 (2005), pp. 16-21.
- Waal, Frans B.M. de. 'Foreword', in H. Lyn Miles et al. (eds.) *Anthropomorphism, Anecdotes, and Animals*, pp. xiii-xvii.
- Wall, Patrick. *Pain: The Science of Suffering*. London: Weidenfeld & Nicolson, 1999.
- Wear, Andrew. 'Medicine in Early Modern Europe, 1500-1700', in Lawrence I. Conrad et al. (eds.) *The Western Medical Tradition*, pp. 215-361.
- Williams, Andrew N. "'To observe well ... and thence to make himself rules": John Locke's principles and practice of child healthcare' *Medical Humanities* 33 (2007), pp. 22-34.
- Wiseman, Susan. 'Monstrous Perfectability: Ape-Human Transformations in Hobbes, Bulwer, Tyson', in Fudge, Gilbert and Wiseman (eds.) *At the Borders of the Human*, pp. 215-238
- Wittgenstein, Ludwig. *Philosophical Investigations*. The German text, with an English translation by Gertrude M. Anscombe, Peter M.S. Hacker and Joachim Schulte. Fourth edition. Oxford: Wiley-Blackwell, 2009.
- Woolhouse, Roger. *John Locke: a Biography*. Cambridge et al.: Cambridge University Press, 2007.
- Yolton, John W. *Locke and French Materialism*. Oxford: Clarendon Press, 1991.
- Young, Robert M. 'Animal Soul', in Paul Edwards (ed.) *Encyclopedia of Philosophy*. 8 vols. New York: Collier Macmillan, vol. 1, pp. 122-127.
- Zimmer, Carl. *Soul Made Flesh: The Discovery of the Brain- and How it Changed the World*. London: William Heinemann, 2004.