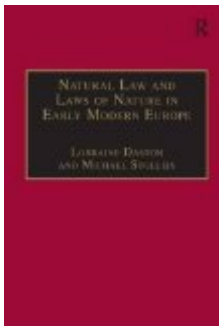
H-Net Reviews
in the Humanities & Social Sciences



Lorraine Daston, Michael Stolleis, eds.. *Natural Law and Laws of Nature in Early Modern Europe: Theology, Moral and Natural Philosophy.* Burlington: Ashgate, 2006. 338 pp. $114.95, cloth, ISBN 978-0-7546-5761-3.

Reviewed by Warren Alexander Dym

Published on H-German (October, 2009)

Commissioned by Susan R. Boettcher

Historians have long wondered why the search for laws intensified after the fifteenth century in both juridical and scientific contexts. Legal thinkers and natural philosophers alike contemplated natural laws and laws of nature. Explanations have appealed to standard events and movements of the period, such as the Reformation and Counter-Reformation, scientific revolution, and state formation. But, as the editors of the present work maintain, prior investigations have repeatedly overlooked the shifting meanings of "natural law" and "law of nature" (*ius naturale*, *lex naturalis*, *lex naturae*) in diverse intellectual contexts. Important questions remain: did a coherent conception of law emerge across disciplines? How did this language originate? How did theories of orderliness change over time? This collection of essays is the only interdisciplinary study of these questions. Editors Lorraine Daston and Michael Stolleis, have amassed a blue-ribbon panel of historians and philosophers. The result, which will appeal to specialists in the history of science and law, develops a myriad of fascinating arguments.

Each of the sixteen entries is a gem in itself, sharply argued and well edited. Some of the authors address the collection's central problem most directly, a parallel in jurisprudence and natural philosophy. Jean-Robert Armogathe sees a common "theological matrix" (or *deus legislator*) behind diverse inquiries among medieval theologians. He identifies two etymologies for "law" (*lex*) as early as the work of Thomas Aquinas; Francisco Suárez, Hyacinthe de Ruggieri, and later Jesuits exploited these traditions in discussing creation, God's will (theological voluntarism), and even Plato's *Timaeus* (ca. 360 BCE): a moral and political, or juridical meaning (*lex*, *legere*), as well as a physical meaning (*lex*, *ligare*) that referred to eternal laws of nature. Stolleis, studying different forms of legitimation of law--God, tradition, new science, written constitutions--would add that Armogathe's two meanings for "law" diverged through the early modern period. If legal and physical law had once both found theological sanction, by the nineteenth century legal principles still required outside legitimation, whereas

laws of nature contained their own inherent legitimacy. Jan Schröder's essay dovetails well with Stolleis and Armogathe here by explaining how a conception of law based on divine commandment and common to jurisprudence, theology, and natural philosophy ultimately fragmented. The secular will of the aristocrat came to ground positive law, just as new science came to dominate physical inquiries. These authors agree that a medieval uniformity in legal and natural philosophical matters (with theological underpinnings) broke apart beginning in the seventeenth century.

A number of chapters focus on the scientific revolution, challenging the assumption that major natural philosophers and mathematicians possessed a distinct conception of law. Catherine Wilson opens the collection with a study of the ancients (especially the atomists) and the new philosophy of Robert Boyle and René Descartes. The law concept that emerged in the seventeenth century was "woven from many strands" but remained "philosophically incoherent" (p. 14). Ian Maclean develops this idea by sketching the semantic and lexical field, illustrating how various the meanings of "law" and "nature" were prior to the late seventeenth century. When they referred to law-like behavior in nature, Renaissance authors such as Philip Melanchthon, Giambattista della Porta, and Girolamo Cardano still used terms such as "dogmata," "praecepta," "principia," "axiomata," "ordo," "ratio," "causae," and "regulae," among countless others. Gerd Graßhoff is also interested in analyzing the actors' own categories, in particular how "law" appeared in the works of Nicholas Copernicus and Johannes Kepler. The author claims that Ptolemy and (more surprisingly) Pliny the Elder provided these astronomers with their respective understandings of law. Graßhoff adds that, notwithstanding our preoccupation with Kepler's "three laws" of planetary orbit, the astronomer only gradually developed a notion of law, identifying only his distance law as a law of nature per se in his late *Epitome* (1618-21). Underscoring just how messy the investigation of physical law was, Daston addresses one practical problem: the weather. The lawfulness of the weather amounted to a test case for the very possibility of discovering laws of nature, and, as Daston stresses, "[i]ncreases in instrumental precision, number of observed variables, and breadth of the observer network usually fragmented rather than solidified tentative generalizations" (p. 242).

No paradigmatic law of nature achieved primacy in the seventeenth century, however pressing the search became. Lest we think that Descartes provided such a model, Sophie Roux finds little congruity between Nicolas Malebranche, Antoine Arnauld, Gottfried Wilhelm Leibniz, Pierre Bayle, Baruch Spinoza, and others with respect to Cartesian laws of motion and universal legality. This diversity becomes clear in their debates on causality, contingency, divine will, monsters, and miracles. Friedrich Steinle would agree with Roux that Descartes, however influential his work on falling bodies and projectiles, did not simply hand contemporary philosophers their notions of lawfulness. Steinle discovers a surprising array of terms referring to laws of nature in Robert Hooke, Boyle, Descartes, Kepler, and others. Only after the 1660s did scholars retrospectively identify "laws of nature" in earlier research (Boyle's law, Galileo's law of falling bodies, Kepler's laws, and so on). This exercise was more popular among members of the Royal Society of London than the Paris Academy of Sciences, moreover, given the relative autonomy of the former institution, which left it more exposed to charges of atheism. Talk of law based on divine authority would offset these suspicions. Hubert Treiber is also interested in how the Royal Society advanced the language of law. It was Richard Cumberland's exposure to the *Philosophical Transactions of the Royal Society* (1655ff)--and not merely to new mathematics--that encouraged him to see lawfulness in nature, and distinguished

him from his humanist predecessors and fellow mathematicians like Matthias Bernegger.

The new philosophy did suggest an original synthesis between juridical and natural philosophical conceptions, however. Heinz Mohnhaupt shows how some attempted to transfer an ideal of mathematical certainty into jurisprudence. But the efforts of men like Descartes and Christian Wolff to render legal matters mathematically precise remained a dream. Codification, comprehension, and clarity were the practical goals of jurisprudence through the Enlightenment, and geometry provided merely "metaphorical language" (p. 86). Leibniz took this metaphor quite seriously and attempted to derive legislation from mechanical law. Klaus Luig follows his subject's curious line of reasoning, as he treated legal matters almost like particles in motion. One of Leibniz's derivations ran as follows: "If in law several persons are linked to one another in relation to one and the same thing, on grounds of equal cause, the thing is divided in such a way that each is apportioned an equal part" (p. 188). But the medieval theological matrix (Armogothe) was lost. If new science did come to influence moral thinking it was rather arithmetic and the work of William Petty or the Abbé de Saint-Pierre, and not the mechanical models of Descartes, Leibniz, or Isaac Newton, as Catherine Larrère shows.

Two chapters turn rather to Protestant theology. Sachiko Kusukawa uses Johannes Bernhardi Velcurio, Melanchthon, and Johannes Magirus to argue that "Protestant focus on providence led to a relatively greater emphasis on the regularity of nature" (p. 121). It even helped standardize the word "law." Anne-Charlott Trepp argues much the same for soteriology and eschatology. Both inquiries fostered an interest in the study of nature that ultimately gave way to a naturalistic theology. One paper analyzes the juridical context most exclusively, uncovering assumptions about laws of nature in debates concerning "crimes against nature." Sodomy, homosexuality, masturbation, polygamy, incest, suicide--how legal thinkers understood these crimes had immediate implications for the study of nature. Andreas Roth reviews the *Constitutio Criminalis Carolina* (1532) and the works of legal scholars such as Hugo Grotius and Samuel Pufendorf here to show that laws of nature in this context referred to the natural biology of man as presented in the Bible.

These arguments do not make for light reading, but the patient reader will be amply rewarded with insight into an important parallel in the history of law and science. The introduction teases out further interdisciplinary themes that ground the collection. Extensive collaboration among the authors is evident in the many cross references, and the bibliographies will be a treasure trove for anybody wishing to pursue a lead.

My only regret after reading this collection is that I did not learn from it how the "law of nature" applied in legal practice. How and when did lawyers and judges invoke this language at court? Roth moves in this direction with the subject of crimes against nature, but otherwise the volume contains no reference to real cases. A more empirically diverse treatment of a similar problem at the crossroads of early modern science, law, and theology--"insanity"--is found in H. C. Erik Midelfort's *A History of Madness in Sixteenth-Century Germany* (1999). Finally, I would have expected to find more material on Francis Bacon. Like Leibniz and Descartes, Bacon seems to represent well the curious mixture of legalistic thinking and new philosophy under consideration here, and yet one finds precious little on him in these chapters.

In sum, however, this is an important intellectual history of a fascinating problem that historians of science and law should continue to ponder, and it represents impressive interdisciplinary collaboration.

S

R

If there is additional discussion of this review, you may access it through the network, at https://networks.h-net.org/h-german

Citation: Warren Alexander Dym. Review of Daston, Lorraine; Stolleis, Michael, eds. *Natural Law and Laws of Nature in Early Modern Europe: Theology, Moral and Natural Philosophy.* H-German, H-Net Reviews. October, 2009.

URL: https://www.h-net.org/reviews/showrev.php?id=25613

This work is licensed under a Creative Commons Attribution-Noncommercial-No Derivative Works 3.0 United States License.