

ORGANIC AND MECHANICAL METAPHORS IN LATE EIGHTEENTH-CENTURY AMERICAN POLITICAL THOUGHT

Metaphors that communicate something about political structures or phenomena are ubiquitous. Although "there is little that has not, at some time, been metaphorically attributed to politics,"¹ a few political metaphors have been articulated frequently enough that historians can trace the tradition of their use. Familiar examples include a human body,² a machine,³ a ship of state,⁴ animal behavior,⁵ and family relations.⁶ The exploration of the history of these metaphors, and thereby of the history of language and discourse, is the exploration of the history of ideas. As I.A. Richards has pointed out, "[t]hinking is radically metaphoric":⁷ "To think of anything is to take it *as* of a sort . . . and that 'as' brings in (openly or in disguise) the analogy, the parallel, the metaphoric grapple or ground . . . by which alone the mind takes hold."⁸ An examination of the "grapples" of which a writer takes hold, of the "grounds" in which she habitually roots her comparisons, may therefore be indicative of her deepest beliefs and assumptions.

Both J.G.A. Pocock and Jeremy Rayner have posited that these "grapples" and "grounds," these political metaphors that persist over time and appear in a variety of contexts, fall into "paradigms" or "metaphorical fields" that historians can map and associate with a particular period.⁹ Establishing the structure of a field as a historical

¹ Jeremy Rayner, *Between Meaning and Event: An Historical Approach to Political Metaphors*, 32 POL. STUD. 537, 544 (1984).

² See *infra* section II.A.

³ See *infra* section II.B.

⁴ Plato and Polybius both employed this image. See Harvey C. Mansfield, Jr., *The Silence of a Mechanism*, 28 GOV'T & OPPOSITION 126, 129 (1993) (book review).

⁵ See Eugene F. Miller, *Metaphor and Political Knowledge*, 73 AM. POL. SCI. REV. 155, 157 (1979).

⁶ See H.M. Drucker, *Just Analogies? The Place of Analogies in Political Thinking*, 18 POL. STUD. 448, 451 (1970) (noting that Aristotle, Hegel, and Filmer make use of the family relations metaphor); James VI and I, *The Trew Law of Free Monarchies* (1598) ("The king towards his people is rightly compared to a father of children . . ."), reprinted in *DIVINE RIGHT AND DEMOCRACY: AN ANTHOLOGY OF POLITICAL WRITING IN STUART ENGLAND* 99, 99-100 (David Wootton ed., 1986).

⁷ MARTIN LANDAU, *POLITICAL THEORY AND POLITICAL SCIENCE: STUDIES IN THE METHODOLOGY OF POLITICAL INQUIRY* 78 (1972) (quoting I.A. Richards) (internal quotation marks omitted).

⁸ *Id.*

⁹ See J.G.A. POCKOCK, *POLITICS, LANGUAGE, AND TIME: ESSAYS ON POLITICAL THOUGHT AND HISTORY* 13 (1989); Rayner, *supra* note 1, at 545. Pocock describes paradigms as "controlling concepts and theories" that "dictat[e] the direction, the pattern, the distribution and organization of intellectual endeavor." POCKOCK, *supra*, at 13. Rayner expresses a similar idea with the term "metaphorical field," which indicates an established fund of images that are associated with conventional meanings. Rayner, *supra* note 1, at 545. Paradigms or metaphorical fields can be

matter is not a facile project involving the identification of direct correspondences. The idea of the metaphorical field is useful as a tool for historical inquiry precisely because it is so nuanced, so "thick."¹⁰ The idea is thick in at least three senses. First, metaphorical fields shape as well as create political discourse:¹¹ the fields "authoritatively indicate not merely the solutions to problems, but the kinds of problems which are to be conceptualized as requiring solution."¹² Second, each metaphorical utterance is itself a "historical event," a reimagination of the metaphor that shapes the contours of the paradigm.¹³ Third, "the history of discourse is not a simple linear sequence in which new patterns overcome and replace the old, but a complex dialogue in which the patterns persist in transforming each other."¹⁴

Historians studying concepts of government structure in seventeenth- and eighteenth-century Britain and America have identified certain metaphorical fields as dominant, claiming that the human body was the main field at work in seventeenth-century Britain and that the machine was the organizing image in eighteenth-century America. These historians have also assigned meanings that place the two fields in opposition to each other and have implicitly characterized the shift from one field to the other as radical. This cabining of the metaphors into neatly divided places and periods does not take the thickness of metaphorical usage fully into account. Part I of this Note examines the relevant historical literature, which focuses on the influence of Newtonian principles on the writing of the American Constitution. Concentrating on political and constitutional literature, Part II details the content of the conventional metaphorical fields of the body and the machine, then explores the reinvention of the body metaphor and argues that the body and machine metaphors for government actually coexisted in eighteenth-century America. Finally, Part II examines the interaction of these two metaphorical fields in late eighteenth-century American political thought and concludes that, although their content was not identical, both fields expressed the idea of a complete, closed

claimed by a political ideology; they can also be modified and put to creative uses. "[T]he structure of a field is the outcome of a series of contests fought in metaphors." *Id.* at 549.

¹⁰ Cf. Clifford Geertz, *Thick Description: Toward an Interpretive Theory of Culture*, in *THE INTERPRETATION OF CULTURES* 3, 6-7 (1973) (discussing the concept of "thick description").

¹¹ See POCOCK, *supra* note 9, at 13; Weller Embler, *Metaphor and Social Belief*, in *LANGUAGE, MEANING AND MATURITY* 125, 125 (S.I. Hayakawa ed., 1954).

¹² POCOCK, *supra* note 9, at 13. Even given a speaker's focus on a certain problem or set of problems, a metaphorical field may lead its user to emphasize particular elements and place others in the background (and thus may lend itself to expression of a particular ideology). See Miller, *supra* note 5, at 160; Rayner, *supra* note 1, at 548.

¹³ POCOCK, *supra* note 9, at 15. Creative uses of familiar metaphorical fields rely on the "existing structure of interpretation," but they can stretch or contract or even entirely reshape the field by introducing new meanings and implications into this structure. Rayner, *supra* note 1, at 544.

¹⁴ POCOCK, *supra* note 9, at ix-x.

system, of a whole no greater than the sum of its parts, of a highly idealized sort of clockwork.

I. HISTORIOGRAPHY

The impulse to set up the "organic" and the "mechanical" in opposition to each other crosses disciplines.¹⁵ Historians of seventeenth- and eighteenth-century Britain and America have frequently succumbed to it, claiming that organic metaphors were dominant in seventeenth-century Britain and that mechanical metaphors were dominant in eighteenth-century America. The prevalence of the organic "body politic" metaphor in seventeenth-century British writing has received an extended treatment in David George Hale's *The Body Politic: A Political Metaphor in Renaissance English Literature*.¹⁶ Hale argues that "[t]he analogy between society and the human body is used with more frequency, variety, and seriousness than any of the correspondences which compose the 'Elizabethan world picture,'"¹⁷ and he traces the appearance of the metaphor through Shakespeare's plays, parliamentary debate, sermons, and political pamphlets.¹⁸ Hale claims that the death of Charles I — a literal beheading of the body politic — signaled the decline of the metaphor, which by the time of the Restoration was largely replaced with "artificial," contractarian ideas about the structure of government and society.¹⁹

Historians have claimed that in eighteenth-century America these new, artificial ideas took the form of a reliance on the metaphor of the machine, a metaphor with implications very different from those of the defunct body metaphor. Most of the historical literature on this topic uses the theories of Isaac Newton²⁰ as a proxy for the concept of

¹⁵ In economics, Claude Menard has contrasted "[t]he naive imagery of the social body which underlies the political economy of . . . Canard" in 1801 with the "importation of the physics metaphor into economics" by Cournot in 1838. Claude Menard, *The Machine and the Heart: An Essay on Analogies in Economic Reasoning*, 5 SOC. CONCEPT 81, 82-85, 87 (1988). In literature, Leo Marx has explored the impact of industrialization on the pastoral ideal in America: "[t]he contrast between the machine and the pastoral ideal dramatizes the great issue of our culture." LEO MARX, *THE MACHINE IN THE GARDEN: TECHNOLOGY AND THE PASTORAL IDEAL IN AMERICA* 353 (1964). Political scientists have also posited that political philosophy about the proper relationship between the state and the individual fits under either the rubric of "organism" (used by philosophers concerned about the danger of civil war) or the rubric of "machine" (used by philosophers worried about the danger of despotic government). See, e.g., T.D. WELDON, *STATES AND MORALS: A STUDY IN POLITICAL CONFLICTS* 30, 48 (1962).

¹⁶ DAVID GEORGE HALE, *THE BODY POLITIC: A POLITICAL METAPHOR IN RENAISSANCE ENGLISH LITERATURE* (1971).

¹⁷ *Id.* at 7.

¹⁸ See *id.* at 69-131.

¹⁹ See *id.* at 8, 108.

²⁰ In *Philosophia Naturalis Principia Mathematica*, published in 1687, Newton presented the law of inertia — every body at rest remains at rest and every body in motion remains in motion unless acted upon by an outside force — and used it to explain both "terrestrial physics" and "celestial dynamics." MICHAEL FOLEY, *LAWS, MEN AND MACHINES: MODERN AMERICAN GOVERNMENT AND THE APPEAL OF NEWTONIAN MECHANICS* 6-7 (1990).

mechanics and examines the extent to which Americans employed Newtonian metaphors. This historical question, which focuses on language, tends to blur into the functional question whether the Constitution is actually a Newtonian machine. Although at least one historian has attempted to separate these strands,²¹ they are related: the claim is that the use of mechanical metaphors and the identity between the Constitution and a machine are both the result of the extraordinary completeness of the mechanical world-view.

One of the first commentators to explore the phenomenon of discussing the American Constitution in terms of the organic and the mechanical was Woodrow Wilson. Writing in 1908, Wilson argued that "[t]he government of the United States was . . . a sort of unconscious copy of the Newtonian theory of the universe."²² Under the theory of checks and balances, Wilson claimed, "[p]olitics is turned into mechanics," and "[t]he theory of gravitation is supreme."²³ He did not explicitly state that the mechanical ideas current at the time of the founding replaced organic metaphors, but he did argue that the mechanical and the organic are directly opposed to each other: "The trouble with the theory is that government is not a machine, but a living thing. . . . It is accountable to Darwin, not to Newton."²⁴ Although this statement focuses on the question of the actual nature of the Constitution rather than the metaphors that contemporaries used to describe it, Wilson's theory illustrates the appeal of the organic/mechanical categorization and the way that it tends to shape debate.

In fact, a great number of twentieth-century historians writing after Wilson's pronouncement have asserted that the metaphorical field of mechanics was prevalent at the time of the founding and that this field both expressed the world-view of the period and influenced the structure of the new government. In the early 1970s, Martin Landau summarized the hypothesis of historians in the early and middle part of this century:

Historians often suggest that an era is best known by the metaphors it keeps. . . . One central unifying image seems to distinguish the way men think. In the eighteenth century it was the machine that provided this image, and it was the Newtonian system that was taken as the model So strong were these influences that numerous scholars . . . have regarded the form of the American Constitution as a direct product of mechanism²⁵

²¹ See *infra* pp. 1838-39.

²² WOODROW WILSON, CONSTITUTIONAL GOVERNMENT IN THE UNITED STATES 54-55 (1908).

²³ *Id.* at 56. Wilson set up this theory of mechanical government only to attack it, however; he wanted to reconceive the Constitution as a Darwinian rather than a Newtonian document, and to recast political science as a descriptive rather than a theoretical discipline. See LANDAU, *supra* note 7, at 92-94.

²⁴ WILSON, *supra* note 22, at 56-57.

²⁵ LANDAU, *supra* note 7, at 84.

Similar arguments were also expressed, with slight variations in emphasis and attention to metaphor, by Edward Corwin,²⁶ Stanley Pargellis,²⁷ Henry Steele Commager,²⁸ Clinton Rossiter,²⁹ Richard Hofstadter,³⁰ and others.³¹ Although several of these historians followed Woodrow Wilson in arguing that a shift to organic metaphors happened some time in the nineteenth or twentieth centuries, none of them paid more than cursory attention to several relevant contextual questions: whether the mechanical paradigm had early eighteenth-century roots (after all, Newton's *Principia* was published in 1687); whether the mechanical paradigm took hold in Britain to any significant degree; and what paradigm the focus on mechanics may have replaced. Nevertheless, the implication of their rhetoric and of their silence on these questions is clear: the metaphorical field of mechanics was a specifically American phenomenon tied to the late eighteenth century that provides another example of the creative genius of the founding generation and the uniqueness of the constitution that they authored.

Interestingly, actual references in these historical accounts to mechanical metaphors in eighteenth-century American writing are sparse.³² This apparent dearth of evidence was one factor that led a few mid-twentieth-century scholars to challenge the mechanical paradigm and the accompanying view that the Constitution is a Newtonian document.³³ For instance, in 1953, Daniel Boorstin argued that his-

²⁶ See Edward S. Corwin, *The "Higher Law" Background of American Constitutional Law* (pt. 2), 42 HARV. L. REV. 365, 380-82 (1929) ("It has become a commonplace that every age has its own peculiar categories of thought . . . [Newton's] demonstration . . . stirred his contemporaries with the picture of a universe which is pervaded with the same reason which shines in man . . .").

²⁷ See Stanley Pargellis, *The Theory of Balanced Government*, in *THE CONSTITUTION RECONSIDERED* 37, 44 (Conyers Read ed., 1938).

²⁸ See HENRY STEELE COMMAGER, *THE AMERICAN MIND: AN INTERPRETATION OF AMERICAN THOUGHT AND CHARACTER SINCE THE 1880'S* at 312 (1950) ("The political theory to which the Fathers had subscribed . . . was Newtonian. . . . The very vocabulary of the time was eloquent of mechanistic concepts . . .").

²⁹ See CLINTON ROSSITER, *SEEDTIME OF THE REPUBLIC: THE ORIGIN OF THE AMERICAN TRADITION OF POLITICAL LIBERTY* 134 (1953) ("[T]he widespread acceptance of [Newton's] theory of a harmonious universe helped create an intellectual atmosphere in which a system of checks and balances would have a special appeal to constitution-makers." (footnote omitted)).

³⁰ See RICHARD HOFSTADTER, *THE AMERICAN POLITICAL TRADITION AND THE MEN WHO MADE IT* 8 (2d ed. 1973) ("[T]he eighteenth century . . . was dominated intellectually by the scientific works of Newton, and . . . mechanical metaphors sprang . . . naturally to men's minds . . .").

³¹ See, e.g., RICHARD D. MOSIER, *THE AMERICAN TEMPER: PATTERNS OF OUR INTELLECTUAL HERITAGE* 98 (1952).

³² Landau, for example, gives a few examples of eighteenth-century political references to machines and then stops: "It is possible to extend this parade at great length, but it would only weary." LANDAU, *supra* note 7, at 90.

³³ Another challenge to the view of the mechanical paradigm was more oblique: the argument that the Framers' references to mechanics were "mere window-dressing," James A. Robinson, *Newtonianism and the Constitution*, 1 MIDWEST J. POL. SCI. 252, 262 (1957), and that the real

torians who propounded this view did "not offer us convincing examples of the adoption of Newtonian thinking into the writings of American Revolutionary theorists."³⁴ In 1957, James Robinson explained that there is "a notable absence of direct acknowledgement by the Founding Fathers of their intellectual debt to a general stream of thought called Newtonianism."³⁵ These thinkers fought an uphill battle against the historiographical trend of their period, however.³⁶

Three relatively recent discussions of the machine metaphor in late eighteenth-century America attempt to synthesize the mass of historical material. In *A Machine That Would Go of Itself*, Michael Kammen argues that the use of metaphors for the Constitution — a document that is "bound up with the Union in American minds"³⁷ — can be divided into distinct phases. "[T]he notion of a constitution as some sort of machine or engine, had its origins in Newtonian science," and was first used in the 1770s and 1780s.³⁸ Although he does not seem to view the metaphor as the dominant paradigm of the late eighteenth century, Kammen states that the metaphor continued to appear over the next one hundred years, reaching its "apogee" near the end of the nineteenth century as technology pervaded "the public consciousness."³⁹ Machine metaphors endured for the next fifty years, but Woodrow Wilson's declaration in the first decade of the twentieth century that the nation was a living thing marked a shift to organic metaphors.⁴⁰ Kammen assigns generalized meanings to these two metaphors that place them in contrast — the machine metaphor as indicating a desire for static perfection, the organic metaphor as favoring adaptiveness and change — and concludes that "the U.S. Constitution is not, and was not meant to be, a machine that would go of itself."⁴¹

Historian of science I. Bernard Cohen examines the role of science in the Founders' political thought in *Science and the Founding Fa-*

intellectual roots of their thinking lay in "classical thought and seventeenth century philosophy," *id.* at 258. This challenge is relevant to the historical dispute over what influences played a role in the writing of the Constitution, but does not directly undermine the majority view that the machine was the dominant metaphorical field for discussing government in late eighteenth-century America.

³⁴ DANIEL J. BOORSTIN, *THE GENIUS OF AMERICAN POLITICS* 79 (1953).

³⁵ Robinson, *supra* note 33, at 256.

³⁶ Landau acknowledged the contrary view, but derided Robinson's methodology of "using as [a] guide the indexes of various editions of [the founders'] papers" and argued that the search for direct acknowledgment was misguided: "Metaphors may be so implicit that a lack of acknowledgement means only a lack of awareness that a transfer is in process." LANDAU, *supra* note 7, at 87 n.14.

³⁷ MICHAEL KAMMEN, *A MACHINE THAT WOULD GO OF ITSELF: THE CONSTITUTION IN AMERICAN CULTURE* 62 (1986).

³⁸ *Id.* at 17.

³⁹ *Id.* at 189.

⁴⁰ See *id.* at 19–20.

⁴¹ *Id.* at 399.

thers.⁴² Having proved that Newtonian thought and the mechanical idea of a balance of forces are not synonymous,⁴³ Cohen maintains that the discussions surrounding the Constitution did not invoke Newton's principles and that the Constitution does not express or embody these principles in any strictly scientific sense.⁴⁴ He argues, however, that science did provide an important source of metaphors for the founding generation, and he distinguishes himself from previous writers on the period by noticing a metaphorical field that coexisted with the field of the machine: "A complete presentation of the eighteenth-century scientific sources of political analogues and metaphors must take note that by mid-century there was an enormous interest in the life sciences."⁴⁵ Cohen concludes that the most important implication of the founders' use of scientific analogies was the "transfer of value systems," the attempt "to legitimate a political concept or principle by making it seem 'scientific.'"⁴⁶

In *Laws, Men and Machines*,⁴⁷ Michael Foley takes on the project of explaining the "mechanistic tradition in American politics,"⁴⁸ and claims that "[n]othing exemplifies this mechanical tradition more . . . than the common American practice of attaching Newtonian terms of reference to the political system."⁴⁹ After canvassing arguments for and against the historical claim that Newtonian principles heavily influenced the Constitution,⁵⁰ Foley concludes that decisive evidence for either position is hard to establish.⁵¹ He argues that "[t]he real significance of this issue lies in its very existence as a controversy,"⁵² and explains that the functional claim that the American Constitution is a Newtonian machine provides the basis for "the strength of belief in the Founders' Newtonian credentials," a sort of projection backward of modern conceptions of government onto the eighteenth century.⁵³

⁴² I. BERNARD COHEN, *SCIENCE AND THE FOUNDING FATHERS: SCIENCE IN THE POLITICAL THOUGHT OF JEFFERSON, FRANKLIN, ADAMS, AND MADISON* (1995).

⁴³ See, e.g., *id.* at 283-85.

⁴⁴ See, e.g., *id.* at 216, 253.

⁴⁵ *Id.* at 44.

⁴⁶ *Id.* at 36.

⁴⁷ FOLEY, *supra* note 20.

⁴⁸ *Id.* at 2. Foley defines this tradition as "a conspicuous American propensity to employ mechanically based precepts and premises as working assumptions about politics and government." *Id.* at 2-3.

⁴⁹ *Id.* Foley insists that the interest in Newtonian principles of government is uniquely American. See *id.* at 5. But see John Theophilus Desaguliers, *The Newtonian System of the World, the Best Model of Government, an Allegorical Poem* (Westminster, A. Campbell for J. Roberts 1728).

⁵⁰ See FOLEY, *supra* note 20, at 14-15, 24, 27-32.

⁵¹ See *id.* at 49. He recognizes, however, the strong historiographical trend toward acceptance of the Newtonian influence: "[T]he onus of proof is upon those who wish to refute the allegations of a Newtonian connection." *Id.* at 49-50.

⁵² *Id.* at 49.

⁵³ *Id.* at 188.

These three authors are more ambivalent than most of their predecessors about the dominance of the mechanical metaphor. Kammen does not seem certain that the metaphor was dominant before the mid-nineteenth century; Cohen is more interested in the rubric of "science" than of "mechanics"; and Foley decides that the evidence of direct Newtonian influence on the Constitution is inconclusive, although he does acknowledge that Newtonian ideas were pervasive during the period. Nevertheless, their work does not mark a serious shift in the historiographical trend of viewing the machine metaphor as influential in the founders' political thought and of assuming that the body metaphor had disappeared by that period.⁵⁴ Like previous historians, Kammen and Foley set up the organic and mechanical categories in opposition to each other when discussing the early twentieth-century shift to a Darwinian paradigm.

Surprisingly, most of these historians do not imbue their categories with a great deal of meaning. The essential clash between the organic and the mechanical is to some degree assumed, considered to be so obvious as to need no elaboration. The general sense that the reader takes away is that the organic metaphor demonstrates a belief in cohesion and hierarchy and that the mechanical metaphor demonstrates a faith in reason and a fascination with balance and moving, interlocking parts. Giuseppa Saccaro-Battisti summarizes this interpretation: "[Mechanical m]etaphors . . . generally . . . refer to . . . the intentional self-conscious will of people participating in the political organization. . . . On the contrary, the persuasive power of organic metaphors is based on the belief that the order of Nature is unquestionable and good because it has its origin in a higher power."⁵⁵

II. REINTERPRETATION

Historians' identification of an organic paradigm in seventeenth-century Britain and a mechanical paradigm in eighteenth-century America is overly simplistic. A close examination of the two metaphorical fields demonstrates that organic and mechanical metaphors coexisted and intertwined with each other in the founding generation's political thought.⁵⁶ Moreover, the organic field underwent a metamorphosis that brought the two fields very close together. In late eigh-

⁵⁴ Only Cohen — briefly — acknowledges the existence of biological metaphors in eighteenth-century America, and he mainly discusses "polyps" and other animal life rather than the human body. See COHEN, *supra* note 42, at 44–56.

⁵⁵ Giuseppa Saccaro-Battisti, *Changing Metaphors of Political Structures*, 44 J. HIST. IDEAS 31, 34 (1983).

⁵⁶ Although many examples of this intersection of meaning come from the writings of the group of politically active men who are most commonly denoted "Founders," this Note also takes account of the immersion of these founders in the literature, religious thought, and culture of eighteenth-century America, using the work of more minor political figures, as well as work that might not usually be classified as "political," to explore the metaphorical usage and organizing ideas typical of the period.

teenth-century America, both fields expressed the idea of a balanced system of interdependent parts.

A. *The Metaphorical Field of the Body*

To explore this metamorphosis meaningfully, it is first necessary to examine the two metaphorical fields' paradigmatic content and meaning.⁵⁷ Judith Shklar provides a general summary of how the body politic metaphor traditionally operated:

In the history of political theory the body politic had enjoyed an immense popularity. . . . It was a model of hierarchical harmony . . . which assigned a proper place to each person and group so that all could perform their functions in maintaining the whole. . . . The head . . . wears a crown . . . in a body of which the peasants are merely the feet. . . . Authority from above is what keeps this body together.⁵⁸

John of Salisbury, a mid-twelfth-century writer, provides an early example of the details of the metaphor, which assigned specific body parts to specific groups in society. John argues in the *Policraticus* that "a commonwealth . . . is a certain body which is given life by benefit of divine favor";⁵⁹ "the ministers of God correspond to the soul; the prince to the head. . . . [T]he senate corresponds to the heart; the judges and governors of provinces to the ears, eyes and tongue; . . . and so on."⁶⁰ The body must "support and protect the head";⁶¹ the head, in turn, "must inspire 'the affection of all.'"⁶²

Written at the start of the seventeenth century, King James VI and I's *Trew Law of Free Monarchies*⁶³ uses the body metaphor to reemphasize the king's power over his subjects. The king-head is the only indispensable member in his scheme, and it can therefore decide when other members of the body should be cut off and discarded: "[T]he judgement coming from the head may not only employ the members, . . . but likewise, . . . must . . . provide for their remedy, in case it be curable, and, if otherwise, gar cut them off for fear of infecting of the

⁵⁷ See Rayner, *supra* note 1, at 544 (arguing that "the means to analyse the structure of implications supporting conventional metaphors" is necessary to understand "[t]he complex and sophisticated ways in which further implications were teased out").

⁵⁸ JUDITH N. SHKLAR, *MEN AND CITIZENS: A STUDY OF ROUSSEAU'S SOCIAL THEORY* 198-99 (1st paperback ed. 1985) (1969). The body politic metaphor is also related to the concept of "impersonation," which expressed the idea that the nation was embodied in the ruler's physical body. See SAMUEL H. BEER, *TO MAKE A NATION: THE REDISCOVERY OF AMERICAN FEDERALISM* 108 (1993).

⁵⁹ Elliot Zashin & Phillip C. Chapman, *The Uses of Metaphor and Analogy: Toward a Renewal of Political Language*, 36 J. POL. 290, 316 (1974) (quoting 1 EWART LEWIS, *MEDIEVAL POLITICAL IDEAS* 225 (1954)) (internal quotation marks omitted).

⁶⁰ *Id.*

⁶¹ HALE, *supra* note 16, at 39.

⁶² *Id.* at 39-40 (quoting JOHN OF SALISBURY, *THE STATESMAN'S BOOK* 17 (John Dickinson trans., 1927) (1159)).

⁶³ James VI and I, *supra* note 6.

rest, even so is it betwixt the prince and his people."⁶⁴ Other early seventeenth-century writers made a similar point by comparing the King to the soul of the body rather than the head,⁶⁵ enabling them to argue that "[t]he soul is chosen by God, not by the body; sovereignty does not derive from the consent of the governed."⁶⁶

Supporters of King Charles I turned to the body politic metaphor to defend him against attack: after all, how can the body politic survive without a head? One political pamphleteer pointed out the dangers of internal schism: "As the naturall body defends it self against an outward force, but strives not by a schisme . . . within it self; so may the body politick against an outward power, but not . . . by one part of it set against the Head . . . ; for that tends to the dissolution of the whole."⁶⁷ This argument against acephaly was also made in verse: "these Acephalists, who here in stead/Of Prince, set up a State without an Head./Must Feet pronounce a sentence on their Head,/And reare *imposthum'd members* in his stead?"⁶⁸ The anonymous author of this poem conveys an air of incredulity at the idea that anyone could contemplate turning against the natural order in this fashion.

The well-established metaphorical field of the body politic did indeed create some difficulties for the King's opponents and Parliament's supporters, but the metaphor ultimately survived their attempts to invalidate it. They sought to prove that Parliament, not the King, was "that to the commonwealth which the soul is to the body,"⁶⁹ and their verbal acrobatics illustrate the extent to which a strong metaphorical field can shape debate. Henry Parker, writing in 1642, strained the metaphor to argue that the body politic can be decapitated and still survive:

[T]he head naturally doth not more depend upon the body, than that does upon the head . . . ; but it is otherwise with the Head Politicall, for that receives more subsistence from the body than it gives, and being subservient to that, it has no being when that is dissolved, and may be preserved after its dissolution.⁷⁰

⁶⁴ *Id.* at 99.

⁶⁵ See, e.g., HALE, *supra* note 16, at 72 ("A Common wealth is a living body compact of sundry estates and degrees of men The soule is the king or supreme governour" (quoting THOMAS FLOYD, *THE PICTURE OF A PERFIT COMMON WEALTH* (London, 1600)) (internal quotation marks omitted)).

⁶⁶ *Id.* at 91.

⁶⁷ *Id.* at 117 (quoting HENRY FERNE, *THE RESOLVING OF CONSCIENCE UPON THIS QUESTION* (Cambridge, 1642)) (internal quotation marks omitted).

⁶⁸ *Id.* at 118 (quoting *Albions Niobe*, in *THE PRINCELY PELICAN* (n.p., 1649)).

⁶⁹ John Pym, Address to the Short Parliament (1640), quoted in GODFREY DAVIES, *THE EARLY STUARTS: 1603-1660*, at 93 (2d ed. 1959) (internal quotation marks omitted).

⁷⁰ HENRY PARKER, *OBSERVATIONS UPON SOME OF HIS MAJESTIES LATE ANSWERS AND EXPRESSES* (1642), reprinted in 2 *TRACTS ON LIBERTY IN THE PURITAN REVOLUTION: 1638-1647*, at 167, 185 (William Haller ed., 1933).

John Milton, who had used the body metaphor himself in his tracts against the bishops,⁷¹ defended Cromwell and the Rump Parliament by arguing that the metaphor should be abandoned altogether: "These petty glosses and conceits . . . are . . . weake and shallow . . ." ⁷² Nevertheless, despite the conceptual difficulties created by the literal beheading of the head of the body politic, the body metaphor reemerged more or less intact after the Glorious Revolution: "[W]ithout the Head, the Body is only a dead Carcass, and can do nothing of itself without the Head . . . Who could endure such a Metaphor, that a Body may cut off its own Head, that it may remain a Body?" ⁷³

Clearly, the conventional metaphorical field of the body emphasized respect for authority and rigid hierarchy. Each segment of government and society had its assigned place and mandatory function. The king's authority was not unlimited — for a head without a body is surely as untenable as a body without a head — but the metaphor figured the king-head as the truly vital organ.

B. *The Metaphorical Field of the Machine*

Contrary to the implication that historians have conveyed, the machine metaphor did not suddenly spring into being in late eighteenth-century America. Some examples of the metaphor occur in late seventeenth-century and early eighteenth-century Britain as well. For example, Walter Moyle, writing in 1698, deployed the image of the machine in an argument for the separation of powers, claiming that the best government would have "a proper Distribution of Power into several Branches, in the whole composing as it were one great Machine, and each grand Branch . . . a Check upon the other." ⁷⁴ Americans were undoubtedly exposed to this metaphor. John Trenchard, whose works were tremendously influential in America,⁷⁵ claimed that "[a] Government is a mere piece of Clockwork; and having such Springs and Wheels, must act after such a manner," ⁷⁶ and used this image of a machine government to argue for a system in which government acts for the public advantage rather than for private interests.⁷⁷ In sum, "[t]he 18th century [British] com-

⁷¹ See HALE, *supra* note 16, at 120.

⁷² JOHN MILTON, *EIKONOKLASTES* (1649), reprinted in 5 *THE WORKS OF JOHN MILTON* 62, 147 (Frank Allen Patterson ed., 1932).

⁷³ HALE, *supra* note 16, at 81 (quoting THOMAS CRAIG, *CONCERNING THE RIGHT OF SUCCESSION TO THE KINGDOM OF ENGLAND* 167 (London, 1703)).

⁷⁴ W.B. GWYN, *THE MEANING OF THE SEPARATION OF POWERS* 88 (1965) (quoting WALTER MOYLE, *AN ESSAY ON THE LACEDAEMONIAN GOVERNMENT* (1698), reprinted in *A SELECTION OF TRACTS BY W. MOYLE* 165–88 (London, 1728)) (internal quotation marks omitted).

⁷⁵ See BERNARD BAILYN, *THE IDEOLOGICAL ORIGINS OF THE AMERICAN REVOLUTION* 36 (1967).

⁷⁶ JOHN TRENCHARD, *SHORT HISTORIE OF STANDING ARMIES IN ENGLAND* (1698), reprinted in GWYN, *supra* note 74, at 138 app. III.

⁷⁷ See *id.*

monwealthsmen were fond of the analogy between machines and constitutions."⁷⁸

In addition to their familiarity with British writing containing machine metaphors, Americans were intimately familiar with Newton's scientific works⁷⁹ and were exposed to a great number of machines in day-to-day life.⁸⁰ In fact, some of the delegates to the Constitutional Convention watched John Fitch, in a tremendous scientific breakthrough, send a steam-powered boat up the Delaware River against the current.⁸¹ This sort of inventive genius was highly valued, as one of John Adams's early diary entries illustrates: "The Man, who has a faculty of inventing and combining into one Machine, or System, for the Execution of some Purpose and Accomplishment of some End, a great Number and Variety of Wheels, Levers, Pullies, Ropes &c. has a great Mechanical Genius."⁸² The evidence of this genius, and the sources for mechanical metaphors, surrounded the founding generation.

When Newtonian and mechanical metaphors began appearing in eighteenth-century America, they were used to refer to the British constitution or government or to the relationship between Britain and its colonies. Sometimes the metaphor was employed to praise the British system, as when the delegates at the Philadelphia Convention of 1787 referred to the "admirable mechanism of the English Constitution."⁸³ However, more often Americans depicted the machine of British government as breaking down: "[Britain] has found out that the great machine will not go any longer without a new wheel. . . . We think she is making it of such materials and workmanship as will tear the whole machine to pieces. We are willing . . . to assist with artists and materials"⁸⁴ If the government is a machine that Americans can conceivably repair, then the British monarch is, in Jefferson's view, a sort of engineer, "no more than the chief officer of the people, ap-

⁷⁸ GWYN, *supra* note 74, at 88 n.4.

⁷⁹ See COHEN, *supra* note 42, at 20.

⁸⁰ Readers of Jefferson's writings "find him discussing things like plows, farm machinery . . . , the orrery, the polygraph, . . . air pumps, . . . canal locks, balloons, [and] the great future possibilities . . . in the application of steam power to machinery." *Id.* at 65 (quoting EDWIN T. MARTIN, THOMAS JEFFERSON: SCIENTIST 11-12 (1952)) (internal quotation marks omitted).

⁸¹ See MARX, *supra* note 15, at 164.

⁸² JOHN ADAMS, THE EARLIEST DIARY OF JOHN ADAMS 72 (L.H. Butterfield ed., 1966) (1758).

⁸³ 2 THE RECORDS OF THE FEDERAL CONVENTION OF 1787, at 278 (Max Farrand ed., 1911).

⁸⁴ JOHN ADAMS, NOVANGLUS: OR, A HISTORY OF THE DISPUTE WITH AMERICA, FROM ITS ORIGIN, IN 1754, TO THE PRESENT TIME (1774), reprinted in 4 THE WORKS OF JOHN ADAMS, SECOND PRESIDENT OF THE UNITED STATES 11, 108 (Charles Francis Adams ed., Boston, Charles C. Little and James Brown 1851).

pointed by the laws . . . to assist in working the great machine of government, erected for their use."⁸⁵

There are also numerous examples, as the project of independence from Britain progressed, of Americans applying the machine metaphor to their own Constitution and system of government. Interestingly, in contrast to the body metaphors discussed above, these metaphors were usually quite brief and not particularly specific about the comparison being made. For instance, George Washington's apprehensive letter to Alexander Hamilton on August 28, 1788 compares the government to a machine only in the most general terms: "I hope the political Machine may be put in motion, without much effort or hazard of mis-carrying."⁸⁶ Hamilton himself employed almost identical language, although he used the machine as a symbol of interdependence, warning that "the 'public burthens' must be so distributed that they do not fall too heavily on parts of the community, lest disorder ensue; 'a shock given to any part of the political machine vibrates through the whole.'"⁸⁷ The 1794 description of the Constitution as the "best national machine that is now in existence" is similarly general.⁸⁸

More specific examples arise in the context of separation of powers and other structural concepts. In the *Federalist Papers*, Hamilton used a machine metaphor to explain an objection to making a separate branch of government for a court of impeachments: "[I]t would tend to increase the complexity of the political machine, and to add a new spring to the government."⁸⁹ In a different *Federalist Paper*, he claimed that a single-body legislature would be a dangerous machine both because of its weakness and because of its power: "[E]ither the machine, from the intrinsic feebleness of its structure, will moulder into pieces, in spite of our ill-judged efforts to prop it; or, by successive augmentations of its force and energy, . . . we shall finally accumulate in a single body all the most important prerogatives of sovereignty . . ."⁹⁰ A well-running government, then, must be a well-balanced machine with all of its parts working in harmony.

In contrast to the conventional metaphorical field of the body, the machine field places man in control of the system of government, makes him a planner of a complex design rather than an unwitting

⁸⁵ Thomas Jefferson, *A Summary View of the Rights of British America* (1774), reprinted in 1 THE WRITINGS OF THOMAS JEFFERSON, 427, 429 (Paul Leicester Ford ed., New York, G.P. Putnam's Sons 1892).

⁸⁶ Letter from George Washington to Alexander Hamilton (Aug. 28, 1788), in THE ORIGINS OF THE AMERICAN CONSTITUTION: A DOCUMENTARY HISTORY 120, 121 (Michael Kammen ed., 1986).

⁸⁷ LANDAU, *supra* note 7, at 90 (quoting RICHARD B. MORRIS, ALEXANDER HAMILTON AND THE FOUNDING OF THE NATION 84-85 (1957) (quoting Alexander Hamilton, *The Continentalist* No. VI, N.Y. PACKET, July 4, 1782)).

⁸⁸ JACK NIPS [JOHN LELAND], THE YANKEE SPY 9 (Boston, John Asplund 1794).

⁸⁹ THE FEDERALIST NO. 65, at 400 (Hamilton) (Clinton Rossiter ed., 1961).

⁹⁰ THE FEDERALIST NO. 22, at 152 (Hamilton) (Clinton Rossiter ed., 1961).

participant in naturally ordained functions. The focus is on institutions rather than social groupings.⁹¹ The field of the machine also emphasizes balance between the different parts of government rather than weighting one aspect of the system heavily, as the body metaphor weights the crowned head.

C. *Reinvention of the Field of the Body*

The body metaphor survived not only the death of Charles I, but also another symbolic beheading: the severing of the British crown from its American colonies. Historians' accounts suggest that usage of the body metaphor waned at the end of the seventeenth century, but there are numerous examples of the metaphor in late eighteenth-century American writing; the body metaphor and the machine metaphor coexisted during this period in American history. The body metaphor in this literature seems at first reading to have lost some of its force — indeed, it has lost some of its authoritarian significance. In the new American republic, the legislature is the head and all of the parts are interdependent. The survival of the body metaphor illustrates how a conventional metaphor can change over time, how each use of a metaphor can subtly reshape its meaning.

Writers began playing with and testing the body metaphor as early as the mid-seventeenth century, the period when the metaphor first came under attack by the opponents of King Charles I.⁹² In eighteenth-century America, the metaphor was often employed to warn of disease in the body politic. For instance, a Constitutional Convention delegate, wary of repeating the British mistakes that helped drive the colonists to revolt, warned that "[a] Vice in the Representation, like an error in the first concoction, must be followed by disease, convulsions, and finally death itself."⁹³ James Madison in the *Federalist Papers* compared America's consideration of different systems of government to a sick patient's consideration of conflicting medical advice.⁹⁴ It is not surprising, given the colonists' break from a government that they

⁹¹ Arguably, the body is an appropriate metaphor for society as a whole, and the machine is an appropriate metaphor for governmental structure. Nevertheless, the distinction between society and government is difficult to sustain: in the eighteenth century, the people themselves ultimately became an important "institution" of government.

⁹² See *supra* pp. 1841–42. Hobbes's *Leviathan*, first published in 1651, defends the idea of the sovereign's absolute power over his subjects; nevertheless, the work provides an interesting variation on the body politic metaphor that anticipates eighteenth-century developments. For Hobbes, the state is an artificial man: "For what is the *Heart*, but a *Spring*; and the *Nerves*, but so many *Strings*; and the *Joynts*, but so many *Wheels*." THOMAS HOBBS, *LEVIATHAN* 81 (C.B. Macpherson ed., Penguin Books 1978) (1651). Hobbes seems to use the word "artificial" primarily to indicate that he is creating a metaphor rather than asserting an identity, but he also uses the conflation of man and machine "to predispose the reader to accept the natural origin as well as the necessity of" the political system that he espouses. Saccaro-Battisti, *supra* note 55, at 35.

⁹³ 2 THE RECORDS OF THE FEDERAL CONVENTION OF 1787, *supra* note 83, at 10.

⁹⁴ See THE FEDERALIST NO. 38, at 234–35 (Madison) (Clinton Rossiter ed., 1961) ("Such a patient and in such a situation is America at this moment . . .").

considered corrupt, to find that sickness and death are common tropes. After all, as Alexander Hamilton wrote, "[o]ur own experience has corroborated . . . that seditions and insurrections are, unhappily, maladies as inseparable from the body politic as tumors and eruptions from the natural body."⁹⁵ The body politic of James VI and I, with every part in its place and working to keep the head and body healthy, was not appropriate for a people who broke out of their assigned colonial role and detached themselves from the rest of the empire.

However, the body metaphor did not have to be abandoned altogether; because other thinkers had already stretched and altered the metaphor's conventional meaning through creative usage, the colonists could take the metaphor and transform it. The best example of this transformation is Joseph Huntington's sermon of 1781,⁹⁶ an extended conceit in the tradition of John of Salisbury and Fortescue. This sermon shows the major alteration of the metaphor achieved by revolutionary ideology: the legislature, rather than the king, is the head. "The head that is placed on high above the body . . . points out the proper station of the legislative and ruling powers in a commonwealth: The seat of thought, council, and understanding is in the head . . ."⁹⁷ The "arms and hands" of the executive⁹⁸ are as important to the body politic as the legislature: "[A]s it is a great blessing to have a clear, discerning, judicious head, so it is to have strong arms; a good legislative and a good executive power are equally necessary . . ."⁹⁹ In fact, all of the body politic's parts must function in harmony if it is to work properly: "[A]s a . . . jarring and discord among the various parts of [the natural body], gives pain to the whole, . . . even so it is in . . . a nation."¹⁰⁰

This conception of the body politic differs radically from the conception associated with the conventional metaphorical field. The legislature, which expresses the will of the people,¹⁰¹ has taken over the traditional position of authority, and no one part of the body politic has dominance over the others. Rather than prescribing a strict social hierarchy, this version of the body metaphor calls for smooth and efficient interaction among government institutions of equal importance.

⁹⁵ THE FEDERALIST NO. 28, at 178 (Hamilton) (Clinton Rossiter ed., 1961).

⁹⁶ Joseph Huntington, A Discourse, Adapted to the Present Day, on the Health and Happiness, or Misery and Ruin, of the Body Politic, In Similitude to that of the Natural Body, Sermon Preached at Coventry (Apr. 1781) (Hartford, Hudson & Goodwin 1781).

⁹⁷ *Id.* at 13-14.

⁹⁸ *Id.* at 16.

⁹⁹ *Id.* at 17.

¹⁰⁰ *Id.* at 13. However, each part still has a separate and independent function to perform. After all, "[w]hat man is there that wishes to have his head and feet change places with each other?" *Id.* at 8.

¹⁰¹ See *id.* at 16 ("[The arms and hands] must have law, direction and warrant, from the whole people, given out by the proper mouth of the people[,] which . . . can never be found any where but in the head.").

D. Relationship of the Two Metaphorical Fields

Despite historians' suggestions that the eighteenth century marks a shift from the body metaphor to the machine metaphor and that the two metaphors signify very different things, body and machine language coexisted in eighteenth-century America; sometimes writers even articulated both metaphors in the same breath.¹⁰² The substance of body metaphors like Huntington's indicates that during this period both the body metaphor and the machine metaphor expressed the same idea of a complete, closed system, of everything functioning in a state of perfect interdependence. This convergence of meaning illustrates Pocock's point that a sharp transition from one paradigm to another is rare;¹⁰³ rather, paradigms constantly interact with and transform each other.

The incidence of direct comparison of the organic and the mechanical demonstrates the close relationship between these two paradigms during the eighteenth century. David Hume figured nature itself as a machine: "Look round the world: Contemplate the whole and every part of it: You will find it to be nothing but one great machine, subdivided into an infinite number of lesser machines . . ."¹⁰⁴ This idea of the similarity between the machine and the natural world appeared in literature as well as in philosophy. During the eighteenth century, poets' "feeling for the beauty of the countryside was inseparable from [their] reverence for the Newtonian world machine."¹⁰⁵ For instance, William Somerville's 1735 poem *The Chase* draws out the aesthetics of the "great system": "grand machine,/Worlds above worlds; subservient to his voice,/Who, veiled in clouded majesty, alone/Gives light to all; bids the great system move,/And changeful seasons in their turns advance,/Unmoved, unchanged himself . . ."¹⁰⁶

One of the subdivisions of Hume's machine-world is the human body, and numerous writers also described the body as a machine.¹⁰⁷

¹⁰² See, e.g., THE FEDERALIST NO. 58, at 360-61 (Madison) (Clinton Rossiter ed., 1961) ("The countenance of the government may become more democratic, but the soul that animates it will be more oligarchic. The machine will be enlarged, but the fewer, and often the more secret, will be the springs by which its motions are directed."); Huntington, *supra* note 96, at 25 (interrupting an extended body metaphor to express the hope "that all the wheels in church and state . . . may be . . . harmoniously turned . . . , the whole machine moved together in the most glorious order").

¹⁰³ See *supra* p. 1833.

¹⁰⁴ DAVID HUME, *DIALOGUES CONCERNING NATURAL RELIGION* 143 (Norman Kemp Smith ed., 2d ed. 1947) (1779); see also MARX, *supra* note 15, at 163 ("Such is the artificial contrivance of this mighty machine of nature . . .") (quoting GEORGE BERKELEY, *A TREATISE CONCERNING THE PRINCIPLES OF HUMAN KNOWLEDGE* (1710), reprinted in *THE ENGLISH PHILOSOPHERS FROM BACON TO MILL* 505, 577 (Edwin A. Burt ed., 1939)) (internal quotation marks omitted).

¹⁰⁵ MARX, *supra* note 15, at 162.

¹⁰⁶ William Somerville, *The Chase* (1735), reprinted in *THE POETICAL WORKS OF JOSEPH ADDISON; GAY'S FABLES; AND SOMERVILLE'S CHASE* 323, 386 (Charles Cowden Clarke ed., Edinburgh, William P. Nimmo 1869).

¹⁰⁷ See, e.g., MOSIER, *supra* note 31, at 104 ("[T]he age of mechanism had denominated man a machine . . .").

Julien de la Mettrie, an influential French philosopher writing in the mid-eighteenth century, baldly asserted this identity: "The human body is a machine which winds its own springs. It is the living image of perpetual movement."¹⁰⁸ Benjamin Rush, an important late eighteenth-century American public figure, used this idea in the service of American conceptions of republican virtue, arguing that it was possible through education "to convert men into republican machines. This must be done if we expect them to perform their parts properly in the great machine of the government of the state."¹⁰⁹ The machine and the man are virtually interchangeable, then; each has taken on some of the qualities of the other.

The body and machine metaphors themselves also demonstrate this interchangeability, this collapse of one metaphor into the other. Both Hamilton's machine and Huntington's body politic are "closed system[s] consisting of discrete bodies . . . that act . . . in accordance with fixed law."¹¹⁰ The different parts of the machine and the different parts of the body (both representing the different branches of government) act in a predictable manner, and their interactions with each other are therefore predictable as well. The legislature/head/spring provides direction; the executive/arm/cog carries out that direction. In order for the government/body/machine to continue to function, each part must perform its discrete task in coordination with every other part of the system. The machine is man-made — but its makers are mirroring the laws that they see reflected in the human body and the natural world.¹¹¹ In the case of both the body and the machine, some external force may set up the system, but once it is set in motion it is propelled by the interaction of the forces inherent within it.

In fact, the strong impulse to see a polarity, to assign the body metaphor and the machine metaphor conflicting rather than complementary significances, is anachronistic. Leo Marx has recognized this anachronism in his study of American literature: he acknowledges "our own feeling . . . that 'organic' nature is the opposite of things 'mechanical,'" but argues that "it is impossible to appreciate the domi-

¹⁰⁸ JULIEN OFFRAY DE LA METTRIE, *MAN A MACHINE* 93 (Open Court Publishing Co. 1961) (1748). Hobbes's description of the body politic in *Leviathan* prefigures this comparison. See *supra* note 92.

¹⁰⁹ Benjamin Rush, *A Plan for the Establishment of Public Schools and the Diffusion of Knowledge in Pennsylvania* (1786), reprinted in *ESSAYS ON EDUCATION IN THE EARLY REPUBLIC* 1, 17 (Frederick Rudolph ed., 1965).

¹¹⁰ LANDAU, *supra* note 7, at 85 (defining "mechanism").

¹¹¹ Although it is tempting to cast the organic/mechanical opposition as a version of the distinction between natural law and positivism, this distinction does not appear to reflect accurately the late eighteenth-century conception of the "machine." Thinkers of this period seem to have conceived of the machine (and of the structure of government) as discovered rather than made, despite the obvious human agency in actually fitting the parts together, because it worked according to universal natural laws. See, e.g., 1 THOMAS PAINE, *THE AGE OF REASON* (1793) ("Man cannot make principles, he can only discover them."), reprinted in 4 *THE WRITINGS OF THOMAS PAINE* 21, 52 (Moncure Daniel Conway ed., 1967).

nant [eighteenth-century] American attitude toward technology if we project this sense of contradiction too far back into the past."¹¹² The sense of contradiction actually arose in the nineteenth century, when the Romantics began to attach all sorts of negative connotations — noise, dirt, oppression¹¹³ — to the machine:

There are few words whose shifting connotations register the revolution in thought and feeling we call the 'romantic movement' more clearly than 'mechanism.' Once the influence of Wordsworth, Coleridge, and Carlyle had been felt in America, no writer . . . would find it possible to use 'mechanism' in the unself-conscious, honorific sense in which [eighteenth-century writers] used it.¹¹⁴

The Romantics thus bestowed on us a dominant paradigm of our own: the organic/mechanical opposition. As Part I of this Note illustrates, it is as difficult for twentieth-century historians to fight their way out of this paradigm, which shapes both the questions they ask and the answers at which they arrive, as it was for seventeenth-century Parliamentarians to struggle against the paradigm of the king-as-head.

The recognition of the organic/mechanical opposition as a paradigm rather than a truism allows us to look at the eighteenth-century use of body and machine metaphors with fresh eyes. The paradigm is ours, but it was not theirs; their transformation of the body metaphor allowed them to see both man and machine as a sort of shorthand for the laws of balance that they believed drove the universe.

If the two metaphors meant similar things to the founders, does the apparent prevalence of machine language have any significance? The increasing use of machine language in late eighteenth-century America is a rhetorical shift that can be explained by scientific developments and the increasing prevalence of technology in daily life, although the Industrial Revolution in America was still decades away. This rhetorical shift laid the groundwork for further changes in meaning, as the machine began to take on the negative connotations ascribed to it by the Romantics and still prevalent today. Nevertheless, characterizing the machine language of the founding generation as a radical shift misconstrues the complex and intertwining metaphorical fields of the period. Recognizing the survival and transformation of the body metaphor in late eighteenth-century American political thought is crucial to a complete understanding of the paradigm that shaped the thoughts of the men who designed the American government.

¹¹² MARX, *supra* note 15, at 162.

¹¹³ See, e.g., William Wordsworth, *The Tables Turned*, in WORDSWORTH AND COLERIDGE, LYRICAL BALLADS 104, 105 (W.J.B. Owen ed., 2d ed. 1969) (1798) ("Sweet is the lore which nature brings;/Our meddling intellect/Mis-shapes the beauteous forms of things;/ — We murder to dissect.").

¹¹⁴ MARX, *supra* note 15, at 162.

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