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Energy

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Abstract:

The concept of 'political energy' is often treated as merely a rhetorical synonym for enthusiasm and active engagement. However, as Bruce Clarke's *Energy Forms* argues there is an allegorical traffic of ideas between politics and science that reaches an apotheosis in the early-twentieth century interest in energy. In the field of the 'energy-humanities' inaugurated by Clarke, the work of George Sorel remains largely overlooked. Situating itself in this field, my paper investigates the interplay of science and politics in Sorel's work. I contend that Sorel, influenced by Vico's ideogenetic law anticipates Clarke's allegorical framework. Paralleling Henri Bergson's attempts to rethink the novelty of life in the post-thermodynamic framework of energy, I argue that models from science (Brownian motion and friction) underlie Sorel's conceptions of political myth and class antagonism. While these remain inchoate in Sorel's works, I conclude with the suggestion that these traces are completed in Ernst Jünger's conception of 'total mobilization'.

Georges Sorel's Political Energy

What relation is there between the scientific theories of an era and the 'logic' of its political forms and institutions? What is the significance of the fashion for 'energy' in French political rhetoric of the turn of the nineteenth century and how is it related to the theories of thermodynamics of the previous century? Such questions are central to the small but growing literature identified as the 'energy humanities'.¹ These works suggest that the late-nineteenth-century science of thermodynamics and the concomitant introduction of a general category of 'energy' transformed key paradigms of thought with effects in various fields, but particularly in political theory. However, as Cara Daggett notes, in comparison with the political implications of theories of evolution, 'there is comparatively little discussion of whether and how the science of energy may have been deployed politically'.²

This paper takes up this line of research focusing on the works of Georges Sorel. Despite Sorel's regular use of 'energy' in a political context and his broad interest in the physical sciences (including the epistemology of science, thermodynamics, Brownian motion and radiation) his writings have largely been overlooked in the 'energy humanities'.³ Additionally, in the existing scholarship on Sorel, although themes of science and epistemology are often explored, energy, in particular, has not been the object of focus. While Humphrey concludes his study with the remark that 'What is Energy?' was the 'question that

¹ Bruce Clarke, *Energy Forms: Allegory and Science in the Era of Classical Thermodynamics* (Ann Arbor: University of Michigan Press, 2001); Cara Daggett, *The Birth of Energy: Fossil Fuels, Thermodynamics, and the Politics of Work* (Durham: Duke University Press, 2019).

² Cara Daggett, *The Birth of Energy: Fossil Fuels, Thermodynamics, and the Politics of Work*, 54.

³ In the literature on Sorel there appear only brief remarks on 'energy' as a theme. Humphrey refers occasionally to energy in a rhetorical sense and makes an 'analogy with physics' and 'moral action', and he hints that Sorel's interest in 'passive resistance' extends beyond physics to 'man's ability to deal with reality', but does not develop this in an explicitly political direction. One of the few works on 'energy' to discuss Sorel, Michael Marder reads Sorel through a largely pre-thermodynamic conception of energy as *energeia*. Michael Marder, *Energy Dreams: Of Actuality* (Columbia University Press, 2017); Richard Humphrey, *Georges Sorel: Prophet Without Honor: A Study in Anti-Intellectualism* (New York: Octagon Books, 1978), 69, 90, 113, 115, 134–5.

is implicit in the life work of Sorel', his discussion remains at a general, almost panoramic level severed from Sorel's actual writing.⁴ Admitting that it is difficult to demonstrate that Sorel makes an explicit transposition of scientific models into politics, in the following I argue that his account of 'the political' is at least structurally informed by the transition in the physical sciences from paradigm of force to one of energy. Moreover, I suggest this is evident in both his understanding of political myth and political potential of class conflict. Where Bergson, confronted by the foundational and universal status of 'energy' in post-thermodynamic science, attempts to rearticulate the categories of life, Sorel, I claim, makes similar efforts in the sphere of politics.

In the first section, I outline the conceptual paradigm of energy at issue in the paper. This is a 'post-thermodynamic' concept in the sense that it was only through and *after* the discoveries of thermodynamics that 'energy' was properly distinguished from 'force'. To contextualise Sorel's references to energy, the second section offers an overview of the 'fashion' for energy in Europe at the turn of the nineteenth century. The central defence of my contention is made in part three, where I argue that a distinctly post-thermodynamic paradigm underlies Sorel's politico-theoretical uses of myth and class division and secondly, that this is not merely a 'metaphorical' transposition but that a conceptual continuity is entailed by his conception of the 'artificial milieu' of science. To conclude, I suggest that Ernst Jünger's concept of 'total mobilisation' was influenced by Sorel and ultimately consummates the energo-political paradigm implicit in Sorel's works.

1 The Paradigm of Post-thermodynamic Energy

The foundational premises of much of the recent literature in the 'energy humanities' are that the nineteenth century concept of 'energy' marked the emergence of a new scientific episteme or paradigm, and that the influence of this paradigm extends beyond the domains of physics

⁴ Humphrey, *Prophet*, 213.

and the natural sciences into the humanities including sociology, economics and importantly political theory.⁵ This new energy-paradigm is nominally determined by the emergence of a strict distinction between the concepts of *force* and *energy*. Until the late-nineteenth century, a multivalent set of terms proliferated, evident in Leibniz's use of '*vis viva*' (living force) to designate the mathematical quantity that would later be understood as kinetic energy.⁶ Beyond the terminological conventions, however, the thermodynamic conception of energy is understood to have established a new paradigm of thought distinct from that determined by an earlier model of force.⁷ While I agree with these broad claims, I admit that the existing literature is often quite speculative and, at times, lacks sufficient evidence for its more inflated claims.

These speculative tendencies may account for some of the intellectual resistance to the specificity of the nineteenth-century concept of energy. Giorgio Agamben, for instance, insists on the continued relevance of the ancient etymological root, *energeia*.⁸ Appealing to Aristotle, he speaks solely of *energeia* as a 'being-at-work', an immersion in the act of work, emphasising the semantics of its construction as *en-ergon*. While Agamben merely ignores the nineteenth century, Michael Marder takes a step further and explicitly derogates the conceptual transformation of 'energy' into a resource or fuel as merely a 'force of habit'.⁹ Contrary to Agamben and Marder, however, for an array of thinkers the nineteenth-century scientific concept of 'energy' marks a significant conceptual break with the past.¹⁰

⁵ Clarke, *Energy Forms: Allegory and Science in the Era of Classical Thermodynamics*; Dominic Boyer, 'Energopower: An Introduction', *Anthropological Quarterly* 87, no. 2 (2014): 309–33; Cara Daggett, *The Birth of Energy: Fossil Fuels, Thermodynamics, and the Politics of Work*.

⁶ Eric Watkins, 'General Introduction', in *Kant: Natural Science*, ed. Allen W. Wood Paul Guyer (Cambridge: Cambridge University Press, 2012), 5; Peter Michael Harman, *Energy, Force and Matter: The Conceptual Development of Nineteenth-Century Physics* (Cambridge: Cambridge University Press, 1982), 53–9.

⁷ I rely here somewhat loosely on the concepts of paradigm and episteme elaborated by Thomas Kuhn and Michel Foucault respectively, to refer to an extensive, articulated or structured sphere of interrelated concepts and meanings that provide a framework for ostensibly 'scientific' forms of understanding or knowledge.

⁸ Giorgio Agamben, *The Omnibus Homo Sacer* (Stanford: Stanford University Press, 2017), 1038–40.

⁹ Marder, *Energy Dreams: Of Actuality*, 2–3.

¹⁰ Howard Caygill, 'Life and Energy', *Theory, Culture & Society* 24, no. 6 (1 November 2007): 17–8; Harman, *Energy*; Anson Rabinbach, *The Human Motor: Energy, Fatigue, and the Origins of Modernity* (University of California Press, 1992), 48–9.

Earlier uses of the term energy were largely synonymous with the concept of force or *kraft*. Three defining qualities of this earlier force-energy are questioned by nineteenth-century science: (i) force is always *actively present* as a result, rather than a source of potential or fuel, (ii) different forces are incommensurable, and (iii) forces are individualised.

Firstly, in the eighteenth century and earlier, references to ‘energy’ evoke a quality or character that is solely present in action itself, like the ‘divine energies’ manifest is enthusiasm.¹¹ This active dimension is evident in Aristotle’s modal dichotomy *energia/dunamis*, translatable into pairs such as, actuality/potentiality (possibility) or *Wirklichkeit/Möglichkeit*. *Energeia* is defined precisely as the active counterpart to the inactive potential of *dunamis*. Similarly, force, or *kraft* refers to an active pressure. In Newton’s physics the fundamental concept is force, which is always active, and thus a body at rest presupposes a balance of equal counter forces acting simultaneously. In his treatise *On War* (1832), Carl von Clausewitz refers regularly to energy, connecting it directly with war and conflict, as does Sorel. However, the term appears primarily as a quality manifest in the act: ‘lieutenants rushing to the attack with the bloody *energy* of concentrated masses [*blutigen Energie konzentrischer Massen*].’¹² As Howard Caygill notes, Clausewitz’s use of ‘energy’ appears tied to an ‘Aristotelian, pre-thermodynamic’ model of the physical sciences.¹³ In addition, Clausewitz often depicts energy as the *result* of a pre-existing strength or force, rather than the source or origin.¹⁴

Secondly, while they could counteract one another, different forces were terminologically and conceptually distinct as ‘living force’, ‘kinetic force’ or ‘motive

¹¹ David Bradshaw, ‘The Divine Glory and the Divine Energies’, *Faith and Philosophy: Journal of the Society of Christian Philosophers* 23, no. 3 (1 August 2006): 283. This is clear in Bradshaw’s elaboration of the ‘divine energies’ which ‘worketh in me mightily.’ They are ‘at work within Paul.’

¹² Carl von Clausewitz, *On War*, trans. Colonel J. J. Graham (London, UK: Kegan Paul, Trench, Trubner & Co., LTD, 1918), 128 II.IV.

¹³ Howard Caygill, *On Resistance: A Philosophy of Defiance* (A&C Black, 2013), 20.

¹⁴ Caygill, 17–8; Immanuel Kant, *Critique of Pure Reason* (Cambridge: Cambridge University Press, 1998), A144–5.

power'.¹⁵ The incommensurability of different forces is presupposed in the analogical translation of force into a political domain by theorists of the organic-biological model of the *Volksgeist*. Fichte's *Addresses to the German Nation* (1808) presumes the incommensurability of the creaturely 'living force' of animals with that of the mechanical force of a clockwork apparatus. This incommensurability is key to distinguishing the organic political form of the *Volksgeist* from the rationalist visions of a state constructed by humans. If a political form is to be rationally constructed, its kinetic foundation, like a clockwork, must be a 'mainspring' which supplies the force [*Kraft*] that makes the mechanism function. But a mainspring must be set by a greater (external) force, thus a mechanistic political form cannot self-propel.¹⁶ By contrast, if the political body is an autonomous, natural, living creature, a *Volkgeist*, it possesses an internal 'living force'. Its force 'issues from itself and is perpetually in motion'. As a living force, the spirit of a society can 'keep it moving'.¹⁷

Thirdly, Fichte's analogy demonstrates an understanding of forces as individualized and indivisible. The mainspring, insofar as it must be set by another greater force, aligns with a logic of political power embodied in the personal, individual, indivisible sovereign ruler.

With the 'discovery' of energy in the mid-nineteenth century, each of these three defining qualities are undermined insofar as energy is revealed to be: (i) fundamentally a kind of *potential* (latent, static or stored) to do work; (ii) a commensurable and quantifiable general and universal category transformable into different forms, and (iii) a cumulative or aggregative source of potential power rather than individualised.

As Harman's account of the scientific developments demonstrates, a distinct concept of energy as a 'general and fundamental physical concept' only emerged in the mid-nineteenth century in the works of William Thomson, Rudolf Clausius, James Joule, W.J.

¹⁵ Harman, *Energy*, 53–9.

¹⁶ For Rabinbach, the shift from force to energy is manifest in the disjuncture between 'social imaginaries' of the eighteenth-century 'mimetic machine' (clockwork) and the nineteenth-century 'motor'. Anson Rabinbach, *The Eclipse of the Utopias of Labor* (New York: Fordham Univ Press, 2018), 4–5.

¹⁷ Johann Gottlieb Fichte, *Fichte: Addresses to the German Nation*, ed. Gregory Moore (Cambridge: Cambridge University Press, 2008), 88–90.

Macquorn Rankine and others, which developed on earlier work on heat engines by Sadi Carnot.¹⁸ The result was a ‘physical theory based on the primacy of the energy concept’ which included the two laws of thermodynamics, but paradigmatically identified energy with fuel, that is, energy was fundamentally a quantifiable reserve or *potential* of a capacity to do a quantity of work.¹⁹ Thomson termed this latent potentiality, ‘statical’ energy: ‘Weights at a height, an electrified body, a quantity of fuel — all contained stores of “statical energy”’.²⁰ Unlike force, which is only present in the act, as an active pressure or effective presence, energy can exist in a purely potential and latent state, in which it is present only as a possibility, a kind of ‘real possibility.’²¹

Secondly, while force was a momentary cause of change of place in a body, energy was a ‘conserved quantity measured by the product of force and the distance through which a force acted in bringing about a change.’²² Energy became a general term for all forms of ‘ordinary motion and mechanical power [work], chemical action, heat, light, electricity, magnetism, and all other powers, known or unknown, which are convertible or commensurable with these.’²³ In particular, as an elementary substance ‘energy’ was a ‘single, indestructible and invisible *Kraft*’ and this paradigm ‘rejected any distinction between the laws of inorganic and organic nature’, undermining the dichotomy between mechanical-force and living-force central to Fichte’s political model of the *Volksgiest*.²⁴

Finally, since the paradigmatic model for energy was the coal steam-engine, the individualisation of force implied by the mainspring was displaced by an accumulative model of fuel combustion. Disparate energy sources can be aggregated together. Coal, wood, oil or

¹⁸ Harman, *Energy*, 5, 61.

¹⁹ While Agamben and Marder reject this latter conceptualisation, by depicting potential-energy as a genealogical misinterpretation or misunderstanding of Aristotle’s *energeia*, they implicitly recognise that thermodynamics marks a break with earlier paradigms.

²⁰ Harman, 58.

²¹ Drawing attention to further political resonances, this phrase alludes to Schmitt’s intensified vision of ‘the political’. This odd modality invoked by Schmitt is one focus of Derrida’s critique, but here Derrida appears to overlook the influence of Sorel and Bergson on Schmitt’s thought. Carl Schmitt and Leo Strauss, *The Concept of the Political Expanded Edition*, ed. and trans. George Schwab (Chicago: University of Chicago Press, 2007 [1927, 1932]); Jacques Derrida, *Politics of Friendship* (London: Verso, 2005), 86–9.

²² Harman, *Energy*, 61.

²³ Harman, 58.

²⁴ Rabinbach, *The Human Motor: Energy, Fatigue, and the Origins of Modernity*, 48–9.

gas can be combined indiscriminately in a steam-engine to supply the necessary heat and force for work. Insofar as these defining qualities were also key to the analogic use in political theory, the discovery of energy, required rethinking the operative models of contemporary political forms.

2 *Fin-de-Siècle* ‘Energy’

Sorel’s milieu was littered with references to energy. It features widely in the nationalist political rhetoric of the period: Maurice Barrès’ trilogy *Roman de l’énergie nationale*, aimed to renew the political energy of France;²⁵ while Italian futurists, such as Marinetti, appealed to energy and electricity, relying on the new scientific developments but utilising them in a largely poetic or imagistic mode.²⁶ However, such rhetoric appears to pre-date the scientific developments. Hippolyte Taine complains that in the eighteenth century, together with the growing popularity of ‘democracy’, the word, ‘energy, formerly ridiculous, becomes fashionable and is used on every occasion.’²⁷ Similarly, Sorel’s contemporaries, such as the crowd theorists Gustave Le Bon and Gabriel Tarde and the sociologist Émile Durkheim, often appeal to such fashionable scientific concepts such as energy, electricity or magnetism, alongside hypnotism and ‘imitation’.²⁸ For instance, Durkheim’s *The Elementary Forms of Religious Life* offers an analysis of primitive forms of religion in which certain energetic

²⁵ In Barrès’s *The Unrooted* [*Les Déracinés*] he conjoins botanical-agricultural metaphors with the rhetoric of energy, such that the ‘renewal of national energy’ requires the ‘restoration of nativist identity.’ Emily Apter, *Continental Drift: From National Characters to Virtual Subjects* (Chicago: University of Chicago Press, 1999), 26.

²⁶ F. T. Marinetti, ‘Multiplied Man and the Reign of the Machine (1911)’, in *Futurism: An Anthology*, ed. Lawrence Rainey, Christine Poggi, and Laura Wittman (New Haven: Yale University Press, 2009), 90, 103.

²⁷ Hippolyte A. Taine, *The Ancient Regime, Trans.*, trans. J. Durand (NY: USA: Henry Holt and Company, 1876), 295. Sorel himself cites this passage: Georges Sorel, *The Illusions of Progress*, trans. John And Charlotte Stanley (Berkeley: University of California Press, 1969), 45.

²⁸ There is an extensive correspondence between Sorel, Le Bon and Henri Bergson as Robert A. Nye’s *The Origins of Crowd Psychology* details. Robert A. Nye, *The Origins of Crowd Psychology: Gustave LeBon and the Crisis of Mass Democracy in the Third Republic*, vol. 2 (London: Sage Publications, 1975), 86–109. However, already in the *Study on Vico*, Sorel was critical of Le Bon’s theory of ‘contagion of sentiment’ likely for its reliance on biological analogies. Georges Sorel, *Sorel: Reflections on Violence* (Cambridge: Cambridge University Press, 1999), 114 fn7, 124; Georges Sorel, *Georges Sorel’s Study on Vico*, trans. Eric Brandom and Tommaso Giordani (Leiden: Brill, 2020), 105.

analogies provide the operative basis of the collective efficacy of religious practice.²⁹ But these references also appear largely metaphorical. Durkheim switches indiscriminately between models of energy and acoustics with little concern for the scientific grounding. The question is thus, whether we find more than political metaphors or rhetoric in Sorel's various references to energy. Two exemplars aiming to go beyond metaphor are the socioenergeticists (Ernst Solvay, Wilhelm Ostwald, Émile Waxweiler and others) and Henri Bergson's philosophy of life.

The socioenergeticists attempted to extend thermodynamic concepts into sociological fields.³⁰ Taking Marx's *Arbeitskraft* as a point of departure these attempts lead ultimately to a utopian positivist sociological consideration of the human being and its calorific requirements for labour.³¹ There are hints that Sorel was aware of this work, but remained critical of it.³² Similar ideas are developed towards a kind of perverse conclusion in Georges Bataille's *The Accursed Share*. The inexhaustible supply from the sun accumulates as an excess of 'energy' in the surplus products of human labour which must ultimately be destroyed in acts of excessive consumption or war.³³

A more significant point of reference for Sorel's conception of energy is the work of Henri Bergson. Sorel was a close, but critical reader of Bergson and cites key passages on the general and universal quality of energy. One aim of Bergson's *Creative Evolution* (1907) is to rethink the distinction between life and mechanism in response to the implications of the

²⁹ Emile Durkheim, *The Elementary Forms of the Religious Life* [1912] (London: George Allen & Unwinn, 1976), 207, 440, 446.

³⁰ Rabinbach, *The Human Motor: Energy, Fatigue, and the Origins of Modernity*, 45–62; Rabinbach, *The Eclipse of the Utopias of Labor*, 28–52. Ostwald's theories influenced Marxists such as Alexander Bogdanov. In 1909, Max Weber published a critical review of Ostwald's *Energetisch Kulturtheorien*, in which he describes the work of this group as a 'violence done to sociology by technologists trained exclusively in the natural sciences.' Max Weber, *Max Weber: Collected Methodological Writings*, ed. Hans Henrik Bruun and Sam Whimster (London: Routledge, 2012), 253; Rabinbach, *The Eclipse of the Utopias of Labor*, 48.

³¹ Brent Ryan Bellamy, Jeff Diamanti, and Others, eds., *Materialism and the Critique of Energy* (Chicago: MCM Publishing, 2018).

³² For instance, he distances his scientific focus from the metaphysics of 'Belgian sociology', possibly a reference to Ernst Solvay's work. Sorel, *Reflections*, 44.

³³ Allan Stoekl, *Bataille's Peak: Energy, Religion, and Post-Sustainability* (Minneapolis: University of Minnesota Press, 2007), x; Georges Bataille, *The Accursed Share*, vol. 1 (New York: Zone Books, 1988), 20–7.

science of energy.³⁴ Where the paradigm of life used by Fichte was based on a distinction between mechanical force and living force, the generalised category of energy demands of Bergson a new basis for this distinction. Tacitly acknowledging the conceptual break between force and energy sketched above, Bergson writes of the ‘usable energy’ that pours out of the sun and must be accumulated ‘in the form of unused energy, in appropriate reservoirs, whence it could be drawn at the desired moment.’³⁵ Reflecting the first law of thermodynamics (the conservation of energy), he notes there is no creation of energy by life, but only an effort to ‘make the best of a pre-existing energy which it finds at its disposal.’³⁶ In order to refound the distinction between life and mechanism, Bergson introduces a new sphere of ‘force’ under the guise of a two counteracting primordial ‘tendencies’: an ‘ascending’ impulse associated with complexity, movement, consciousness and indeterminacy, and a ‘descending’ impulse associated with simplicity, fixity, mechanism and necessity.³⁷

However, despite these revisions, Bergson remains sceptical of the law of conservation. Against the first law, Bergson cites Duhem in defence of the claim that ‘there are, in fact, energies of various kinds, and the measurement of each of them has evidently been so chosen as to justify the principle of conservation of energy.’³⁸ Instead of conservation, Bergson suggests there is only ‘a mutual dependence’ supported by well chosen conventions of measurement. In his later lectures and essays, Bergson even suggests that the ‘free activity’ of consciousness or life may contradict conservation. He hypothesizes that if ‘the will is

³⁴ James DiFrisco, ‘Élan Vital Revisited: Bergson and the Thermodynamic Paradigm: Bergson and the Thermodynamic Paradigm’, *The Southern Journal of Philosophy* 53, no. 1 (March 2015): 54–73; M. Capek, *Bergson and Modern Physics: A Reinterpretation and Re-Evaluation* (Dordrecht: D. Reidel Publishing Company, 1971), 72–3.

³⁵ Henri Bergson, *Creative Evolution*, trans. Arthur Mitchell (New York: The Modern Library: Random House, 1944), 127–8.

³⁶ Bergson, 127; Henri Bergson, *Mind-Energy: Lectures and Essays*, trans. H. Wildon Carr (London: Greenwood Press, 1975), 18–19.

³⁷ Bergson uses an array of terms, referring variously to a ‘primitive tendency’, ‘original impetus’, ‘impulsion’, ‘effort’, ‘impulse’ and occasionally ‘force’. Ultimately it is interpreted in an almost Kantian transcendental manner as a necessary condition of possibility. DiFrisco thus reads it as a ‘virtual’ tendency. DiFrisco, ‘Élan Vital Revisited: Bergson and the Thermodynamic Paradigm: Bergson and the Thermodynamic Paradigm’, 64.

³⁸ Bergson, *Creative Evolution*, 264; Bergson, *Mind-Energy: Lectures and Essays*, 43.

capable of creating energy, the quantity created may be so small that it would not affect sensibly our instruments of measurement.’³⁹

While Bergson was attuned to the implications of thermodynamics for theories of life, consciousness and spontaneous activity, his writings before the *Two Sources of Morality and Religion* (1932) remained focussed on the individual rather than the collective. By contrast, I contend that Sorel’s work offers an attempt to understand the *political* (collective) implications of thermodynamics and rethink political action and opposition within an energetic-paradigm. To draw a schematic parallel with Bergson, I claim that Sorel accepts the defining qualities of energy as a cumulative and convertible resource or potential to do work, but is resistant to the apparent implications of ‘dogma of the conservation of energy’.⁴⁰

3 Sorel’s Energy: between Politics and Science

It is striking how often Sorel invokes the terms ‘energy’ and ‘energetic’ in his work. There are multiple uses from the earliest works such as the *Study on Vico* (1896), to the later *De l’utilité du Pragmatisme* (1921).⁴¹ He refers to various forms of ‘political energy’, the ‘republican energy’ of the *Comité de Salut public*, or the ‘energy’ of political groups (the workers or the bourgeoisie). Revolution will be possible only if ‘the workers have enough energy’.⁴² This energy is ‘powerful’, ‘new’ and ‘constitutes the soul of the revolutionary proletariat’.⁴³ He contrasts the ‘energy’ of the political writer with that of a person in action.⁴⁴ We might ask whether Sorel’s citation of Taine on the absurd ‘fashion’ for energy marks a moment of self-recognition.⁴⁵ Although many of these references appeal only to a rhetorical sense of

³⁹ Bergson, *Mind-Energy: Lectures and Essays*, 44.

⁴⁰ Ernest Coumet, ‘Écrits épistémologiques de Georges Sorel (1905): H. Poincaré, P. Duhem, E. Le Roy’, *Mil neuf cent. Revue d’histoire intellectuelle (Cahiers Georges Sorel)* 6, no. 1 (1988): 43–4.

⁴¹ Georges Sorel, *De l’Eglise et de l’état: Fragments* (Paris: Ed. des Cahiers de la Quinzaine, 1901), 56; Georges Sorel, *La ruine du monde antique: conception matérialiste de l’histoire* (Paris: Librairie G. Jacques & Co., 1902), 73, 214, 232, 248; Georges Sorel, *Le révolution dreyfusienne* (Paris: Bibliothèque du Mouvement Socialiste, 1909), 13; Georges Sorel, *Matériaux d’une théorie du prolétariat* (Paris: Marcel Rivière, 1919), 9, 17–8, 34, 80, 293fn1, 294.

⁴² Sorel, *Reflections*, 251.

⁴³ Sorel, 250–1.

⁴⁴ Georges Sorel, *Les Girondins du Roussillon* (Perpignan: Imprimerie de Charles Latrobe, 1889), 29, 46, 51, 52.

⁴⁵ See Sorel, *Progress*, 45.

energy as ‘enthusiasm’ or ‘forcefulness’, easily understood through earlier conceptions of force-energy as an active ‘being-at-work’, in the following I argue that alongside these we also find uses that are comprehensible only through a post-thermodynamic paradigm of energy.

In particular, Sorel’s conception of the political potential of myth and sentiment appears to be modelled on energy as a reserve. Political myths, composed of ‘images of battle’, when recalled, can be a source of energy or enthusiasm for ‘men who are participating in great social movements.’⁴⁶ ‘Sentiment furnishes energy necessary for struggle.’⁴⁷ Collections of such images constitute the myths, which form the mental ‘reserve’ and preparation for political struggle.⁴⁸ Unlike ‘a doctrine expressed entirely in words’ images (or myths) have an intuitive and direct efficacy.⁴⁹ Political energy is thus an accumulated reserve of myths, a latent capacity or ‘means of acting on the present’.⁵⁰ It must be directed or channeled towards the ‘benefit of man.’ Sorel refers to ‘great geniuses’ who ‘*exhaust [épuisèrent]* their energy’.⁵¹ In an explicitly political register, ‘energy’ appears as a quantum or amount in reserve that can be spent [*dépensé*].⁵² France is ‘all the more threatened as its energy is exhausted’.⁵³

Sorel’s various references prompt two key questions. Are these merely metaphorical transpositions? Do they specifically appeal to a post-thermodynamic fuel-energy paradigm or are they consistent with the earlier model of force typical of the mainspring of a clock mechanism?

Taking the latter question first, I admit that it is difficult to decisively demonstrate a post-thermodynamic register. However, there are unmistakable hints in this direction. Sorel’s

⁴⁶ Sorel, *Reflections*, 20.

⁴⁷ Sorel, *Study on Vico*, 134.

⁴⁸ Sorel, *Reflections*, 5, 28. Sorel notes that a ‘reserve of ideas stirred up by recent reading’ can be ‘exhausted.’ Recalling the logic of the fuel for the ‘motor [*moteur*] of the mind.’

⁴⁹ Sorel, 24.

⁵⁰ Sorel, 116.

⁵¹ Georges Sorel, *Le système historique de Renan*, vol. 1 (Genève: Slatkine Reprints, 1971 [1905-1906]), 65.

⁵² Sorel, *Matériaux*, 216.

⁵³ Sorel, 227.

references to the ‘energies of the mind’, as a ‘metaphysical fire’ at the heart of the individual, allude to combustion at the heart of the steam engine, key to the development of thermodynamics.⁵⁴ When he speaks of the ‘motive force’ or ‘enthusiasm’ or political actors, it is treated as a mutable, and transformable ‘energy’ that can channelled and directed in different ways, or ‘dissipated’ like heat.⁵⁵ Nonetheless, Sorel’s references to an ‘energetic pressure’ suggest some continuity with the earlier paradigm of force or spring.⁵⁶ Nonetheless, the general and universal extension of the new concept of energy would also subsume these models pressure and tension. That is, the conceptual break between force and energy occurs at the level of the paradigm. In the articulation of the fuel-energy paradigm, forces of tension and the pressure of a spring are not excluded but *subsumed* under the new category, potential energy.

Despite the ambiguity in his political discourse, in the field of science, Sorel was clearly cognisant of the advent of a thermodynamic conception of energy.⁵⁷ Sorel’s educational and vocational background attests to a longstanding interest in the sciences, including mathematics, engineering and the social sciences.⁵⁸ The principles of thermodynamics are a central theme of ‘Experimentation in Modern Physics’, which cites various contemporary sources: Maxwell, Clausius, Brunhes.⁵⁹ While he accepts the general paradigm of energy as an elementary ‘substance’ of the universe, a transformable reserve of potential activity, like Bergson, he opposes the deterministic vision of reality that the thermodynamic laws of conservation appear to imply. In a report on Henri Poincaré’s *La*

⁵⁴ Sorel, *Reflections*, 7, 250.

⁵⁵ Sorel, *Progress*, 153–4.

⁵⁶ Sorel, *Reflections*, 58, 63, 66, 73, 75, 78, 85, 163.

⁵⁷ Sternhell’s depiction of Sorel as an irrationalist ‘attack on reason’ based on a ‘philosophy of action based on intuition, the cult of energy and *elan vital*’ is clearly a misrepresentation, as is demonstrated in more recent accounts of his legacy. Compare: Zeev Sternhell, Mario Sznajder, and Maia Asheri, *The Birth of Fascist Ideology*, trans. David Maisel (New Jersey: Princeton University Press, 1994), 24; E. Braham, ‘Violence In Translation: Georges Sorel, Liberalism and Totalitarianism from Weimar to Woodstock’, *History of Political Thought* 38, no. 4 (2017): 735–7; J. R. Jennings, *Georges Sorel: The Character and Development of His Thought* (Springer, 1985), 40–65; Eric Braham and Tommaso Giordani, ‘Introduction: Georges Sorel’s Study on Vico in French and European Context’, in *Georges Sorel’s Study on Vico* (Leiden: Brill, 2020), 1–55.

⁵⁸ Braham and Giordani, ‘Introduction: Georges Sorel’s Study on Vico in French and European Context’, 11.

⁵⁹ Georges Sorel, *From Georges Sorel, Volume 2: Hermeneutics and the Social Sciences*, ed. John L. Stanley, trans. John And Charlotte Stanley (New Brunswick: Transaction Books, 1990), 152–5.

Valeur de la science, to the *Revue générale de bibliographie française* of 1905, Sorel was particularly interested in the way recent experiments on Brownian motion and the ‘calorimetric experiments on radium’ undermine ‘*le dogme de la conservation de l’énergie*.’⁶⁰ In *Illusions of Progress*, he cites Bergson’s remarks extending the new conception of energy to the problem of life: ‘life manufactures explosives... storehouse[s] of solar energy.’⁶¹ Aiming, like Bergson, to counter these deterministic and mechanistic forecasts, he seeks out a ‘new and unknown energy [*énergie nouvelle et inconnue*]’ that defies the current dogma.⁶²

If this demonstrates Sorel’s cognisance of a definitively post-thermodynamic *scientific* paradigm, then the key difficulty for my thesis lies in the unanswered question raised above: are Sorel’s references to energy in a *political* context merely metaphorical transpositions? The standard approach to this question understands it as one of justifying the application of the epistemically privileged domain of science, consisting of essentially true theories and laws, to the less epistemically certain domain of politics. However, this approach overlooks the significance of the artificial nature of scientific theory according to Sorel’s epistemology. Influenced by Vico’s ‘ideogenetic law’, Sorel insists that science is not simply a straightforward account of reality.⁶³ Scientific theories, like political forms, lie suspended in an artificial milieu separated from reality. Anticipating, in certain ways, Bruce Clarke’s work, which highlighted the use of allegory in the development of scientific theory, Sorel’s artificial milieu supports a two-way traffic of ideas between politics and science which is mutually beneficial to each.⁶⁴ While Jennings captures Sorel’s longstanding ‘preoccupation... with the

⁶⁰ Coumet, ‘Écrits épistémologiques de Georges Sorel (1905): H. Poincaré, P. Duhem, E. Le Roy’, 43–4.

⁶¹ Sorel, *Progress*, 153. cites Bergson, *Creative Evolution*, 268.

⁶² Coumet, ‘Écrits épistémologiques de Georges Sorel (1905): H. Poincaré, P. Duhem, E. Le Roy’, sec. Annex p. 42–5.

⁶³ Brandom and Giordani, ‘Introduction: Georges Sorel’s Study on Vico in French and European Context’, 86.

⁶⁴ Compare, for instance, Clarke’s discussion Entropy as Allegory’ with Sorel’s remarks on the theories of gravity: the Sorel, *Reflections*, 12–13; Clarke, *Energy Forms: Allegory and Science in the Era of Classical Thermodynamics*, 25–7.

issue of whether science could, in some way explain, human behaviour’, he understates the contiguity between science and politics implied by the artificial milieu.⁶⁵

Taking up Vico’s doctrine *verum ipsum factum* (that humanity can only understand that which it has made), Sorel elaborates a radical distinction between the natural world, the *milieu cosmique*, and the human world, the *milieu artificiel*.⁶⁶ Experimental practices of science, although they attempt to explain the former, are ultimately restricted in scope, since their experiments are moments of human artifice. There is no direct connection between the two milieux. Vico’s doctrine demanded a ‘fundamental revision of our conception of the ties that connected science to reality.’⁶⁷ From Vico, Sorel draws the idea that science is a social construction with a history.⁶⁸ Both because it is an ‘immense cooperative labour’ relying on the traditions and beliefs of those involved, but also because principles of science, such as induction, only apply to the artificial milieu ‘made by humanity’ and not the cosmic milieu.⁶⁹ From his early writings on Vico, there is thus a sense of continuity between various social practices (political forms) and experimental practices of the physical sciences. Sorel writes of a ‘homogeneity of process’ that applies to the sciences as well as the arts: one based on the same categories of ‘invention, combination and action.’ Playing on the ambiguity of the French term ‘*expérience*’ (meaning both experience and experiment), he describes experiment as an act of creation within the artificial milieu.⁷⁰

In *Reflections of Violence* and *The Illusions of Progress*, Sorel expands on the structural continuity between science and the social, emphasising the importance of the traffic of ideas between the natural sciences and politics.⁷¹ The development of the sciences as well as political thought, relies on the traffic of analogies back and forth between physics and

⁶⁵ Jennings, *Georges Sorel*, 40.

⁶⁶ Sorel, *Study on Vico*, 81–2.

⁶⁷ J. R. Jennings, ‘Sorel, Vico, and Marx’, in *Vico and Marx, Affinities and Contrasts*, ed. Giorgio Tagliacozzo (New Jersey: Humanities Press, 1983), 331.

⁶⁸ Sorel, *Hermeneutics*, 157. Sorel specifically identifies ‘laboratory experiments and the use of Maxwellian models [of energy]’ with the ‘artificial milieu’ derived from Vico.

⁶⁹ Sorel, *Study on Vico*, 82.

⁷⁰ Sorel, 83–4.

⁷¹ Sorel, *Progress*, 12–3.

politics. Laws of science may have arisen as ‘a consequence of political analogies’ before being returned again to the political sphere. Sorel suggests Galileo’s theory of gravity as a ‘constant force’ may have arisen through an analogy with ‘monarchical power’ [*puissance*], only to return to the political sphere as the ‘idea of progress.’⁷² In Ancient Greece, because the height of the physical sciences was represented by ‘observation of the heavens’ this led them to ‘suppose that human things ought to imitate the movements of divine things.’ That is, that ‘institutions.... would be seen to obey laws similar to those ascertained in astronomy.’⁷³ Today, he notes we have attuned our ‘instruments for precise measurement’ to the ‘problems of terrestrial physics.’ As a result, terrestrial physics defines the political forms of the era. Even ‘the idea of the general strike’ functions like the theories of the ‘modern physicist’, because the activist parallels the modern physicist who has ‘complete confidence in his science, although he knows that the future will look upon it as antiquated.’⁷⁴

The structural continuity entailed by the artificial milieu, engenders a homology between the political forms and the scientific theories of an era. Instead of the ‘political theology’ proposed by Carl Schmitt, in which ‘significant concepts of the modern theory of the state are secularized theological concepts’, Sorel proposes a ‘political *physics*’, in which the significant concepts of contemporary politics are politicized scientific concepts.⁷⁵ Further, such a homology between science and politics implies that the reception of political theory is dependent on our general expectations of the physical sciences and their relation to reality.⁷⁶

Political theories are not just derived from physics, according to Sorel. Instead, their effectiveness in politics remains dependent on the reputation and validity of those concepts in

⁷² Sorel, *Reflections*, 12–13. In the case of France, Sorel likely thought this even more pronounced since: ‘Our minds [the French] are constructed in such a way that we reason much more by analogy than by syllogisms.’

⁷³ Sorel, *Progress*, 158–9.

⁷⁴ Sorel, *Reflections*, 142.

⁷⁵ In ‘The Age of Neutralizations and Depoliticizations’ (1929), Schmitt, who was familiar with Sorel’s writings, expands this to a general mapping between the dominant intellectual sphere and politics. However, he notably excludes the sciences, referring only to theology, metaphysics, humanitarian-morality, and economics. Carl Schmitt, *Political Theology: Four Chapters on the Concept of Sovereignty*, trans. George Schwab (Chicago: University of Chicago Press, 2005 [1922]), 36; Carl Schmitt, *The Concept of the Political: Expanded Edition* (Chicago: University of Chicago Press, 2008), 81–2.

⁷⁶ Sorel, *Progress*, 48.

their original domains (whether the natural sciences, anthropology, theology, or elsewhere). For instance, alluding to *Volksgeist*-type biological theories of the nation, Sorel writes that the ‘socio-biological analogies’ of the nineteenth century, which ‘employ formulas in which human organisations are assimilated to a higher order of organisms’ had ‘profited from the prestige that natural history had acquired.’⁷⁷ This is despite the fact that they had originally been borrowed from human groupings. However, Sorel recounts the failing effectiveness of traditional political analogies — natural law, the social contract, religion, progress are all exhausted. Natural law had been undermined by Pascal, who had demonstrated it was simply an absurdity, ‘nothing but a simple tautology.’⁷⁸ The idea of an original social contract had been undermined by Henry Sumner Maines’s ‘studies on primitive societies’ which replaced the contract with a primordial political role for magic.⁷⁹ ‘Religion is daily losing its efficacy with the people,’ and is being replaced with mere ‘probabilism, mechanical rites and proceedings more or less related to magic.’⁸⁰ And on progress, Sorel even criticises Marx’s reliance on the ‘force of the mysterious *Weltgeist*’, as a romantic ‘Hegelian leaning’ in which ‘social mechanisms were no longer empirical data, but agents of the mysterious force of history.’⁸¹

If each of these traditional foundations had lost their effectiveness, then the homology between science and politics suggests alternatives could be derived from contemporary advances in science. Sorel’s attempts to elaborate a new political theory appears to draw on two distinct theoretical developments in the physics of energy: Brownian motion and resistance (friction). Like Bergson, Sorel depicted the thermodynamic ‘dogma of the conservation of energy’ as a conservative and deterministic.⁸² In his scientific writings Sorel searches for a ‘new and unknown energy [*énergie nouvelle et inconnue*]’ that defies current

⁷⁷ Sorel, *Reflections*, 254; Sorel, *Progress*, 136. Sorel writes that ‘[i]n Savigny’s time, all change was conceived under forms similar to those provided by biology: it is thus entirely natural that the juridical conscience of the people was so often regarded as being a sort of vital force.’

⁷⁸ Sorel, *Reflections*, 15–6.

⁷⁹ Sorel, *Progress*, 46.

⁸⁰ Sorel, *Reflections*, 58, 238.

⁸¹ Sorel, *Progress*, 207–9.

⁸² Coumet, ‘Écrits épistémologiques de Georges Sorel (1905): H. Poincaré, P. Duhem, E. Le Roy’, 43–4.

dogma.⁸³ Two phenomena that attracted his attention were Brownian motion and resistance (friction). Were these understood as conditions of possibility for a political theory of spontaneous action?

Although Sorel does not explicitly connect Brownian motion and the general strike, at least speculatively, it seems that the random motion of particles structures Sorel's understanding of the political use of myth. In *Reflections*, spontaneous political action draws on a hidden reserve of myths, images and sentiments like the apparently inexplicable random motions of particles. Sorel takes an almost functionalist approach, what is the 'function of violence' and 'the feelings which move the masses [to] form into groups'. Images, feelings, sentiments are to be accumulated and then channelled like disparate energies into a usable form.⁸⁴ While this model rejects the thermodynamic theory of conservation, it remains post-thermodynamic in its treatment of energy as a cumulative and convertible reserve of potential. Mirroring Brownian motion, spontaneous political movements, which employ the 'creative energy' of violence, are distinguished from those merely in the conservative use of force made in the 'service of primordial interests of civilisation.'⁸⁵

Turning to theories of resistance and friction, could these furnish political models? As Humphrey notes 'Sorel attributed great importance to the conception of passive resistances, which he looked on not only as a major problem for physics but, even more significant as the key to a proper understanding of man's ability to deal with reality.'⁸⁶ If a break with the dogma of conservation of energy demands a 'new and unknown energy', then friction would appear to fit. Sorel writes explicitly that these 'phenomena where energy transforms itself into heat are probably not subject to the determinism that our fathers believed applicable to the whole of physics'.⁸⁷ In his political theory, I suggest this model underlies Sorel's

⁸³ Coumet, sec. Annex p. 42–5.

⁸⁴ Sorel, *Reflections*, 40.

⁸⁵ Michel Charzat, 'Georges Sorel et le fascisme. Eléments d'explication d'une légende tenace', *Mil neuf cent. Revue d'histoire intellectuelle (Cahiers Georges Sorel)* 1, no. 1 (1983): 45–6; Sorel, *Reflections*, 78.

⁸⁶ Humphrey, *Prophet*, 134–5.

⁸⁷ Georges Sorel, *De l'utilité du pragmatisme* (Paris: Marcel Rivière, 1921), 310. cited in translation in Humphrey, *Prophet*, 135.

understanding of class conflict.⁸⁸ In *Reflections*, the need to maintain a distinct ‘line of cleavage [*scission*]’ between the classes is repeatedly emphasized. Like a point of contact between two moving physical bodies which generates heat-energy by friction, the line of division between the classes is described as a source of political energy, without which ‘socialism cannot fulfil its historic role.’⁸⁹ Escaping the determinism of conservation of energy, class conflict and the violence of the proletariat, energizes the proletariat, however, dissipating like heat it will also ‘restore to the bourgeoisie something of its energy.’⁹⁰

Notwithstanding these suggestive parallels, I admit that Sorel does not explicitly connect his political theory with the emerging post-thermodynamic paradigms of energy and any conclusions remain purely speculative. Further, Sorel specifically derogated as ‘scientific superstitions’ attempts to solve political problems with scientific methods. Sorel equates Engels’s ‘scientific socialism’ with bourgeois tendencies to believe that ‘science could remedy the defects of society’.⁹¹ However, despite these caveats, I claim that Sorel’s work (perhaps against his own intentions) exhibits at least those ‘allegorical’ relations that inspired Bruce Clarke’s work on energy twenty years ago. Sorel’s depiction of myth and class cleavage as reserves of latent political energy relies on a post-thermodynamic paradigm of physics in which energy (rather than force) provides the elementary principles for action. Where the force of the mainspring had suited the constitutional monarchies of the nineteenth-century, embodied in the self-contained, individual and always active presence of the sovereign, the paradigm of energy conforms with the dynamics of mass-politics emerging in Sorel’s era. The energy of the people is disparate and multiple, it must be aggregated and converted to a cause

⁸⁸ See also the ‘anomalies of’ and ‘indeterminacy of friction’ in Sorel, *Hermeneutics*, 150.

⁸⁹ Sorel, *Reflections*, 125, 182.

⁹⁰ Sorel, 85, 178.

⁹¹ Sorel, 131–2.

to be put to political work.⁹² While these energetic structures remain inchoate in Sorel's work, they are elaborated and developed by readers such as Ernst Jünger.⁹³

4 Ernst Jünger's 'Total Mobilisation'

To conclude, I turn briefly to Jünger's account of 'Total Mobilization' [*Totale Mobilmachung*] from 1930.⁹⁴ Although the turn to Jünger aims to confirm my hypothesis of an energetic paradigm lurking in Sorel's political thought, my aim is not to produce a proto-fascist reading of Sorel. The political results of an energetic model were simply unknowable to Sorel. The continued controversy over the proper understanding of democratic participation attests to the intractability of questions of the final results of political forms.⁹⁵ Instead, my objective is to uncover the subterranean conceptual structures that inform their understanding of the nature of political action, and its means and goals.

On conceptual structure, Jünger's essay arguably completes the break between a model of politics based on the organic and biological to one based on the hard-sciences (physics and chemistry). In Jünger's essay and the later monograph *The Worker*, nature, the organic and biological are replaced with the 'elementary'.⁹⁶ Like 'energy', the 'elementary' belongs to a basic category common to the living and the mechanical. The category of life has lost all political force. Recalling Sorel's critiques of organicism, Jünger implicitly derogates

⁹² Evoking specifically the thermodynamic definition of work as relation between energy, time, and change, Sorel writes that 'with a little good will and energy a radical change could be wrought in a short time'. Sorel, *Progress*, 104; Harman, *Energy*, 61.

⁹³ Elliot Neaman notes that 'in the 1920s Jünger read Sorel and sympathized' with Sorel's opposition to the bourgeoisie and demand for direct action. Elliot Y. Neaman, *A Dubious Past: Ernst Jünger and the Politics of Literature after Nazism* (Berkeley: University of California Press, 1999), 29; Steffen Martus, *Ernst Jünger* (Stuttgart: J.B. Metzler, 2001), 52; David Ohana, 'Nietzsche and Ernst Jünger: From Nihilism to Totalitarianism', *History of European Ideas* 11, no. 1–6 (1 January 1989): 756.

⁹⁴ Ernst Jünger, 'Total Mobilization', in *The Heidegger Controversy: A Critical Reader*, ed. Richard Wolin, trans. Joel Golb and Richard Wolin (Cambridge, MA: MIT press, 1998 [1930]), 119–39. Schmitt, who was also familiar with Jünger's theory of 'Total Mobilization', in the 1950s writes similarly of a 'real political energie' or a 'war-potential [*Kriegspotential*]' as a 'reservoir of historical force [*Kraft*]'. Carl Schmitt, *The Nomos of the Earth in the International Law of the Jus Publicum Europaeum*, trans. G. L. Ulmen (New York: Telos Press Publishing, 2006 [1950]), 291 [IV.5.D].

⁹⁵ On democratic participation one need only compare: Dylan Riley, *The Civic Foundations of Fascism in Europe: Italy, Spain and Romania 1870-1945* (Baltimore: John Hopkins University Press, 2010); Judith Butler, *Notes Toward a Performative Theory of Assembly* (Harvard University Press, 2015).

⁹⁶ See, for instance, the section 'Der Einbruch elementarer Mächte in den bürgerlichen Raum': Ernst Jünger, *Der Arbeiter: Herrschaft und Gestalt* (Stuttgart: Klett-Cotta, 1981), 23–9.

life (the core presupposition of *Volksgeist* nationalism) by emphasising its links with digestion.⁹⁷ Jünger's titular concept is 'total mobilization'. This is neither a juridical-legal conception of the authoritarian state, nor the Marxist quasi-deterministic totality of scientific organization, but the aggregation and deployment of *all* possible *resources* of a political entity. Throughout the essay, Jünger treats this broadly 'political' capacity of the people as a kind of 'energy', a latent potential that can be put to work equally in war and production.⁹⁸ And further, if not put to use effectively this political energy could be 'squandered' or wasted.⁹⁹ Jünger clearly imagines mass-mobilisation according to the three qualities of energy identified above: (i) mass-participation is not an active present *force*, but a latent reserve of a capacity to do work (war or production); (ii) politics is not a matter of a delicate balance of incommensurable forces, but a field of elementary universal energies, which (iii) are not individualised but radically cumulative and transformable. Thus for Jünger, the specific task of government is 'to channel the collective energies of a great empire into a single current.'¹⁰⁰ Political effectiveness emerges wholly from the 'unlimited marshalling of potential energies'.¹⁰¹

If the novelty of the 'energy-humanities' consists in its excavation of the mutual structural-conceptual influences between the sciences and political theory, then it offers a counterweight to the returned interest in 'political theology'.¹⁰² Unearthing the scientific structures guiding Sorel's political thought does not suggest that he reduced political issues to scientific problems. He specifically rejects such ideas, like Engel's conception of a scientific-socialism. However, this rejection does not entail that his theory of myth is 'irrational'. Like the statistical mechanics of Brownian motion, it is possible to treat

⁹⁷ Jünger, 'Mobilization', 123.

⁹⁸ Jünger makes explicit parallels between war and consumption. Towards different ends, Bataille develops a similar sense of energy, which equates consumption and war, as an excess to be specifically squandered or wasted. Bataille, *The Accursed Share*.

⁹⁹ Jünger, 'Mobilization', 136.

¹⁰⁰ Jünger, 127.

¹⁰¹ Jünger, 126–7.

¹⁰² Most notably the recent work of Giorgio Agamben has inspired a great deal of interest in Schmitt and political theology. Agamben, *Omnibus*.

spontaneous and indeterminate action within a rational but non-deterministic framework.

However, the scientific elaboration of a general (elementary) theory of energy suggested that truly spontaneous political action presupposed its own form of energy. In this respect, we can interpret Sorel's work as a displacement, into the sphere of politics, of Bergson's struggle to recover the novelty of life in the post-thermodynamic framework of energy.

Bibliography

- Agamben, Giorgio. *The Omnibus Homo Sacer*. Stanford: Stanford University Press, 2017.
- Apter, Emily. *Continental Drift: From National Characters to Virtual Subjects*. Chicago: University of Chicago Press, 1999.
- Bataille, Georges. *The Accursed Share*. Vol. 1. New York: Zone Books, 1988.
- Bellamy, Brent Ryan, Jeff Diamanti, and Others, eds. *Materialism and the Critique of Energy*. Chicago: MCM Publishing, 2018.
- Bergson, Henri. *Creative Evolution*. Translated by Arthur Mitchell. New York: The Modern Library: Random House, 1944.
- . *Mind-Energy: Lectures and Essays*. Translated by H. Wildon Carr. London: Greenwood Press, 1975.
- Boyer, Dominic. 'Energopower: An Introduction'. *Anthropological Quarterly* 87, no. 2 (2014): 309–33.
- Bradshaw, David. 'The Divine Glory and the Divine Energies'. *Faith and Philosophy: Journal of the Society of Christian Philosophers* 23, no. 3 (1 August 2006): 279–98.
- Brandom, E. 'Violence In Translation: Georges Sorel, Liberalism and Totalitarianism from Weimar to Woodstock'. *History of Political Thought* 38, no. 4 (2017): 733–63.
- Brandom, Eric, and Tommaso Giordani. 'Introduction: Georges Sorel's Study on Vico in French and European Context'. In *Georges Sorel's Study on Vico*, 1–55. Leiden: Brill, 2020.
- Butler, Judith. *Notes Toward a Performative Theory of Assembly*. Harvard University Press, 2015.
- Capek, M. *Bergson and Modern Physics: A Reinterpretation and Re-Evaluation*. Dordrecht: D. Reidel Publishing Company, 1971.
- Cara Daggett. *The Birth of Energy: Fossil Fuels, Thermodynamics, and the Politics of Work*. Durham: Duke University Press, 2019.
- Caygill, Howard. 'Life and Energy'. *Theory, Culture & Society* 24, no. 6 (1 November 2007): 19–27.
- . *On Resistance: A Philosophy of Defiance*. A&C Black, 2013.
- Charzat, Michel. 'Georges Sorel et le fascisme. Eléments d'explication d'une légende tenace'. *Mil neuf cent. Revue d'histoire intellectuelle (Cahiers Georges Sorel)* 1, no. 1 (1983): 37–51.

- Clarke, Bruce. *Energy Forms: Allegory and Science in the Era of Classical Thermodynamics*. Ann Arbor: University of Michigan Press, 2001.
- Clausewitz, Carl von. *On War*. Translated by Colonel J. J. Graham. London, UK: Kegan Paul, Trench, Trubner & Co., LTD, 1918.
- Coumet, Ernest. 'Écrits épistémologiques de Georges Sorel (1905): H. Poincaré, P. Duhem, E. Le Roy'. *Mil neuf cent. Revue d'histoire intellectuelle (Cahiers Georges Sorel)* 6, no. 1 (1988): 5–51.
- Derrida, Jacques. *Politics of Friendship*. London: Verso, 2005.
- DiFrisco, James. 'Élan Vital Revisited: Bergson and the Thermodynamic Paradigm: Bergson and the Thermodynamic Paradigm'. *The Southern Journal of Philosophy* 53, no. 1 (March 2015): 54–73.
- Durkheim, Emile. *The Elementary Forms of the Religious Life [1912]*. (London: George Allen & Unwin, 1976).
- Fichte, Johann Gottlieb. *Fichte: Addresses to the German Nation*. Edited by Gregory Moore. Cambridge: Cambridge University Press, 2008.
- Harman, Peter Michael. *Energy, Force and Matter: The Conceptual Development of Nineteenth-Century Physics*. Cambridge: Cambridge University Press, 1982.
- Humphrey, Richard. *Georges Sorel: Prophet Without Honor: A Study in Anti-Intellectualism*. New York: Octagon Books, 1978.
- Jennings, J. R. *Georges Sorel: The Character and Development of His Thought*. Springer, 1985.
- . 'Sorel, Vico, and Marx'. In *Vico and Marx, Affinities and Contrasts*, edited by Giorgio Tagliacozzo, 326–41. New Jersey: Humanities Press, 1983.
- Jünger, Ernst. *Der Arbeiter: Herrschaft und Gestalt*. Stuttgart: Klett-Cotta, 1981.
- . 'Total Mobilization'. In *The Heidegger Controversy: A Critical Reader*, edited by Richard Wolin, translated by Joel Golb and Richard Wolin, 119–39. Cambridge, MA: MIT press, 1998 [1930].
- Kant, Immanuel. *Critique of Pure Reason*. Cambridge: Cambridge University Press, 1998.
- Marder, Michael. *Energy Dreams: Of Actuality*. Columbia University Press, 2017.
- Marinetti, F. T. 'Multiplied Man and the Reign of the Machine (1911)'. In *Futurism: An Anthology*, edited by Lawrence Rainey, Christine Poggi, and Laura Wittman, 89–92. New Haven: Yale University Press, 2009.
- Martus, Steffen. *Ernst Jünger*. Stuttgart: J.B. Metzler, 2001.
- Neaman, Elliot Y. *A Dubious Past: Ernst Jünger and the Politics of Literature after Nazism*. Berkeley: University of California Press, 1999.
- Nye, Robert A. *The Origins of Crowd Psychology: Gustave LeBon and the Crisis of Mass Democracy in the Third Republic*. Vol. 2. London: Sage Publications, 1975.
- Ohana, David. 'Nietzsche and Ernst Jünger: From Nihilism to Totalitarianism'. *History of European Ideas* 11, no. 1–6 (1 January 1989): 751–58.
- Rabinbach, Anson. *The Eclipse of the Utopias of Labor*. New York: Fordham Univ Press, 2018.
- . *The Human Motor: Energy, Fatigue, and the Origins of Modernity*. University of California Press, 1992.
- Riley, Dylan. *The Civic Foundations of Fascism in Europe: Italy, Spain and Romania 1870-1945*. Baltimore: John Hopkins University Press, 2010.
- Schmitt, Carl. *Political Theology: Four Chapters on the Concept of Sovereignty*. Translated by George Schwab. Chicago: University of Chicago Press, 2005 [1922].
- . *The Concept of the Political: Expanded Edition*. Chicago: University of Chicago Press, 2008.
- . *The Nomos of the Earth in the International Law of the Jus Publicum Europaeum*. Translated by G. L. Ulmen. New York: Telos Press Publishing, 2006 [1950].
- Schmitt, Carl, and Leo Strauss. *The Concept of the Political Expanded Edition*. Edited and

- translated by George Schwab. Chicago: University of Chicago Press, 2007 [1927, 1932].
- Sorel, Georges. *De l'Eglise et de l'état: Fragments*. Paris: Ed. des Cahiers de la Quinzaine, 1901.
- . *De l'utilité du pragmatisme*. Paris: Marcel Rivière, 1921.
- . *From Georges Sorel, Volume 2: Hermeneutics and the Social Sciences*. Edited by John L. Stanley. Translated by John And Charlotte Stanley. New Brunswick: Transaction Books, 1990.
- . *Georges Sorel's Study on Vico*. Translated by Eric Brandom and Tommaso Giordani. Leiden: Brill, 2020.
- . *La ruine du monde antique: conception matérialiste de l'histoire*. Paris: Librairie G. Jacques & Co., 1902.
- . *Le révolution dreyfusienne*. Paris: Bibliothèque du Mouvement Socialiste, 1909.
- . *Les Girondins du Roussillon*. Perpignan: Imprimerie de Charles Latrobe, 1889.
- . *Le système historique de Renan*. Vol. 1. Genève: Slatkine Reprints, 1971 [1905-1906].
- . *Matériaux d'une théorie du prolétariat*. Paris: Marcel Rivière, 1919.
- . *Sorel: Reflections on Violence*. Cambridge: Cambridge University Press, 1999.
- . *The Illusions of Progress*. Translated by John And Charlotte Stanley. Berkeley: University of California Press, 1969.
- Sternhell, Zeev, Mario Sznajder, and Maia Asheri. *The Birth of Fascist Ideology*. Translated by David Maisel. New Jersey: Princeton University Press, 1994.
- Stoekl, Allan. *Bataille's Peak: Energy, Religion, and Post-Sustainability*. Minneapolis: University of Minnesota Press, 2007.
- Taine, Hippolyte A. *The Ancient Regime, Trans.* Translated by J. Durand. NY: USA: Henry Holt and Company, 1876.
- Watkins, Eric. 'General Introduction'. In *Kant: Natural Science*, edited by Allen W. Wood Paul Guyer, xiii – . Cambridge: Cambridge University Press, 2012.
- Weber, Max. *Max Weber: Collected Methodological Writings*. Edited by Hans Henrik Bruun and Sam Whimster. London: Routledge, 2012.