The Coming Anarchy: Peter Kropotkin's Divine Plan

Introduction

In 1994, the author Robert Kaplan published 'The Coming Anarchy', a grim assessment of the prospects of liberal democracy at the end of the Cold War.[1] The "bifurcated world" anarchy heralded, he argued, was every bit as dangerous as the Cold War polity it had reconfigured. Indeed, Kaplan's 'anarchy' was characterised by violence fuelled by 'ethnic, political and sectarian conflict'.[2] Controversially, he used the "tribalism" and disorder he found in West Africa to evoke it: "Disease, overpopulation, unprovoked crime, scarcity of resources, refugee migrations, the increasing erosion of nation-states and internationals borders, and the empowerment of private armies, security firms, and international drug cartels."[3]

Kaplan's forecast sparked a host of objections. The essay was roundly condemned as Eurocentric and for perpetuating colonial stereotypes. Kevin Dunn judged Kaplan a modern-day Stanley, responsible for producing a faulty "political travelogue" that breathed new life

[1] Robert Kaplan, "The Coming Anarchy. How Scarcity, Crime, Overpopulation, Tribalism, and Disease are Rapidly Destroying the Fabric of Our Planet," *The Atlantic Monthly*, (February 1994), 44-76.

[2] Kaplan, "Eurasia's Coming Anarchy: The Risks of Chinese and Russian Weakness", Foreign Affairs, 95 (2), 2016: 33-41 at 33

[3] Kaplan, "The Coming Anarchy," 46.

into Victorian tropes about "savage" Africa as "the 'white man's grave'."[4] Undeterred, when Kaplan revisited the essay in 2018,[5] he argued that his projections had been far more accurate than Francis Fukuyama's complaisant construal of liberal democracy as the end of history. Moreover, the obvious and disastrous impacts of global warming have helped soften his audience. Setting the critiques of Kaplan's 'deterministic and overly pessimistic' predictions to one side, a 2016 report on the security implications of climate change defended the 'underlying assumption' of his analysis. The report's authors noted that Kaplan had recognised that 'environmental degradation can work as a driver of conflict'. [6]

In this essay, I examine an earlier version of "The Coming Anarchy". [7] This is the promising view presented by Peter Kropotkin nearly one hundred years before Kaplan set out his stall. [8] At first glance, the relationship seems to begin and end with Kaplan's fluke re-cycling of Kropotkin's title. Yet Kropotkin's conception holds a mirror to Kaplan's. Whereas Kaplan documented the repercussions of globalisation in an international order structured by the state and capitalism, Kropotkin promoted the accentuation of anticapitalist and antistatist trends to avoid the predictably disastrous effects of international competition and colonialism.

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[4] Kevin C. Dunn, "Fear of A Black Planet: Anarchy Anxieties and Postcolonial Travel to Africa," *Third World Quarterly* 25/3 (2004), 483-99 at 494.

[5] Robert Kaplan, "The Anarchy That Came," *The National Interest,* 158 (November-December 2018).

[6] Sebastian van Baalen and Malin Mobjörk, 'A Coming Anarchy? Pathways from Climate Change to Violent Conflict in East Africa', Research Report 2016 Stockholm University, 2.

[7] Kropotkin, "The Coming Anarchy," 154.

[8] Peter Kropotkin, "The Coming Anarchy," *The Nineteenth Century* XXII/126 (1887), 149-64.

There are some striking theoretical similarities, too. Both turned to Thomas Mathus to assess the problem of scarcity. Whereas Kaplan used Malthus to argue that population growth will always outstrip food supply, Kropotkin rejected the validity of his calculations and explained scarcity as a phenomenon of political economy. Both also mined the work of nineteenth-century geographer Carl Ritter to produce rival accounts of geopolitics. Kaplan presented his "map of the future" as a "perverse twisting" of Ritter's view of natural order or "'divine plan'". The careless creation of ungovernable political entities in Africa by nineteenth-century European colonisers, he argued, had fatally disrupted Ritter's enlightenment vision of "regionalism and a constant, living flow of forms."[9] In contrast, Kropotkin re-booted Ritter's project and dusted down the divine plan to map the contours of a decolonised globalised community, this time emphasising ecology over creation. Kaplan argued that problems bequeathed by nineteenth-century imperialism were simply too great to fix. In 1887, Kropotkin argued that they were too urgent to ignore.

By the turn of the century, it was clear to Kropotkin that anarchy had been sidelined as the route not taken. A hundred years on, his transformative image looks utopian and forlorn. Yet his disappointment is not a measure of inescapability of Kaplan's bleak picture of anarchy-as-gangsterism. Rather, his positive construction of anarchy as an uncertain but attractive possibility makes it an ideal vehicle to reflect on Kaplan's realism.

I borrow Mathias Thaler's three-part conceptualisation of utopianism to structure the argument.[10] In what follows I argue that Kropotkin's work *defamiliarizes* Kaplan's regressive narratives of relentless development to remind us that history is contingent. His political theory *galvanise*s action while constructing anarchy *cautiously*. If Kropotkin were

[9] Ibid., 75.

[10] Mattias Thaler, *No Other Planet*, (Cambridge: 2022) 3.

alive today, he would tell us that anarchy was still coming, and that the future is always malleable. As alterglobalisation activists in Genoa put it: you make plans we make history.

Gramscian critics of "austere historicism", namely, the view that the history of ideas should be directed narrowly towards the recovery of authorial intention, argue that ideas contain a transhistorical "'residue'".[11] Following this lead, I find the residue in Kropotkin's work in his promotion of science against social science first, to dispel doubts about the possibility of self-government and second, to stimulate the dismantlement of market systems by grassroots action.[12] In contemporary political theory, his defence of science resonates with Brennan and Pettit's conception of ordinary capability,[13] a non-ideal approach to political theory that focuses analysis on the political "arrangements that ordinary human beings are able in general to sustain".[14] Kropotkin's attempt to outline a process of market

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[11] Adam David Morton, "On Gramsci," *Politics*, 19/1 (1999), 1-8 at 5.

[12] Cohen asked two questions: "whether socialism would work, and be stable" and "whether we can get to it from where we are … burdened as we are with a massive legacy of capitalism." He labelled the first "sustainability; and the second "accessibility." He argued that the problem of accessibility would resolve itself once socialists were able to demonstrate how a non-market economy would work (Ibid., 56-7).

[13] Geoffrey Brennan, Philip Pettit, "The Feasibility Issue," in Frank Jackson and Michael Smith eds., *Oxford Handbook of Contemporary Philosophy* (Oxford, 2007) 258-80.

[14] Ibid., 264. Their approach assumes that "the timber of humanity is crooked" and gives latitude to "efforts of imagination" to incentivise virtuous behaviours and disincentivise "knavery" (Ibid. 260). Their three-step plan abstractly matches "opportunity to virtue," "incentive to virtue" and "incentive to vice" (Ibid., 274). They find a model of feasibility in republicanism and enlightened leadership. Approvingly quoting James Madison, they define

dissolution addresses a question that G.A. Cohen failed to resolve in *Why Not Socialism?*: How to replace "intrinsically repugnant" predatory market systems without the need for a period of 'transition' or elite planning.[15]

I start the analysis by situating "The Coming Anarchy" in a nineteenth-century debate about the relationship between states and markets. Reading the essay alongside "The Scientific Bases of Anarchy", also published in 1887,[16] I argue that Kropotkin not only staked out an anarchist position that examined the nexus, but also pushed the debate in a new direction. In contrast to his social democratic and liberal opponents, Kropotkin shifted his attention from the regulation or deregulation of markets to the dysfunction of the international order and the pattern of globalising trends. He called its twin pillars "no-government ethics" and "no-capital economics". These were latent processes of self-government and non-market exchange driven by cooperation, free agreement and voluntary association.

The second part of the essay examines the barriers to no-government ethics and no-capital economics. Looking at a range of work Kropotkin produced in the late nineteenth-century, I argue that his chief concerns were ideational. Deep-rooted prejudices about anarchy, the necessity of government and the intractability of the market threatened to

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the aims of the constitution as: "'first obtain for rulers men who possess most wisdom to discern, and most virtue to pursue, the common good of the society; and in the next place, to take the most effective precautions for keeping them virtuous whilst they continue to hold public trust'" (Ibid., 274).

[15] G.A. Cohen, *Why Not Socialism?* (Oxford, 2009) 78.

[16] Peter Kropotkin, "The Scientific Bases of Anarchy," *The Nineteenth Century* XXI/127 (1887), 238-52.

stymie the movement towards no-government ethics and no-capital economics. His elaboration of anarchist political theory demythologised anarchy as disorder to build confidence in the possibility change and so promote direct action.

The final section sets out Kropotkin's redevelopment of Carl Ritter's divine plan. The analysis focuses on the essay "What Geography Ought to Be," written in 1884 during his incarceration in Clairvaux Prison, France, and his later critique of T.H. Huxley's book, *Physiography*.[17] I argue that Kropotkin revived Ritter's *Erdkunde* or geography to initiate a system of global knowledge exchange capable of empowering the development of no-capital economy locally by tailoring production to environmental conditions. Building a universal science of geography from below, networked communities would equip themselves with the practical know how to meet material needs and forge solidaristic relationships in the process. The practice of geography would advance anarchy, without God or technocratic masterplan.

The Coming Anarchy 1887

In 1884, H.M. Hyndman, the maverick leader of the British Social Democratic Federation, published a response to Herbert Spencer's "The Coming Slavery," an excited sally originally published in 1889 in *The Contemporary Review*. Spencer's essay had bemoaned the accelerating slide towards "officialism" and "the organization formed of officials."[18] Pointing

[17] Peter Kropotkin, "What Geography Ought To Be," *The Nineteenth Century* XVIII/106 (1885), 940-56; Peter Kropotkin, "On the Teaching of Physiography," *The Geographical Journal* 2/4 (1893), 350-59.

[18] Herbert Spencer, "The Coming Slavery," in Herbert Spencer, *The Coming Slavery and Other Essays* (New York, 1888) 1-18 at 8. The dispute illustrates the polarity underpinning what

to the mistaken beliefs that "suffering ought to be prevented," that "every evil can be removed" and that "evils of all kinds should be dealt with by the State,"[19] he warned that "[c]ommunistic theories"[20] were gaining ground on every side. Describing socialism as this movement's excrescence and spur, he contended that persistent attacks on *laissez-faire* had set Victorian Britain on a course towards "slavery," namely, the individual's "coercion to satisfy another's desires."[21]

Hyndman replied in kind. Spencer, he argued, was so concerned with prophesying the "hypothetical" slavery "of the future" that he forgot about "palpable slavery which actually exists to-day."[22] Yet his defence of socialism was little more than a call to democratise the systems Spencer labelled regimentation. Noting that bureaucracies "exist in every civilised or capitalised country," he argued that the pertinent question was one of control: whether or not "they are to be handled by the community."[23] Hyndman's view was that the "whole of this vast and far-reaching organisation must be under the control of the

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Elinor Ostrom called a "world view of simple systems," – the belief that issues of governance turn on planning efficient resource management and a choice between "the state" or "the market" (Elinor Ostrom, "Beyond Markets and States: Polycentric Governance of Complex Economic Systems," *American Economic Review* 100 (2010), 641-72 at 642). Anticipating Ostrom's work, Kropotkin was interested in the evolution and ecology of complex social-political systems and principles of self-governance and federalism.

[19] Ibid., 8.

[20] Ibid., 11.

[21] Ibid., 12.

[22] H.M. Hyndman, *Socialism and Slavery*, second edition (London, 1884), 4.

[23] Ibid., 8.

people, not carried on for the benefit of a non-producing class."[24] Accordingly, in socialism, "the [s]alaried officials who work to-day for the Companies would work to-morrow for the Democratic State."[25]

Kropotkin published "The Coming Anarchy" and the "Scientific Bases of Anarchy" in the periodical *The Nineteenth Century*.[26] The title of the first suggests that he had his sights set on the Spencer-Hyndman debate. The political context reinforces this view. The articles appeared as Kropotkin's once friendly relationship with Hyndman began to sour and when divisions between parliamentarians and antiparliamentarians in the British socialist movement intensified. Kropotkin outlined his position as Hyndman sought to counter the drift of the antiparliamentary movement towards anarchism by upping his attacks on its individualistic proclivities. Spencer was an obvious foil in this exchange and, as Matthew Adams points out, anyway regarded by Kropotkin as something of a nemesis.[27] This was a good time for Kropotkin to show how the inequalities justified by Spencer could be remedied without recourse to state socialism, as Hyndman proposed.

One of the major themes of Kropotkin's articles is the projected development of the state system and the threat of liberalism's dissolution on the cusp of the first globalisation.

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[24] Ibid., 9.

[25] Ibid., 9.

[26] Together with "The Scientific Bases of Anarchy," 'The Coming Anarchy' was later reproduced as a pamphlet entitled *Anarchist Communism*. Peter Kropotkin, *Two Essays: Anarchism and Anarchist Communism* (London, 1987).

[27] On Kropotkin and Spencer see Matthew Adams, "Formulating an Anarchist Sociology: Peter Kropotkin's Reading of Herbert Spencer," *History of Political Thought* 35/1 (2014), 147-73.

The intensification of global interconnection, he argued, had enabled individuals to conceptualise "society as a whole, so intimately connected together."[28] While he welcomed this development, he was dubious about its results. Like Spencer, he warned of coming "slavery", but unlike Spencer, he argued that liberalism was the cause, not its remedy. It was impossible, he argued, to contemplate the "limitation of the powers of government," without abandoning the "existing conditions of property" which government protected.[29] The only antidote to slavery was anarchy.

Kropotkin's analysis of social and economic trends in Western Europe revealed two models of interconnectedness. The first involved the extension and solidification of international market exchange, capitalist exploitation and the accentuation of statist bureaucratising, centralising and monopolising trends. The predicted outcome was the spread of "*Volksstaat*" and "*Kultur-Staat*" organisation,[30] breeding "theocracy, dictatorship, or even Caesarism" in Europe.[31]

The second was rooted in what Kropotkin called the "free growth"[32] of social forces. It opened a vista on the "[n]o-Government system of socialism,"[33] "no-government ethics" and "no-capital economics."[34] Free growth promoted forms of sociability that rooted individual sovereignty in communism. It promised to integrate "our labour for the

[28] Kropotkin, "The Coming Anarchy," 152.

[29] Kropotkin, "Scientific Bases of Anarchy," 242.

[30] Kropotkin, "The Scientific Bases of Anarchy," 241.

[31] Ibid., 241.

[32] Ibid., 238.

[33] Ibid., 238.

[34] Kropotkin, "The Coming Anarchy," 154.

production of all riches in common, so as finally to render it impossible to discriminate the part of the common production due to the separate individual" and to promote a sense of "general sympathy"[35] prioritising "the wants of the individual" over "the valuation of the services he had rendered."[36] Kropotkin's pithy description was: "the fullest freedom of the individual for the prosecution of all aims, beneficial both for himself and for society at large."[37]

Kropotkin argued that neither path was certain. Statism had sounder footings, but was never fully cemented. Kropotkin remarked: "Millions of human beings" still lived and died "without having had anything to do with government" and that every day "millions of transactions are made without the slightest interference of government."[38] The activities of a multitude of national and international associations told the same story. These groups and initiatives pointed to the creation of a new global public sphere which operated despite government, furnishing anarchist hopes that the "functions of government" could be reduced "to *nil*."[39] Kropotkin's thesis was that the anarchist path was more attractive than the statist alternative, and that the consequences of taking the latter path would be ruinous. Statism and colonisation, he argued, structured global violence: "wars, continuous wars" he remarked, were fought for "the possession of the East … for … possession of the seas … for having the right of imposing heavy duties on foreign merchandise."[40] Anarchist

[35] Ibid., 163.

[36] Ibid., 152.

[37] Kropotkin, "The Scientific Bases of Anarchy," 239.

[38] Kropotkin, "The Coming Anarchy," 154.

[39] Kropotkin, "The Scientific Bases of Anarchy," 238.

[40] Kropotkin, "The Scientific Bases of Anarchy," 251.

globalisation would check those pressures; rather than bemoan the effects of European colonisation, he called for the infrastructure of European domination to be dismantled. [41]

Kropotkin identified the major hurdle to no-government ethics and no-capital economics in the assumption of scarcity and rounded on Thomas Malthus, the eighteenth-century pioneer of population studies, to advance his critique. Measuring the arithmetic grow of food production against the geometric growth of population, Malthus had argued that scarcity and impoverishment were inescapable, and that needs could never be satisfied. Rejecting his science as faulty, Kropotkin countered that the calculation of scarcity had set economics on a defective course and that it was based on data gathered in economies structured by inequality: Malthusian political economists were resigned to deprivation, to patchy and unjust patterns of distribution and indifferent about the investigation of the earth's ecosystems. How, Kropotkin asked, "can we talk about a want of means of subsistence" when "capital finds it more advantageous to supply … the Russian Government with "strategic railways" and Krupp guns"?[42] On this account, shortages and interruptions of supply were explained by "defects of social organisation"[43] and the "indirect and

[41]Kropotkin also rejected the malign cultural prejudices colonisation embedded. Subverting the language of Victorian colonialism, he argued that Europeans had claimed to have "'civilised the savages'" when, in fact, they had only "inoculated them with their own vices" and "enslaved" them. The reality was that so-called ""savages" had understood how to develop highly in their societies the same humane sociable feelings which we Europeans are so proud to profess, but so seldom practice." Kropotkin, "What Geography Ought to Be," 943.

[42] Kropotkin, "The Scientific Bases of Anarchy," 247.

[43] Kropotkin, "The Scientific Bases of Anarchy," 246.

unconscious limitation of production" arising from power asymmetries embedded in international trade and the "squandering the produce of human labour in luxury."[44] Kropotkin's view that "the stock of potential energy in nature" was "little short of infinite"[45] stretched credulity. But the lesson he took from his critique of Malthus was that systematic global mapping held the key to the reconfiguration of political economy and recovery of "communist principles."[46]

Kropotkin turned to Carl Ritter to accomplish this task. His plan was to examine how best to utilise natural forces and find an "equitable solution" to the problem of global production and distribution.[47] As he put it in his memoirs, he wanted to reveal new, "higher forms of social life," which "ought to prevail in different physical regions."[48] In 1871 he had set himself the task of applying Ritter's methods to "map the wide prairies of Southern Russia" to show that the periodic "droughts and failures of crops" were not "accidental calamities" but "a natural feature of that region as its position on a southern slope, its fertility, and the rest." The lesson was that the solution to crop failure lay in the re-organisation of the "economic life of the southern prairies … in prevision of the unavoidable recurrence of periodical droughts."[49] Twenty-five years later, Kropotkin reported that experimental farms in Canada were already blazing this trail. By tailoring production to prevailing local conditions, growers were improving crop yields and undertaking on-going

[44] Ibid., 247.

[45] Ibid., 246.

[46] Kropotkin, "The Coming Anarchy," 151.

[47] Kropotkin, "The Coming Anarchy," 151.

[48] Peter Kropotkin, *Memoirs of a Revolutionist* (Boston & New York, 1899), 227; 235.

[49] Ibid., 235.

research into "the laws of growth, nitrification and denitrification of the soil."[50] The problem was that growers in Russia, working in similar physical landscapes, had no knowledge of these experiments.

In the early years of the twentieth century, Kropotkin began to consider how rebooting Ritter would help communities adjust to global threats. Climate change was the significant problem he identified. He explained global warming as a "physico-geographical" and "geological fact independent of the will of man."[51] Yet explicitly ruling out human intervention as a cause, he contended that the "geological epoch of dessication we are living in" would have significant planetary effects, notably droughts, triggering mass migrations.[52] The appropriate response was to "think of the measures which should be taken for combating - at least within the limits of what is possible - the coming drought."[53] His worry was that the impetus for divine planning would diminish as the momentum for global regulation increased. In this eventuality, the balance of power between state socialists and *laissez-faire* liberals was mostly irrelevant. Both looked the wrong way.

Anarchy and transformation

Kropotkin's contention that no-government ethics and no-capital economy were sociological trends, not only already at work in globalisation, but also its vital forces, were

[50] Peter Kropotkin, "Recent Science," *The Nineteenth Century* XLII/249 (1897) 799-820 at 810-11.

[51] Peter Kropotkin, "The Desiccation of Eur-Asia," *The Geographical Journal* 23/6 (1904), 722-34 at 726; 734.

[52] Ibid., 734.

[53] Ibid., 734.

underpinned by a conception of anarchy discounted by Spencer and Hyndman. No less than Hyndman, Spencer defended legislation to create a social system of "voluntary co-operation" to "achieve business" and other ends.[54] Hyndman wanted to replace "anarchical competition" with "organised co-operation" using law to abolish individual ownership and institute "collective ownership of the means of production and exchange".[55] Kropotkin defended voluntary co-operation, but not to meet the interests of business and without legislation.

To persuade sceptics that anarchy was a possible development of globalisation, he set out to expose what Angela Davis describes as the fraudulence of the norms of possibility that stymy transformative change.[56] The starting point was defensive. Doubt, Kropotkin remarked, motivated anarchists to "carry the hatchet into the forest of prejudice."[57]

He identified two problems: conditioning and misinformation. Proudhon's anecdote about the seventeenth century Parisian who, "having heard it said that in Venice there was no king" almost "died from laughter"[58] neatly summarised the anarchist view of the prevailing norm. Kropotkin linked it to a claim that anarchy was fit only for saints. This misconception, he argued, was the flip side of the argument about anarchist chaos and violence. Indeed, the easing of public anxiety about the anarchist peril, Kropotkin

[54] Spencer, (1884) 26.

[55] Hyndman, (1884) 10; 12.

[56] Angela Davis, "Reflections on the Black woman's Role in the Community of Slaves," *Massachusetts Review* 13/1-2 (1972), 81-100 at 85.

[57] Kropotkin, *Anarchism: Philosophy and Ideal*, 21.

[58] P.-J. Proudhon, *What is Property? An Inquiry Into the Principle of Right and of Government* trans. Benj. R. Tucker (London [1840] 1969), 264.

commented, was inversely related to the popularity of the view that anarchy was "too beautiful, too lofty," and fit only for "superior beings."[59]

Taken separately, both perspectives undermined the prospects of the coming anarchy. Together they were fatal. Kropotkin set the charges for their demolition by showing how the abstraction of conventional political philosophy mythologised the state. His hope was that new perspectives would encourage marginalised to accentuate and accelerate the movement towards anarchy by their collective action.

His critique followed the thrust of Proudhon's blistering attack on Jean-Jacques Rousseau's *Social Contract*. Calling it a "masterpiece of oratorical jugglery" Proudhon had complained that Rousseau's masterwork had set a lamentable trend for subsequent generations of "reformers of political and social science"[60] by elevating style over "reason and morality", and wrongly fastening political philosophy to a chain of geometric theorems. Rousseau's abstract method had framed the constitutional ready-mades that eighteenth and nineteenth republicans had presented as models of good governance, but which had only entrenched domination. A genuinely real-world approach to institutional design, Proudhon argued, centred on the historic and extant forms of self-rule and the analysis of the forces active "within" society", not the hypothetical development of notional beings. Good design could not be found "*outside*" society.[61] There was no outside.

Following suit, Kropotkin argued that anarchism rejected political philosophy "constructed on the *a priori* method, after a few desiderata have been taken as postulates."[62]

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[59] Peter Kropotkin, *Anarchism: Its Philosophy and Ideal,* Fourth issue (London, 1907), 1.

[60] Proudhon, *General Idea of the Revolution*, 120-21.

[61] Ibid., 121.

[62] Kropotkin, "Anarchism," 914.

The attempt "to picture an ideal human society based on reason", he remarked, was ill-advised. While he admitted the purchase of these horribly inflexible '"Utopias"', he classified them as philosophically and scientifically bankrupt. The "distinctive trait" of these "happy Christmas dreams," was "immobility" and a "tendency to crystallize what should be modified and developed day by day."[63] Scientific analysis revealed, to the contrary, that all phenomena were subject to the same shape-shifting cosmological forces. He found a synonym in "harmony", describing this as "an ever-changing and fugitive equilibrium between a multitude of varied forces and influences of every kind, following their own course." [64] Since nothing was fixed in nature, Kropotkin concluded that interventions designed to regulate entities by determining their course or relation were only ever disruptive, requiring sustained force to maintain their connection.

In his entry for "anarchism" in the celebrated 11th edition of *Encyclopaedia Britannica*, he set out the political implications. The essay showed the antagonism between state socialism and *laissez-faire* liberalism to be a false binary. The real choice was between repression and harmony. These were opposite poles on a spectrum of social arrangements. Harmony, "an ever-changing adjustment and readjustment of equilibrium between a multitude of forces and influences", was obtained by "free agreements concluded between various groups, territorial and professional … for the sake of production and consumption, as also for the satisfaction of the infinite variety of needs and aspirations of a civilized

[63] Peter Kropotkin, "Law and Authority" in Roger N. Baldwin ed. *Kropotkin's Revolutionary Pamphlets* (New York, 1970), 196-218 at 200.

[64] Kropotkin, *Anarchism Philosophy and Ideal*, 8.

being".[65] Repression was "submission to law, or by obedience to any authority". Any number of mixes was possible. In his long description Kropotkin clarified that harmony was a process, not a changeover, though it involved rupture.

> In a society developed on these lines, voluntary association which already now begin to cover all the fields of human activity would take a still greater extension so as to substitute themselves for the state in all its functions. They would represent an interwoven network composed of an infinite variety of groups and federations of all sizes and degrees, local regional, national and international – temporary or more or less permanent – for all possible purposes: production, consumption and exchange, communications, sanitary arrangements, education, mutual protection, defence of the territory, and so on; and on the other side, for the satisfaction of an ever-increasing number of scientific, artistic, literary and social needs.[66]

Kropotkin acknowledged the quixotic bent of this vision, once remarking that anarchists lived "in a world of dreams to come."[67] He also accepted, as Gerhardt argues, that the ability "to imagine a post-capitalist world requires a vision of how to get there."[68]

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[65] Peter Kropotkin, 'Anarchism' *Encyclopaedia Britannica*, 11th Edition, vol. 1 A to Androphaghi (New York: 1910): 914.

[66] Kropotkin, 'Anarchism', 914.

[67] Kropotkin, *Anarchism Philosophy and Ideal*, 21.

[68] Hannes Gerhardt, "Engaging the Non-Flat World: Anarchism and the Promise of a Post-Capitalist Collaborative Commons," *Antipode* 52/3 (2019), 681-701 at 696.

As he put it: the "wants of the workman *must* be formulated with more precision."[69] But he rejected the necessity of an "elaborate programme".[70] He encouraged local experimentation or what he called "acting for yourselves", elevating the "needs of the moment". His answer to the question: "'How will you organise the future society based on Anarchist principles?'" was: "'We cannot organise you. It will depend upon *you* what sort of organisation you will choose'".[71] In 1890, addressing the question "Is Socialism Practicable?", Kropotkin told his working-class audience that the realisation of socialism demanded "audacity of thought, and the power to take the bull by the horns."[72]

Harmony dissolved transformation into an intelligible construction process, negating he need for self-appointed architects. The objection was that egalitarianism threatened cultural mediocrity. As one critic put it, the construction of Scotland's Forth Bridge and "the names of Darwin, Joule, Helmholtz, and Pasteur" demonstrated just how much society had to lose from the repression of genius.[73] In anticipation, Kropotkin argued that brilliant people had not made the world by their singular efforts, whatever elitists argued to the contrary. The "universe as it exists now", he noted, "had been built up by the efforts of past and present generations, and things had been created not by the effort of one individual, but by the collective efforts of generations."[74]

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[69] Kropotkin, "What We Must Do," 28-31 at 31.

[70] Kropotkin, "What We Must Do", 31.

[71] Peter Kropotkin, "Act For Yourselves" in *Act For Yourselves*, 32-6 at 32.

[72] "Prince Kropotkin in Leicester, 'Is Socialism Practicable?'," *Supplement to the Leicester Chronicle and Leicestershire Mercury* 22 November 1890, 3.

[73] "Socialism in Science", *St. James's Gazette*, 10 March 1890, 4.

[74] "Prince Kropotkin in Leicester," 3.

Like his antiegalitarian foes, he found a metaphor in engineering. Lecturing in Aberdeen, he remarked that Benjamin Baker, the pioneering designer of the Forth Bridge, had in fact credited the workforce with the perfection of its novel cantilever beam. Constantly grappling with the "difficulties of detail," Baker had acknowledged that the ordinary workers had "rendered the construction of the bridge possible."[75] The conclusion Kropotkin drew was this acknowledgment was that collaboration, recognising the special role that each played in it, was essential to the success of any project.

The coming anarchy merely extended the practice of bridge-building to all fields of activity, dismantling hierarchies and establishing new priorities in the process. Kropotkin appealed to workers' to do "[e]verything which they could do in the direction of limiting the functions of government, of promoting the growth of the community." He continued: "If they did not want to be exploited or ill-treated they must not give anyone the power of doing so." And if they accepted "this idea to be right" then "they should not turn their back upon it and march in the opposite direction." The "only way of preparing for the future," Kropotkin concluded, was to "apply their principles on a smaller scale in their mutual relations."[76]

Turning to the process of transformation, Kropotkin argued that variation and uneven development were givens. Puncturing the idea of national liberation he remarked: "A nation is a complex being, and to expect uniformity where multiformity reigns would be to take and utterly erroneous view of public affairs."[77] Universal revolution was even more

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[75] "Socialism: Its Modern Tendencies: Lecture by Prince Kropotkin", *Aberdeen Journal* 29 October 1889.

[76] "Prince Kropotkin in Leicester," 3.

[77] Peter Kropotkin, "Local Action" in *Act For Yourselves*, 42-46 at 44.

absurd. To "imagine that in each separate State, all the nations will rise at a given moment as one man, with one uniform practical programme" was "an illusive [sic.] and dangerous dream."[78]

Harmonisation promoted voluntarism, as Spencer argued. Indeed, many of the examples of Kropotkin used to illustrate the dynamism of no-government ethics and no-capital economy were market driven. In *The Conquest of Bread*, a how-to guide to the logistics of revolution, he pointed to the construction of European railways and canals to support his contention that socialism could be achieved "*without the intervention of central government*".[79] Yet to deflect the criticisms of Hyndman and his ilk, he detached voluntarism from the profit-motive. In anarchy, common interest prevailed over the "authoritarian individualism which stifles us" and the "iniquitous organization of society as a whole".[80] The Royal National Lifeboat Institute was Kropotkin's favourite example of a not-for-profit voluntary organisation dedicated to collective well-being. But he also pointed to the work of scientists like Waldemar Haffkine who battled institutional anti-Semitism and a lack of resources to develop an effective cholera vaccine, injecting himself with prototypes to test their efficacy.[81] The easing of social divisions and the shift towards equality, he argued, would facilitate voluntarism by curbing self-interest. In the *Encyclopaedia Britannica*, Kropotkin

[78] Kropotkin, "Local Action", 44.

[79] Peter Kropotkin, *The Conquest of Bread* (London: Chapman & Hall, 1906), 176.

[80] Kropotkin, The Conquest of Bread, 169; 172.

[81] Peter Kropotkin, Recent Science Brain Structure – The Apprach of the 'Black Death' – Snake-Bite, *The Nineteenth Century*, LXII no. 254 (August 1896) 34-43.

predicted that "adjustment would be the easier to obtain" where harmony prevailed because "none of the forces would enjoy a special protection from the state."[82]

The process of harmonisation also necessarily involved adaptation to existing imperfect social conditions. In Canada in 1897, Kropotkin found an example. As A.G. Ivanov notes, he was greatly impressed with the "economic and commercial activities" of the cities he toured and by "the broad scope of their self-government."[83] In Manitoba, he recorded his observations of Mennonite settlers displaced from Ukraine. They had been "prosperous in Russia" and continued to "prosper in Canada" (1898: 503). By way of explanation, Kropotkin praised their age-old "semi-communistic" practices. However, he warned that the community elders' refusal to adjust inherited traditions to suit the Mennonites new environment was gradually eroding social cohesion. Frustrated by the inflexibility of Mennonite teachings, increasing numbers of alienated youth would likely quit.[84] Their desertion, he warned, would likely play into the hands of the first settler's destructive, "unbridled egoism."[85] Mennonite communities proved to be more resilient than Kropotkin forecast.[86] Nevertheless, the lesson he took from Manitoba was that it was hard to preserve "the economical and social bases of life" in capitalism,[87] let alone drive new experiments

[82] Kropotkin, 'Anarchism', 914.

[83] A.G. Ivanov, *Kropotkin and Canada* (Alberta, 2020), 122.

[84] Peter Kropotkin, "Some Of the Resources of Canada," *The Nineteenth Century* XLIII/253 (1898), 495-514 at 504.

[85] Ibid., 504.

[86] The impacts of urbanisation are discussed in Leo Driedger, *Mennonites in the Global Village* (Toronto, 2000).

[87] Kropotkin, Resources of Canada, 504.

conducive to anarchy. Indeed, Kropotkin judged the "change of economical relations" to be especially challenging; more complex "than the reform of political institutions."[88] The success of no-government ethics and no-capital economy depended on co-operation and solidarity. Kropotkin's divine plan provided the infrastructure.

Kropotkin's Divine Plan

Kropotkin found a pathway to resolve the complications no-capital economy in eighteenth-century geography, notably in the work of Carl Ritter and Alexander von Humboldt, two of his intellectual heroes. Together, they had pioneered *Erdkunde*, or geography, examining local phenomena to generate knowledge of the laws governing the Earth and mapping planetary interactions to complicate and unsettle existing configurations of power.[89] Redefining the objectives of Ritter's project, Kropotkin was as keen as they had been to use geography disruptively. Outlining his conception of the discipline in "What Geography Ought to Be", he found a fitting model for its operationalisation in T.H. Huxley's

[88] Peter Kropotkin, "What Must We Do" in Nicolas Walter and Heiner Becker eds. *Act For Yourselves: Articles from Freedom 1886-1907* (London, 1988), 28-31 at 30.

[89] For the eighteenth-century project see Ann Marie Claire Godelwska, "From Enlightenment Vision to Modern Science? Humbolt's Visual Thinking" in David N. Livingstone and Charles W.J. Withers eds. *Geography and Enlightenment* (Chicago & London: 1999), 236-75; Franco Farinelli, "Friedrich Ratzel and the Nature of (Political) Geography," *Political Geography* 19/8 (2000), 943-55; Walter Eric Boettcher, "Carl Ritter's Early Geographic Thought (1779-1817)" (unpublished Ph.D thesis, University of London, 1990), 95.

Physiography.[90] This book "defined for a generation the way in which the earth's physical features were studied in Britain" and shaped "the nature of school education" as geography rapidly expanded in the curriculum.[91] In Kropotkin's hands, it galvanised the movement towards no-capital economics.

Historical geographers frequently read "What Geography Ought to Be", an essay invited by James Scott Keltie, the Royal Geographical Society's Inspector of Geographical Education,[92] in one of two ways: as a contribution to live debates about the teaching of geography in British schools and universities[93] or as an exemplary statement of

[90] T.H. Huxley, *Physiography: An Introduction to the Study of Nature* (London, 1878).

[91] D.R. Stoddart, "'That Victorian science': Huxley's Physiography and its impact on geography", *Transactions of the Institute of British Geographers*, 66 (1975):17-40 at 17.

[92] M.J. Wise, "The Scott Keltie Report 1885 and the Teaching of Geography in Great Britain," *The Geographical Journal* 152/3 (1986), 367-82; Federico Ferretti, "Publishing Anarchism: Pyotr Kropotkin and British Print Cultures, 1876-1917," *Journal of Historical Geography* 57 (2017) 17-27 at 22.

[93] A.J. Fielding, "What Geographers Ought to Do: The Relation Between Thought and Action in the Life and Work of P. A. Kropotkin" *University of Sussex Research Papers in Geography,* 1980, 1-14; Innes M. Keighren, Christian Abrahamsson and Veronica della Dora, "On Canonical Geographies," *Dialogues in Human Geography* 2/3 (2021), 296-312; Michael Wise, "The Campaign for Geography in Education: The Work of the Geographical Association 1893-1993," *Geography* 78/2 (1993), 101-109; Richard Peet, "For Kropotkin", Antipode 7/2 (1975), 42-3; D.R. Stoddart, "Kropotkin, Reclus, and 'Relevant' Geography," *Area* 7/3 (1975), 188-90; Jim MacLaughlin, "State-Centred Social Science: Ideology in Political

internationalism that broke the mould of the "new geography" pioneered by Halford Mackinder, the liberal imperialist and future Professor of Geography at the LSE. [94] Internationalism features prominently in Kropotkin's thinking. Indeed, discussing "What Geography Ought to Be" in 1889, he told the Aberdeen meeting of the Royal Geographical Society that the duty of geographers was to contest hawkish notions of national particularity and stress the commonalities between peoples, especially the "likeness among toilers of the

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Geography", *Antipode* 18/1 (1986), 11-38; Simon Springer, "Anarchism! What Geography Still Ought to Be," *Antipode* 44/5 (2012), 1605-24).

[93] R. Mayhew, "Halford Mackinder's "New" Political Geography and the Geographical Tradition," *Political Geography* 19/6 (2000), 771-791 at 780; J.F. Unstead, "H.J. Mackinder and the New Geography," The *Geographical Journal*, 113 (Jan-June 1949) 47-57 at 53.

[94] The coincidence of Kropotkin's and Mackinder's views on science and education is discussed by Ferretti, "The correspondence between Elisée Reclus and Pëtr Kropotkin as a Source for the History of Geography," *Journal of Historical Geography* 37/2 (2011), 216-22. Mackinder's "new geography" is discussed in R. Mayhew, "Halford Mackinder's "New" Political Geography and the Geographical Tradition," *Political Geography* 19/6 (2000), 771-791 at 780; J.F. Unstead, "H.J. Mackinder and the New Geography," The *Geographical Journal*, 113 (Jan-June 1949) 47-57 at 53. His later Heartland Theory, a muscular form of geopolitics and belligerent realpolitik, is discussed in Gearóid Ó Tuathail, "Putting Mackinder in his Place: Material Transformations and Myth," *Political Geography* 11/1 (1992), 100-118; Gerry Kearns, "The Political Pivot of Geography," *The Geographical Journal* 170/4 (2004), 337-46; Lucian M. Ashworth, "Realism and the Spirit of 1919: Halford Mackinder, Geopolitics and the Reality of the League of Nations," *European Journal of International Relations* 17/2 (2010), 279-301.

soil."[95] Yet his internationalism was fractured through the lens of the coming anarchy and his interest in pedagogy and curriculum design predated and extended beyond schooling. Hinting at his wider goals, in 1877 he told his friend Paul Robin that he regarded "social geography" – the study of the origins of the earth, species, and mankind – as especially rich material for workers' education.[96] Ten years later, he told an interviewer that his turn to anarchism in 1871 had been spurred by his need to "practically advance" his scientific views.[97] There was a nexus between geography and anarchy.

Kropotkin's framing of geography dovetailed with approach adopted Elisée Reclus, a former student of Ritter, and Lev Metchnikov, [98] a leading Japanologist who "separately and

[95] "Prince Kropotkin in Aberdeen. Lecture in the Christian Institute Hall", *The Aberdeen Journal*, 26 March 1889, 6.

[96] Peter Kropotkin to Paul Robin, 29 March 1877, Nettlau Papers 2702, International Institute of Social History, Amsterdam.

[97] "Prince Kropotkin", *The Freeman's Journal*, 27 October 1887, 5.

[98] On Reclus see Marvin W. Mikesell, "Observations on the Writings of Elisée Reclus," *Geography* 44/4 (1959), 221-26; Gary S. Dunbar "Elisée Reclus in Louisiana," *Louisiana History: The Journal of the Louisiana Historical Association* 23/4 (1982), 341-52; Federico Ferretti, "'They Have the Right to Thow Us Out': Élisée Reclus' *New Universal Geography,*" *Antipode* 45/5 (2013) 1337-55; Pascale Siegrist, "Cosmopolis and Community: Éliseé Reclus and Pëtr Kropotkin on Spatial and Moral Unity, 1870s to 1900s," *Global Intellectual History*, 7/1 (2022), 47-64. On Metchnikov: Sho Konishi, "Reopening the 'Opening of Japan': A Russian-Japanese Revolutionary Encounter and the Vision of Anarchist Progress," *The American Historical Review*, 112/1 (2007), 101-30; Breno Viotto Pedrosa, "Léon Metchnikoff and the Building of a

almost simultaneously" with Kropotkin, had adopted the term mutual aid to describe co-operation as a leading factor in evolution.[99] In different ways each challenged conceptions of civilisation saturated by cultural and racial hierarchies, to turn geography to the analysis of mutability and the critique European domination. Patrick Geddes's remarks on Reclus hint at the romanticism of their project. In his obituary, Geddes commented that Reclus' life's work could be seen as a reaction to environmental destruction. Reclus had witnessed "virginal loveliness, pure from snow to sea, and cities still enthroned upon their past, each unique in its homely or its monumental beauty … ignorantly, ruthlessly demolished or transformed." Using concepts of change and adaptation hardwired into geography, each prized open a critical space to analyse statis, change, function and cause. Following the same path, Geddes gave an example of a destructive, extrinsic change designed to promote profit: the transformation of the Alps into "funicular hotel-playgrounds".[100]

In Kropotkin's perspective, geography was resistant and restorative; a scientific instrument for an experimental learning built on the acquisition, application and dissemination of knowledge about the environment. While he stopped short of endorsing Keltie's view of geography as the "mother of the sciences",[101] he argued that it was the

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Geographical Evolutionary Model: The Great Historical Rivers," *Geografares*, 1/32 (2021), 3-29.

[99] James D. White "Despotism and Anarchy: The Sociological Thought of L.I. Mechnikov," *The Slavonic and East European Review* 54/3 (1976), 359-411 at 397.

[100] Patrick Geddes, "A Great Geographer; Elisée Reclus, 1830-1905" *Scottish Geographical Magazine* 21/9, 490-96 at 495.

[101] J. Scott Keltie and O.J.R. Howarth, *History of Geography* (London, 1913), 1.

"most attractive" field for the study of science[102] and a cornerstone for the "complete reform in the teaching of all exact sciences."[103]

The typology Kropotkin outlined in "What Geography Ought to Be" set to one side conventional distinctions between human or social and physical geography and instead presented the discipline as a synthetic science with four inter-related fields: orogeny or mountain building, climatology, zoo- and phyto-geography – the study of the distribution of animals and plants - and the last and least developed in Kropotkin's estimation, "the study of the distribution of human families."[104] Each combined a range of specialisms. For example, phyto-geography had a biological aspect and drew on botany and zoology. The study of human distributions intersected with sociology and history to investigate ecology, ethnography, migration and urban development. It embraced the distribution of "races, beliefs, customs, and forms of property, and their close dependency on geographical conditions," the "aspirations and dreams of various races, in so far as they are influenced by the phenomena of nature," the "distribution of human settlements in each country" and "the geographical subdivision of territories into natural manufacturing basins, notwithstanding the obstacles opposed by political frontiers."[105]

Locating the practical value of geography in science, Kropotkin consciously elevated the discipline from a merely descriptive "*graphy*" to a "*logy*," a field for the discovery of "*laws*

[102] "Prince Kropotkin in Aberdeen", 6.

[103] Kropotkin, "What Geography Ought to Be", 943.

[104] Kropotkin, "What Geography Ought to Be", 949.

[105] Ibid., 949.

of a certain class of phenomena" and their systematisation.[106] As a general proposition, he argued:

> there are *types* of landscape and scenery on the Earth's surface as there are types of animals and plants, each of theme representing a definite group of physical causes which have acted to produce the result, and each of them playing a definite part in the distribution and destinies of organic life, as well as in the growth and development of separate civilisations.[107]

Confusingly, the elevation of geography to law aligned *Erdkunde* to anarchist cosmology. Kropotkin signalled the alignment in a discussion of science and art. It echoed Bakunin's earlier analysis in *God and the State*, though Kropotkin did not acknowledge this. Bakunin had defended science as "indispensable to the rational organization of society" and simultaneously warned that scientific study was "incapable of interesting itself in that which is real and living."[108] Science, he had argued, exposed the errors of "theology, metaphysics, politics, and judicial right" and promised to "reproduce ... to its fullest extent and all its infinite detail, the universe, the system or co-ordination of all the natural laws manifested by the incessant development of the world."[109] On the downside, it could not venture beyond "the sphere of abstractions." Art, representing the "return of abstraction to life" was its

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[106] Ibid., 947; 949.

[107] Peter Kropotkin, "On the Teaching of Physiography," *The Geographical Journal* 2/4 (1893), 350-59 at 356.

[108] Michael Bakunin, *God and The State* (New York, 1916), 62.

[109] Ibid., 43.

necessary counterpart. It contextualised "the types and situations which it conceives," made real life "permanent and immortal" and recalled "to our minds the living, real individualities which appear and disappear under our eyes."[110]

Kropotkin dissolved Bakunin's tension by reframing of science as art and attached the shortcomings Bakunin detected in science to social science. This was the argument he put in "The Coming Anarchy": social science was wedded to abstraction and detached from real life. Open any book "of sociology, history, law, or ethics," Kropotkin wrote, and "everywhere we find government, its organisation, its deeds, playing so prominent a part that we grow accustomed to suppose that the State and the political men are everything."[111] Warming to the theme, he contended that social science typically reinforced "prejudices" about "the providential function of government," guaranteeing that "anarchist ideas" were always "received with distrust."[112] The conceptual languages and analytical tools that had been honed by generations of economists, philosophers and ethicists were similarly steeped in statist ideas. The bias fatally undermined their educative value. Malthus's mathematics was a case in point.

In contrast to social science, science contained an abstract and concrete dimension. Its salient feature was the malleability of general rules or laws to contextual analysis and experience. Using an example from evolutionary biology in "The Scientific Bases of Anarchy", Kropotkin argued that science had enabled philosophers to set aside their speculative presuppositions and "deduce the laws of moral science from the social needs

[110] Ibid., 56-7.

[111] Kropotkin, "The Coming Anarchy," 154.

[112] Kropotkin, "The Scientific Bases of Anarchy," 243.

and habits of mankind."[113] As if directly addressing Bakunin, Kropotkin remarked, "what was formerly considered as an "art" rapidly becomes "science" nowadays."[114]

Defining geography as a science in this expansive sense, Kropotkin adapted Huxley's associative approach to knowledge acquisition to outline a practical plan of action. Huxley's view that science was "nothing but *trained and organized common sense*", chimed with Kropotkin's general view.[115] However, Kropotkin was less impressed with Huxley's associative theory which, he argued, extended observations about the local and familiar - *Heimatkunde* - to express complex or abstract ideas about the workings and study of the earth, or *Erdkunde*. In the first six pages of *Physiography*, Huxley worked up an apparently casual reflection about the flow of the Thames at London Bridge to explain ebb and flood tides, distinguish maps from charts and plans and explain principles of solar navigation.

Accusing Huxley of wrongly theorising *Heimatkunde* as an exemplar or illustration of *Erdkunde*, Kropotkin argued that the "study of one's own corner," could "*not* be used for the study of Nature altogether."[116] Nodding to Huxley's opening illustration, he continued: "To speak … of the distribution of rainfall in the British Isles, *à propos* of the water which flows under London Bridge, is as artificial and irrational as to develop the laws of friction of liquids, or those of the elasticity of solids, in connection with the same bridge." The laws discoverable in geography "as well as the distribution of climates on Earth, must be studied

[113] Ibid., 243.

[114] Kropotkin "Recent Science," 810.

[115] Huxley, quoted in D.R. Stoddart "'That Victorian Science': Huxley's Physiography and Its Impact on Geography," *Transactions of the Institute of British Geographers* 66 (1975), 17-40 at 18; 20.

[116] Kropotkin, "On Physiography," 2.

for themselves, not *à propos* of some features of the local landscape."[117] In Kropotkin's view, *Heimatkunde* was an excellent means "for giving a more concrete form to the acquired knowledge," and for "acquiring knowledge through personal work and personal observation."[118] Its value, Kropotkin contended, lay in the complexity of the map it generated and the parallel applications of *Erdkunde* it enabled.

The starting point for the development of *Erdkunde* was *Heimatkunde*, as Huxley proposed. But in Kropotkin's model, *Heimatkunde* referred to local, self-directed indigenous practice and *Erdkunde* referred to the collective wisdom it produced. Kropotkin's veneration of indigenous practice predated his anarchism. In his memoirs he remembered how badly his book-learning had equipped him for his expeditions in Siberia and the "floods of light" that his interactions with peoples there had thrown on his "subsequent reading."[119] Importing this into his revolutionary politics, in the 1880s he investigated the forces behind Finnish independence, contrasting the inartistic, philosophic stance of Swedish elites to the scientific bent of the Finnish peoples they ruled. The general lesson was that science "enforced the opinion of social reformers as to the necessity of modifying the conditions of life for improving man, instead of trying to improve human nature by moral teachings while life works in an opposite direction."[120] Thinking more specifically about the way science developed through reflection, he remarked:

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[117] Ibid., 2.

[118] Ibid., 2.

[119] Kropotkin, *Memoirs*, 216.

[120] "The Scientific Bases of Anarchy," 243.

> Contemplativeness — if I am permitted to use this ugly word — is another distinctive feature of the Finns: Tawastes, Samos, and Karelians are alike prone to it. Contemplation of nature, a meditative mute contemplation … is characteristic as well of the peasant as of the savant. It may be akin to, without being identical with, mystical reverie. It may, in certain circumstances, give rise to mysticism … but actually it gives rise among the instructed classes to a tendency towards a philosophic and pantheistic conception of nature … In science it causes savants to devote themselves rather to abstract mathematics, to astronomy, to the great problems of the physics of the earth, than to the merely descriptive sciences, these last being, as it seems, rather inherited from the science of Sweden.[121]

To preserve the richness of *Heimatkunde* as a source for global knowledge, Kropotkin embraced multilingualism to promote a form of perspectivism.[122] Anticipating protests from the "savants of Western Europe," he argued: the "true scientific man can no more ignore Scandinavian, Russian, Polish, Czechian, Hungarian, and Finnish scientific literature" or the necessity of "systematically bringing all works of importance, written in any language, to the knowledge of the whole of the scientific world."[123] Similarly, in Canada, in the 1890s, he recorded "the extensive knowledge of the North American Aboriginal Peoples in the fields

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[121] Peter Kropotkin, "Finland: A Rising Nationality," *The Nineteenth Century* XVII/97 (1885), 527-46 at 530-31.

[122] In contrast to anti-imperialists who leant Esperanto to counter trends towards linguistic purity. Sho Konishi, "Translingual World Order: Language Without Culture in Post-Russo-Japanese War Japan," *The Journal of Asian Studies* 72/1 (2013), 91-114 at 101.

[123] Kropotkin, "Finland", 542.

of astronomy, physical geography, and zoology."[124] Taking extensive notes from Daniel Brinton's 1883 *Library of Aboriginal American Literature*, a book that collated narratives, poetry and drama,[125] he linked traditional creation myths, notably the Algonquin's veneration of the turtle as the mother of life, to philosophically rich concepts of ecological interdependence.[126]

The networks and associations documented in "The Coming Anarchy" constituted the perfect laboratories for the development *Erdkunde*. In "What Geography Ought to Be" Kropotkin highlighted the work of the Agassiz Association to illustrate the possibilities. The Association, named after the Harvard professor Louis Agassiz, was a "union of 986 local societies, each numbering from 4 to 20 members, of all ages from 4 to 84." With "chapters" across the United States and "members in Canada, England, Ireland, Scotland, Chili, Japan, and Persia," the Association was constituted to "collect, study, and preserve natural objects and facts."[127] Enthusiastically reporting that the Agassiz farm in British Columbia had successfully cultivated fruit trees "on some small patches of open ground, amid the virgin forest, up to an altitude of 1,050 feet," Kropotkin regarded the association's open channels of communication as the organisation's special achievement.[128] Members "write to other branches … exchange with them their observations, their ideas, their specimens of minerals,

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[124] Ibid., 103.

[125] On Brinton, see Lee D. Baker, "Daniel Brinton's Success on the Road to Obscurity, 1890-99," *Cultural Anthropology* 15/3 (2000), 394-423.

[126] Ivanov, *Kropotkin and Canada*, 103-4. Ivanov suggests that Kropotkin remarked on the status of the tortoise, rather than the turtle.

[127] Harlan H. Ballard, *Handbook of the St. Nicholas Agassiz Association* (Pittsfield, MA: 1882), 6; Harland H. Ballard, "History of the Agassiz Association", *Science* 28/9 (1887), 93-96 at 94.

[128] Kropotkin, "Recent Science," 816.

plants, and animals." Canadians described "the scenery of Canada to friends in Texas" while "Swiss friends … send them the *Edelweiss* of the Alps, and their English friends instruct them in the geology of England."[129]

Similar independent, not-for-profit transnational exchanges explained why experimental farms in Canada were not "scattered over the territory in a haphazard way" and why "each of them … represents a sum of conditions of climate and soil which is typical for some large division of the Dominion."[130] Scientific exchange explained how farmers in America and Canada were able to develop hardy, high-yield cereal crops using Russian and Siberian varieties and why farmers in Vladivostok were also able to test those new varieties on Siberian farms.[131] It also explained how bacteriologists working in China, Japan and France were able to share research findings to produce serums capable of stalling the spread of the plague.[132] In sum, the process clarified how the ground for the discovery of transformative ideas and technologies was prepared and how science supported ethical interactions or mutual aid. Speaking in Oxford in 1899, he described the expansion of anarchy or "the natural development" of society against the "control and organisation of production under a representative Government" as a movement "towards a state of society where men would be brought into a condition of mutual knowledge of each other."[133]

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[129] Kropotkin, "What Geography Ought to Be," 952.

[130] Kropotkin, "Recent Science," 810.

[131] Ibid., 814.

[132] Peter Kropotkin, "Recent Science – Brain Structure, The Approach of the 'Black Death", Snake Bite", *The Nineteenth Century* XLII/245, (1897), 28-34.

[133] "Prince Kropotkin at the Town Hall", *Jackson's Oxford Journal*, 20 May 1899, 7.

Kropotkin's hope was that the spread of science, specifically geography, would revolutionise the social sciences, turning analysis from behavioural modelling towards practical physiography. Just as geo-logy transformed geography into a tool for the generation of Erdkunde, a new physiography of needs would transform political economy from the study of markets to the realisation of well-being. As Kropotkin put it, the new perspective would inspire the "study of the wealth of *individuals*" not the "study of the wealth of *nations*." As a practice comparable to geography, economics would investigate the means of satisfying the "needs of all with the least loss of power" and with a view to guaranteeing the greatest sum of individual and collective satisfaction.[134] The possibilities were endless. Knowledge, Kropotkin wrote in his memoirs, "is an immense power." Imagining the globalisation of science, the elimination of government and market controls he wondered: "What if that knowledge … should become the possession of all? Would not science itself progress in leaps, and cause mankind to make strides in production, invention, and social creation …?[135]

Conclusion

The essays Kropotkin published in the mid-1880s are not a "first or last or fullest summary of anarchist theory."[136] They are usually remembered because they provide a conspectus for the body of work Kropotkin published from the 1890s and for which he is best known. The decentralising trends, networks and projects he sketched in "The Coming Anarchy" and "The Scientific Bases of Anarchy" complemented the call to direct action he issued in *The*

[134] Kropotkin, *Anarchism Philosophy and Ideal*, 7.

[135] Kropotkin, *Memoirs*, 240.

[136] Nicolas Walter, "Introduction", *Peter Kropotkin Two Essays: Anarchism and Anarchist Communism: Its Basis and Principles* (London, 1987), 5.

Conquest of Bread (1892) and formed the crux of the political economy he advanced in *Fields, Factories and Workshops* (1898). Notions of free community, free agreement and social adaptation became central themes in *Mutual Aid* (1902) and *Ethics* (1921). Kropotkin revisited the arguments about science and moral sentiments in *Modern Science and Anarchism* (1902). Yet these earlier essays provide the crispest statement of his conception of the trends towards anarchy.

Kropotkin's fears about the late nineteenth-century patterning of global interconnection foreshadowed late twentieth century critiques of neo-liberal globalisation and the rise of globalism. His defence of interconnection, though uniformly neglected by internationalists and free-market federalists alike,[137] touched on themes explored by post-war intellectuals troubled by the devastation wrought by two global conflicts and exercised by the prospect of European decolonisation. Labelling this as the period as federalism's zenith, Merve Fejzula notes that these debates revolved around the questions Kropotkin probed: the character of inter-state relations, the logics of the global economic order and the benefits of pooling or dispersing state sovereignty.[138] Kropotkin's modelling of anarchy on harmony distinguished his response, providing a transformative framework for the assessment of ordinary capability:

> And when a physiologist speaks now of the life of a plant or of an animal, he sees rather an agglomeration, a colony of millions of separate individuals than a personality

[137] Or Rosenboim, "Barbara Wootton, Friedrich Hayek and the Debate on Democratic Federalism in the 1940s," *International History Review* 36/5, (2014), 894-918.

[138] Merve Fejzula, "The Cosmopolitan Historiography of Twentieth-Century Federalism," *The Historical Journal* 64/2 (2021), 477-500 at 500.

> one and indivisible. He speaks of a federation of digestive, sensual, nervous organs, all very intimately connected with one another, each feeling the consequence of the well-being or indisposition of each, but each living its own life. Each organ, each part of an organ in its turn is composed of independent cellules which associate to struggle against conditions unfavourable to their existence. The individual is quite a world of federations, a whole universe in himself.[139]

Rather than paint poverty, global inequality and violence as an inescapable reality, as Kaplan appears to do, Kropotkin resurrected Ritter's divine plan to maximise the flow of ideas, minimise hardship locally and reduce the necessity of forced migration. Contemplating the amount of energy and effort that was required to sustain the global market economy and the systemic injustices that provoked the movements of peoples he mused:

> Surely it is desirable that mankind should spread all over the globe, that it should take possession of it and carry on its civilisation, such as it is, to the remotest parts of the earth. This expansion has widened the circle of ideas, it has opened to thought wider horizons, it has shattered many traditions of old. But, looking on the matter from the point of view of economy – of well-being and the means to attain it – would it not have been better to apply a considerable part that energy at home? … what has driven the Mennonite from the South Russian Steppe to the Manitoba Steppe …? What drives the Galician to Saskatchewan, the Swede to Alberta, and the Scotchman to

[139] Kropotkin, Anarchism Philosophy and Ideal, 4.

> Ontario? The social conditions alone drive them from lands which badly want the work of their hands, but to which they are not allowed to give it.[140]

Kropotkin did not imagine that anarchy would come without struggle. Expropriation was the keyword in *The Conquest of Bread*. He told Leicester workers that socialism tapped into a "rapidly growing" feeling that capitalism was unjust and "obnoxious to society at large."[141] The substantive l issue that the coming anarchy raised was how to build and sustain no-government, no-capital systems. Kropotkin's answer was to incentivise collective actions that deconstructed state and capital.

The Kropotkin resisted socialist orthodoxy and the default to experts - designers and technicians equipped with the wherewithal to invent and manage non-market economic systems. This was the model G.A. Cohen returned to. His gloomy judgement was the planners' work was not yet done. Decrying Soviet centralisation, the kind of enslavement Kropotkin most feared, he modelled socialism on a camping trip. Sustainability, he argued, was demonstrable on a small scale, but socialists were still at a loss to show "*now* know how to replicate camping trip procedures on a nationwide scale, amid the complexity and variety that comes with nationwide size."[142] The only hope, he argued, was the further development of socialist theory. In sinking his hopes in practice, Kropotkin turned this model on its head.

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[140] Kropotkin, "Resources of Canada," 514.

[141] "Prince Kropotkin in Leicester," 3

[142] Ibid., 75.