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# The Legacy of Peter Kropotkin (1842–1921)

Anarcho

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Peter Kropotkin was above all else a revolutionary. While all-too-often remembered as the author of *Mutual Aid*, the gentile prince of co-operation, this picture of an anarcho-Santa is false. Kropotkin was no reformist, no naïve believer in cross-class cooperation. He was a revolutionary anarchist-communist who championed the direct struggle against capital for five decades. This is not to deny the importance of *Mutual Aid* and his ground-breaking exposition of what is now a staple of evolutionary theory, it is just to note that this was one aspect of a thinker who was the foremost theoretician of revolutionary anarchism from 1879 to 1914. In books like *Words of a Rebel* (1885), *Conquest of Bread* (1892) and *Modern Science and Anarchy* (1913) as well as countless newspaper articles, he popularised the core ideas of revolutionary anarchism: direct action and solidarity, anti-parliamentarianism, expropriation and insurrection.

His books are important contributions to anarchist theory, with *Words of a Rebel* primarily a libertarian critique of capitalist society and *Conquest of Bread* arguing for libertarian com-

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munism and how best to achieve it during a revolution. Both discussed how to get from criticism to implementation only in passing and while *Modern Science and Anarchy* was more forthcoming on current strategy, this was hardly its main concern. For that, to understand how Kropotkin saw anarchy being achieved, we need to turn to the articles he penned for the anarchist press which were not latter gathered together into books.

Sadly, these articles are relatively unknown and rarely reprinted, with only the collections *Act For Yourselves!* (1988) and *Direct Struggle Against Capital* (2014) including any. Yet without an awareness of them, Kropotkin's politics can be misconstrued as the most easily available of his texts are those that are very general and theoretical, *not* those dealing with the concrete political and strategic issues facing the anarchist movement. This means that he far too often gets cast as a visionary or as a theorist rather than as an active anarchist militant actively engaged in the issues of the day, grappling with challenges facing the workers' movement and anarchist strategies within and outwith it to produce social transformation.

His political life was bookended by two epochal events – the Paris Commune of 1871 and the Kronstadt revolt in 1921. The former played a pivotal role in him embracing anarchism and the latter, which erupted shortly after his death, confirmed his repeated warnings about Marxism. A critic of the Tzarist autocracy of which he was a scion, he avidly read Proudhon, Herzen and other radical thinkers as well as radical developments in Europe including the Parisian revolt and the International Workers' Association. Unsurprisingly, he took the opportunity of a trip to Switzerland in 1872 to discover more about both. After joining the International, he initially met with its reformist, pro-Marxist wing but soon found his spiritual home with the Jura Federation and become an anarchist. Although he never meet Bakunin during his visit,

he took his revolutionary ideas to heart and advocated the same tactics – which would later be called syndicalist – until his death. As Kropotkin put it in the *Encyclopaedia Britannica*:

the anarchists.... do not seek to constitute, and invite the working men not to constitute, political parties in the parliaments. Accordingly, since the foundation of the International Working Men's Association in 1864–1866, they have endeavoured to promote their ideas directly amongst the labour organisations and to induce those unions to a direct struggle against capital, without placing their faith in parliamentary legislation.

In terms of strategy, Kropotkin remained true to the labour-orientated position of the so-called Bakuninists. While many anarchists became infatuated with “propaganda by the deed” (initially in the sense of invoking uprisings, later individual acts of violence or destruction), Kropotkin argued for “the spirit of revolt” as change comes from below, by the masses. The role of revolutionaries is to encourage the masses’ self-confidence, self-activity and power from within the struggle rather than trying – fruitlessly – to inspire them from outwith by spectacular acts. While unwilling to criticise such actions – being concerned about joining the denunciation of genuine acts of resistance – he recognised that while such acts spontaneously occur in any struggle, they are not to be encouraged and were only one, small, aspect of a wider struggle which had to be collective to succeed. This was why Kropotkin regularly penned articles on the importance of union struggles:

We have to organise the workers’ forces – not to make them a fourth party in Parliament but to make them a formidable ENGINE OF STRUGGLE

AGAINST CAPITAL. We have to group workers of all trades with this single purpose: “war on capitalist exploitation!” And we must prosecute this war relentlessly, every day, by the strike, by agitation, *by every revolutionary means ...* once the workers of every land have seen this organisation at work, taking in its hands the defence of the workers’ interests, waging an unrelenting war on capital... once the workers from all trades, from villages and towns alike, are united into a single union... [they will] emerge victorious, having crushed the tyranny of Capital and State for good.

Unlike parliamentarianism, this direct struggle against Capital and State had a radicalising effect:

[H]owever moderate the battle-cry may be – provided that it is in the domain of the relations between capital and labour – as soon as it is put into practice by revolutionary means, it will eventually deepen and inevitably lead to demanding the overthrow of the regime of property. Whereas a party which confines itself within parliamentary politics ends up abandoning its programme, however advanced it was in the beginning: it ends up merged with the parties of bourgeois opportunism.

These arguments were repeated throughout his life and showed the importance he placed on anarchist involvement in the labour movement for raising the possibility of revolution as well as creating the bodies able to take over workplaces, expropriate the owners and start production up again under workers’ self-management. Unions, then, were considered “as *natural organs for the direct struggle with capital and for the organisation of the future order* — organs that are *inherently*

Brian Morris, *Kropotkin: The Politics of Community* (Oakland: PM Press, 2018)

Iain McKay, *Mutual Aid: An Introduction and Evaluation* 2<sup>nd</sup> Edition, (Edinburgh: AK Press, 2010).

Daniel Todes, “The Scientific Background of Kropotkin’s Mutual Aid”, *The Raven: Anarchist Quarterly* No. 24.

self-assertion, he suggests, was essential in the past, today *and* in any free society of the future to ensure social progress and individual freedom.

Too conclude, rather than a product of rose-tinted glasses or ideologically drive, *Mutual Aid* takes a dispassionate perspective on nature. It documents the many examples of cooperation within species, shows why it develops and points to the mechanism by which it is maintained. As such, it predates the conclusions of modern sociobiology by decades, which would have undoubtedly pleased Kropotkin as he repeatedly – for example, in *Modern Science and Anarchy* (1913) – linked anarchism to developments within numerous branches of science.

With the 100<sup>th</sup> anniversary of his death, we should not forget that Kropotkin's impact was wider than just anarchism. His contributions to evolutionary theory, while not without a few dead-ends, should be better known outwith the movement as well as being a source of pride within it. Kropotkin was far more than the writer of *Mutual Aid*. Just as he was a world-renown scientist, he was a world-renown revolutionary. His writings present a critique of modern society, an appealing vision of a better society and, just as importantly, a strategy of transforming the former into the latter. All three are still relevant.

#### *Further Reading*

Caroline Cahm, *Kropotkin and the Rise of Revolutionary Anarchism, 1872–1886* (Cambridge: Cambridge University Press, 1989).

Peter Kropotkin, *Direct Struggle Against Capital: A Peter Kropotkin Anthology* (Edinburgh: AK Press, 2014).

Peter Kropotkin, *Modern Science and Anarchy* (Edinburgh: AK Press, 2018)

*necessary* to achieve the workers' own goals." Just as Bakunin had championed the general strike, so Kropotkin recognised its potential for revolutionary change. However, he had no illusions that it was sufficient in-and-of-itself. Pointing to the example of American Great Railway Strike of 1877, he noted how it initially had popular support but then lost it because it disrupted the flow of necessities. The conclusion was obvious:

the insurgent people will not wait for any old government in its marvellous wisdom to decree economic reforms. They will abolish individual property by themselves... They will not stop short at expropriating the owners of social capital by a decree that will remain a dead letter; they will take possession and establish their rights of usufruct immediately. They will organise the workshops so that they continue production.

Given his perspective on the role of direct action by the masses in social change, Kropotkin regularly spoke at workers' events across Britain when ill-health did not intervene just as he had in Switzerland and France before his imprisonment in 1883. As such, he was no isolated intellectual and engaged with developments within the anarchist and labour movements as well as in the scientific community. He was particularly keen to point out the authoritarianism and growing reformism of Marxian Social-Democracy – and mocking their pretensions of being “scientific” – while pointing to the First International as an exemplar activists should embrace:

The enemy on whom we declare war being capital, it is against it that we will direct all our efforts, without letting ourselves be distracted from our goal by the phony agitation of political parties. The great struggle we are preparing for being

an essentially *economic* struggle, it is on the economic terrain that our agitation must take place... To be able to make the revolution, the mass of workers must be organised, and resistance and the strike are excellent means for organising workers. They have an immense advantage over those advocated at present (worker candidates, forming a workers' political party, etc.), namely not diverting the movement, but keeping it in constant struggle with the principal enemy, the capitalist... It is a question of organising in every town resistance societies for all trades, to create resistance funds and to fight against the exploiters, to unify the workers' organisations of each town and trade and to put them in contact with those of other towns, to federate them across France, to federate them across borders, internationally... It was by organising resistance against the boss that the International managed to group more than two million workers and to build up that force before which the bourgeoisie and governments trembled.

Yet Kropotkin, for all his championing of workers' struggle and organisation on the economic terrain, did not limit the fight for liberty and equality to the workplace. He also recognised the importance of community struggle and organisation, pointing to the example of the sections of the Great French Revolution, arguing that "through this institution it gained... immense power" and "[b]y acting in this way — and the libertarians would no doubt do the same today — the districts of Paris laid the foundations of a new, free, social organisation." Thus the struggle for freedom was to be waged in both the workplace and the community and the bodies created in this

pressions of mutual aid within current society, being the means by which working class people can defend themselves against the hostile environment of capitalism.

So it is important to stress that Kropotkin did not, as many like to suggest, ignore the fact of individual conflict within groups. As the subtitle of *Mutual Aid* indicates, he was well aware that it was simply "a factor of evolution" and he explicitly noted that his book was simply the first stage of a wider work which would seek to evaluate the relative importance of both factors in evolution. Thus *Mutual Aid* was deliberately one-sided in the sense of documenting beyond reasonable doubt that co-operation existed within nature, proving a fact which many scientists denied it or dismissed it as little more than wishful thinking in spite of its widespread existence within nature. It was, as Kropotkin stressed, "a book on the law of Mutual Aid, viewed at as one of the chief factors of evolution — not of *all* factors of evolution and their respective values."

As *Mutual Aid* shows, humanity's tendency to co-operate as equals faces our tendency to exploit and oppress others. He sketches how this conflict through the centuries is expressed in the rise and fall of institutions of mutual aid within the people and the corresponding rise and fall of ruling classes above them. Yet Kropotkin also saw the positive aspect of the self-assertion which so often destroyed or exploited co-operation for the benefit of the few. So while he indicated how individuals and classes can and do oppress and exploit their fellows (and how mutual aid institutions arise to resist that), he also argued that even the best social organisation can become crystallised and a hinderance to social evolution and individual flourishing. When that happens, then self-assertion is essential to break up these once useful but now stifling organisations and customs, renewing society from the dead-weight of the past while remaining true to the values of mutual aid. Rebels are needed both to resist hierarchy and social pressures gone wrong. Such

leaving serialisation of those deemed 'unfit' or 'degenerate' as the only alternative. Kropotkin rightly replied that "the great problem of medicine and social hygiene *is to eliminate the conditions which always produce new degenerate families*" which "contradicts the rantings of the 'eugenicists.'" ("Comment lutter contre la dégénérescence: Conclusions d'un professeur de physiologie", *Les Temps Nouveaux*, 8 and 15 November 1913)

We now know that genetic heritability, whether it is high or low, implies nothing about modifiability which is deeply impacted by environment and so nature and nurture interact. In other words, while Kropotkin – like Darwin – has been proven wrong in his favoured assumptions on the mechanism by which animals evolve, he was right to stress the impact of environment influences on individuals in terms of how their genetic inheritance develops. Ironically, the "hard" inheritance he spent so much time trying to refute between 1910 and 1914 actually provides a more secure basis for Kropotkin's position for Lamarckian evolutionary processes could mean that, given sufficient State repression, co-operative instincts could disappear. However, it should not be forgotten that Kropotkin recognised that cooperative instincts reflected a long evolutionary history as well as always rejecting the more superficial claims against Lamarckian theories (such as the notion that cutting off the tails of mice would soon produce a tailless offspring).

If conditions can shape individual animals and how they develop, the same can be said of how mutual aid instincts express themselves. Kropotkin was well aware that social conditions can impact on how much mutual aid was practiced in a given group or by an individual. This is why he wholeheartedly supported both class struggle and social revolution as the means of bolstering mutual aid tendencies within humanity – not least by eliminating the class divisions within it. Unsurprisingly, then, *Mutual Aid* indicates unions, strikes and co-operatives as ex-

would play their respective roles in the free society of the future.

However, Kropotkin was not blind to the limitations of even the most militant union or community grouping and recognised the need for anarchists to organise together to influence those in struggle:

The syndicate is absolutely necessary. It is the only form of worker's association which allows the direct struggle against capital to be carried on without a plunge into parliamentarianism. But, evidently, it does not achieve this goal automatically, since in Germany, in France and in England, we have the example of syndicates linked to the parliamentary struggle... There is need of the other element which Malatesta speaks of *and which Bakunin always professed*.

He also, like other anarchists, opposed all forms of oppression and exploitation and did not, as some incorrectly assert, only reject the State. He recognised that while the State's hierarchical, centralised and bureaucratic nature spawned privileged classes, this did not mean it was not an instrument forged to maintain the property and power of the economically dominant class. Indeed, a key aspect of his analysis of the State was that it had developed certain, defining in fact, features which secured minority rule. Both these factors meant the State could not be used to create socialism:

Developed in the course of history to establish and maintain the monopoly of land ownership in favour of one class... what means can the State provide to abolish this monopoly that the working class could not find in its own strength and groups? Then perfected during the course of

the nineteenth century to ensure the monopoly of industrial property, trade, and banking to new enriched classes... what advantages could the State provide for abolishing these same privileges? Could its governmental machine, developed for the creation and upholding of these privileges, now be used to abolish them? Would not the new function require new organs? And these new organs would they not have to be created by the workers themselves, in *their* unions, *their* federations, completely outside the State?

Resistance was fertile – not only did it change those who take part in it and society, it also creates the organisational structures of the future. The link between now and the future, between the tyranny of class society and the freedom of libertarian communism, was the class struggle, the direct struggle against capital and the State, waged in the workplaces and on the streets. These federated groups would provide those useful social functions required for the “satisfaction of all social needs” but which are currently monopolised by the capital and State in their own interests including “consumption, production and exchange, communications, sanitary arrangements, education, mutual protection against aggression, mutual aid, territorial defence; the satisfaction, finally, of scientific, artistic, literacy, entertainment needs.”

Yet getting rid of the bosses would only be the first stage of a long process in which the legacy of class society would be transformed to reflect the needs of a free people rather than those of profit and power. Kropotkin was well aware that the structure of industry, the nature of the work, how towns and cities have developed, to name just a few, were shaped by the power and priorities of capital and the State, so “while a thorough change in the present relations between labour and capital is becoming an imperious necessity, a thorough remodelling

incidence that these super-colonies are flourishing in the Jura Mountains, birthplace of revolutionary anarchism.

Yet, because Kropotkin died before the genetics breakthrough, some suggest that he provides no mechanism by which the traits required by mutual aid are inherited. This is true, as he lived before the definitive triumph of Mendelian inheritance within biology. Yet the same can be said of Darwin and that does not mean rejecting natural selection. Accepting Darwin’s theory, Kropotkin argued that co-operation within a species ensures that individual animals and their offspring have a better chance of survival in the face of a hostile environment. In short, the same mechanism Darwin pointed to was at the heart of mutual aid.

While Kropotkin did champion Lamarckian theories of inheritance against what he considered the baneful influence of August Weismann, this aspect of his ideas is no more required for mutual aid than Darwin’s pangenesis is for natural selection. So it must be stressed that Kropotkin’s Lamarckian tendencies and his opposition to Weismann, while now recognised as wrong, can be understood in the context of the ideological (rather than scientific) debates of the time. Lamarckian ideas were scientifically respectable then – and remained so until the 1930s – and Kropotkin had no difficulty proving Darwin’s own acceptance of them and how these came increasingly to the fore in subsequent editions of *On the Origins of Species* (in articles written for the *Nineteenth Century* after *Mutual Aid* was published). Kropotkin was rightly worried that Weismann’s arguments about heritability meant that an organism was unaffected by its environment. This came to the fore in the debates on eugenics which, as Kropotkin acidly noted, reflected “all the hatred of the upper classes of England against the poor of their nation”. Thus the notion that the environment had no impact on an organism reflected the reactionary notion that individuals were ‘born bad’ and so changing their social conditions was pointless,



informed of the origins of the ideas Dawkins popularises, noting how Kropotkin was the first amongst those who had “pondered the origins of a cooperative, and ultimately moral, society without invoking false pretence, Freudian denial schemes, or cultural indoctrination. In this they proved the true followers of Darwin.” (*Primates and Philosophers : how morality evolved*). So co-operation and altruism are as “Darwinian” as competition and selfishness, as the likes of Dawkins himself has shown.

Thus mutual aid explains the evolution of both co-operation, justice and altruism, all facts documented in animal life which have caused “nature, red in tooth and claw” biologists some concern (if they acknowledge it at all) as their theory suggests these simply cannot exist. Yet the very fact that “evolutionary theory” could even have “an altruism problem” in the first place shows both the limitation of the mainstream perspective and the impact of cultural and class influences on the scientists “discovering” it. Simply put, any “laws of evolution” which cannot explain co-operative and altruistic behaviour given their widespread existence are far from complete.

A recent example of this ideological blindness is shown by the discovery of ant colonies which include genetically unrelated ants. Mainstream socio-biology explains ant co-operation by colonies sharing a common genetic heritage (just as kinship is used to explain animal cooperation within groups). These mega-colonies, according to some so-called scientists, violate “the laws of evolution”. Yet they do no such thing: they simply violate *their* theory of evolution, which is clearly incomplete. Kropotkin, in contrast, would have had little difficulty in explaining why the ants co-operate – rather than wage war over resources, expending energy killing or being killed, they use that time and energy to work together to best utilise those resources and so secure a better existence for themselves and ensure their offspring survive. It is surely a delightful cosmic co-

of the whole of our industrial organisation has also become unavoidable. “Expropriation, then, was the start, not the end, of the revolution.

Like earlier anarchist thinkers like Proudhon and Bakunin, Kropotkin envisioned the transformation of work once workers were managing their own productive activity and workplaces. The crippling division of labour of capitalism would be replaced by the integration of brain and brawn work, agriculture and industry, to produce a satisfying and ecologically balanced work-life. In *Fields, Factories and Workshops* (1898, 1912) he showed, with his usual flare for empirical evidence, that this was no utopian vision but rather reflected tendencies already existing within capitalist society (albeit tendencies subject to the pressures of the political, economic and class power within it). Likewise, while favouring the decentralisation and integration of industry and agriculture, he recognised that certain industries and products required an objective size (“oceanic steamers cannot be built in village factories”) and did not see the end of global interaction (“Not to reduce... the world-exchange: it may still grow in bulk; but to limit it to the exchange of what really must be exchanged”). Rather than fetishise local, small-scale, production as many assert, Kropotkin advocated *appropriate* levels of both to help humanise work.

The main difference between anarchist-communism and the early forms of anarchism, whether Proudhon’s mutualism or Bakunin’s collectivism, was primarily to do with distribution as all advocated workers’ management of production. Rather than distribution according to the work done (by deeds), Kropotkin championed free distribution (by needs). While undoubtedly the most famous, persuasive and appealing advocate of libertarian communism, he did not invent it. Rather, it initially developed within the Italian sections of the First International in the mid-1870s while he was in a Tsarist jail. Indeed, Kropotkin was still referring to Collectivism in articles

written in 1879, championed communism from the following year.

Given that communism has been advocated by authoritarians before and after Kropotkin, it is important to stress that all that is meant by the term is simply the maxim “from each according to the ability, to each according to their needs”. It does *not* imply a commitment to central planning (as in the USSR), quite the reverse as communism “must result from thousands of separate local actions, all directed towards the same aim. It cannot be dictated by a central body: it must result from the numberless local needs and wants.” It was needed for many reasons, including the fact that “in the present state of industry, when everything is interdependent, when each branch of production is knit up with all the rest, the attempt to claim an individualist origin for the products of industry is untenable.” So it “is utterly impossible to draw a distinction between the work of each” and to “estimate the share of each in the riches which *all* contribute to amass”. Modern production is collective and each task is as important as another for if one is not done the whole suffers.

More importantly, it was fairer to share according to need as rewarding labour done did not take into account the many factors that impact on a person’s ability to work. Thus “a man of forty, father of three children, has other needs than a young man of twenty” and “the woman who suckles her infant and spends sleepless nights at its bedside, cannot do as much *work* as the man who has slept peacefully.” Moreover, “the needs of the individual, do not always correspond to his *works*.” This is obviously the case with children, the sick and the elderly and so we should “put the *needs* above the *works*, and first of all to recognise *the right to live*, and later on *the right to well-being* for all those who took their share in production.”

Libertarian communism, Kropotkin stressed, was “the best basis for individual development and freedom; not that individualism which drives men to the war of each against all” but

natural consequence of selection for reciprocal altruism. That is, you could easily imagine that sense of fairness would evolve as a way of regulating reciprocal tendencies.” Yet this *had* been anticipated in *Mutual Aid*:

“Moreover, it is evident that life in societies would be utterly impossible without a corresponding development of social feelings, and, especially, of a certain collective sense of justice growing to become a habit ... And feelings of justice develop, more or less, with all gregarious animals.”

Here it is worthwhile noting that mutual aid is not the same as altruism. While the latter, strictly defined, implies a sacrifice to the giver and a benefit to the receiver, mutual aid implies a benefit to both parties. Thus a wolf pack cooperates because by so doing the individual animals will have access to more food than if they hunted alone. Likewise, their prey cooperate because it gives them a better chance of defending themselves and their offspring against the wolves. Thus the desire to survive drives co-operation rather than some vague altruistic sentiment.

Yet mutual aid is related to altruism for, as Kropotkin put it in an article in the *Nineteen Century* later revised for his book *Ethics*, “*Mutual Aid-Justice-Morality* are thus the consecutive steps of an ascending series.” Morality “developed later than the others” and so was “an unstable feeling and the least imperative of the three.” Mutual aid simply ensured “the ground is prepared for the further and the more general development of more refined relations.”

The idea that morality has evolved as a product of social life is also becoming well-established in modern science. Dawkins summarised this work in *The God Delusion* which has a useful discussion of “*Does our moral sense have a Darwinian Origin?*” However, Dutch primatologist Frans de Waal is better

tual support.” Life in common meant while individual competition existed, these “unsociable instincts have no opportunity to develop, and the general result is peace and harmony” for “[i]f every individual were constantly abusing its personal advantages without the others interfering in favour of the wronged, no society-life would be possible.”

Thus Kropotkin postulated the mechanism by which co-operative behaviour could flourish long before Triver’s work and “Tit-for-Tat”. Unsurprisingly, he stressed the need for social pressure to minimise anti-social behaviour in an anarchist society in such works as *Anarchist Morality* and *Conquest of Bread* (both published before *Mutual Aid*). Kropotkin’s co-operators are not “suckers”, to use Richard Dawkins terminology, but rather “grudgers”, individuals who co-operate but “if any individual cheats them, they remember the incident and bear a grudge.” In this way, individual who co-operate flourish while those who abuse the helpfulness of their neighbours suffer and eventually disappear into an evolutionary dead-end.

Mutual aid is now a staple of evolutionary theory but better known by Triver’s nomenclature, “reciprocal altruism”. As Stephen Jay Gould noted in his classic (if unfortunately entitled) essay “Kropotkin was no crackpot” concluded, “Kropotkin’s basic argument is correct. Struggle does occur in many modes, and some lead to co-operation among members of a species as the best pathway to advantage for individuals”. Moreover, Kropotkin showed that “mutual aid must benefit individual organisms in Darwin’s world of explanation” and so “did include the orthodox solution as his primary justification for mutual aid.” (*Bully for Brontosaurus*) Other biologists and naturalists have made the same point.

This is not the only aspect of Trivers’ ideas which Kropotkin predated by decades. Trivers suggested that a “very agreeable feature of my reciprocal altruism, which I had not anticipated in advance, was that a sense of justice or fairness seemed a

“that which represents the full expansion of man’s faculties, the superior development of what is original in him, the greatest fruitfulness of intelligence, feeling and will.” This was because the “most powerful development of individuality, of individual originality” can “only be produced when the first needs of food and shelter are satisfied” and “when man’s time is no longer taken up by the meaner side of daily subsistence, — then only, his intelligence, his artistic taste, his inventive spirit, his genius, can develop freely and ever strive to greater achievements.”

While Peter Kropotkin is today best remembered as a leading anarchist thinker, one of the most persuasive advocates of anarchist communism, we should not forget that he was also a world-renown scientist, a geographer who revolutionised our understanding of the physical features of Asia. His stature was such that as well as his justly famous – and much reprinted – entry on Anarchism for the 11<sup>th</sup> Edition of the *Encyclopaedia Britannica*, he also contributed entries on the physical and human geography of Russia and Asia.

Little wonder an obituary was published in *The Geographical Journal* expressing regret that Kropotkin’s “absorption” in his political activities “seriously diminished the services which otherwise he might have rendered to Geography.” He “was a keen observer, with a well-trained intellect, familiar with all the sciences bearing on his subject” and his “contributions to geographical science are of the highest value.”

Kropotkin considered it essential for socialists to earn their own living and while in exile in Britain did so by writing for scientific journals and on scientific topics for leading journals, primarily *The Nineteenth Century*. As well as writing its “Recent Science” column between 1892 and 1902 (with ill-health ending that source of income), he wrote on a whole range of issues – from anarchism (contributing two articles in 1887 which would later be revised as the Freedom Press pamphlet *Anarchist Communism: Its Basis and Principles*), to commentary on events in Russia and on the self-defeating nature of prisons (based on

his own experiences in French and Russian jails). It was in its pages that he first expounded his most famous scientific work, namely popularising the theory of mutual aid within evolution and its ramifications (such as the evolution of morality).

Like communist-anarchism (which had arisen first in the Italian section of the First International whilst Kropotkin was imprisoned in Tzarist Russia), the theory of mutual aid was advocated by many Russian scientists before Kropotkin became its most famous champion. As Daniel P. Todes has shown in *Darwin Without Malthus: The Struggle for Existence in Russian Evolutionary Thought* (1989), the idea that co-operation existed in nature just as much, if not more so, than competition was commonplace in Russia in the late nineteenth century. Kropotkin, as he himself admitted, was simply popularising the theory to a British audience and backing his account up with substantial empirical evidence.

Regardless of what some claim, *Mutual Aid: A Factor of Evolution* (1902) is not an anarchist work. Rather, like his *Fields, Factories and Workshops* (1898, 1912), it is a work of popular science written by a leading anarchist thinker. Its conclusion – that co-operation between individuals of the same species is more beneficial than competition – can be agreed to without having anarchist politics, particularly given the wealth of evidence Kropotkin marshals to support his argument (he added new evidence when he revised *Mutual Aid* for the 1907 Russian edition). The book showed that “those animals which acquire habits of mutual aid are undoubtedly the fittest” because “life in societies is the most powerful weapon in the struggle for life, taken in its widest sense.” Thus co-operation provides “more chances to survive” and animals and humans “find in association the best arms for the struggle for life: understood, of course, in its wide Darwinian sense.”

So the basic idea of mutual aid is simple enough: animals which co-operative together have a greater chance of survival than those which do not. In other words, a group of, say, apes

would survive and reproduce far better by working together against the trials and tribulations nature throws at it than one whose members were constantly at each other’s throats. Moreover, as Kropotkin makes clear, the theory of mutual aid is not anti-Darwinian and he repeatedly notes its origins in Darwin’s own works, especially *The Descent of Man*. That he penned it in response to the speculations of Thomas Henry Huxley, “Darwin’s Bulldog”, on “The Struggle for Existence in Human Society” is an irony which should not be forgotten.

Given this, it comes as no surprise that the theory of mutual aid was later independently rediscovered by scientists. Robert Trivers, in *The Evolution of Reciprocal Altruism* (1971), showed that “under certain conditions natural selection favours these altruistic behaviours because in the long run they benefit the organism performing them.” This was summarised by Richard Dawkins in the second (and subsequent) editions of *The Selfish Gene* and its discussion of “Tit-for-Tat”, namely if animals co-operated by default and subsequently repeat (reciprocate) what another did previously (i.e., it will never be the first to defect and will retaliate against selfish behaviour) then co-operation becomes the best evolutionary strategy.

Dawkins rightly suggests that “Tit for Tat” ensures animals “prosper from mutual co-operation” and does so by rewarding co-operative behaviour and punishing those who do not reciprocate. This echoes Kropotkin, who argued that the uncooperative would be penalised, that “selfish” individuals would be “treated as an enemy, or worse” by their fellows. While not the focus of his book (which was to document the co-operative behaviour so many Victorian scientists denied), a close reading of *Mutual Aid* shows that it addresses the issue of individuals abusing the cooperativeness of their colleagues. Kropotkin acknowledged that “anti-social instincts continue to exist” but “natural selection continually must eliminate them” as those with “predatory inclinations” would be “eliminated in favour of those who understand the advantages of sociable life and mu-