Theory, strategy – Revolution in a Warming World: Lessons from the Russian to the Syrian Revolutions

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It doesn't take much imagination to associate climate change with revolution. If the planetary order upon which all societies are built starts breaking down, how can they possibly remain stable? Various more or less horrifying scenarios of upheaval have long been extrapolated from soaring temperatures. In his novel *The Drowned World* from 1962, today often considered the first prophetic work of climate fiction, J. G. Ballard conjured up melting icecaps, an English capital submerged under tropical marshes and populations fleeing the unbearable heat toward polar redoubts. The UN directorate seeking to manage the migration flows assumed that 'within the new perimeters described by the Arctic and Antarctic Circles life would continue much as before, with the same social and domestic relationships, by and large the same ambitions and satisfactions' – but that assumption 'was obviously fallacious.' [1] A drowned world would be nothing like the one hitherto known.

In more recent years, the American military establishment has dominated this subgenre of climate projection. Extreme weather events, the Senate learned from the 2013 edition of the 'worldwide threat assessment' compiled by the U.S. intelligence community, will put food markets under serious strain, 'triggering riots, civil disobedience, and vandalism.' [2] If the armed forces are firefighters tasked with suppressing outbreaks of rebellion, their workload will increase in a warming world. Pursuing its consistent and candid interest in the issue, in such stark contrast to the denialism of the American right, the Pentagon submitted a report to Congress in July 2015 detailing how all combatant commands are now integrating climate change into their planning.

The 'threat multiplier' is already at work, undermining fragile governments, turning populations against rulers unable to meet their needs: and it will only get worse. [3] Most of it will play out in overcrowded littorals. In *Out of the Mountains: The Coming Age of the Urban Guerilla*, David Kilcullen, perhaps the most astute mandarin of the military wing of the empire, predicts a near future of megacities in the Global South filled to the brim with restless masses, mostly on low-lying coastal land; not only cutting into their food and water supplies, climate change will threaten to directly drown those masses. How can they not pick up whatever arms they have and start marching? Mixing lessons from the second intifada, Central Asian jihads, the Arab Spring and the Occupy movement, Kilcullen envisions a century of permanent counterinsurgency in hot slums sliding into the sea. [4]

So far, the sworn enemies of revolution have dominated this frenzy of speculation. Little input has

come from the other side: from the partisans of the idea that the present order needs to be overthrown or else things will turn out very badly. But if the strategic environment of counterinsurgency is shifting, so is – by definition – that of revolutionaries, who then have just as compelling a reason to analyze what lies in store. The imbalance in the amount of preparation is glaring. Those who pledge allegiance to the revolutionary tradition – in whose collective mind the experience of 1917 will probably always loom large – should dare to use their imagination as productively as any writer of intelligence reports or works of fiction. One might begin by distinguishing between four possible configurations of revolution and heat.

Revolution As Symptom

How can rising temperatures translate into social turbulence? In a pair of papers which have caused a stir in the research community, Solomon M. Hsiang and his colleagues collect some fifty data sets covering 10,000 years of world history, feed numbers into their computer models and distil a straight link from heat to various forms of confrontation. On all scales and in all cultures, anomalously hot weather induces hostile honking, police brutality, baseball pitchers hitting batters, urban riots and, at the end of the spectrum, 'the forcible removal of rulers.' Somehow exceptional warmth incites more contentious behaviour in individuals, and the effect is three times larger for 'intergroup conflict,' the box in which the spectre of revolution appears. [5] Claiming robust quantitative proof of causation, Hsiang *et al.* proceed to conclude that if the past is anything to go by, a hotter twenty-first century will see all manner of strife – 'the future holds nothing else but confrontation,' they could have quoted the opening lines of *Public Enemy's Apocalypse 91*.

Naturally, critics have taken aim at the deceptive simplicity of this thesis. By placing all other variables within brackets – a prerequisite for isolating the climate factor – Hsiang and his colleagues effectively invent a unilinear, monocausal mechanism: bad weather–conflict. [6] That criticism could be taken one step further. If there is any link between climate change and the kind of unrest that may issue in a full-fledged revolution, it cannot possibly be immediate. No matter how hot it gets, no one will ever go on strike or attack a police station just for feeling over-heated. There has to be a pre-existing score to settle, some sort of simmering rage brought toward a boiling-point, for otherwise the aggression would be completely random, and so unable to feed into collective action of any significance (hostile honking here excluded). The statistical methodology of Hsiang *et al.*, in which everything but climate is relegated to the dead category of *ceteris paribus*, should be inverted: if the aim is to understand how global warming may set off discord, it must not be posited as acting on its own. [7]

That criticism, however, also curves back on some of the critics of the thesis. Laying all emphasis on the variables omitted by Hsiang et al., one team of researchers argues that 'it is probably more critical to understand "the nature of the state" than the "state of nature."' [8] Given that climate never operates in isolation – this is the logic of the argument – it cannot really be that important. But that is to jump to the mirror error. That the violent repercussions of global warming must have travelled along social pathways does not make the process any less powerful. Unmediated, exclusive causation cannot be posited as a criterion for the efficacy of climate change in calling forth something like a revolution, for that would presuppose an empty planet, the non-existence of human societies on earth. Since there are societies – in whose absence we would not have had fossil fuel combustion in the first place, nor contentious politics in streets or squares – any climatic spark will always burn through relations between people on its way to an explosion. Even societies crumbling under four degrees of warming will be shot through with inequalities of power. The critical state of nature is mediated – in no way negated – by the nature of the state. Or, in short, it is a matter of articulation. That is what needs to be understood and acted upon.

This academic debate now has a testing ground where the stakes count in millions of human lives: Syria. In the years leading up to the outbreak of the 2011 revolution, that country reeled under an epochal drought. Sustaining the agriculture of the Mediterranean basin since time immemorial, a relatively stable regime of rainfall coming in from the sea between November and April abruptly gave way, in the 1970s, to a trend of ever more fickle precipitation and persistent drying. [9] The worst effected corner was the Levant, particularly the area known as the Fertile Crescent, and particularly the part of it located in Syria. 1998 marked another shift toward semi-permanent Syrian drought, the severity of which, tree rings reveal, has no equivalent in the past 900 years. [10] Not only have the winter rains failed, but the higher temperatures have also sped up evaporation in summertime, depleting groundwater and streams and parching the soil. [11] There is no natural explanation for the trend. It can only be ascribed to the emissions of greenhouse gases.

The Syrian drought reached its highest peak of intensity so far in the years 2006-2010, when the sky stayed blue for longer than anyone could remember. The breadbasket of the northeastern provinces collapsed. Wheat and barley crops more than halved; by February 2010, nearly all livestock herds had been obliterated. In October of that year, the calamity reached the pages of the *New York Times*, whose reporter described how 'hundreds of villages have been abandoned as farmlands turn to cracked desert and grazing animals die off. Sandstorms have become far more common, and vast tent cities of dispossessed farmers and their families have risen up around the larger towns and cities of Syria.' [12] Estimates range between one and two million displaced farmers and herders. Fleeing the wastelands, they hunkered down on the outskirts of Damascus, Aleppo, Homs, Hama, joining the ranks of proletarians seeking to find a living from construction work, taxi-driving, or any other, mostly unavailable, job. But they were not alone in feeling the heat. Due to the drought, the marketplaces of the country exhibited one of the central vectors of climatic influence on popular livelihoods: doubling, tripling, uncontrollably spiking food prices. [13]

What did the regime of Bashar al-Assad do when the people ate dust? The onset of the peak drought coincided almost exactly with a concerted push to renovate the foundation of the Syrian ruling class. After years of sclerosis, Assad and his closest accomplices resolved to nurture a fresh clique of private businessmen, encourage them to seize hold of large swathes of the economy and task them with launching a bonanza of accumulation. While the crops withered, real estate markets underwent fabulous booms, free trade zones opened up, investments poured in from the Gulf and Iran, luxury boutiques and fancy cafes sprang up in the centres of Damascus and Aleppo, a first car factory was constructed, plans were tabled for rebuilding the entire centre of Homs into a model of Dubai complete with golf courses and residential towers. One individual, Rami Makhlouf, owner of mobile phone operator SyriaTel and king of the crony capitalists, reputedly extended his tentacles into 60 per cent of the economy. [14] In the countryside, the regime matched the dust bowl with a new law allowing landowners to expel their tenants. Subsidies on fuel and food were slashed. State farmlands ended up in the pockets of private entrepreneurs, water in the thirsty cotton plantations and other vain agribusiness projects. [15] In *Burning Country: Syrians in Revolution and War*, Robin Yassin-Kassab and Leila al-Shami capture the scene after four years of extreme drought: 'water shortages plagued the cities too – during the hot summer months the taps sometimes only flowed once a week in poorer areas, while the lawns of the rich remained lush and green.' [16]

And then Syria exploded. Starting in Dera'a – a town in the southern outpost of the agricultural heartland, nearly as heavily impacted by the drought as the northeast – the Syrian revolution stood out in the Arab Spring for having its basis outside the main city centres. [17] The people who first dared to march, chanting against Assad and smashing the windows of SyriaTel, lived either in rural regions or in neighbourhoods on the peripheries of the cities, where large numbers of migrants had taken up residence. When the demonstrations morphed into civil war in 2012, the armed rebels streaming into the cities from their liberated villages found the most avid support precisely in those

neighbourhoods, in a geographical pattern that has persisted ever since (witness eastern Ghouta or northern and eastern Aleppo). Looking back on one year of revolution in Jadaliyya, Suzanne Saleeby summed up the lingering effects of the drought: 'In these recent months, Syrian cities have served as junctures where the grievances of displaced rural migrants and disenfranchised urban residents meet and come to question the very nature and distribution of power.' [18] Combined with a host of other sparks, climate change, it seems, had ignited the fuse.

But to some activists and scholars, that thought is obnoxious. Francesca De Châtel has argued against ascribing any role in the Syrian crisis to the climate. To make her case, she must first brush aside all the signs that the pre-revolution drought was unprecedented and anthropogenic. Instead, she claims, it was but a routine episode in a country accustomed to dry weather, with no demonstrated ties to rising temperatures. [19] Global warming poses no serious threat to Syria's water resources – any scarcity is the regime's own doing. Blaming fossil fuel combustion is to chime in with the Assad propaganda. The 'role of climate change in this chain of events is not only irrelevant; it is also an unhelpful distraction,' lending credence to the efforts of the regime to 'blame external factors for its own failings.' [20] It remains to be investigated how revolutionaries on the ground perceive the situation, but it is not inconceivable that many of them would agree. We are fighting Assad and Makhlouf, not ExxonMobil or Chinese coal!

And yet De Châtel's argument is flawed in several respects. Firstly, it is premised on a sort of local climate denialism that cannot stand up against the overwhelming scientific evidence. Secondly, if we were to follow the principle that global warming should not be attributed any responsibility for miseries to which provincial exploiters and oppressors have also made contributions, then that planetary fire – and more precisely, the people who have lit it, maintained it, and pour fuel on it on a daily basis – would be very successfully exonerated. Thirdly, and most importantly, the marks of climate change on Syria's fate by no means wipes Assad's slate clean. Had the country been a perfect democracy, in which households shared resources equally and made sure to distribute water and food to those who suffered losses, the drought might still have caused stress and even widespread hunger, but it could not possibly have contributed to a revolution. That could only happen because the climatic impact was articulated through the social formation over which Assad presided – or more simply put, the drought could only push people toward rebellion because some lawns were perversely lush and green. Climate change does not take away any of the iniquities of the regime: it is constituted as a destabilizing force in relation to them. [21]

The Levant has seen a similar logic play out before. In *The Climate of Rebellion in the Early Modern Ottoman Empire*, Sam White tells the story of how that empire came close to falling apart in the early seventeenth century when a series of extraordinarily severe droughts crippled what is today eastern Turkey and Syria. [22] The droughts were the result not of global warming, but of global cooling caused by the natural drop in solar radiation known as the Little Ice Age. Freezing dry winters killed off the crops and cattle of Anatolian and Levantine peasants – and how did the sultan respond? By levying heavier taxes on those peasants, forcing them to deliver greater quantities of grain, sheep and other provisions to the imperial capital and its armies. Just as famine spread on the plains, the centre moved to squeeze them ever harder, and it was this additional curse, White stresses, that tipped the hungry peasants into open revolt. Starting around the turn of the century, they attacked tax collectors, raided stores and set up military units, coalescing into the great armies of the Celali rebellion, whose territories at one point stretched from Ankara to Aleppo. The sultan eventually defeated the Celalis, but a cycle of drought–higher taxes–rebellion–greater deficits in provisioning–even higher taxes continued to roll through the Empire in the seventeenth century. In 1648, the sultan and his detested grand vizier were killed in a rare uprising in the heart of Istanbul, whose chronic problems of food supply, public health and low wages had been exacerbated by the massive influx of refugees from the desolated countryside: 'when the people saw that the sultan's

favorites still had water while the mosques and fountains went dry, they rose up and forced out the grand vizier.' [23]

We can thus propose a first hypothesis for a Marxist theory of climate-induced social confrontation. 'The specific economic form,' Marx writes in the third volume of *Capital*, 'in which unpaid surplus labour is pumped out of the direct producers determines the relationship of domination and servitude.' [24] Now if the direct producers experience a climatic shock that reduces their capacity to reproduce themselves, and if the pump continues to operate or even accelerates, sending ever more resources toward the top, chances are that the former will rise up. If they cannot command the clouds to open, at least they can break the pump that takes away what little they have left. These are the relations of domination and servitude through which the impact of climate change is fundamentally articulated. In the case of the Ottoman Empire, they ran along the axis of taxes pumped out of peasants and into the imperial capital, and the shock was of an entirely natural character. What can we expect in a capitalist world rapidly heating up because of fossil fuel combustion? Now the central pump would seem to be the extraction of surplus-value from productive labour. Is the shock felt at the bottom here, too?

There are indications that a new bone of contention between classes is being formed. In the report *Climate Change and Labour: Impacts of Heat in the Workplace*, several union federations and UN branches draw attention to what might be the most universal and the most widely ignored experience of global warming: it's getting hotter at work. [25] Physical labour makes the body warm. If it takes place under the sun or inside facilities without advanced air-conditioning systems, excessively high temperatures will make the sweat flow more profusely and the bodily powers sag, until the worker suffers heat exhaustion or worse. This will not be an ordeal for the average software developer or financial adviser. But for people who pick vegetables, build skyscrapers, pave roads, drive buses, sew clothes in poorly ventilated factories or mend cars in slum workshops, it already is; and the bulk of exceptionally hot working days are now anthropogenic in nature. With every little rise in average temperatures on Earth, thermal conditions in millions of workplaces around the world shift further, primarily in the tropical and subtropical regions where the majority of the working population – some four billion people – live their days. For every degree, a greater chunk of output will be lost, estimated to reach more than a third of total production after four degrees: in this heat, workers simply cannot keep up the same pace. Or can they? Here is a source of any number of clashes, since workers will have to slow down and take long breaks, while capitalists and their representatives – if their entire past is anything to go by – will demand that production be maintained (and preferably sped up). In a hotter capitalist world, the pump can only extract the same amount of surplus-value by squeezing the last drop of sweat out of workers, but on the other side of some locally determined tipping point, that might not be sustainable.

A workers' revolution to win rest in the shade? Probably not. If the conflict between the victims of drought and the insatiable sultan of the Ottoman Empire was straightforward enough, the equivalents in the twenty-first century look set to be rather more complex. Extraction of surplus-value may still be the central pump, but the most explosive impacts of climate change will scarcely be transmitted in any straight line along its axis. If there is one overarching logic of the capitalist mode of production through which rising temperatures will be articulated, it is probably rather that of uneven and combined development. [26] Capital expands by pulling other relations into its orbit; as it continues to accumulate, people stuck in those external-but-internalized relations – think of herders in north-eastern Syria – will enjoy few if any of the benefits, and might not even come close to the threshold of wage-labour. Some amass resources, while others, outside the pump but inside the orbit, struggle to get a chance to produce them. If a catastrophe descends on such a society – deeply divided and deeply integrated – chances are that it starts breaking apart along some of the cracks. The Syrian revolution might indeed be a template in this regard.

Incidentally, uneven and combined development plus catastrophe was also the equation that touched off the Russian revolution. The catastrophe in question was, of course, the First World War, which caused the entire food supply system of Tsarist Russia to crash. To make matters worse, heavy floods in the spring of 1917 washed away roads and railway lines and blocked further procurements. [27] On 8 March – the story is well-known, but now casts a new light on the future – the women workers of Petrograd went on strike and marched through the streets, demanding bread from a duma incapable of delivering it. Soon they called for the fall of the Tsar. The crisis took a new plunge in August 1917, when grain prices suddenly doubled and Petrograd faced the challenge of surviving without any flour. 'Famine, genuine famine,' one government official described the situation, 'has seized a series of towns and provinces – famines vividly expressed by an absolute insufficiency of objects of nutrition already leading to death.' [28] It was at this moment that Lenin penned what is arguably his key text from 1917, *The Impending Catastrophe and How to Combat It*, in which he made the case for a second revolution as the only way to avert total nationwide famine. In his internal and external agitation, this was his stock argument for striking the October blow:

"There is no escaping the famine, and there can be none except by an uprising of the peasants against the landowners in the countryside, and by a victory of the workers over the capitalists in the cities. … 'In insurrection delay is fatal' – this is our answer to those having the sad 'courage' to look at the growing economic ruin, at the approaching famine, and still dissuade the workers from the uprising." [29]

The Pentagon refers to climate change as a 'threat multiplier.' Lenin spoke of the catastrophe of his time as a 'mighty accelerator' bringing all contradictions to a head, 'engendering world-wide crises of unparalleled intensity,' driving nations 'to the brink of doom.' [30] His wager was, of course, to seize the unique opportunity thereby opened up. That did not diminish his hostility to the war – it had no more implacable enemies than the Bolsheviks – but he saw in all its miseries the most compelling reasons to take power, and nothing worked as effectively to rally the workers behind him. Climate change is likely to be the accelerator of the twenty-first century, speeding up the contradictions of late capitalism – above all the growing chasm between the evergreen lawns of the rich and the precariousness of propertyless existence – and expedite one local catastrophe after another. What should revolutionaries do when it hits their turf? Seize the opportunity to depose any exploiters and oppressors they can get their hands on. But there is, needless to say, no guarantee of a happy outcome.

Counter-Revolution and Chaos as Symptoms

Acute shortages of food and water are poised to become some of the most tangible effects of global warming. In the run-up to the Tunisian and Egyptian revolutions, rising food prices partly caused by extreme weather intensified the latent tensions, and the Middle East – so far the revolutionary cauldron of the century – can expect more to come. No region is as prone to water scarcity, and none as vulnerable to 'tele-connected food supply shocks,' or harvest failures in distant breadbaskets driving up prices of the imports on which the population depends. [31] In revolutionary Russia, the supply shock originally stemmed from the blockades and demands of the First World War and then multiplied across the vast territory; for the Bolsheviks, it was as much a curse as a blessing. In his remarkable study, *Bread and Authority in Russia, 1914–1921*, Lars T. Lih shows how the dearth of food not only propelled them to power, but prompted them to develop the authoritarian tendencies that would later devour them.

Moreover, those tendencies were in full swing already before October. The Tsarist state itself took the first steps toward a 'food-supply dictatorship,' in which the state applies coercion to enforce the

delivery of food to starving citizens. 'The food-supply question has swallowed up all other questions,' one government employee observed in the autumn of 1916, and 'as economic anarchy has spread, all the deeper is the process of penetration of the state principle into all aspects of the economic existence of the country.' [32] The Provisional Government continued on the same track – all political currents save the anarchists agreed on the necessity of strict centralised control to bring forth the grain – but proved utterly unequal to the task. The Bolsheviks turned out to be the sole party disciplined and hard-hitting enough to reconstitute the centre and reign in the centrifugal forces. But to succeed in their efforts, they had to ditch any ideological doubts about the state and make maximum use of the remaining scaffoldings of the Tsarist bureaucracy. The problem was that they had promised 'all power to the Soviets.' According to a logic Lih reconstructs in painful detail, genuinely self-governing soviets (and communes and factory committees) had the interests of their own constituencies closest to heart: in the countryside, they held back grain from the cities; in the cities, they sent volunteers to the countryside to collect whatever could be found and distribute it to their members. The experiment in direct democracy the Bolsheviks had done so much to encourage merely deepened the chaos in the food system – the one plague they had vowed to eradicate. Locked into this contradiction, they opted for subjugating the soviets to the party, shooting suspected hoarders, stationing agents in the villages to surveil the peasants, setting the whole train of bureaucratic control in motion.

But the choice – this is Lih's main point – was forced upon the Bolsheviks by the situation. Exacerbated by first civil war and then drought, the scarcities seemed to allow for no other general course of action than a food-supply dictatorship, to which the vast majority of Russians eventually resigned themselves, preferring some stability and food on the table to the endless deprivation and uncertainty of the revolutionary years. Here the seeds of Stalinist counter-revolution were sown. Paradoxically, in Lih's analysis, they sprang from a remarkable feat: precisely because they were so ruthless and consistent in their centralization of the food system, the Bolsheviks did avert total breakdown. In a formulation now pregnant with meaning, Lih sums up his view of their young state: 'a Noah hastily constructing a small ark against imminent disaster.' [33]

Now if very many more disasters are imminent, and if they will trigger revolutions, will they also trigger counter-revolutions in the shape of rough beasts and bloated bureaucracies (claiming to be) indispensable for containing the hardships? It is too early to tell, of course. One hint at such a scenario, however, may be abstracted from the military coup that ended the Egyptian revolution. In the final days of the Morsi regime, the 'deep state' orchestrated massive shortages of fuel and food and rolling blackouts, sapping the support for the democratically elected president and prodding millions to take to the streets against him. [34] After the coup of 3 July 2013, those deficiencies miraculously disappeared overnight; the Sisi junta took full credit and won stomachs and minds across the country. This episode obviously has no link to any impacts of climate change, but it points to a political logic that might conceivably reappear when they bite deeper: a strong leader poses as the sole guarantor of a minimum of stable supplies and monopolizes power. That would not necessarily have to wait for a revolution to materialize; it could be stimulated by the scarcities as such.

The broader danger lurking here might be labelled ecological fascism. It has few adherents so far, but they do exist: in *The Climate Challenge and the Failure of Democracy,* Australian scholars David Shearman and Joseph Wayne Smith reject the Marxist contention that capitalism is the source of global warming and assigns all the blame to democracy. Now is the time to realise that 'freedom is not the most fundamental value and is merely one value among others. Survival strikes us as a much more basic value.' [35] As climate change puts the survival of the human species in question, it has to rediscover its true nature: rigid hierarchy. 'The human brain is hard-wired for authoritarianism, for dominance, and submission' (just look at the apes). [36] More precisely, Shearman and Smith

advocate a fusion of feudalism and the one-party state – but without any planned economy – headed by 'an altruistic, able, authoritarian leader, versed in science and personal skills,' backed up by a class of 'philosopher kings or ecoelites' trained since childhood – 'as in Sparta' – to steer the world through the heat. [37] (We also learn that female brains are geared toward children, that 'black rap songs' expressing 'desires to murder white people' should be banned, and that Islam is demographically torpedoing the Western world.) [38] Such lunacy has not yet found much of an audience. But when survival really starts hanging in the balance, one cannot exclude the scenario that it gains traction; indeed, climate change has already brought some lunatic ideas of once-despised mavericks to the fore (notably geoengineering).

If ecological fascism could be an explicit ideological trend for a very warm future, another possibility is nihilistic, opportunistic, even racist violence: in the drying Ottoman Empire, Sam White records, the Celalis professed no particular political or religious conviction. They merely plundered their way through the ruined landscape. A particular stronghold of theirs was the city of Raqqa: epicentre of the recent drought, capital of the faux caliphate of Daesh. White reports that the droughts fanned the flames of fundamentalist revivals among the various sects of the Empire. [39] In the endless bread queues of revolutionary Russia, rumours of Jews stockpiling and speculating on grain spread like wildfire; the step from the closed bakery to the pogrom remained short. [40] In 1917, Lenin measured the 'mood of despair among the broad masses' and prophesied that 'the hungry will "smash everything, destroy everything, even anarchically." if the Bolsheviks are not able to lead them in a decisive battle.' [41] The anti-Semitic Black Hundreds waited for the Russians to swing behind them, and Lenin saw objective tendencies working in their favour. 'Can one imagine a capitalist society on the eve of collapse in which the oppressed masses are not desperate? Is there any doubt that the desperation of the masses, a large part of whom are still ignorant, will express itself in the increased consumption of all sorts of poison?' [42]

Celalis, Daesh, Black Hundreds: Christian Parenti has offered a similar prognosis in his *Tropic of Chaos: Climate Change and the New Geography of Violence*. 'Damaged societies, like damaged people, often respond to new crisis in ways that are irrational, shortsighted, and self-destructive,' and the societies of this world – particularly those ravaged by colonialism, Cold War counterinsurgency, wars against terror, neoliberal restructuring – are nothing if not damaged. [43] We can anticipate a 'slide toward entropy and chaos,' 'intercommunal strife, brigandry,' the undoing of the modern state – which might, of course, flip over into its opposite and resurrect some green-brown Sparta. What about those who can insulate themselves against the heat with any amount of air conditioning? As the most likely protection of their material interests, Parenti foresees a 'politics of the armed lifeboat' or 'climate fascism,' by which the ruling classes continue on their present course and mercilessly keep their victims at bay with walls, drones and detention centers. [44] One genocide scholar has recently gone one step further and warned that the expected flows of climate refugees toward the North will revive 'the genocidal impulse,' a scenario possibly gaining some plausibility from the circumstance that one of the greatest flows will likely consist of people from Muslim-majority countries heading toward a European continent thoroughly infected with Islamophobia. [45] That could be another form of articulation. As such, however, it would be the outcome of relations shaped in struggle. Revolutionaries in a warmer world would then have to be as much vigilant and militant anti-fascists. We might be living not right after, but at the very dawn of the age of extremes.

Revolution for Treating the Symptoms

So far we have two configurations, then, although the line between them may be difficult to draw: revolution and/or counter-revolution/chaos as symptoms of climate change. One might take a leaf

from meteorology to conceptualize this symptomaticity. Climate scientists often speak of how rising temperatures 'load the dice' in favor of extreme weather events: a superstorm could have happened in the eighteenth century, but all the carbon dioxide accumulated in the atmosphere since then has filled the weather systems with material, such as hot and high sea surfaces, that works like an extra weight at number six, making a deadly hurricane dramatically more likely. The type of extreme social events on which we have speculated here can evidently also happen without anthropogenic climate change, but that novel mega-weight inside all planetary systems now seem to push things in such directions. If all of this sounds surreally extreme, consult state-of-the-art climate science. The shattering of the material foundations on which human existence stands really will be fatal if global warming rolls on, it tells us, and it reports on a monthly basis on how much faster the process unfolds than first predicted.

In January 2016, the average temperature on Earth was 1.15°C higher than for the period 1951-1980. It was a record jump instantly beaten by February, which reached 1.35°C. [46] By then the planet stood right on the threshold to a 1.5°C warming above pre-industrial levels, identified by world leaders congregating in Paris for COP21 in December 2015 as the limit that should not be crossed (although a more common marker for the shift from already dangerous to extremely dangerous climate change is still 2°C). [47] When might that be attained? Fresh results suggest it could happen sooner rather than later: in clouds, for instance, ice crystals reflect more sunlight back to space than do liquid droplets, but climate models have vastly underestimated the share of the latter, missing a considerable extra warming effect already in the pipelines. [48] Others have revised the estimate of how much temperatures would increase if all proven fossil fuel reserves were burnt. Using conservative figures, excluding any future discoveries and deposits made available by new technologies, Katarzyna Takorska and her colleagues place the effect in the ballpark of 8°C – hitting 17°C in the Arctic – rather than the previously believed 5°C. Converted into actual conditions for life on Earth, those average eight degrees would, of course, spell the end of all stories. [49] This will not happen tomorrow, but it now marks the general direction of late capitalist history. Anyone who wishes to dispute the forecast that the ensuing dislocations will usher in an age of political extremes would need to build a case for the astounding stoicism of the human species, or for its utter detachment from what happens inside ecosystems. However that case might look, it would certainly not be materialist.

But there is the possibility for cushioning against some impacts. Consider the case of Syria. Most agriculture in that country still relies on flood irrigation – peasants opening channels and flushing water through their fields – which might have been an adequate method in the days of old, but not in this dry era. [50] Shifting to drip irrigation is imperative, so as to save or make optimal use of every valuable drop of water. A state attuned to the needs of poor farmers and willing to provide them with the basic productive forces could make it happen, but the Assad regime has instituted water policies sucking the land dry. In Egypt, the rising Mediterranean pushes saltwater ever deeper into the clayey soil of the Nile Delta. To save their crops from being killed, farmers try to 'elevate' fields by applying enormous amounts of sand and fertilisers, but only the richest farmers can afford such measures of adaptation. [51] Along the coastlines, storm surges are growing in frequency and strength, but sea walls and other buffer systems are primarily built in front of resort towns, while communities of fisherfolk and farmers are left unprotected. [52] The Egyptian revolution represented an opportunity to fill such cracks in the armour and move toward comprehensive, popular adaptation to climate change. It would be an understatement to say that it was missed.

Here, then, can be discerned the contours of a third hypothetical configuration: revolution to treat the symptoms of global warming. The Syrian and Egyptian cases are no outliers. Surveys have found that the day-to-day processes of capital accumulation – enclosures, commodification, planning for real estate, centralization of resources – heavily distort most adaptation projects around the world,

leaving precisely the most vulnerable people without cushions. [53] But 'in revolutionary times the limits of what is possible expand a thousandfold,' recalling Lenin. [54] If social relations block the way to effective pro-poor adaptation, they ought to be overhauled. Here is one more reason to seize every opportunity catastrophes open up. Unlike the two previous configurations, this one would presuppose revolutionaries who consciously act against the impacts of climate change on the terrain over which they can wield influence. But that influence will by nature be constrained.

Revolution Against the Causes

Adaptation to three, four, not to speak of eight degrees is bound to be a futile endeavour. No matter how advanced the sprinklers Syrian farmers install, irrigation requires water. No walls can save the Nile Delta from the underground infiltration of the sea. No one can perform any kind of physical labour when temperatures settle above a certain level, and so on. But the proven fossil fuel reserves can be kept in the ground. Emissions can be slashed to zero. 'Everybody says this. Everybody admits this. Everybody has decided it is so. Yet nothing is being done,' and this is the rationale for the most exigent type of revolution, the one that, in full consciousness of the roots of the problem, wages a full-scale onslaught on fossil capital, just as the Bolsheviks set themselves the task of putting 'an immediate end to the war,' insisting that 'it is clear to everybody that in order to end this war, which is closely bound up with the present capitalist system, capital itself must be fought.' [55] This is the moment to read the Lenin of 1917 anew and salvage the kernel of the Bolshevik project:

"We can draw, perhaps, the most striking comparison of all between reactionary-bureaucratic methods of combating a catastrophe, which are confined to minimum reforms, and revolutionary-democratic methods, which, to justify their name, must directly aim at a violent rupture with the old, obsolete system and at the achievement of the speediest possible progress …" [56]

– speed here being the critical dimension. The dawdling bourgeoisie, meanwhile, 'as always, are guided by the rule: "Après nous le deluge."' [57]

Policies that would save millions or even billions of lives could be put in place, if only the obstructing interests were removed. 'The ways of combating catastrophe and famine are available, the measures required to combat them are quite clear, simple, perfectly feasible, and fully within reach of the people's forces.' We could begin by updating the *Communist Manifesto* and list ten: [58]

1.Enforce a complete moratorium on all new facilities for extracting coal, oil or natural gas.

2. Close down all power-plants running on such fuels.

3. Draw 100 per cent of electricity from non-fossil sources, primarily wind and solar.

4. Terminate the expansion of air, sea and road travel; convert road and sea travel to electricity and wind; ration remaining air travel to ensure a fair distribution until it can be completely replaced with other means of transport.

5. Expand mass transit systems on all scales, from subways to intercontinental high-speed trains.

6. Limit the shipping and flying of food and systematically promote local supplies.

7. End the burning of tropical forests and initiate massive programmes for reforestation.

8. Refurbish old buildings with insulation and require all new ones to generate their own zero-carbon power.

9. Dismantle the meat industry and move human protein requirements toward vegetable sources.

10. Pour public investment into the development and diffusion of the most efficient and sustainable renewable energy technologies, as well as technologies for carbon dioxide removal. [59]

That would be a start – nothing more – yet it would probably amount to a revolution, not only in the forces of production but also in the social relations in which they are so deeply enmeshed. Just how thoroughly the phenomenon of CO_2 emissions is bound up with class society has recently been highlighted by two striking reports. One tenth of the human species accounts for half of all present emissions from consumption, half of the species for one tenth. The richest 1 per cent have a carbon footprint some 175 times that of the poorest 10 per cent; the emissions of the richest 1 per cent of Americans, Luxembourgians and Saudi Arabians are two thousand times larger than those of the poorest Hondurans, Mozambicans or Rwandans. Shares of the CO_2 accumulated since 1820 are similarly skewed. [60] Some ecological class hatred is certainly warranted, and then we have not even mentioned the hard inner core of fossil capital, the Rex Tillersons of this world, the billionaires who swim in money from pulling fossil fuels out of the ground and selling the fuel for the fires. [61] Make no mistake: this revolution would have its fair share of enemies.

Who shall execute it? Who are the Petrograd metalworkers and the Kronstadt sailors of the climate revolution? Look at the country that tops a survey of the populations most worried about global warming: Burkina Faso, currently devastated by declining rains and magnified sandstorms, topping the list of African nations suffering from excessively hot working days. [62] Can a farmer from Burkina Faso storm the Winter Palaces of fossil capital – can she even catch sight of them in her lifetime, or are the headquarters of ExxonMobil in Texas and the glittering towers of Dubai so distant as to be utterly beyond her reach, let alone her and her peers' capacity for effective revolutionary action? It would probably be as easy to gain mass support for the above program in Burkina Faso as it would be hard to implement it from there.

Precisely the abysmal divides within the species – belying the talk of the 'Anthropocene,' of humanity in general as responsible, of 'us all' as the enemy – may prove the greatest obstacle to attacking the causes of catastrophe: the victims of the systematic violence known as fossil fuel combustion may simply be too far away from the perpetrators to topple them. 'Revolutions-as-symptoms' target exploiters and oppressors in the immediate vicinity and so are not hard to imagine when some lives become unbearable, but 'revolutions-against-the-causes' must, if they are to be launched by the classes most concerned, travel across the globe. Uprisings then seem likely to continue targeting nearby Makhloufs rather than faraway Tillersons. Put differently, the spontaneous formation of trade-union consciousness in a warming world – a basic prerequisite for any kind of October thrust – looks like a very uncertain prospect. It is otherwise with, for instance, oil exploration – when a corporation intrudes on a people's ancestral homeland to drill for the fuel, the antagonism is in your face and resistance comes naturally – but global warming as such can slaughter millions from within a castle never seen and, alas, hard to raid.

This appears to be the fundamental strategic conundrum for the struggle against climate change. The most promising vision for breaking out of it has been formulated (although not in such terms) by Naomi Klein in *This Changes Everything: Capitalism vs. the Climate*. Short-circuiting the distance problem, she argues that, since present-day capitalism is so saturated with fossil energy, more or less everyone involved in some social movement under its rule is objectively fighting global warming, whether or not she or he cares about it or suffers its consequences. Brazilians protesting fare hikes and demanding free public transit all but raise the banner of the fifth measure in the list above, while the Ogoni people kicking out Shell are busy working on the first. [63] Similarly, European auto-workers fighting for their jobs, in accordance with the kind of trade-union consciousness they have always possessed, have an interest in converting their factories to the production of

technologies required for the transition away from fossil fuels – wind turbines, buses – rather than seeing them disappear to some low-wage destination. [64] All struggles are struggles against fossil capital: the subjects only need to be made aware of it. In Klein's words, 'the environmental crisis – if conceived sufficiently broadly – neither trumps nor distracts from our most pressing political and economic causes: it supercharges each one of them with existential urgency.' [65] This formula has the added appeal of making the broadest possible alliance conceivable. Clearly, nothing less will be needed in this struggle.

It remains to be seen if this is a solution that can substitute for the absence of immediately victimized strike forces. So far in a warming world, the position analogous to the Palestinians fighting Zionist occupation or to factory workers striking against speed-ups has been vacant – not in-itself (the expelled and sweated are there) but for-itself (they are not actively combating their enemies) – and so far, that absence has stifled the outbreak of explicit climatic unrest on a scale commensurate to the problem. What we do have is a fledgling climate movement. In any alliance drawing in the full spectrum of social movements to take down fossil capital, this one will have to be the linchpin. It has some compelling arguments to make, along the lines of the slogan 'there are no jobs on a dead planet': whatever else you are clamoring for presupposes a reasonably stable climate, and even if the desert sands do not encroach on your doorstep in this particular moment, be sure some impact or other is on its way. If the German worker shrugs his shoulder at the condition of the farmer in Burkina Faso, or in optimist fashion comforts himself with the thought than in Germany things are not nearly so bad, the climate movement can tell him: '**De te fabula narratur**.' This movement collects and crystallizes the insights that Syria cannot survive the disappearance of the Fertile Crescent, or Egypt a three meter sea level rise, or Burkina Faso four degrees of warming; it articulates the interests of their most vulnerable masses even if only on behalf of them. Yes, there is here, for structural reasons yet to be overcome, a component of what classical Marxists would have called substitutionism and voluntarism.

This movement has scored a number of noteworthy victories of late. The shelving of the Keystone XL pipeline, the retreat of Shell from the Arctic, the spiraling divestment campaign, the cancellation of coal projects from Oregon to Orissa have been added in rapid succession to its vita. The movement further raised its profile with the Break Free campaign in May 2016, the largest coordinated wave of direct action against fossil fuel extraction so far, stretching from the Philippines to Wales, New Zealand to Ecuador. The centrepiece of the campaign was the camp known as Ende Gelände, erected a stone's throw from Schwarze Pumpe, 'the black pump,' a power-plant in the German region of Lusatia running on lignite coal – dirtiest of all fossil fuels – extracted from an adjacent mega-mine, and one of the largest point-sources of CO_2 emissions in Europe. The various quarters of the sprawling tent camp were named after distant low-lying island nations: Kiribati, Tuvalu, the Maldives. On Friday 13 May 2016, the multi-pronged offensive against Schwarze Pumpe was set off when some one thousand activists – the camp would attract nearly four thousand – descended into the mine, seized the gargantuan digging machines and settled in for the weekend. On Saturday morning, there were even more occupying the railway lines that bring the coal to the black pump. A brief incursion into the compound of the power plant itself provoked the outnumbered police to hit back indiscriminately with pepper spray, baton wielding and arrests, but the blockades held until on Sunday morning the owners declared that climate activists had forced them to suspend all electricity production. [66] That had never before happened in central Europe.

The background to the action is instructive. In the parliamentary elections in Sweden in 2014, Gustav Fridolin, leader of the Green Party, kept a piece of coal in his pocket. Wherever he went, in every speech and televised debate, he waved that piece of coal and promised, stern determination in his voice, to take the hands of the Swedish state off the fuel. Deep inside the pits of eastern Germany, those hands have long sullied the self-image of Sweden as a *föregångsland* or 'pioneering

country' in climate politics, since the state-owned corporation Vattenfall owns and operates Schwarze Pumpe and four other lignite complexes of the same volcanic size. By the time of the election, the Swedish state produced CO_2 emissions from these assets equal to all emissions from its own territory plus a third. Now, Fridolin declared, was the time to liquidate them and put a lid on the coal in the ground. If the Greens entered the government, the single most important promise of their election campaign would be to make sure that Vattenfall closed its German mines and plants. Two years later, they were no longer in Swedish hands. They had been sold to a consortium of capitalists from the Czech republic – including its richest man – craving more resources for the lignite renaissance currently sweeping out from their corner of the continent. The Greens, in other words, resolved to throw some of the greatest lignite riches straight into the mouth of fossil capital. That decision contributed to the worst crisis in the history of the party – probably the most influential of its kind in the world – and hence one of the worst in the history of reformist parliamentary environmentalism. To cap the debasement, Fridolin, on behalf of the Swedish government, denounced the Ende Gelände action as 'illegal.' [67]

In any science-based reality, Ende Gelände is the type of action that should be repeated and scaled up a thousandfold. Inside the advanced capitalist countries and the most developed zones of the rest, there is no shortage of appropriate targets: just look around for the closest coal-fired power plant, pipeline, SUV, expanding airport, growing suburban shopping mall, and so many others. That is the terrain on which a revolutionary climate movement should trespass in one great accelerating surge. Obviously, it is still very far from such size and capacity. Perhaps some extreme weather event of truly traumatic proportions could catalyze a leap. Even then, however, as the Vattenfall story makes clear, direct action in itself would solve nothing: there have to be decisions and decrees from the state – or, in other words, the state must be wrested from all the Tillersons and Fridolins of this world for any transitional program like the one sketched above to be realized. In the post-1989 ideological hangover that still affects the activist milieus making up the climate movement in the North, however, there lingers a fetishization of horizontal direct action as a self-sufficient tactic and a reluctance to consider Lenin's lesson: 'The key question of every revolution is undoubtedly the question of state power.' [68] Rarely if ever has it been more important to heed that lesson than now.

Can the climate movement grow by several orders of magnitude, gather progressive forces around it and develop some viable strategy for projecting its aims through the state – all within a relevant time frame in this rapidly warming world? It is a tall order, to say the least. But in the words of Daniel Bensaïd, perhaps the most brilliant theorist of revolutionary strategy in the late twentieth century, 'any doubt bears on the possibility of succeeding, not on the necessity of trying.' [69]

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P.S.

* "Revolution in a Warming World: Lessons from the Russian to the Syrian Revolutions". Socialist Project, April 23, 2018: https://socialistproject.ca/2018/04/revolution-in-a-warming-world/#easy-footnote-11-14227

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Footnotes

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[3] Department of Defense, 'National Security Implications of Climate-Related Risks and a Changing Climate,' report submitted to Congress 23 July 2015, available from archive. defense.gov. The spectre of escalating conflict in a warming world is not the only one to haunt the Pentagon: a wide range of military installations face the risk of inundation, including the Norfolk naval base in Virginia, the largest of its kind in the world. See e.g. Peter Engelke and Daniel Chiu, Climate Change and U.S. National Security: Past, Present Future, The Transatlantic Partnership for the Global Future, Brent Scowcroft Center and the Ministry for Foreign Affairs of the Government of Sweden, 2016.

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[5] Solomon M. Hsiang, Marshall Burke, and Edward Miguel, 'Quantifying the Influence of Climate on Human Conflict,' Science (2013), 341, p. 4. Cf. Solomon M. Hsiang and Marshall Burke, 'Climate, Conflict, and Social Stability: What does the Evidence Say?,' Climatic Change (2014), 123: 39–55.

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[12] Robert F. Worth, 'Earth is Parched Where Syrian Farms Thrived,' New York Times, 13 October 2010. See further W. Erian, B. Katlan and B. Ouldbdey, 'Drought Vulnerability in the Arab Region: Special Case Study: Syria,' 2011 Global Assessment Report on Disaster Risk Reduction, United Nations; OCHA (United Nations Office for the Coordination of Humanitarian Affairs), Syria Drought Response Plan, 2009–2010: Mid-Term Review; Francesco Femia and Caitlin Werrell, 'Climate Change Before and After the Arab Awakening: The Cases of Syria and Libya,' in Caitlin Werrell and Francesco Femia, eds., The Arab Spring and Climate Change, Center for American Progress, Stimson, and The Center for Climate and Security, 2013, pp. 23–32; Peter H. Gleich, 'Water, Drought, Climate Change, and Conflict in Syria,' Weather, Climate & Society, 6, 2014, pp. 331–40; Myriam Ababsa, 'The End of a World: Drought and Agrarian Transformation in Northeast Syria (2007–2010),' in R. Hinnebusch and T. Zintl, eds., Syria from Reform to Revolt, Vol. 1: Political Economy and International Relations, Syracuse: Syracuse University Press, 2015, 199–222.

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[14] Bassam Haddad, Business Networks in Syria: The Political Economy of Authoritarian Resilience, Stanford: Stanford University Press, 2012, p. 104; Shamel Azmeh, 'The Uprising of the Marginalized: A Socio-Economic Perspective of the Syrian Uprising,' LSE Middle East Centre Paper Series, no. 6, 2014; Robin Yassin-Kassab and Leila Al-Shami, Burning Country: Syrians in Revolution and War, London: Pluto, 29-33.

[15] Ababsa, 'The End of a World,' pp. 210–17.

[16] Yassin-Kassab and Al-Shami, Burning Country, p. 33.

[17] On the drought in Dera'a, see e.g. Caitlin E. Werrell, Francesco Femia and Troy Sternberg, 'Did We See it Coming?: State Fragility, Climate Vulnerability, and the Uprisings in Syria and Egypt,' SAIS Review of International Affairs, 35, 2015, p. 31.

[18] Suzanne Saleeby, 'Sowing the Seeds of Dissent: Economic Grievances and the Syrian Social Contract's Unraveling,' Jadaliyya, 16 February 2012.

[19] Francescva De Châtel, 'The Role of Drought and Climate Change in the Syrian Uprising: Untangling the Triggers of the Revolution,' Middle Eastern Studies, 50, 2014, pp. 521–34.

[20] De Chatel, 'The Role of Drought,' p. 532.

[21] Another attempt to downplay the drought is made in Christiane J. Frölich, 'Climate Migrants as Protestors? Dispelling Misconceptions about Global Environmental Change in Pre-Revolutionary Syria,' Contemporary Levant, 1, 2016, pp. 38–50. She has interviewed people from Dera'a who say that the refugees from the countryside living in camps around the town did not orchestrate the early phase of the uprising; moreover, she claims they lacked the social networks required for such an adventurous undertaking and could not possibly have led the charge against the regime. This supposed disproof of the link rests on an extremely narrow testing procedure. It is concerned only with Dera'a, and only with directly revolutionary activities of the migrants sheltering there, ignoring the wider effects of the drought – including food price hikes and water shortages – as well as plenty of evidence that the revolutionary process as a whole took off

primarily in the areas where such effects were most strongly felt (which is not necessarily to say that climate refugees organised the revolution: few if any have made that claim).

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[23] White, Climate of Rebellion, p. 242. In this particular incident, an earthquake had aggravated the water shortages in the capital.

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[25] Matthew McKinnon, Elise Buckle, Kamal Gueye et al., Climate Change and Labour: Impacts of Heat in the Workplace, UNDP, ILO, WTO, UNI, ITYUC and others, 29 April 2016, available from e.g. www.ilo.org.

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[27] Lars T. Lih, Bread and Authority in Russia, 1914–1921, Berkeley: University of California Press, 1990, pp. 65–7.

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[29] V.I. Lenin, Revolution at the Gates: Selected Writings of Lenin from 1917, edited and introduced by Slavoj Žižek, London: Verso, 2004, p. 155.

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[31] Cristopher Bren d'Amour, Leonie Wenz, Matthias Kalkul et al., 'Teleconnected Food Supply Shocks,' Environmental Research Letters, 11, 2016, 035007. On the role of food in the Egyptian revolution, see Malm, 'Tahrir Submerged?' and references therein.

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[36] Shearman et al., The Climate Change Challenge, p. 130.

[37] Quotations from Shearman et al., The Climate Change Challenge, pp. 13, 141, 134

[38] Quotation from Shearman et al., The Climate Change Challenge, p. 111.

[39] On the Celalis and other rebels in Raqqa, see White, Climate of Rebellion, e.g. pp. 179, 234, 237, 244; on fundamentalism see p. 215.

[40] Lih, Bread and Authority, pp. 37, 75, 98, 169.

[41] Lenin, Revolution at the Gates, p. 157. Emphasis in original.

[42] Lenin, Revolution at the Gates, p. 159. Emphases in original.

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[44] Parenti, Tropic of Chaos, p. 11; cf. e.g. pp. 20, 183, 209, 214–15.

[45] Alex Alvarez, 'Borderlands, Climate Change, and the Genocidal Impulse,' Genocide Studies International, 10, 2016, p. 30. Cf. e.g. Rafael Reuveny, 'Climate Change-Induced Migration and Violent Conflict,' Political Geography, 26, 2007, pp. 656–73.

[46] amian Carrington and Michael Slezak, 'February Breaks Global Temperature by "Shocking" Amount,' The Guardian, 14 March 2016.

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[55] Lenin, Revolution at the Gates, 69, 163.

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[57] Lenin, Revolution at the Gates, p. 97.

[58] Lenin, Revolution at the Gates, p. 70.

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