

# *Il razzismo climatico*

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# Ipotesi di studio e ricerca

***Il razzismo non è un problema semplicemente  
“culturale”, “sociale” o “economico”.***

*L'emergenza climatica prodotta dall'energia fossile ha reso  
evidente una “zona d'ombra” della storia:*

*il razzismo è un problema di  
“colonizzazione umana diseguale del sistema climatico” da  
cui sono scaturite categorie giuridiche ed economiche  
“razziali” (gli “scarti climatici”)*

*[Donna Haraway, Andreas Malm, Joan Martinez-Alier, **Aura Group** - Aarhus University Research on the Anthropocene, **Public Political Ecology Lab** University of Arizona; lettura  
“schmittiana” del sistema climatico]*

# Indice

1) Che cos'è il “sistema climatico”

2) Dal “sistema climatico” all'emergenza climatica

3) Il razzismo è un “sistema climatico”?

4) Le interpretazioni geo-fisiche (c.d. “*Antropocene*”), geo-politiche (c.d. “*Piantagionocene*”) e geo-economiche (c.d. “*Capitalocene*”) dell'emergenza climatica

5) Alle origini della geopolitica climatica “razzista”: “estrattivismo epistemico”; “scambio ecologico diseguale”; “materia” viva schiava vs “materia” morta fossile; “*nomos* ecologico”; “debito climatico”; sesta estinzione di massa

6) La “razza climatica” come insieme di specie “di scarto”

7) Il nuovo “regime climatico” del mondo e l'umanità come specie “di scarto”

7) Dalla giustizia ambientale, alla giustizia climatica alla (in)giustizia di specie: la c.d. “tragedia dell'orizzonte”

8) Siamo tutti “razzisti climatici”?

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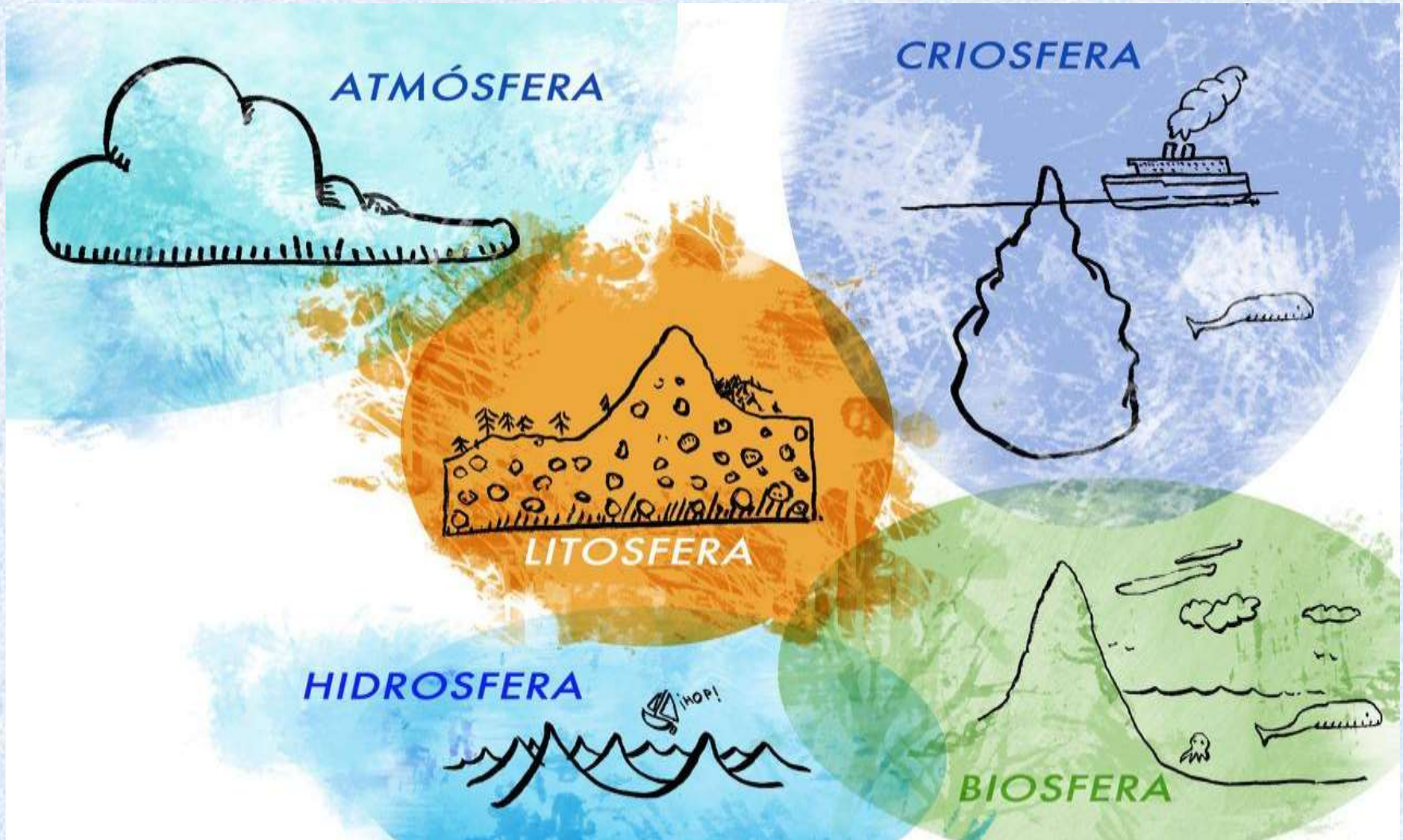
# Che cos'è il “sistema climatico” (1)

*Il clima come “servizio ecosistemico” di regolazione di qualsiasi vita e i “servizi culturali” di selezione storica funzionale – non “quantitativa” – delle vite (umane, animali e vegetali)*



## Che cos'è il “sistema climatico” (2)

*Il sistema climatico è un'unità “egalitaria” e “comunitaria” di materia ed energia in funzione del calore (è un sistema “comunista”)*





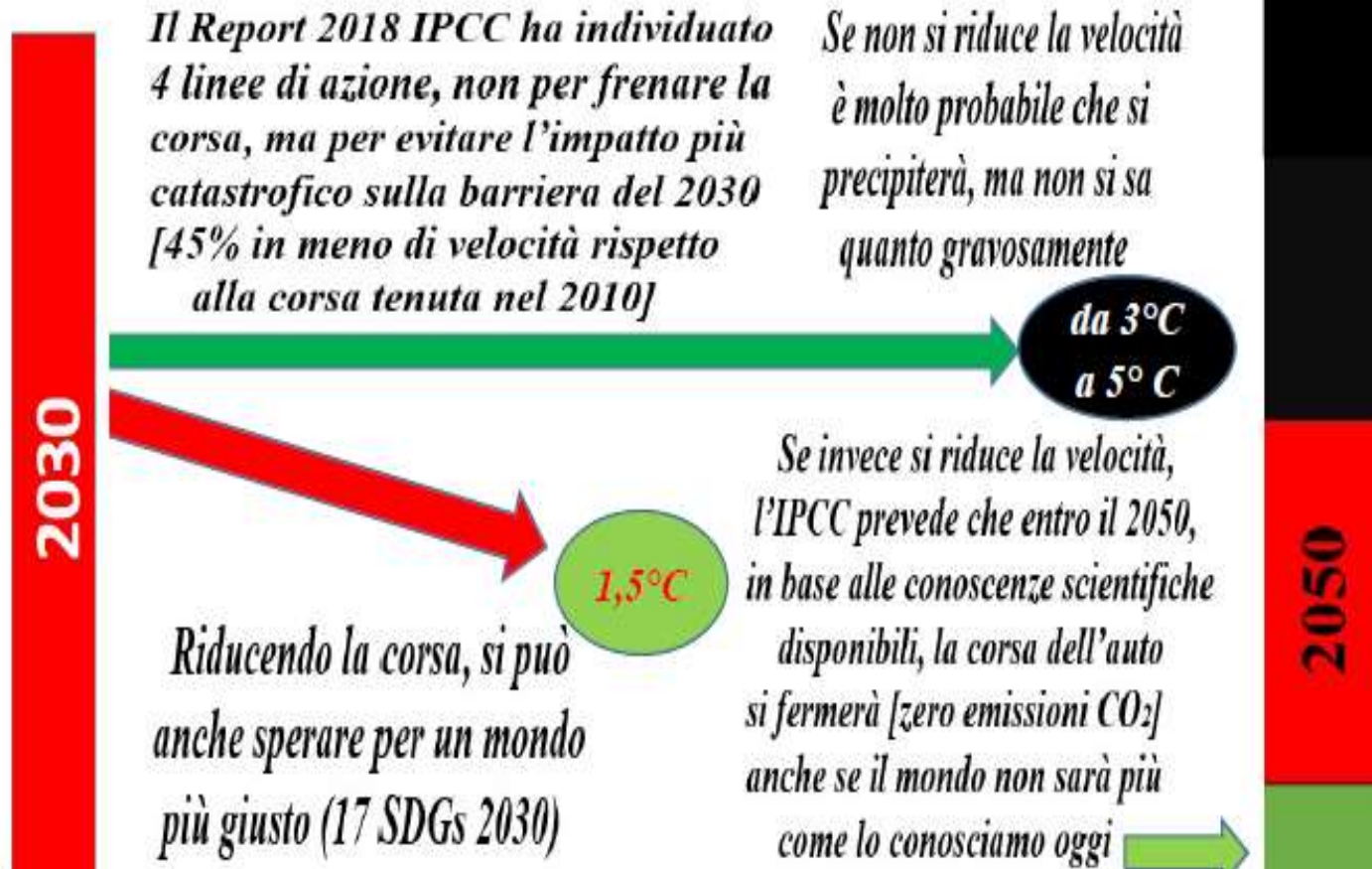
# Dal cambiamento climatico all'emergenza climatica antropogenica (1)



# Dal cambiamento climatico all'emergenza climatica antropogenica (2)

## Diamoci una mossa per il 2030! La metafora della «corsa delle emissioni»

*Gli Stati sono automobili con  
freni insufficienti  
(perché oltre 350 ppm)  
a fermare la corsa  
delle emissioni.  
Andranno sicuramente  
(per acquisizione scientifica)  
a sbattere contro una  
barriera chiamata 2030*





# Il razzismo è un “sistema climatico” (1)?

- 1) Origine “energetica” delle comunità umane (la combustione)*
- 2) Evoluzione non omogenea delle ere “energetiche” dell’umanità (e differenze di “tradizione giuridica” di convivenza). La “colonizzazione” occidentale del sistema climatico (con regole di Civil e Common Law) ha legittimato la costruzione degli “scarti climatici” (forme di vita da “infettare”)*
- 3) La “scoperta dell’America” come “spazio climatico colonizzato”: dalle piantagioni a base schiavistica, come materia/energia “scartabile”, alle macchine fossili come materia/energia “moltiplicabile” (abbandono della schiavitù e conquista dell’aria)*
- 4) L’effetto moltiplicativo delle differenze materiali nell’era “fossile” (c.d. “contraddizione fossile”) ha segnato il sistema climatico “antropogenico” contemporaneo “climaticamente ingiusto”*



# Il razzismo è un “sistema climatico” (2)?

*Dentro lo spazio del sistema climatico antropogenico  
(colonizzato dall'essere umano),*

*“razza”*

*diventa sinonimo di*

*“scarto climatico”*

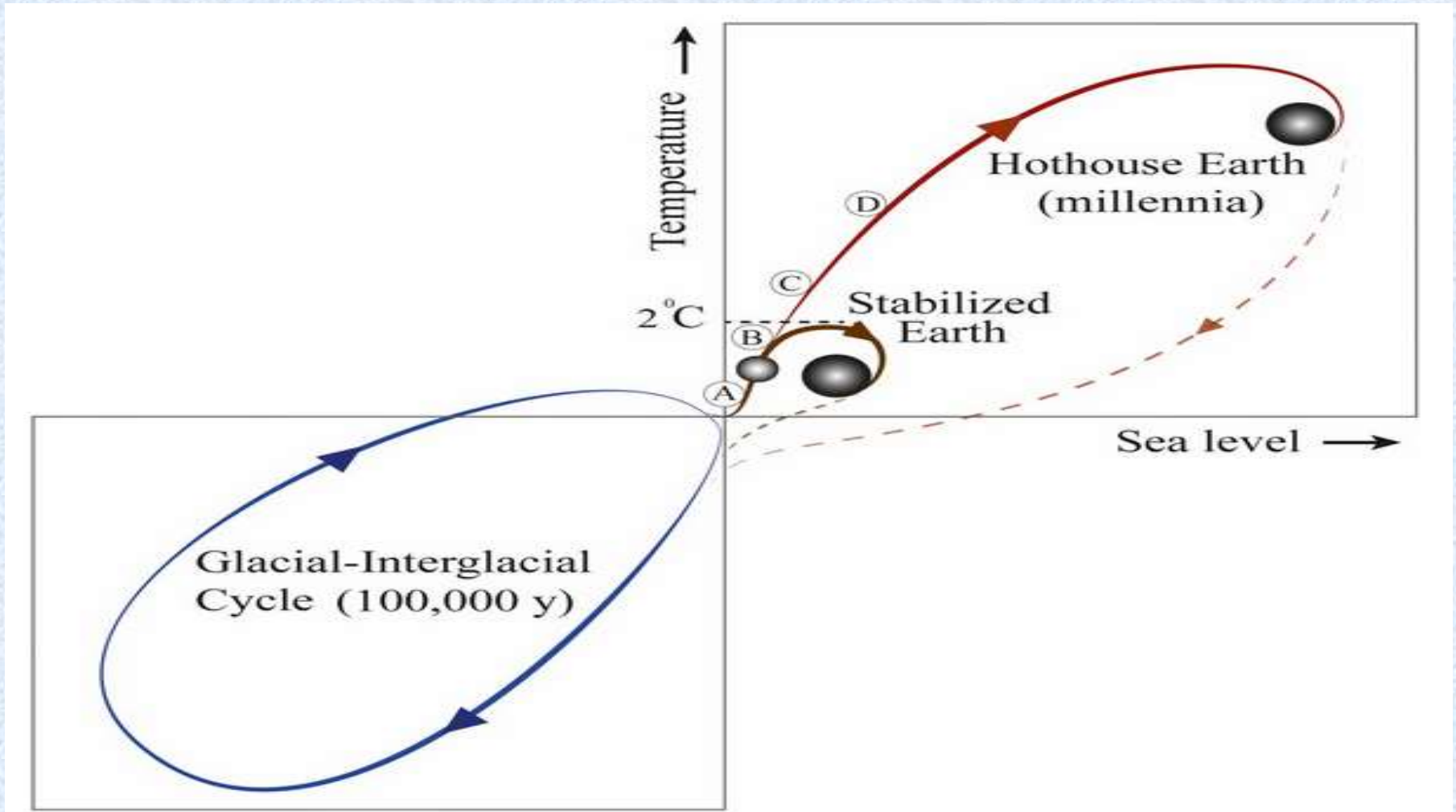
*Ossia*

*qualsiasi materia ed energia, indipendentemente se viva o  
inerte, che può essere consumata, inquinata, infettata,  
degradata, indipendentemente dalla sua utilità  
climatica).*

# “Antropocene”

## “Piantagionocene” o “Capitalocene”? (1)

*La traiettoria accelerativa della specie umana nell’  
“Antropocene”*





## “Antropocene” “Piantagionocene” o “Capitalocene”? (2)

*Il “Piantagionocene” come traiettoria “a scarto” (umano, ambientale, sociale, politico) [c.d. «Ipotesi Kalecki»]*

*Il sistema di produzione moderno si consolida nelle piantagioni – come sistema di sfruttamento umano - e nei porti – come sistema di sfruttamento della natura.*

*Esso emerge come sistema geopolitico di dislocazione degli scarti “ecologici” (vite umane e luoghi naturali), dislocazione che coinvolge la terra e il sottosuolo sino al XVIII secolo, per poi aprirsi anche all’aria dal XIX secolo.*

*Questa ricostruzione “genealogica” del sistema climatico “antropogenico” supera la dicotomia, più ideologica che storiografica, fra “Antropocene” [P. Crutzen] e “Capitalocene” [J. Moore].*

# “Antropocene”

## “Piantagionocene” o “Capitalocene”? (3)

*Infatti:*

- *la prospettiva dell’ “Antropocene”, di P. Crutzen, privilegia l’analisi geo-fisica della pressione umana sulla terra e i suoi cicli, consentendo di individuare i c.d. punti di non ritorno (Tipping Point) dei disequilibri planetari antropogenici;*
- *quella del “Capitalocene”, di J. Moore, enfatizza l’analisi geo-economica, imputando al sistema di produzione capitalistico la riduzione della natura a capitale riproduttivo, ormai in esaurimento nel suo accesso “a buon mercato”;*
- *quella della “Piantagionocene”, di richiamo schmittiano, constata l’intreccio di lunga durata tra uso umano del sistema climatico e decisioni politiche di “scarto” degli spazi e dei loro viventi al suo interno, avvenuta per ragioni di dominio, precedenti il capitalismo.*



## Le origini geopolitiche dello “scarto climatico” (1)

*L’ “estrattivismo epistemico” e la creazione del “nemico”*

*La costruzione teologico-giuridica della “res nullius” in  
sostituzione delle tradizioni “ctonie” della “forest”*

*(Magna Charta, Carta di Kouroukanfouga, res communes  
omnium; Allmende ecc...) e la sostituzione del  
“forestiero” con il “nemico bioculturale”.*

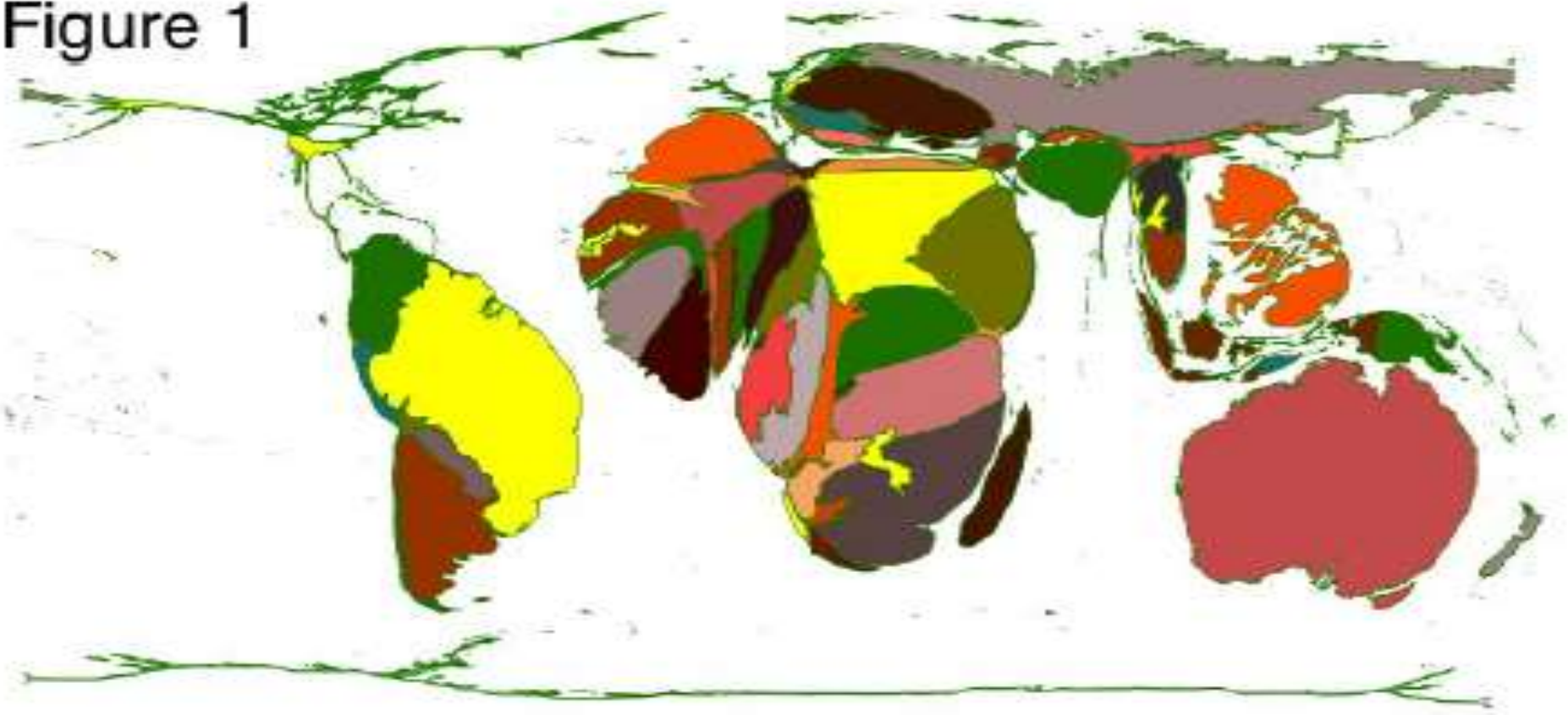
*La prima separazione “razziale” dello spazio climatico  
colonizzato: terra/sottosuolo = vita/morte (l’inerte  
sotterraneo è più importante del vivente sopraterra)*



## Le origini geopolitiche dello “scarto climatico” (2)

*Lo “scambio ecologico diseguale” dal 1492: la seconda  
separazione “razziale” dello spazio climatico colonizzato:  
nord/sud-sviluppo/sottosviluppo*

Figure 1





## Le origini geopolitiche dello “scarto climatico” (3)

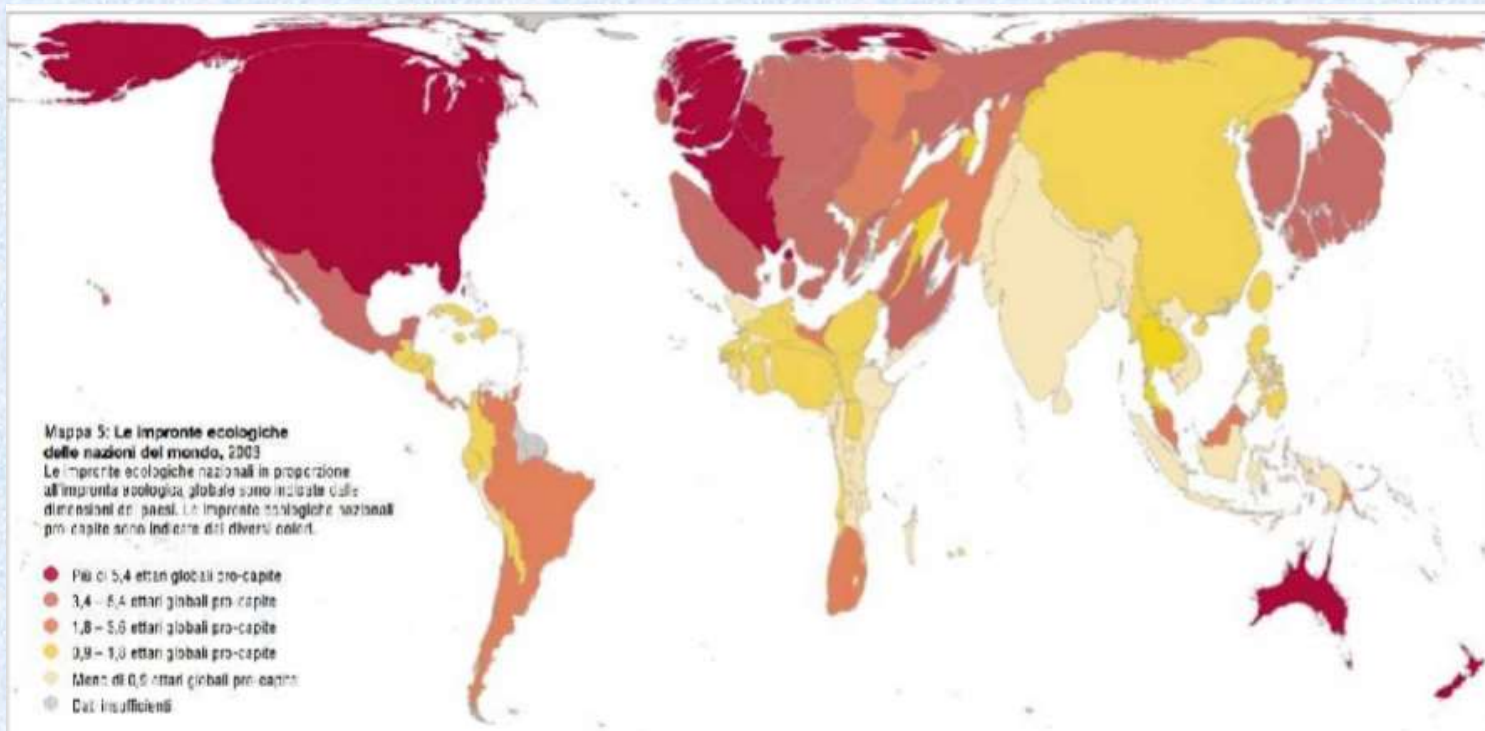
*Dalla schiavitù agricola alle macchine fossili: la terza  
separazione “razziale” dello spazio climatico colonizzato:  
materia/energia viva vs. materia/energia morta*





## Le origini geopolitiche dello “scarto climatico” (4)

*Il “nomos ecologico”. L’appropriazione dell’atmosfera  
come nuovo spazio climatico antropogenico (dalle  
emissioni industriali ai c.d. “diritti di emissione”-ETS).  
La quarta separazione “razziale” dello spazio climatico:  
terra/aria e l’impronta di emissione*





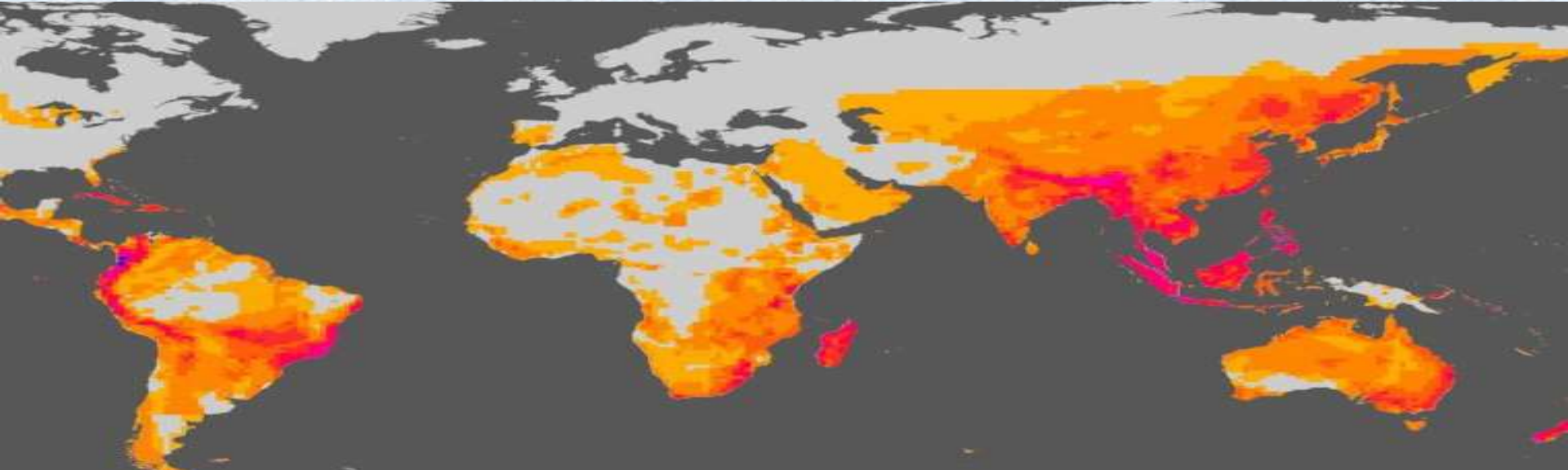
## Le origini geopolitiche dello “scarto climatico” (5)

*Il “debito climatico”, determinato dalle filiere produttive globali e dalla dissociazione e asimmetria tra luoghi di produzione e luoghi di destinazione del consumo. I luoghi di produzione emettono molta CO<sub>2</sub> eq, ma non per sostenere i propri consumi locali, bensì per soddisfare i consumi dei luoghi di destinazione, dove paradossalmente le emissioni risultano, in ragione di tale asimmetria, inferiori. La quinta separazione “razziale” dello spazio climatico: produzione e consumo dissociati dalla qualità ambientale spaziale.*

*L'esempio della Cina e dell'India.*

# L'effetto geopolitico dello “scarto climatico”

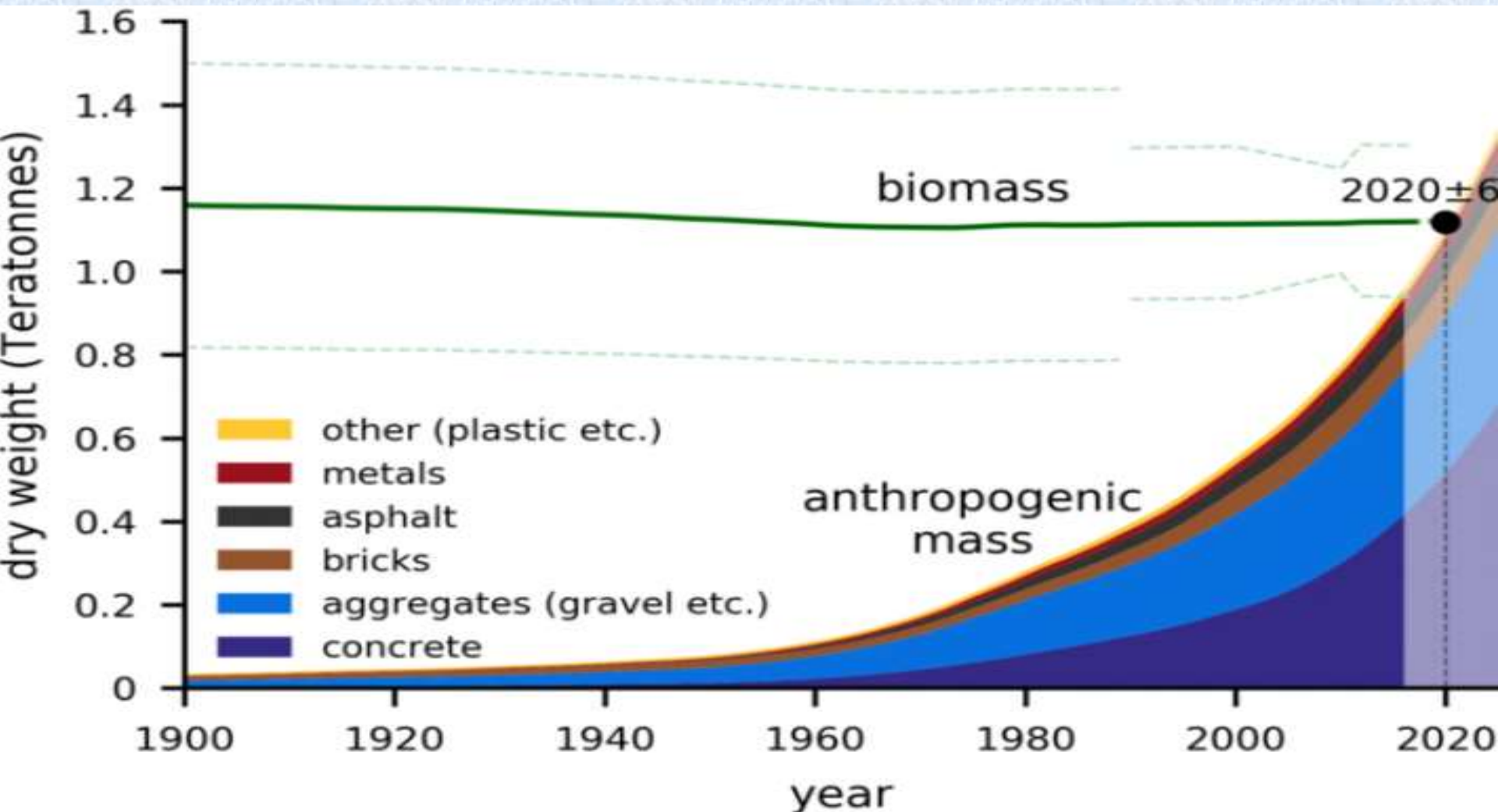
*La “sesta estinzione di massa” (la c.d. “estinzione dell’uguaglianza”)*





# Il “nuovo regime climatico” (1)

*Il “peso” del totale dei servizi “culturali” (antropomassa)  
sulla biomassa climatica “naturale”*



## Il “nuovo regime climatico” (2)

*Il c.d. “paradosso dell’indigeno”, l’unico soggetto “climatico” compatibile con la biomassa, ancorché storicamente “scartato” dal sistema climatico colonizzato*





# Quale giustizia o uguaglianza?

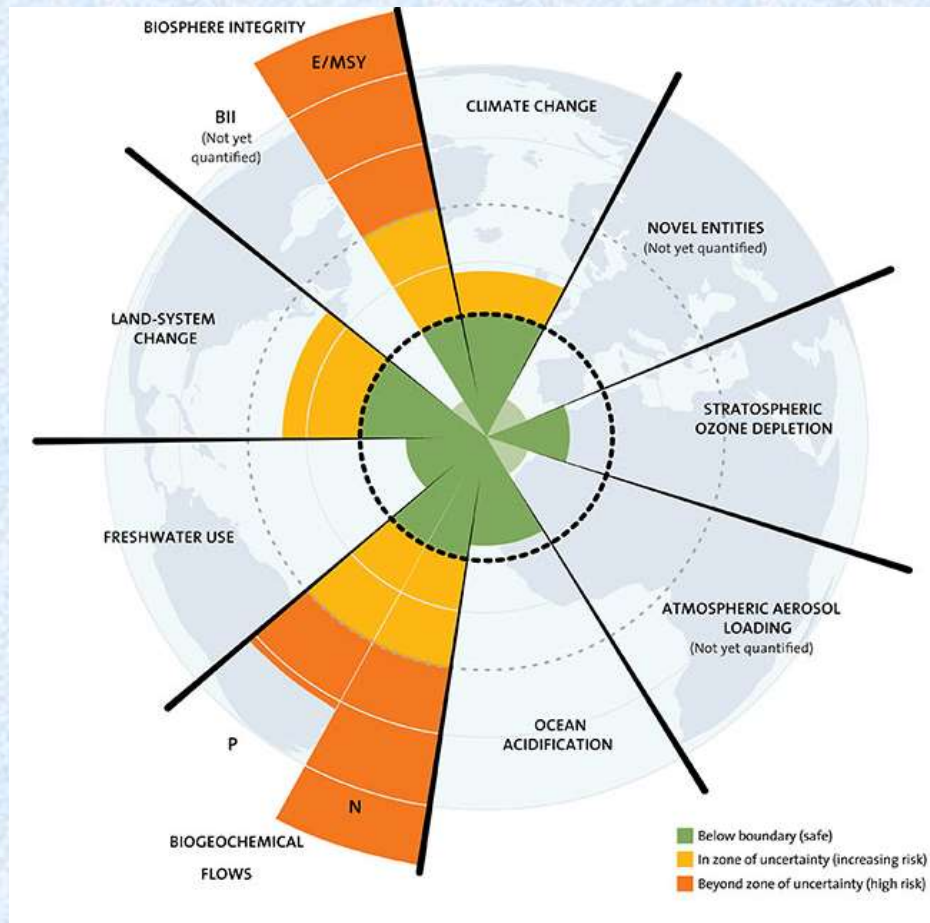
## “ambientale”, “climatica” o “di specie”?

### Il c.d. “*Disassembling*” del sistema climatico

Giustizia/uguaglianza ambientale	Giustizia/uguaglianza climatica	Giustizia/uguaglianza di specie
<p>Affronta i problemi degli effetti dei singoli impatti ambientali sui territori e le popolazioni che li vivono, senza interrogarsi sulle cause e le provenienze geopolitiche degli impatti</p> <p><u>Non risolve</u> le ingiustizie “razziali” del sistema climatico colonizzato</p>	<p>Distingue in base alle provenienze geopolitiche delle emissioni climalteranti, sulla base di una doppia distinzione:</p> <ul style="list-style-type: none"><li>- tra emissioni di produzione ed emissioni di consumo;</li><li>- tra emissioni di profitto, di lusso, di necessità sociale, di sopravvivenza</li></ul> <p><u>Tenta di risolvere</u> le ingiustizie “razziali” del sistema climatico colonizzato</p>	<p>Prende atto della necessità e urgenza dell'emergenza climatica (c.d. “<i>tragedia dell'orizzonte</i>”) come problema della pressione umana di specie sull'intero sistema climatico comunque termodinamicamente interconnesso</p> <p><u>Impedisce di risolvere</u> le ingiustizie “razziali” del sistema climatico colonizzato</p>

# Siamo tutti “razzisti climatici” (1)? Perché?

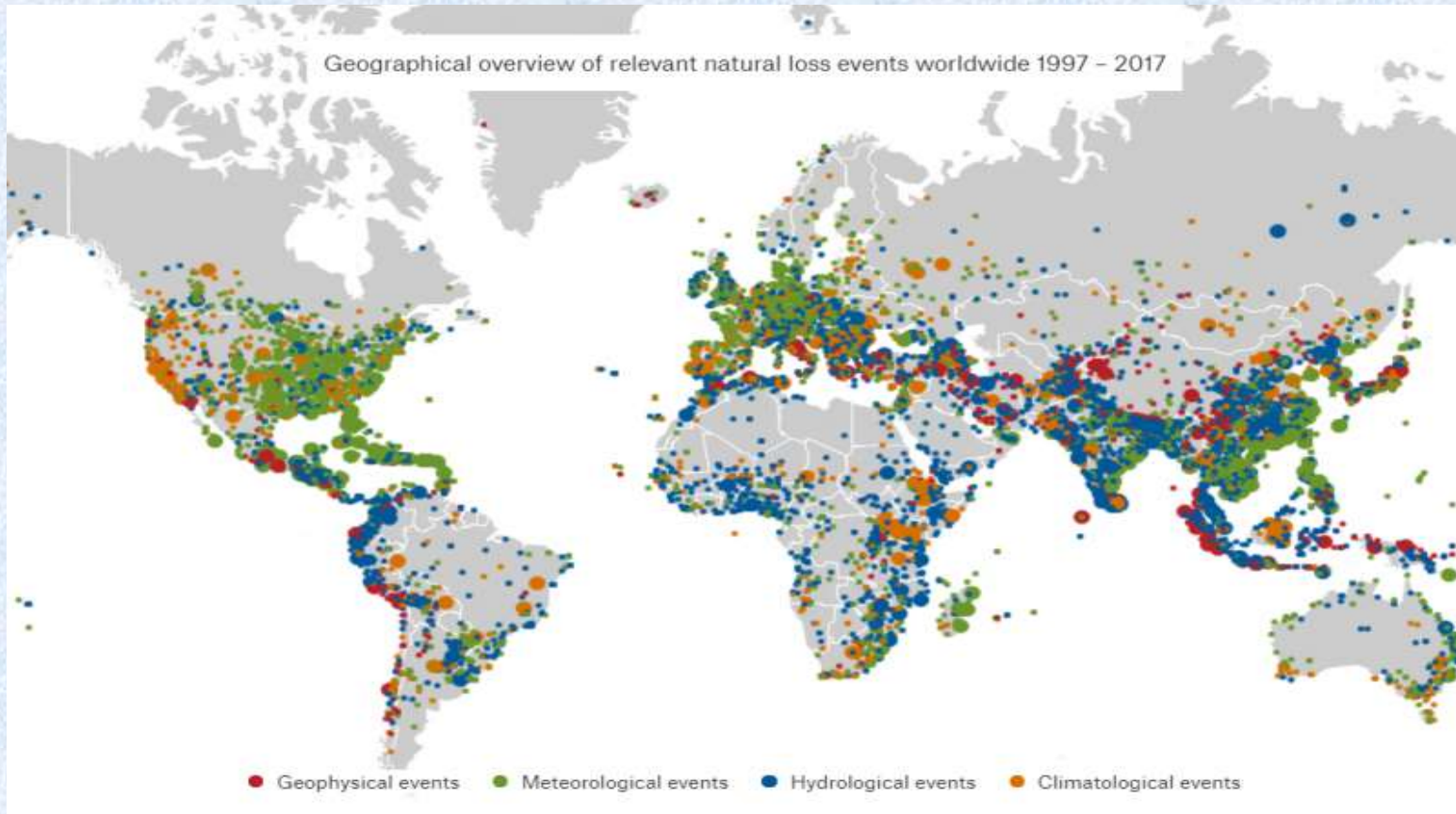
*Il benessere materiale e sociale garantito dall'energia fossile si rivela “ingiusto” sia verso lo spazio che verso il tempo del sistema climatico, quindi in termini planetari e non semplicemente “situati”. Il dato emerge dalle rilevazioni sui “Planetary Boundaries”*





## Siamo tutti “razzisti climatici” (2)? Perché?

*La condizione planetaria del collasso del sistema climatico antropogenico produce problemi inediti di giustizia di specie, di fatto “ingiusti” verso gli stessi soggetti della specie, perché espansi sulla terra e sull’aria, indipendentemente dalle costruzioni “razziali” umane del sistema climatico.*

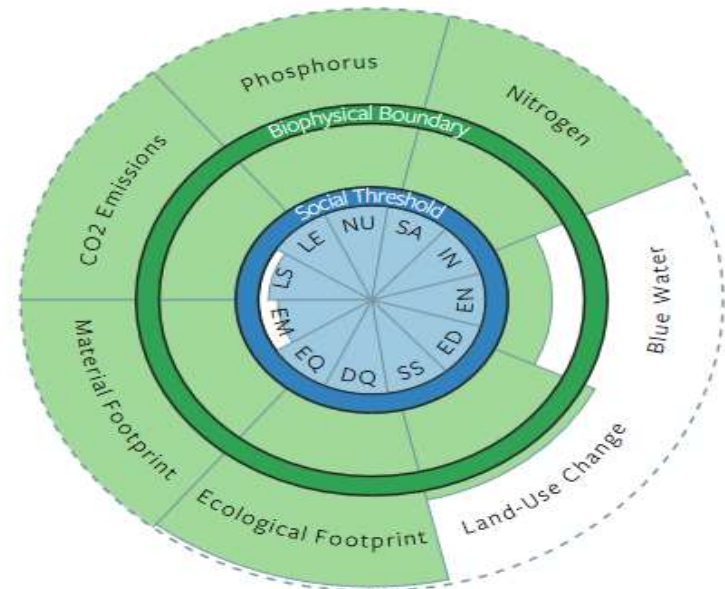
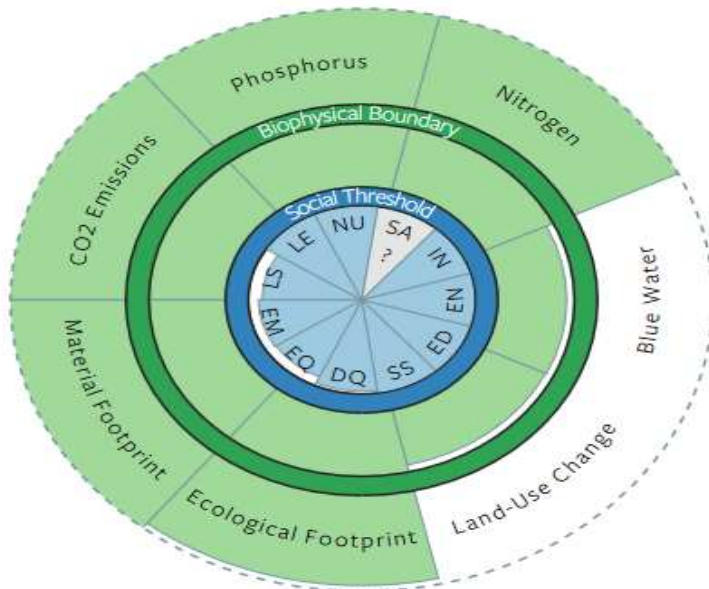


# Siamo tutti “razzisti climatici” (3)? Perché?

*Questa realtà spiega non solo la difficile cooperazione internazionale nella lotta al cambiamento climatico, formalmente retta dal principio di “equity” ma di fatto perseguita in termini egoistici [dati UNFCCC 2021], ma anche il tendenziale fallimento dei 17 SDGs ONU di Agenda 2030 [dati ONU 2021] e della c.d. “Just Transition”*

Italy

EU-28



LS - Life Satisfaction	ED - Education
LE - Healthy Life Expect.	SS - Social Support
NU - Nutrition	DQ - Democratic Quality
SA - Sanitation	EQ - Equality
IN - Income	EM - Employment
EN - Access to Energy	



# Siamo tutti “razzisti climatici” (4)?

## Verso chi?

GENERAZIONE 1 (la generazione sfruttata per estrarre fossile: per es. i minatori italiani in Belgio o i lavoratori schiavizzati in America latina o Africa = dissociazione sociale geopolitica);

GENERAZIONE 2 (la generazione che ha usufruito dei vantaggi di crescita, di benessere e di consumo, prodotti dall'estrazione fossile e dai sacrifici della precedente generazione: per es. i figli dei minatori o degli schiavi = dissociazione sociale intergenerazionale);

GENERAZIONE 3 (le generazioni presenti e soprattutto future, che non solo non usufruiranno dei vantaggi della “generazione 2” ma soprattutto pagheranno ingiustamente tutti gli effetti irreversibili di “Gap” e di “deficit” ecologico del sistema terra, senza averne avuto alcuna responsabilità = dissociazione sociale intergenerazionale e climatica);

GENERAZIONE 3 DI 1 (le generazioni presenti e soprattutto future, figlie degli sfruttati, che continueranno a pagare il «debito ecologico» del pianeta = dissociazione sociale geopolitica, intergenerazionale

# Siamo tutti “razzisti climatici” (5)?

## Verso chi?

*Per stabilizzare il clima, dobbiamo liberarci dal fossile, ma questo implica l'utilizzo delle c.d. “terre rare” e di nuovi “minerali”, con un'ulteriore neocolonizzazione antropogenica del sistema climatico stesso, il che inaugura problemi di “Slavery Footprint” (non più di CO<sub>2</sub> Footprint) nell'assenza di un “responsabile collettivo” cui imputare il paradosso.*

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# Il sistema climatico antropogenico futuro secondo il WEF 2021

## Top Global Risks by Likelihood



## Top Global Risks by Impact



■ Economic
 ■ Environmental
 ■ Geopolitical
 ■ Societal
 ■ Technological

Source: World Economic Forum Global Risks Report 2021

# Bibliografia (1)

- A. Angelini, A. Re, *Parole, simboli e miti della natura*, Qanat, Palermo 2012.
- M. Carducci, «Estrattivismo» e «nemico» nell'era «fossile» del costituzionalismo, *Spec. DPCE*, 2019, 61-80.
- M. Carducci, *La ricerca dei caratteri differenziali della "giustizia climatica"*, in *DPCE online*, 2, 2020, 1345-1369.
- P. Crutzen, *Benvenuti nell'Antropocene. L'uomo ha cambiato il clima. la Terra entra in una nuova era*, trad. it., Mondadori, Milano 2005.
- P. Dardot, C. Laval, *La nuova ragione del mondo. Critica della razionalità neoliberista*, trad. it., DeriveApprodi, Roma 2013.
- M. Fisher *Realismo capitalista*, trad. it., Nero ed., Roma 2018.
- A. Folkers, *Air-Appropriation: The Imperial Origins and Legacies of the Anthropocene*, in *23 European Journal of Social Theory*, 4, 2020, 611-630.
- K. Golser (a cura), *Religioni ed ecologia. La responsabilità verso il creato nelle grandi religioni*, EDB, Bologna 1995.
- J. Goudsblom, *Storia del fuoco. Dalla preistoria ai nostri giorni*, trad. it., Donzelli, Roma 2008.
- D. Haraway, *Chthulucene. Sopravvivere su un pianeta infetto*, trad. it., Nero ed., Roma 2019.



# Bibliografia

- L.J. Kotzé, R.E. Kim, *Earth System Law: The Juridical Dimensions of Earth System Governance*, 1 *Earth System Governance*, 2019, 1-12.
- B. Labatut, *Quando abbiamo smesso di capire il mondo*, trad. it., Adelphi, Milano 2021.
- B. Latour, *La sfida di Gaia. Il nuovo regime climatico*, trad. it. , Meltemi, Milano 2020.
- E. Leonardi, *Lavoro, natura, valore. André Gorz tra marxismo e decrescita*, Orthotes, Salerno-Napoli 2017.
- A. Malm, *Fossil Capital*, Verso, London-New York 2016.
- A. Malm, *Clima Corona Capitalismo*, trad. it., Ponte alle Grazie, Firenze 2020.
- J. Martinez-Alier, *Ecologia dei poveri*, Jaka Book, Milano 2009.
- J. Moore, *Antropocene o Capitalocene?*, trad. it., Ombre Corte, Verona 2019.
- C. Safina, *Becoming Wild*, Hanry Holt & C. Macmillan, New York 2020.
- C. Schmitt, *Il Nomos della terra*, trad. it., Adelphi, Milano 1991.
- V. Smil, *Energia e civiltà. Una storia*, trad. it., Hoepli, Milano 2021.
- D. Tanuro, *È troppo tardi per essere pessimisti*, trad. it., Alegre ed., Roma 2020.
- R. Wiethölter, *Le formule magiche della scienza giuridica*, trad. it., Laterza, Bari 1975.

# Atlanti e strumenti di comparazione spaziale

*A Good Life For All Within Planetary Boundaries:* <https://goodlife.leeds.ac.uk/>.

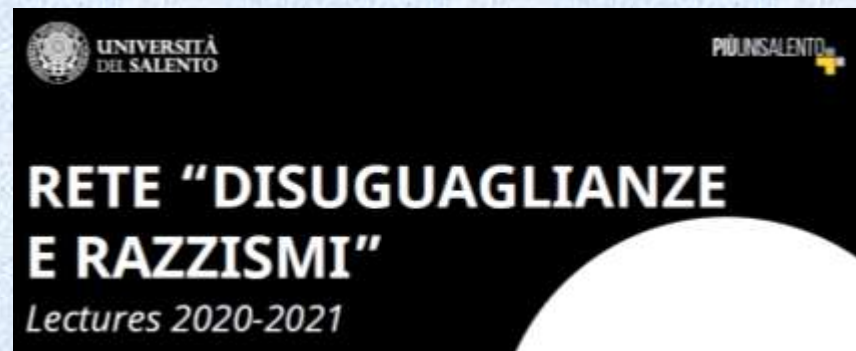
*Atlas for the End of the World:* [http://atlas-for-the-end-of-the-world.com/index\\_0.html?fbclid=IwAR0LV2ZBdyXJeS4QFPg5in7sCt8rI-UqANjOJK483Sw\\_QSHo97P6S3TsnV8](http://atlas-for-the-end-of-the-world.com/index_0.html?fbclid=IwAR0LV2ZBdyXJeS4QFPg5in7sCt8rI-UqANjOJK483Sw_QSHo97P6S3TsnV8)

*Books about Environmental Racism, White Privilege, and Climate Justice:* <https://www.zerowastewisdom.com/post/books-about-environmental-racism-white-privilege-and-climate-justice>

*Feral Atlas:* <https://feralatlas.supdigital.org/>

F. Gemenne et al., *Atlante dell'Antropocene*, trad. it., Mimesis, Milano Udine 2021.





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# Geo-capitalism and global racialization in the frame of Anthropocene

Dario Padovan & Alfredo Alietti

To cite this article: Dario Padovan & Alfredo Alietti (2019) Geo-capitalism and global racialization in the frame of Anthropocene, International Review of Sociology, 29:2, 172-196, DOI: [10.1080/03906701.2019.1641263](https://doi.org/10.1080/03906701.2019.1641263)

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# Geo-capitalism and global racialization in the frame of Anthropocene

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## ABSTRACT

The appropriation of nature under current capitalist conditions implies the intensification of processes of exploitation of labour, dispossession of peasants' lands, indiscriminate extraction of raw materials, and racialization of all these processes. These dynamics reveal a double process: from one side we are witnessing a global racialization generated alongside socio-ecological phenomena that are changing for the worse food, energy, land, water, and raw materials regimes. From the other side we are witnessing an imperious use of racist speeches, claims, public measures and violent practices aimed to galvanized the racial and racist spirit of European and American white populations against migrants and refugees driven by the underlying forces formerly recalled. These two dynamics are strictly interlinked. For a long time, researchers dealt with local dynamics and phenomena of racism often forgetting how global, large, planetary processes of exploitation, appropriation, and dispossession sculpt these dynamics at the local level. This article aims to deal with these processes of global racialization and racism by an analysis of the process of accumulation based on 'racialized unequal exchange' fostering the idea that that unequal ecological exchange bases on historical division of people in different subordinate races in line with the global neoliberal order.

## ARTICLE HISTORY

Received 8 November 2017

Accepted 3 June 2019

## KEYWORDS

Anthropocene; racism; geo-capitalism

## 1. Introduction

The anthropogenic transformations of ecosystems called Anthropocene is forcing scientists to recognize not only the inextricable interfusion of nature and human society (Malm & Hornborg, 2014), but also the fact that it is becoming a perfect marker and multiplier of differences and inequalities. The appropriation of nature under current capitalism conditions, which is at the core of the current geological troubles, is entailing some correlated processes such as the intensification of the processes of labour's exploitation, the dispossession of peasants' lands, the indiscriminate extraction of raw materials, and the racialization of all these processes.<sup>1</sup> All this implies a radical fragmentation of the relationship between humans, and between humans and nature. These dynamics reveal a double process: on the one hand, we are witnessing deep socio-ecological changes of

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food, energy, land, water, and raw materials regimes implying wide processes of dispossession, expulsion, and racialization. On the other hand, we are observing an imperious use of racist speeches, claims, public measures and violent practices aimed to galvanize the racial and racist spirit of European and American white populations against migrants and refugees driven by the phenomena formerly recalled.

This paper aims to deal with these processes of global racialization and racism trying to show how the two dynamics above stressed are strictly interlinked. For a long time, researchers have dealt with local dynamics and phenomena of racism often forgetting how global, large, planetary processes of exploitation, appropriation, and dispossession have moulded these dynamics at local level. The link between local racisms and global processes of dispossession and deprivation seems now more plausible than ever, even in the cases of new racisms rising up in many Western countries.

The first paragraph frames the phenomenon of global racism suggesting that different epochs have held their own racial global systems. In the second one, we shortly present a critical view of Anthropocene as a conceptual umbrella able to capture many aspects of the socio-ecological crisis. The third paragraph inspects the notion of ‘natural fertility of capital’ formulated by Marx whose variability affects the rate of profit of capital at the point that current capitalism may be labelled as *geo-capitalism*. The fourth one examines the different strategies that capital puts on the ground to cope with the falling rate of profit due to the decreasing natural fertility of capital (of agriculture, mining and energy harvesting), which focuses mainly on the hunting for cheap, semi-free or even unpaid labour. The fifth paragraph explains as geo-capitalism can be seen as a global racial formation to get cheap labour. Moreover, in this paragraph, we dialectically link a worldwide apartheid prospect forged onto the black/white opposition with a more stratified vision in which a new emergent semi-periphery is generating its own racial regimes. The sixth paragraph pinpoints trajectories of racialization in the frame of Anthropocene: the causes of the Earth system alteration, migrations as adaptation strategies, and the losses of habitat. The seventh paragraph discusses the concrete and racialized body as the core of a social manipulated reaction to global problems (energy crisis, the shortage of cheap raw material and so on). In the last paragraph, we concentrate on the process of accumulation based on ‘racialized unequal exchange’ fostering the idea that the unequal ecological exchange grounds on historical division of people in different subordinate races in line with the global neoliberal order.

## 2. Global racism and racial sovereignty

As suggested by Winant, ‘the global racial system we have is obviously not the first one we have ever had’ (Winant, 2004, p. 94). A worldwide racial system marked the emerging of the modern epoch grounded on European imperialism and African slavery. Both these systems were organized racially. The theft of labour and life, of land and resources, from millions of Native Americans and Africans, and from Asians and Pacific Islanders as well, financed the rise of Europe and made both its subsequent mercantilism and its later industrialism possible (Winant, 2004). Racialization was necessary to design the social, economic and political order of slavery during the long process of primitive accumulation also called ‘accumulation by dispossession’ (Harvey, 2003). Slavery was not born from racism but provided the material basis for racism (Williams, 1944; Wilson,



1996). The emerging plantation capitalism turned soon to Africa, a bountiful muscle reservoir, creating one of the world's most sinister energy systems: the Atlantic slave trade (Nikiforuk, 2012).

A novel global racial system, made of a mixture of different 'racial projects' such as anti-Semitism and Afro-racism, arose during the building process of industrial, colonial and financial capitalism and the Western nation-states supporting it. Antisemitism was at the core of European nationalization based on the twofold process of nation-building and state-building (Adorno, Frenkel-Brunswick, Levinson, & Sanford, 1950; Mosse, 1978; Bauman, 1989; Balibar & Wallerstein, 1991), whereas afro-racism – after the end of slaves trading – was at the core of Western colonial domination (see on this Fredrickson, 2002; see also Goldberg, 1993). Both racisms – Afro-racism and Antisemitism – were at the core of the global process of modernization and capital expansion, the first one representing the bare labour-force, the second one representing the naked money; the first one having to do with the ground-rent, the second one with the money-interest, two different forms of capital. In this erratic system of production and circulation of commodities and value (Harman, 2010), racism plays again a crucial role, as a common sense marker for social and labour positions (see on this point for example Banton, 1967; Blumer, 1958; Miles, 1989). Thus, global racism consists of an array of intersectional acts that makes race, gender and age converge towards the creation of extensive social and physical differentiated vulnerabilities.

Even though this global order is nowadays apparently shaken by blurred attempts to come back to a more nationalized and de-globalized order, it is clear that this latter process triggered by 'white' and 'developed' nation-states is in no way a challenge to global capitalism and that it has nothing to do with democracy, equality, freedom, solidarity, development. This racism, that has become a successful political weapon in the hands of cynic fascist minorities, can be seen as the national translation of global racism embracing the planet. Many European countries are now governed by xenophobic, racist, discriminatory parties that won the elections just promising to solve, once and for all, the problems of refugees, migrants, foreigners, criminals, terrorists, and then of Jews, Muslims, Roma, living in these countries. Violent racism and widespread institutional discrimination promoted by these countries are not accidental consequences of legitimate reactions to a blind and strongly unequal globalized order, but the pitiless transformation of long-time processes of exploitation and dispossession of natural and human wealth from the poorest areas of the planet.

These processes, clearly footed on an old-style but still working racial nationalism (Balibar & Wallerstein, 1991; Foucault, 2003), aim perhaps to re-establish the lost centrality of the world-system's core countries challenged by the emerging countries, or simply to avoid the social consequences of the ecological degradation of many areas of the planet. However, the so-called 'refugees crisis' is hiding something more. Here, the game is changing its rules: the time of a hypocrite semi-free circulation of human labour, often coupled in many aspects with raw materials and primary goods flows (Massey et al., 1993) is coming to an end. At the beginning, the flows of migrants were generated by a demand of cheap labour-force to be employed in the production processes feeding for a long time white and non-white elites' profits (Coates, 2007). Subsequently, the flows of people have become refugees escaping from political, economic, environmental, and social crises (often taking the form of local armed conflicts or natural disasters), which are now seen as to be

destabilizing the internal order of affluent – but no more growing – white countries and thus they need to be stopped. Here, racism and migrations enter a lethal circularity. As noted by Miles and Brown (2003, p. 137), there is ‘a dialectical relationship between migration and racism [...] in the longer term, racism begets migration, which begets racism which begets migration and so on’.

Thus, Western societies are once more re-discovering their mythical racial origins, and the racial enemies – inside and outside – threatening them. Affluent societies begin to build concrete boundaries (walls) keeping out their enemies (or internally segregating them) (Sassen, 2009; Brown, 2010), and claiming the right of the sovereign power to defend them. The figure of the climate-change migrant, for instance, expresses a set of ‘white’ anxieties having to do with an impending loss of control and disorder, and the dissolution of boundaries (Baldwin, 2013). Racism is in fact a strong tool to build cleavages and walls into social bodies as stressed by Foucault: ‘It (racism) is primarily a way of introducing a break into the domain of life that is under power’s control: the break between what must live and what must die’ (Foucault, 2003, p. 254). The racialized states look for enemies, whether they are to be found inside or outside their boundaries (Kelly, 2004). Consequences are the ferocious discrimination and separation of those enemies from the social body, their abandonment to greater risks, or, as it is happening, the simply letting them die (Padovan, 2003). Moreover, this racism employs a strategy that shifts the burden of supporting life from states to people, attempting to contain non-insured population flows reducing the potential migrants’ expectations while improving their local self-reliance (Duffield, 2006).

In the perspective of global racism, dynamics of racialization such as the discrimination against minorities in order to exploit their labour or to exclude them from social benefits underlined by a number of scholars (see for example Castles, 1993; Miles & Brown, 2003; Bonacich, Alimahomed, & Wilson, 2008; Rex;), are taking two converging dynamics. On the one hand, the global economy generates local regimes of racialization in which targets of racial practices change depending on the race, religion, culture descent: afro-descendants, natives, tribes, groups, and minorities of different religion and habits (such as Rohingya in Myanmar, Uyghur in China, Dalits in India, Xavante in Brazil, Ogoni in Nigeria).<sup>2</sup> On the other hand, the global economy system reproduces a ‘global apartheid’ as the focus on current world order, whereas different places are marked by the same abstract racial order. Global apartheid implies a racial hierarchy, a system whose *raison d’être* is wealth extraction and super-exploitation, where the violent repression of the free movement of labour plays a central role (Smith, 2011).

The material dimensions of this racialized global order prevail on the ideological constructs often underlined by scholars. Racialized narratives are not *ex-ante* a justification and a legitimization of the racial order, but they emerge in the founding process of the order itself. Racialization and the on-going racist structures try to solve the problem of resources appropriation management, delegating the brutal role of the appropriation and manipulation of natural resources for the reproduction of the whole society to some de-humanized groups. It is not only a problem of the ‘ancient disdain for work’ – as said Max Weber – but it is a problem of social organization of labour: some groups and their descendants are deputized to provide – almost for free – the basic and primary resources for society, being them slaves, servants, non-salary, bonded, or low-salary workers. In all these typologies, what is crucial is their low cost, their limited free



movement, and their closeness – often imposed – to the natural objective conditions of the social metabolism (Padovan, 2015).

Racism is thus ‘a potential element of signification by which to select, and to legitimate the selection of a particular population, whose labour power will be exploited in a particular set of unfree production relations’ (Miles & Brown, 2003, p. 129; see also Miles, 1989, 1989; Gilroy, 1987). The people identified as the source of unskilled exploitable labour power are also constructed and treated as an inferior race. Class formation and race formation here merge: the creation of the partially dispossessed labouring class is not only motivated by racism, but it is effected through a series of mechanisms pushing these people into an increasing segregated system.

The expansion and perpetuation of global racism cannot be separated from the expansion and perpetuation of capitalism accumulation (Du Bois, 2015; Cox, 1959; Batur-Vanderlippe, 1999). These processes are linked theoretically and practically. The articulation of capitalism, by enabling and maintaining the connection between everyday reproduction processes and the global production of value, is essential to the perpetuation of global racism. Racial space is globalized throughout the articulation of capitalism (Winant, 1997). As capitalism expanded and adapted to particularities of spatial and temporal variables, and as it started to colonize increasing portions of the planet, global racism has become part of its rationalization and accommodation (Batur, 2018), especially in terms of natural resources appropriation arrangements. Racism is thus the cruel flag of a new stage of the appropriation of resources – in the form of land grabbing and ground rent – while people must be chained to their deprived land. People left to die in these deserted lands or into the shadowy seas that they try to cross, constitute the spectral materiality of the global processes of dispossession, the material dimension of an order of inequalities.

### 3. World-ecology crisis or the ‘Anthropocene’

The expression Anthropocene indicates the most recent geological era of the Earth whose main characteristic is to be deeply influenced by anthropogenic activity, i.e. the growing evidence of how atmospheric, geological, hydrological and biospheric processes are now radically altered by the human activities. ‘Anthropos’ has thus become the main geological agent of this new epoch, rivalling the ‘great forces of Nature’ (Steffen, Grinevald, Crutzen, & McNeill, 2011; Crutzen, 2002).

The Anthropocene denotes the crisis of the Earth or society/nature nexus (Smil, 2013), and consequently also the crisis of the ingenuous idea that an infinite process of re-harmonization and re-equilibrium is always at work between the two parts. The capital-induced radical cleavage between Society and Nature is captured by the notion of Anthropocene as revealed by McKenzie Wark:

The Anthropocene is a series of metabolic rifts, where one molecule after another is extracted by labour and technique to make things for humans, but the waste products don’t return so that the cycle can renew itself. The soils deplete, the seas recede, the climate alters, the gyre widens: a world on fire. Earth, water, air: there is a metabolic rift where the molecules that are out of joint are potassium nitrate, as in Marx’s farming example; or where they are dihydrogen-oxide as with the Aral sea; or where they are carbon dioxide, as in our current climate change scenario. (Wark, 2015, p. XIV)

Metabolic rifts reveal that the system of metabolic exchange between nature and society is at stake (Foster, 1999; Foster, Clark, & York, 2010). Marx (1969) illustrated the divergence in the exchange (*Stoffwechsel*) between nature and humanity in ancient societies, and the same process under capitalism that commands metabolic processes of global reproduction:

At the same pace that mankind masters nature, man seems to become enslaved to other men or to his own infamy. Even the pure light of science seems unable to shine but on a dark background of ignorance. All our invention and progress seem to result in endowing material forces with intellectual life, and in stultifying human life into a material force. (Marx, 1969, p. 500)

However, even if Anthropocene's arguments and narratives have the merit to cast a light on the ongoing bio-geological processes shaping the Earth, it does not provide elements to understand the unequal and racialized distribution of its causes and consequences. This narrative is useful to bring to the surface current geo-ecological problematic dynamics affecting the planet, but it is profoundly problematic in that it presents a teleological and universal narrative of history that disperses responsibility onto the abstract humanity, precluding a critical understanding of climate change that accounts for differential responsibilities and vulnerabilities (Bauer & Ellis, 2018).

Viewed from a critical prospect, we can argue the Anthropocene is a consequence of trans-planetary processes related to the global development and diffusion of the capitalist system starting from the sixteenth century. Capitalist civilization, with its audacious strategies of global conquest, relentlessly commodification, and rationalization, has produced – and now destroyed – the world as we have known it (Moore, 2017). Anthropocene is a term that can be rightly contested because it hides the fact that at the origin of this wide phenomenon is the dominating capitalist regime and not an abstract humanity or species (Malm & Hornborg, 2014). This is the reason why someone rightly suggested the term 'Capitalocene'. The fact that the global capitalist system consumes more than what can be reproduced by the 'Earth system' is at the base of its declining productivity. The Anthropocene, with all its conceptual limits, announces a time of deep crisis, revealing the potential declining natural fertility of capital.

#### 4. The declining natural fertility of capital ...

The horizon emerging from the Anthropocene presents crucial and problematic elements for the global accumulation of capital. The most important is the decreasing 'natural fertility of capital', in other words the availability of cheap fossil energy and raw materials needed to capture living labour (Moore, 2016). This dynamic shapes the ratio between dead labour and living labour, between carriers of value and valorizing labour, or, in other words, the organic composition of capital (see Padovan, 2018). As Marx wrote:

There is just one thing to be noted here: the natural wealth in iron, coal, wood, etc., which are the principal elements used in the construction and operation of machinery, presents itself here as a natural fertility of capital and is a factor determining the rate of profit irrespective of the high or low level of wages. (Marx (1894). Capital, vol. III, p. 76)

Marx sensed that the material basis of the capital accumulation process could shape its magnitude and speed of reproduction. The 'natural wealth' here evoked by Marx includes

energy carriers such as oil, coal, gas, and wood, raw materials that directly enter the process of production such as cotton, wool, linen, iron, and finally raw materials used to build machinery such as iron, wood, leather. The current raw materials are not significantly different from those of Marx. The fluctuation in the price of such materials affects the rate of profit, falling and rising inversely to the price of raw materials. This shows, among other things, how important the low price of raw material is for industrial countries, even if fluctuations in the price of raw materials are not accompanied by variations in the sales sphere of the product.

Marx based its consideration of 'natural fertility of capital' on the decreasing return in terms of productivity and land fertility of agriculture, emphasizing the negative consequences of agriculture and mineral industry under capitalism. Precisely because of such an application, he illustrated how it inevitably brings about disharmonies in the trans-historical 'metabolism' between human beings and nature. Marx's acute analysis of the changing natural fertility of capital implies also, as he did, a reconsideration of global trade, as an intrinsic tool in the hands of capital to cope with the fluctuating rate of profit. The foreign trade influences the rate of profit, regardless of its influence on wages through the cheapening of the necessities of life. The point is that it affects the prices of raw or auxiliary materials consumed in industry and agriculture.

Recent data on the influence of changing Earth conditions such as climate change, confirm this insight on decreasing global fertility of agriculture and raw material extraction. One-third of the planet's land is severely degraded and fertile soil is being lost at the rate of 24bn tonnes a year, according to a new United Nations study that calls for a shift away from destructively intensive agriculture (United Nations Convention to Combat Desertification, 2017). A significant proportion of managed and natural ecosystems are degrading: over the last two decades, approximately 20 per cent of the Earth's vegetated surface has shown persistent declining trends in productivity, mainly because of land/water use and management practices (Amundson et al., 2015). Over 1.3 billion people are trapped in degrading agricultural land: farmers on marginal land, especially in the drylands, have limited options for alternative livelihoods and are often excluded from wider infrastructure and economic development.

The FAO composite measures of food prices for 2002–2004 indicate events when the top five countries producers of wheat, maize, and soy crops had yields 25% below the trend line (indicative of a seasonal climate extreme). At the same time, food prices are increasingly associated with the price of crude oil, making attribution of price changes to climate difficulties (Porter et al., 2014). In the same wake, we can notice that trends from 1980 to 2008 show that global maize and wheat production declined by 3.8 and 5.5%, respectively, relative to a counterfactual without climate trends (Lobell, Schlenker, & Costa-Roberts, 2011).<sup>3</sup>

High rates of declining fertility are also visible in the mining sectors. Worldwide mining operations are as much as 28 per cent less productive today than a decade ago, according to new McKinsey research. The results from McKinsey's new MineLens Productivity Index (MPI), which adjusts for declining ore grades and mine cost inflation, show that the pronounced decline in productivity is evident across different commodities and it is seen in most mining players and geographies (Lala, Moyo, Rehbach, & Sellschop, 2015). Mining labour productivity in Australia has declined by roughly 50% since 2001, while in the US



coal sector labour productivity declined by an average of 27.5% from 2009 to 2012 (Mitchell & Steen, 2017).

In short, we can say that the declining natural fertility of capital is the outcome of different converging processes: on the one hand the increasing consumption of renewable biomass by the commodity production system is slowing down the Earth capacity of reproducing the same quantity of matters and absorbing waste; on the other hand, the consumption of non-renewable raw materials is also squandering the global fertility of the planet, even though reports blame the scarce productive skill of recruited workers. This mining fertility weakly depends on labour productivity, even the reduction of workforce remains the principal strategy of the mining industry. These processes are leading to a strengthening of some branches designated to the appropriation of raw materials of global capital that had been excluded from the dramatic growth of financial and so-called 'immaterial' capitalism. These branches are regaining centrality – both for the destruction and losses of fertility they accomplished and their importance for the stabilization of fictitious capital marked by an increasing instability and uncertainty – at the point they started to be called extractive capitalism, carbon capitalism, fossil capitalism, and, we suggest, geo-capitalism.

## 5. ... and the hunting for cheap labour

For Marx, the value of raw material forms an ever-growing component of the value of the commodity-product in proportion to the development of the productivity of labour, not only because it passes wholly into this latter value, but also because in every aliquot part of the aggregate product the portion representing depreciation of machinery and the portion formed by the newly added labour – both continually decrease. Owing to this falling tendency, the other portion of the value representing raw material increases proportionally, unless this increase is counterbalanced by a proportionate decrease in the value of the raw material arising from the growing productivity of the labour employed in its own production (Marx, 1894, p. 77). However, if we consider the enormous mass of fixed capital which enters the process of social production as a whole, not only do we have to explain the falling rate of profit, but also the reasons why this fall is not greater and more rapid than we could expect. Thus, as also suggested by Marx (1894, vol. III, pp. 165-169), we have to identify some counteracting effects at work.

To brake the falling rate of profit, capital has different counterbalancing strategies. The first one is to increase the surplus value coming from living labour, thus reducing the labour costs of reproduction. It can also cut the costs of labour force reproduction using countries' debt to dismantle collective welfare services or reduce the cost of food production sector. Secondly, capital can act on productivity of labour employed in raw materials extraction and energy harvesting (agriculture, mining, and oil fields and platforms). However, due to the absolute decreasing of productivity of raw materials reservoirs, technology can be used only partially to improve or at least maintain their fertility. Vast investments and hugely creative and destructive technology can drive the reckoning back, but cheap nature is really over. Thirdly, whereas increasing productivity of labour applied to raw materials extraction turns out to be little useful, an alternative strategy of capital is the prolongation of the working-day, which increases the mass of appropriated surplus-labour without essentially altering the proportion of the employed

labour-power to the constant capital set in motion by it, and which rather tends to reduce this capital relatively.

In our perspective, the most important strategy that capital can take up is twofold. On the one hand, it can hunt for cheap labour around the world in the form of low wages or no-paid labour, using for instance semi-free or forced labour for the extraction of energy and raw materials, and for the production of primary goods. On the other hand, and strictly connected, it can reinforce the ‘unequal exchange’ expressed into the constant flows of embodied work, land, energy, and materials between peripheral and core countries (Hornborg, 2018).

All these strategies can act simultaneously, but we concern mainly with those that imply a racialization of labour-force to reduce its costs of reproduction in the form of semi-free or unfree wage labour, and a strengthening of unequal exchange of value embedded into work and raw materials. It seems to us that the global racism as it is going to extend its global hegemony at a global level pushes people out of juridical conventions embodied in ‘human rights’ upon what the capitalist order was based on until now. The racialization of labour is typically linked to forms of unfree labour (Bonacich et al., 2008), which implies the denial of citizenship and related rights enabling employers to engage in unchecked coercive practices.

The connection between the capitalist hunting for ‘cheap’ nature and the global organization of a ‘cheap,’ racialized, disposable labour-force, is based on the conception of racialized human labour as semi-free constant capital. The fact that ‘the organizers of the capitalist world system appropriated Black labour power as constant capital’ (Robinson, 1983) has a long history. As suggested by the environmental historian McNeill:

Slavery was the most efficient means by which the ambitious and powerful could become richer and more powerful. It was the answer to the energy shortage. Slavery was widespread within the somatic energy regime, notably in those societies short on draft animals. They had no practical options for concentrating energy other than amassing human bodies (McNeill, 2000, p. 12).

Even if slavery has been abolished, forms of slavery remain around the world, often masked by different semi-legal forms of exploitation. Kevin Bales (1999) estimates that the number of slaves in the world today is 27 million (see also van den Anker, 2004). Recent data (ILO, 2017) estimate that 40.3 million were victims of modern slavery in 2016. They were forced to work under threat or coercion as domestic workers, on construction sites, in clandestine factories, in farms and fishing boats, in other sectors, and in the sex industry. They were forced to work by private individuals and groups or by state authorities. In many cases, the products they made and the services they provided ended up in seemingly legitimate commercial channels. Forced labourers produce some of the food we eat and the clothes we wear, and they clean the buildings in which many of us live or work (ILO, 2017). Conditions that make available forced labour are different and strictly interconnected. The most common ones are for instance poverty, limited protection, restrictive mobility, law discrimination (LeBaron, Howard, Thibos, & Kyritsis, 2018), and they all concur to generate forced labour. Our concern here is to show how this labour-form is a constitutive aspect of the political economy of racism in the frame of Anthropocene.

## 6. Geo-capitalism as global racial formation

Many highlighted the criticality of energy and raw materials for a wider and long-term analysis of the capitalist world-system and the conflicts, struggles, and inequalities that their harvesting and extraction have risen over the time (see for instance Podobnik, 2005; Bunker & Ciccantell, 2005). This is the reason which, coupled with the fact that the global dimension of current capitalism has covered by now the entire planet, induces us to call it *geo-capitalism*.

The appropriation of natural resources has always been coupled with racialized labour. From cotton to sugar, from coal to oil, racialized workers have been the principal human resource applied to the retrieval of raw materials. For instance, oil has almost always been produced in conditions of apartheid: the performers of physical work are a separate group – made of different ‘races’ – than the geologists, engineers, and other experts, and both groups are flown as *Gastarbeiters* into the fields from different parts of the world (Salminen & Vadén, 2015, p. 18). In this sense, racism marks people’s social position regarding the process of organization and production of nature. In other words, to feed its process of accumulation based on energy and raw materials appropriation, geo-capitalism needed and needs racialized labour-force, racialized labour-time and racialized labour-space (land and factories). The racialized labour-force is constitutive of different branches of production and distribution and it distributes through different phases of global commodity chains. Racialized labour-time means that labour-force as commodity has a different value around the world and that the time expended by racialized labour-force on the process of production is de-valued compared to non-racialized labour-time. Finally, racialized labour-space means that land and factories are often segregated places where production runs with the smallest technical mediation, where the human conflates the organic.

In a wider sense, racialized space is a production of the colonialism of the late nineteenth century that was marked by an acceleration in the rate of territorial acquisition by Europe, the United States and England. White supremacy was the essential ideology of colonial projects. The doctrine of the divine right of white people to appropriate resources around the world became the mantra of the new imperialism. The gospel of this new racist imperialism, a ‘vast quest of the dark world’s wealth and toil’, was that ‘whiteness is the ownership of the earth forever and ever, Amen!’ (DuBois, [1920] 2003: 54-55; cit. in Holleman, 2017). Different racial orders were thus built up in order to rationalize the entire process of accumulation, governed by the industrial capitalism.

The current global capitalism does not escape this rule: to get cheap nature as bearer of value, capital needs cheap racialized work. Racism is thus not only an ideological veil to legitimate the more consistent reality. It is a mechanism aimed to forge deep unequal practices, institutions and social orders, but also able to manipulate causes, consequences, and solutions of the global crisis. Capitalism aims to differentiate the distribution of its positive and negative consequences, internalizing profits and externalizing losses. In this sense, the dynamics of world-ecology crisis is denoting a globalized ‘racial formation’, whereas non-white ‘races’ are at a global level captured into and then abandoned to unpredictable dynamics of current crisis.

The ‘racial formation’ is associated with the emergence of capitalism in Western Europe and its concomitant imperialist expansion. Slavery, colonialism, imperialism, are processes



of racialization leading to groups of people being cordoned off for distinct, exclusionary treatment, typically based on a combination of perceived physical appearance and putative ancestry (Omi & Winant, 2015). Race as a by-product of a racialization process is a fundamental organizing principle of social stratification, influencing the definition of rights and privileges, the distribution of resources, and the ideologies and practices of subordination and oppression.

However, whereas global racial formation is a direct consequence of geo-capitalism, at the same time we can notice that the global racialized system is an outcome of the complex composition of differentiated racialized regimes that take place in different scenes of the planet. Thus, we can say that two intertwined dynamics are at work. On the one hand, there is a global racialized regime ruled by a white western elite dominating the rest of the world. On the other hand, we can note a more complex process by which former countries belonging to the periphery of the world system have improved their position reaching the role of semi-peripheral countries and then starting to exploit poor countries generating their own racialized regime.

At first glance, global capitalism can be seen as a 'world racial system' that is grounded on a 'centuries old pattern of white supremacy' which 'denigrates the other and elevates whiteness.' It relegates most of the world's population to inferior statuses, appropriating 'racial' differences in the service of unequal treatments and appropriation of natural resources and labour, making it a 'racial fact' (Winant, 1997). Such a pattern is rooted into the global apartheid model forged by Du Bois (2015) at the beginning of the twentieth century that predicted a dualistic situation regarding the racial system (see for example Winant, 2001, pp. 297–298). This systemic vision of global racism, which combines phenotypical, biological, cultural and ideological elements, managed at a global level by global white elite inserted into global and automatic mechanisms of value generation, fits the prospect of 'systemic racism' (Feagin, 2006).<sup>4</sup> Feagin notes also that 'systemic racism theory' can address global-level racial structures. It can provide empirically grounded and theoretical guidance to understand racial realities beyond the USA and in comparative perspective (see Feagin & Elias, 2013).

The second overlook is different from this latter. It can be seen a process of fragmentation of the dual model based on the colour line. In this case, global racism is engendered by a myriad of processes that produce the racialization of people in different stages and places. It can be seen as a chaotic combination of different local 'racial projects' dispersed in different areas of the planet placed mainly in the so-called emerging countries (Dunaway & Clelland, 2017) contributing to the 'global racial formation'. This model is consistent with the Omi and Winant vision that considers racial projects as the socio-historical creation of racial meanings and arrangements giving rise to a 'racial formation'. The place where, and how, they have developed and transformed over the time, constitute their ontology. Racial formation is thus the intersection of racial 'projects', a kind of 'synthesis, an outcome, of the interaction of racial projects on a society-wide level' (Omi & Winant, 2015, 60).

These two models can easily coexist, if not support each other, but their reciprocity changes over the time. Global dynamics of world system are not so static, as maintained by the global apartheid model. This model foreseen a *fixed racial axis for the world-economy* that undoubtedly reduced the 'periphery' to a racially demarcated zone of precarity, under a permanent 'state of exception' (Winant, 2017). However, more complexity can be found (Dunaway & Clelland, 2017). In other words, the moving of capital outside its

western boundaries toward the so-called semi-periphery meant the mounting of many localized racial systems inside both western and emerging countries. At the same time, an extreme marginalization of the poorest countries happens. In terms of racialization, it means that a myriad of ‘others’ is emerging, differently stratified and localized. In its process of relentless expansion, capital generates many localized racial systems alongside its expansion and that ‘all these peoples, all these concepts, would ultimately be employed in the complex project of knitting together the modern world; all would be inescapably involved in fracturing world society’ (Winant, 2001).

From a world-system perspective, the periphery struggles against two massive levels of exploitation. While there is a core appropriation of surplus from the whole world-economy, the middle stratum is both *exploited* and *exploiter*, allowing the new semi-peripheral areas to enjoy a larger share of the world surplus. Semi-periphery – or in other words countries such as China, India, Brazil, Indonesia, South Korea, Saudi Arabia, Nigeria and so on – gained relative appropriation of the total surplus generated in the commodity chains. At a global level, a division of labour is working between activities that generate high shares of the value-chain surplus and those left with low shares (Radice, 2015). The consequence is the making of unequal exchanges between semi-peripheries and peripheral areas (and with weaker semi-peripheries) generalizing the model of appropriation by dispossession in which cheap labour, raw materials and primary goods are exported from periphery to semi-periphery (Worth & Moore, 2009; Strange, 2009; Harvey, 2003). These dynamics imply a reconfiguration of the global racism apartheid model, in which new racial fractures emerge linked to the position that semi-periphery occupies in the global value chains and its participation in export-oriented investments (Garcia, 2017).

## 7. Racializing Anthropocene

Anthropocene is exacerbating these geo-capital dynamics, whereas anyone becomes the subject of exploitation. Geo-racialization is the racial form that Anthropocene is taking, denoting a new phase of racism, reconfiguring the localized and daily-life forms of material discrimination in a global one featured by a ‘variable geometry’. It takes the figures of climate racism, food racism, health racism, land grabbing, water and energy exclusion, destruction of habitat that link to the environmental degradation that is distributed in different ways among continents, countries, classes, and races. The environmental impact of any processes of production, distribution, consumption and disposal distributes unequally and racially. The ‘racial formation’ process is now working at a larger level, going beyond the conventional national boundaries embracing continents and the whole planet. ‘Gaia’ discovers its internal stratification, in terms of human and perhaps non-human discriminations. If the Holocene was the long period when places of refuge still existed, even abounded, to sustain regeneration processes of rich cultural and biological diversity, Anthropocene is about the destruction of those places and times of refuge for humans and non-humans (Tsing, 2015).

### 7.1. Causes

Sources of ecological crisis are racialized per definition. Fossil economy cannot be seen as a global and unanimous deliberation of human species, as well as the succession of energy

technologies following steam – electricity, the internal combustion engine, the petroleum complex: cars, tankers, aviation. All this has been introduced through investment decisions, sometimes with crucial inputs from certain governments but rarely through democratic deliberation (Malm & Hornborg, 2014). Reflecting on the material responsibility regarding the climate change, in 2008 the advanced capitalist countries or the ‘North’ composed 18.8% of the world population, but they were responsible for 72.7 of the CO<sub>2</sub> emitted since 1850, subnational inequalities uncounted. In the early twenty-first century, the poorest 45% of the human population accounted for 7% of emissions, while the richest 7% produced 50%; a single average US citizen – national class divisions again disregarded – emitted as much as upwards of 500 citizens of Ethiopia, Chad, Afghanistan, Mali, Cambodia or Burundi (Roberts & Parks, 2009; Malm & Hornborg, 2014). Are these basic facts able to indicate a process of racialization of Anthropocene?

## 7.2. Impacts

Anthropocene denotes an array of processes that is having deleterious but differentiated consequences for people living on the planet. These consequences are stratified by the socio-ecological conditions in which people live. Consequently, we can speak of racialized Anthropocene (see Vergès, 2017) just to designate the way in which the climate change – the core dynamics of Anthropocene – affects people living conditions in different manners and intensity. The impacts of climate change will be severely unequal in their distribution, whereas the most vulnerable groups will disproportionately suffer from climate change (Leichenko & O’Brien, 2008; Wilson & Piper, 2010), and these vulnerable groups are easily identifiable for skin colour and gender.

One of the broadest impacts of climate change is the increase of people’s displacement. Predictions indicate that numerous people are expected to be on the move as weather-related disasters such as extreme precipitations and temperatures becoming more frequent and intense, and changes to climate conditions impact on livelihoods (IPCC, 2014). While no internationally accepted definition for people on the move due to environmental reasons exists to date, International Organization for Migration has put forward a broad working definition, which seeks to capture the complexity of the issues at stake:

Environmental migrants are persons or groups of persons who, predominantly for reasons of sudden or progressive change in the environment that adversely affects their lives or living conditions, are obliged to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their country or abroad. (International Organization for Migration 2011: 33)

Environmental change and natural disasters have always been major drivers of migration. The movement of people is and will continue to be affected by natural disasters and environmental degradation. Climate change is expected to have major impacts on human mobility and population movements. For the Global Report on Internal Displacement (2018), people affected by internal displacements in 2017 were 30.6 million. Estimates suggest that between 25 million to one billion people could be displaced by climate change over the next 40 years. For the most part, these figures represent the number of people exposed to the risk of climate change in certain parts of the world and do not take account of the measures that could be taken to adapt to these changes. These expected environmental migrations may take many complex forms: forced and voluntary,



temporary and permanent, internal and international (Piguet, Pécoud, & de Guchteneir, 2011). The most vulnerable people may be those who are unable to or do not move (trapped populations). Environmental migration should not be understood as a wholly negative or positive outcome – migration can amplify existing vulnerabilities but can also allow people to build resilience (IPCC, 2014).

### 7.3. Adaptations

Migration is currently considered a form of adaptation to changing climate conditions (Leary, 2008). As noted also by IPCC (2014), displacement risk increases when populations lacking the resources for planned migration experience higher exposure to extreme weather events, in both rural and urban areas, particularly in developing countries with low income. Expanding opportunities for mobility can reduce vulnerability for such populations. Changes in migration patterns can be responses to both extreme weather events and longer-term climate variability and change, and migration can be an effective adaptation strategy (IPCC, 2014). However, it remains a matter of disquisition the fact that mass displacements are due directly and without mediations to the global warming or they are the consequence of complex patterns of multiple causality, in which natural and environmental factors are closely linked to economic, social and political ones (see for example Castles, 2002, 2003).

Even migration has always been one of the ways people chose to adapt to changing environment, migration-as-adaptation discourse contains some paradoxes. Viewing at migrations as a kind of adaptation strategy, negates the adverse tone in which migrants, asylum seekers and refugees regularly figure as a threat. Thus, it is claimed that migrations give a positive contribution to climate change adaptation and planetary well-being, a formulation in stark contrast to xenophobic narratives that depict migrants as usurpers and threats to public life. It also challenges growing current governments' strategies aimed to keep people moving for different reasons out of their borders, wanting to re-chain them to the land they left. In this prospect, migration is increasingly characterized as a legitimate adaptive response to climate change rather than as a failure to adapt (Baldwin, 2013). Some noted that migration-as-adaptation in some way reinforces and supports the neoliberal strategy of climate change adaptation, based on the idea that individuals – and not institutions such as state – have to bear the heavy burden of their own condition. When migration is conceived as a legitimate adaptive response to climate change, it nevertheless expresses a form of power, one that seeks to organize the immanent flows of people specific to the Anthropocene (Felli & Castree, 2012; Baldwin, 2017).

However, even we feel close to this interpretation, our interest is not on migration *per se*, while adaptive or altering, but on the fact that these 'forced migrations' might be seen as direct and indirect consequences of Anthropocene radical environmental changes. Moreover, these migrations can be seen as a circular and self-reinforcing phenomenon generated by racialized processes of exploitation – or at least differentiate inclusion in global processes of capital reproduction – generating racialization and racism. Geo-capitalism and its compulsory accelerating extractivism has immediate consequences on the lives of millions of people of the South, and these consequences are a matter of racialization. Millions leave their country and they are rarely white (Myers, 1997; Myers & Kent, 1995; Castles, 2002).

### 7.4. Land grabbing

Whereas a wild consumption of natural resources occurs, it fosters Anthropocene dynamics (McNeill & Engelke, 2016). Land grabbing is at the same a time a cause and a consequence of Anthropocene. As suggested by Saskia Sassen (2016) a consistent part of current migrations stems from a so-called 'loss of habitat'. Extreme violence is one key factor explaining these migrations. But a second key factor is the one made by thirty years of international development policies that have left much land dead (because of mining, land grabs, plantation agriculture) and have expelled entire communities from their habitats. For them, migration – both domestic and abroad – has increasingly become their last option. This multidecade history of destructions of land and expulsions of its inhabitants is also the history of the Anthropocene, but of a racialized one. The loss of habitat for people of the South of the planet, 'their' Anthropocene, transforms people not into migrants in search of a better life, but into people looking for a 'bare life, with no home to return to' (Sassen, 2016, p. 205).

What is new in these processes of land expropriation – for producing bio-fuels such as soya beans, jatropha, palm oil, or for mining raw materials or building dams – is its financial feature. High finance is radically different from traditional banking. Traditional banks sell something they have: money, for an interest. Finance sells something it does not have, so it needs to develop complex instruments that enable it to invade other sectors in order to financialize whatever value can be extracted and then inserted it into financial circuits. For Sassen, it is this feature that posits finance as an extractive sector and that once it has extracted what is there to be extracted, it moves on, leaving behind destruction.

Financial markets, which mobilize enormous amounts of fictitious capital, exert rather strong pressures on the so-called real economy, imposing, for example, the payment by debtors of debts contracted with financial creditors (banks and funds); payments that are only possible if real growth rates remain high. Financial capital is a particular form of capital called by Marx 'fictitious capital' (Trenkle, 2015), directly and indirectly responsible for the global process of wealth dispossession of entire areas of the planet. This takes often, as we will see below, the form of an unequal ecological exchange, but this dispossession is becoming more and more direct based on the land buying. Thus, financial capital not only forces economic growth and, consequently, increases consumption of energy and raw materials, but it is also the key to the engine of the geo-sphere degradation and global social inequalities.

## 8. Bodies' abstract racialization

Racism implies the personification, corporealization, phenotypification of differences (Winant, 2017) and at the end de-humanization of individuals and groups considered inferior, dangerous, unskilled, or also – directly or indirectly – liable for current troubles. This invocation of the concrete body, this dimension of corporeal rule that is characteristic of every form of racism, can be understood as the core act of a socially manipulated reaction to global problems such as labour, financial, and ecological crises. The unpredictable consequences of these misfortunes provide the concrete frame for the blaming of certain groups or individuals. In this perspective, Islamophobia and anti-Semitism might be conceived as racial projects (Winant, 2017) aimed to explain for instance energy crisis or financial crisis in terms of Muslim and Jews responsibilities.

These processes ground on the abstract corporealization of people involved in the production and circulation of commodities and value. The dualism between work and money present in the commodity is radicalized to the point of provoking its violent splitting. Both the abstract forms of the commodity – that of labour and that of money – find a corresponding scapegoat: on the one hand, the quasi-human, unproductive, inoperative but inexpensive body of the ‘Negro’; on the other hand the parasite, dishonest, rogue, conspiratorial ‘Jew’. On the one hand the sub-human who steals work, on the other hand the superhuman who steals money. Both the abstract work of production and its monetary representation in circulation become the objective of the populist and racist horizon. Here racism and critics of financial capital conflate. Goods must be produced by white labour-power, as the capitalist who earns money from it must be white.

The racialization of alleged agents (Jews) of financial capitalism – during its past and current rising up at a global level – is aimed to violently conflate human agents with money and value circulation, and thus demonizing them for the blind process of the commodity market. The Jew was – and still is – embodied money, the racialized core of commodities circulation and financialization. In the same pathway, the African epitomizes and embodies the abstract physiological labour of labour-force, the racialized core of natural resources appropriation and metabolic exchange with nature. Its incapacity to develop accomplishing these tasks is an irrevocable sign of its bio-cultural inferiority. Finally, also the Muslim is considered the cruel actor of fossil fuels prices volatility, the brutal manipulator of the energy market. Here the Muslim becomes the abstract racialized core of fossil energy.

For each form of revenue (wages, profits, interest, and rent) in a capitalist society, notes George Caffentzis, there is an attendant form of racism. Different varieties of racism can be categorized according to the flows of value in a capitalist society. The particular racism appropriate to the politics of resources (e.g. oil) can be also understood as a rent and profit racism and not only as ‘wage racism’ that is the most ordinary notion of racism (Caffentzis, 2005). We can also say that for each embodied form of value – labour, energy, money – there is its own form of racism.

The abstraction of labour – and other activities – implies the symmetrical process of abstraction of bodies. Bodies are fixed to the concrete labour they must accomplish but at the same time they are expended abstract labour/energy that constitutes the commodity’s value, which seems indifferent to their own racial features. Bodies are labour-power, potential labour, and when recruited in the production process they become homogeneous abstract human labour, expenditure of one uniform labour-power, ‘expenditure of human brains, nerves, and muscles’ (Marx, 1976, p. 134). As Marx said, labour ‘is the expenditure of simple labour-power, i.e. of the labour-power possessed in his bodily organism by every ordinary man, on the average, without being developed in any special way’ (p. 135). In a famous note, Marx claims ‘Creation of value is the transposition of labour-power into labour. Labour-power itself is, above all else, the material of nature transposed into a human organism’ (Marx, 1976, vol. I, p. 323, n. 2). For Marx, at the end, the physical body is the generator of abstract labour in terms of energy expenditure, which then transforms in substance of value. Extending these insights, we can share the statement by which ‘the body is an accumulation strategy in the deepest sense’ (Harvey & Haraway, 1995: 510; see also Harvey, 1998). Capital circulates through the bodies of the workers as variable capital and thereby turns the worker into a mere appendage of the circulation of capital



itself, David Harvey notes (Harvey, 1982). In fact, the two processes – the accumulation of men and the accumulation of capital – cannot be separated. In short, capitalism makes bodies mere embodiments of labour-power and energy-power (Kirsch & Mitchell, 2004), but differentiated because of biological characteristics – race, age, gender.

Even though bodies generating value are indifferent for capital, differences between bodies have to be established, to differentiate their reproductive costs: without competing costs of reproduction among workers capital cannot run, as well as different forms of labour – wage-labour, independent labour, forced labour. In a simpler way, we can say that the socially necessary means of reproduction are highly differentiated among different individual and collective bodies belonging to the global labour force. This differentiation can be seen as global racism, the constituent form of capital process of value production. Racism becomes thus a key mechanism for the stabilization of capitalism accumulation (Reich, 1977) to cope with its declining natural fertility and the falling global rate of profit. While geo-capitalism makes nature the motor for accumulation through its abstraction, an abstract bearer of value, it needs racialized metabolic labour aimed to secure the exchange with nature and the self-valorization of capital. This process is based on a strong procedure of abstract racialization of people recruited for it, whereas ancient orders of inequality did not need such a tool for abstraction of the human body and its productive functional adaption.

## 9. Racialized unequal ecological exchange

To feed its process of accumulation based on labour, energy and raw materials appropriation, geo-capitalism generates extreme global inequality that takes often the form of the unequal ecological exchange. The causes of ecological injustice are many, but they are mostly located in the historical processes of extraction, primary production and distribution of raw materials, organic and inorganic, at a global level. The Anthropocene puts in crisis the ancient model of self-regulating balance proper of a naïve vision of natural world that justified the capitalist market exchange shared by Adam Smith and his successors. Perhaps, we didn't need to forge the notion of 'Anthropocene' to understand the fact that 'from time immemorial, not just since the capitalist appropriation of surplus value in the commodity exchange of labour power for the cost of its reproduction, the societally more powerful contracting party receives more than the other' (Adorno, 2005).

As the myth of an equal exchange vanishes, processes highlighted or denuded by the ecological crisis can be termed 'ecological unequal exchange', a term that condenses all aspects, mechanisms, dimensions of the global exchange of material wealth and value. Moreover, the term covers or at least evokes many similar approaches and points of view such as metabolic rift, ecological debt, global environmental justice, ecological imperialism, extractive capitalism. Many in recent years have dealt with this issue (Smith, 1984; Bunker, 1985; Rice, 2007; Foster & Holleman, 2014; Hornborg, 2011; Martinez-Alier, Kallis, Veuthey, Walter, & Temper, 2010; Lawrence, 2009). The theory of ecologically unequal exchange describes the 'unequal material exchange relations and consequent ecological interdependencies within the world economy, which are fundamentally tied to wide disparities in socio-economic development and power embedded within the global system' (Jorgenson, 2016a). In other words, it is 'an asymmetric net flow of

biophysical resources (e.g. embodied materials, energy, land, and labor) that is obscured by the apparent reciprocity of market prices' (Dorninger & Hornborg, 2015). More accurately, ecological unequal exchange refers to the environmentally damaging withdrawal of energy and other natural resource assets from less-developed countries and the externalization of environmentally damaging production and disposal activities within them. It constitutes the obtainment of natural capital (stocks of natural resources that yield important goods and services) and the usurpation of sink-capacity (waste assimilation properties of ecological systems in a manner that enlarges the domestic carrying capacity of more powerful developed countries) to the detriment of developing countries (Jorgenson, 2016b).

Even though new global dynamics between core, semiperiphery and periphery countries are going to shake the old distinction between extractive and productive economies, we can note that extractive capitalism or geo-capitalism is by far the largest responsible of the global worldwide racialization. Current racialization applies both to the extraction of wealth from nature and the creation of value by industrial labour, but it essentially focuses on the double movement of closeness/separation of racialized people with their land. Extractive economies like the Amazonian economics are based primarily more on the extraction of wealth from nature, engendering very different patterns of labour and nature exploitation, and capital accumulation than the economies based on the appropriation of value from labour do. Extractive economies get their own logic and dynamic, and tend to develop peculiar social structures. They possess a simplified class and racial structure, and develop organization of labour, property relations, state activities, and physical infrastructures that include a state of exception allowing extreme level of labour and nature exploitation (Bunker, 1985; Rice, 2007). Compared with economies producing final commodities, extractive economies develop a strong logic of 'frontier' (Bunker, 1985; see also Moore, 2015). This logic implies that people living, working, moving, nearby the frontier are often outlaw. In other words, the 'frontier' allows explicit processes aimed to cordon off semi-free or even unfree labour to expend it in activities of extraction or deforestation (Zanin, 2002). 'Frontier' expansion has caused irreparable destruction of habitat – human and non-human – to be accounted as one of the first causes of Anthropocene.

Ecological unequal exchange provides a framework for conceptualizing how the socioeconomic metabolism or material throughput of core countries may destroy the global conditions of living reproduction, and at the same time casting a light into the new racialized world order. Ecological unequal exchange is one of the most important roots and mechanisms of global racism, largely because it extinguishes natural and social 'fertility' of entire countries, it undermines the direct self-reproduction of people inhabiting these lands, it expropriates them of those resources needed for development, by managing and playing on racialized features held by people victims of these processes. The fact that the global uneven flow of labour, energy, natural resources, and industrial waste embraces former colonies, the fact that these countries and populations are seen as to fulfil a subordinate role in the world economy as a tap for the raw materials and sink for waste, thereby supporting the disproportionate production-consumption-accumulation processes of more-developed countries, all these facts suggest that a global racism is at work.

In Africa, while precolonial forms of inequality have influenced the continent's encounter with colonialism and have been reproduced and exacerbated in the colonial period, colonialism itself created new and more extreme forms of inequality that define the

continent's social condition today. Colonial dispossession, particularly pronounced in settler colonial societies, has led to enclosures, created poverty, and worsened inequalities (Murombedzi, 2016). The historical perspective is crucial to understand these racialized dynamics of unequal exchange between the developed and less developed countries, just because such disparities have existed since nearly five centuries and have been incorporated into the social and physical structures of global society as accumulated externalities.

The mechanism of ecological unequal exchange makes that low prices for primary commodities allow industrialized countries of the capitalist core to appropriate high amounts of biophysical resources from the peripheral economies in the South, while maintaining external trade relations balanced in monetary terms. Additionally, the price paid for these commodities appears equal, but it masks – as said before – a biophysical inequality of exchange in which one of the partners has little choice but to exploit and possibly exhaust his natural resources and utilize its environment as a waste dump (Giljum & Eisenmenger, 2004; Giljum, 2004). In few words, as said by Roberts and Parks (2009), the volatility and periodic collapse of export commodity prices encourage poor nations to ramp up the extraction and sale of material goods that they are already selling at a near loss. Consequences are that local racialized regimes rise up, but that these new racializing processes of subordination, exclusion and dispossession are still pulled by the old global racialized ontology.

## 10. Conclusions

In this article, we tried to frame the concept of 'global racism' in order to identify the new racialized global order generated by the geo-capitalism. Compare with the older forms of global order, the current one stems and affects new theoretical and empirical conditions fostered by the so-called Anthropocene and the crisis of capital's natural fertility it implies, creating deep troubles to the global process of accumulation. To compensate, this decreasing rate of profit capital has few alternatives: accelerating the reproduction and harvesting of natural resources, increasing the productivity of labour entitled to raw materials extraction via technics. However, the main tool is still the haunting for cheap labour, usually racialized labour. The racialization of labour is taking a different configuration: the main cleavage is no longer the one between black and white labour, but a myriad of regional differentiated processes of racialization are giving form to a new global racial formation. These regional regimes of differentiated and racialized labour-force stem this time not only from periphery – that by now operates as a racially demarcated zone under a permanent state of 'bare existence' – as in the past, but from the semiperiphery of the system, and also from strong racial differentiations inside the core countries. Moreover, in the logic of regional racialized regimes, labour force is going to be chained to its deserted lands or forced to leave in consequence of climate change and land grabbing. Thus, a racialized Anthropocene is emerging whereas causes and consequences are distributed in radical different ways between populations, regions, continents. The Anthropocene becomes the frame on which the crisis of global capitalism experiences the shortage of cheap resources and at the same time people and populations experiment the social and racial stratification of the Earth system.

What we also wanted to stress is the fact that this racial stratification of Earth system casts new light on a plurality of racisms often considered incomparable and



incommensurable. Local or regional racisms are part of the same processes of global racialization that we call ‘bodies’ abstraction’. All bodies marked by some common features – skin colour, gender, language, dressing – are reduced to a single body, embodying all the collective characteristics proper of the entire population to which they belong without any distinction. The reduction of private and individual bodies to abstract social and collective bodies is a process proper of capitalist production of value. As the body with all its sensuous characteristics are extinguished, as the concrete form of the body and its useful peculiar capacity disappears, bodies can no longer be distinguished, but are all together reduced to the same kind of body, human body in the abstract. Abstract bodies – the Negro, the Jew, the Muslim – become merely human labour-power to be expended without regard to the form of its expenditure, crystals of that social substance, which is the ‘race’. Their abstractness makes these bodies applicable to different sectors of human activity, chaining over time, social functions and needs of reproduction to their phenotypical characteristics. This process provides the ontological ‘racial’ conditions to justify the capitalists’ appropriation of labour power below the average reproduction cost of the global working class.

The unequal ecological exchange emerges properly on this historical abstract division of people in races. Extractive capitalism implies its own social structures of exploitation and dominion, forcefully engaging devaluated groups in order to get cheap raw materials. Bodies, raw materials, energy, both directly or embodied on commodities, apparently equally exchanged on the market because obscured by the apparent reciprocity of market prices, are captured into asymmetric networks of biophysical flows that get their roots into racialized historical dynamics. If we want to open up a window for the critique of current geo-capitalism we cannot leave aside the way in which the Anthropocene has managed its internal stratification.

## Notes

1. With the notion of racialization, we mean the process by which different groups or clusters of people are discriminated in some way because of their natural characters – skin colour, gender, age – or of cultural features that are naturalized and crystallized – religion, language, dressing.
2. As suggested by Bonacich et al. (2008), the global capitalist system is maintained and structured within a global system of White supremacy. Dominant racialized labour groups (mainly white/European workers) are in general afforded more privileges than subordinate racialized labour groups (workers of colour), who face the denial of basic citizenship rights and higher degrees of exploitation and inferior working conditions.
3. A number of significant indicators are also available to support this approach. For instance, ecological footprint measures the declining fertility of natural capital in terms of bio-capacity.
4. Joe Feagin didn’t miss to criticize Omi and Winant ‘racial formation’ model.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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## References

- Adorno, T. W. (2005). *Critical models interventions and catchwords*. New York: Columbia University Press.
- Adorno, T. W., Frenkel-Brunswick, E., Levinson, D. J., & Sanford, N. R. (1950). *The authoritarian personality*. New York: Harper and Brothers.
- Amundson, R., Berhe, A. A., Hopmans, J. W., Olson, C., Sztein, A. E., & Sparks, D. L. (2015). Soil and human security in the 21st century. *Science*, 348(6235), 1261071. doi:10.1126/science.1261071
- Baldwin, W. A. (2013). Racialisation and the figure of the climate-change migrant. *Environment and Planning A: Economy and Space*, 45, 1474–1490.
- Baldwin, W. A. (2017). Resilience and race, or climate change and the uninsurable migrant: Towards an anthroporacial reading of ‘race’. *Resilience*, 5(2), 129–143.
- Bales, K. (1999). *Disposable people: New slavery in the global economy*. Berkeley, CA: University of California Press.
- Balibar, E., & Wallerstein, I. (1991). *Race. Nation and class: Ambiguous identities*. London: Verso.
- Banton, M. (1967). *Race relations*. London: Tavistock.
- Batur-Vanderlippe, P. (1999). Centering on global racism and antiracism: From everyday life to global complexity. *Sociological Spectrum*, 19(4), 467–484.
- Batur, P. (2018). Heart of violence: Global racism, war, and genocide. In P. Batur & J. R. Feagin (Eds.), *Handbook of the sociology of racial and ethnic relations* (pp. 313–327). London: Springer.
- Bauer, A. M., & Ellis, E. C. (2018). The Anthropocene divide: Obscuring understanding of social-environmental change. *Current Anthropology*, 59(2), 209–227.
- Bauman, Z. (1989). *Modernity and the holocaust*. Cambridge: Polity Press.
- Blumer, H. (1958). Race prejudice as a sense of group position. *The Pacific Sociological Review*, 1(1), 3–7.
- Bonacich, E., Alimahomed, S., & Wilson, J. B. (2008). The racialization of global labor. *American Behavioral Scientist*, 52(3), 342–355.
- Brown, W. (2010). *Walled states. Waning sovereignty*. Brooklyn, NY: Zone Books.
- Bunker, S. (1985). *Underdeveloping the Amazon: Extraction. Unequal exchange, and the failure of the modern state*. Urbana, IL: University of Illinois Press.
- Bunker, S., & Ciccantell, P. (2005). *Globalization and the race for resources*. Baltimore, MD: The Johns Hopkins University Press.
- Caffentzis, G. (2005). *The many forms of racism and the politics of oil*. Notes for a Talk at the 2005 Left Forum CUNY Graduate Center April 16.
- Castles, S. (1993). Racism: A global analysis. Centre for Multicultural Studies. University of Wollongong. Occasional Paper 28.
- Castles, S. (2002). Environmental change and forced migration: Making sense of the debate. Refugees Studies Centre. University of Oxford. Working Paper, 70.
- Castles, S. (2003). Towards a sociology of forced migration and social transformation. *Sociology*, 37(1), 13–34.
- Coates, R. D. (2007). Racial hegemony. Globalization. Social justice. In H. Vera & J. R. Feagin (Eds.), *Handbook of the sociology of ethnic and racial relations* (pp. 319–342). London: Springer.
- Cox, O. C. (1959). *Caste, class, and race*. New York: Monthly Review Press Edition.
- Crutzen, P. (2002). Geology of mankind. *Nature*, 415, 23.
- Dorningner, C., & Hornborg, A. (2015). Can EEMRIO analyses establish the occurrence of ecologically unequal exchange? *Ecological Economics*, 119, 414–418.
- Du Bois, W. E. B. (2015). The present outlook for the darker races of mankind. In *The problem of the color line at the turn of the twentieth century: The essential early essays* (pp. 111–138). Nahum Chandler: Fordham University Press.
- DuBois, W. E. B. ([1920] 2003). The souls of white folk. *Monthly Review*, 55(6), 44–58.
- Duffield, M. (2006). Racism, migration and development: The foundations of planetary order. *Progress in Development Studies*, 6(1), 68–79.

- Dunaway, W. A., & Clelland, D. A. (2017). Moving toward theory for the 21st century: The centrality of nonwestern semiperipheries to world ethnic/racial inequality. *Journal of World-Systems Research*, 23(2), 399–464.
- Feagin, J. R. (2006). *Systemic racism: A theory of oppression*. New York, NY: Routledge.
- Feagin, J., & Elias, S. (2013). Rethinking racial formation theory: A systemic racism critique. *Ethnic and Racial Studies*, 36(6), 931–960.
- Felli, R., & Castree, N. (2012). Neoliberalising adaptation to environmental change: Foresight or foreclosure? *Environment and Planning A: International Journal of Urban and Regional Research*, 44(1), 1–4.
- Foster, J. B. (1999). Marx's theory of metabolic rift: Classical Foundations for environmental Sociology. *American Journal of Sociology*, 105(2), 366–405.
- Foster, J. B., Clark, B., & York, R. (2010). *The ecological rift*. New York, NY: Monthly Review Press.
- Foster, J. B., & Holleman, H. (2014). The theory of unequal ecological exchange: A Marx-Odum dialectic. *The Journal of Peasant Studies*, 41(2), 199–233.
- Foucault, M. (2003). *Society must be defended*. New York, NY: Picador.
- Fredrickson, M. G. (2002). *Racism: A short history*. Princeton, NJ: Princeton University Press.
- Garcia, A. S. (2017). Nonwestern periphery and its paradoxes: Reflections for struggles in the 21st century. *Journal of World-Systems Research*, 23(2), 499–504.
- Giljum, S. (2004). Trade. Material flows and economic development in the South: The example of Chile. *Journal of Industrial Ecology*, 8(1–2), 241–261.
- Giljum, S., & Eisenmenger, N. (2004). North-South trade and the distribution of environmental goods and burdens: A biophysical perspective. *The Journal of Environment & Development*, 13(1), 73–100.
- Gilroy, P. (1987). *There ain't no black in the Union Jack: The cultural politics of race and nation*. London: Hutchinson.
- Goldberg, D. T. (1993). *Racist culture*. Cambridge, MA: Blackwell.
- Harman, C. (2010). *Zombie capitalism*. Chicago, IL: Haymarket Books.
- Harvey, D. (1982). *The limits to capital*. Cambridge: Basil Blackwell.
- Harvey, D. (1998). The body as an accumulation strategy. *Environment and Planning D: Society and Space*, 16, 401–421.
- Harvey, D. (2003). *The new imperialism*. Oxford: Oxford University Press.
- Harvey, D., & Haraway, D. (1995). Nature, politics, and possibilities: A debate and discussion with David Harvey and Donna Haraway. *Environment and Planning D: Society and Space*, 13(5), 507–527.
- Holleman, H. (2017). De-naturalizing ecological disaster: Colonialism, racism and the global dust bowl of the 1930s. *The Journal of Peasant Studies*, 44(1), 234–260.
- Hornborg, A. (2011). *Global ecology and unequal exchange*. London: Routledge.
- Hornborg, A. (2018). The money-energy-technology complex and ecological Marxism: Rethinking the concept of 'use-value' to extend our understanding of unequal exchange. Part 1. *Capitalism Nature Socialism*. doi:10.1080/10455752.2018.1440614
- Internal Displacement Monitoring Centre. (2018). *Global report on internal displacement*. Oslo: Norwegian Refugee Council.
- International Labour Office (ILO). (2017). *Global estimates of modern slavery: Forced labour and forced marriage*. Geneva.
- International Organization for Migration. (2011). *Glossary on migration* (2nd ed.). International Migration Law No. 25. Geneva: IOM.
- IPCC. (2014). *Climate Change 2014: Impacts, adaptation, and vulnerability. Part A: Global and sectoral aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Field, C.B. V.R. Barros. D.J. Dokken. K.J. Mach. M.D. Mastrandrea. T.E. Bilir. M. Chatterjee. K.L. Ebi. Y.O. Estrada. R.C. Genova. B. Girma. E.S. Kissel. A.N. Levy. S. MacCracken. P.R. Mastrandrea. and L.L. White (eds.)]. Cambridge: Cambridge University Press.
- Jorgenson, A. K. (2016a). Environment, development, and ecologically unequal exchange. *Sustainability*, 8, 227.



- Jorgenson, A. K. (2016b). The sociology of ecologically unequal exchange, foreign investment dependence and environmental load displacement: Summary of the literature and implications for sustainability. *Journal of Political Ecology*, 32, 334–349.
- Kelly, M. (2004). Racism, nationalism and Biopolitics: Foucault's society must be defended. *Contretemps*, 4, 58–70.
- Kirsch, S., & Mitchell, D. (2004). The nature of things: Dead labor, nonhuman actors, and the persistence of Marxism. *Antipode*, 36(4), 687–705.
- Lala, A., Moyo, M., Rehbach, S., & Sellschop, R. (2015). *Productivity in mining operations: Reversing the downward trend*. McKinsey & Company. <https://www.mckinsey.com/industries/metals-and-mining/our-insights/productivity-in-mining-operations-reversing-the-downward-trend>
- Lawrence, K. S. (2009). The thermodynamics of unequal exchange energy use. CO<sub>2</sub> emissions. And GDP in the world-system. 1975–2005. *International Journal of Comparative Sociology*, 50(3–4), 335–359.
- Leary, N. (2008). *Climate change and adaptation*. Sterling: Earthscan.
- LeBaron, G., Howard, N., Thibos, C., & Kyritsis, P. (2018). *Confronting root causes: Forced labour in global supply chains*. Sheffield: openDemocracy and the Sheffield Political Economy Research Institute (SPERI), University of Sheffield.
- Leichenko, R., & O'Brien, K. (2008). *Environmental change and globalization: Double exposures*. New York, NY: Oxford University Press.
- Lobell, D. B., Schlenker, W., & Costa-Roberts, J. (2011). Climate trends and global Crop production since 1980. *Science*, 333, 616–620.
- Malm, A., & Hornborg, A. (2014). The geology of mankind? A critique of the Anthropocene narrative. *The Anthropocene Review*, 1(1), 62–69.
- Martinez-Alier, J., Kallis, G., Veuthey, S., Walter, M., & Temper, L. (2010). Social metabolism, ecological distribution conflicts, and Valuation Languages. *Ecological Economics*, 70, 153–158.
- Marx, K. (1894). Capital. Vol. III. Edited by Friedrich Engels. Institute of Marxism-Leninism. USSR. 1959. International Publishers. NY. [n.d.]; On-Line Version: Marx.org 1996. Marxists.org 1999.
- Marx, K. (1969). Speech at the anniversary of the people's paper. April 1856. In K. Marx & F. Engels (Eds.), *Selected works* (Vol. I, pp. 500–501). Moscow: Progress Publishers.
- Marx, K. (1976). Capital. Vol. I. Introduced by Ernest Mandel. Translated by Ben Fowkes. Penguin Books in association with New Left Review Penguin Books Ltd. Harmondsworth.
- Massey, D. S., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A., & Taylor, J. E. (1993). Theories of international migration: A review and appraisal. *Population and Development Review*, 19(3), 431–466.
- McNeill, J. R. (2000). *Something new under the sun: An environmental history of the twentieth-century world*. New York, NY: W.W. and Norton.
- McNeill, J. R., & Engelke, P. (2016). *The great acceleration: An environmental history of the Anthropocene since 1945*. Cambridge: Harvard University Press.
- Miles, R. (1989). *Racism*. London: Routledge.
- Miles, R., & Brown, M. (2003). *Racism*. London: Routledge.
- Mitchell, P., & Steen, J. (2017). *Productivity in mining*. EY.
- Moore, J. W. (2015). *Capitalism in the web of life ecology and the accumulation of capital*. London: Verso.
- Moore, J. W. (2016). The rise of cheap nature. In J. Moore (Ed.), *Anthropocene or Capitalocene? Nature, history, and the crisis of capitalism* (pp. 78–115). Oakland: PM Press.
- Moore, J. W. (2017). The Capitalocene, Part I: On the nature and origins of our ecological crisis. *The Journal of Peasant Studies*, 44(3), 594–630.
- Mosse, G. L. (1978). *Toward the final solution. A history of European racism*. New York, NY: Howard Fertig.
- Murombedzi, J. C. (2016). Inequality and natural resources in Africa. in *World Social Science Report 2016*. UNESCO and the ISSC. Paris, 59–62.
- Myers, N. (1997). Environmental refugees. *Population and environment*, 19(2), 167–182.
- Myers, N., & Kent, J. (1995). *Environmental exodus: An emergent crisis in the global arena*. Washington, DC: Climate Institute.

- Nikiforuk, A. (2012). *The energy of slaves: Oil and the new servitude*. Vancouver: Greystone Books.
- Omi, M., & Winant, H. (2015). *Racial formation in the United States*. New York: Routledge.
- Padovan, D. (2003). Bio-politics and the social control of the multitude. *Democracy & Nature*, 9(3), 473–496.
- Padovan, D. (2015). Assembling societal metabolism and social practices: The dynamics of sustainable and unsustainable reproduction. In P. Strandbakken & J. Gronow (Eds.), *The consumer in society. A tribute to Eivind Stø* (pp. 335–362). Oslo: Abstrakt Forlag AS.
- Padovan, D. (2018). Energy, work and value. The crisis of capitalism/nature nexus. *Culture della sostenibilità*, 21, 5–33.
- Piguet, E., Pécou, A., & de Guchteneir, P. (2011). *Migration and climate change*. Cambridge: UNESCO Publishing and Cambridge University Press.
- Podobnik, B. (2005). *Global energy shifts: Fostering sustainability in a turbulent age*. Philadelphia: Temple University Press.
- Porter, J. R., Xie, L., Challinor, A. J., Cochrane, K., Howden, S. M., Iqbal, M. M., ... Travasso, M. I. (2014). Food security and food production systems. In *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects*. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press. Cambridge. United Kingdom and New York, NY, USA, 485–533.
- Radice, H. (2015). *Global capitalism: Selected essays*. London: Routledge.
- Reich, M. (1977). The economics of racism. In D. Gordon (Ed.), *Problems in political economy: An urban perspective* (pp. 184–231). Lexington, MA: D.C. Heath.
- Rice, J. (2007). Ecological unequal exchange: International trade and uneven utilization of environmental space in the world system. *Social Forces*, 85, 1369–1392.
- Roberts, J. T., & Parks, B. C. (2009). Ecologically unequal exchange, ecological debt, and climate justice. The history and implications of three related ideas for a new social movement. *International Journal of Comparative Sociology*, 50(3–4), 385–409.
- Robinson, C. J. (1983). *Black Marxism: The making of the black radical tradition*. London: Zed Press.
- Salminen, A., & Vadén, T. (2015). *Energy and experience: An essay in naftology*. Chicago, IL: MCM Publishing.
- Sassen, S. (2009). Bordering capabilities versus borders: Implications for national borders. *Journal of International Law*, 30(3), 567–597.
- Sassen, S. (2016). A massive loss of habitat: New drivers for migration. *Sociology of Development*, 2(2), 204–233.
- Smil, V. (2013). *Harvesting the biosphere: What we have taken from nature*. Cambridge: MIT Press.
- Smith, N. (1984). *Uneven development: Nature, capital, and the production of space*. Oxford: Blackwell.
- Smith, J. (2011). Imperialism and the law of value. *Global discourse*, 2(1), <https://globaldiscourse.files.wordpress.com>.
- Steffen, W., Grinevald, J., Crutzen, P., & McNeill, J. (2011). The Anthropocene: Conceptual and historical perspectives. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 369, 842–867.
- Strange, G. (2009). Globalisation. Accumulation by dispossession and the rise of the semi-periphery: Towards global post-Fordism and crisis? In O. Worth & P. Moore (Eds.), *Globalization and the 'new' semi-peripheries* (pp. 40–57). London: Palgrave-Macmillan.
- Trenkle, N. (2015). Labour in the era of fictitious capital. Work Conference presentation. Cardiff. 10 July.
- Tsing, A. (2015). *The mushroom at the end of the world: On the possibility of life in capitalist ruins*. Princeton, NJ: Princeton University Press.
- United Nations Convention to Combat Desertification. (2017). *The global land outlook* (1st ed.). Bonn, Germany.

- van den Anker, C. (Ed.). (2004). *The political economy of new slavery*. Basingstoke: Palgrave MacMillan.
- Vergès, F. (2017). Racial Capitalocene. Is the Anthropocene racial? In T. G. Johnson & A. Lubin (Eds.), *Futures of black radicalism*. London: Verso.
- Wark, M. (2015). *Molecular red*. London: Verso.
- Williams, E. (1944). *Capitalism and slavery*. Chapel Hill: University of North Carolina Press.
- Wilson, C. A. (1996). *Racism. From slavery to advanced capitalism*. London: Sage.
- Wilson, E., & Piper, J. (2010). *Spatial planning and climate change*. London: Routledge.
- Winant, H. (1997). Racial dualism at century's end. In W. Lubiano (Ed.), *The house that race built* (pp. 87–115). New York, NY: Random House.
- Winant, H. (2001). *The world is a ghetto: Race and democracy since World War II*. New York, NY: Basic Books.
- Winant, H. (2004). *The new politics of race: Globalism, difference, justice*. Minneapolis: University of Minnesota Press.
- Winant, H. (2017). Is racism global? *Journal of World-Systems Research*, 23(2), 505–510.
- Worth, O., & Moore, P. (Eds.). (2009). *Globalization and the 'new' semi-peripheries*. London: Palgrave-Macmillan.
- Zanin, V. (2002). *Studi sul lavoro coatto contemporaneo*. Padova: Cleup.