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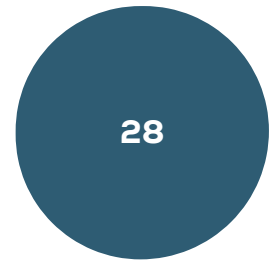
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abstract:

This article argues that climate change prediction and projection of dystopic futures have affected processes of race re(con)figuration through the logic of development and disaster risk management. It argues for an epistemological shift in our understanding of race that passes through space, and most importantly, time, and situates the analysis of race within chronobiopolitics that is used as a framework to explain the rationales and mechanisms of evolution, development and adaptation. In this context, the article attempts to delineate the shift from endless progress to sustainability, and eventually adaptation. By analysing the rhetoric and images in specific reports, videos, action plans and frameworks related to climate change predictions and weather-related disasters in Africa, it attempts to show how the fictioning and preemption of predatory futures creates a fertile ground for resilience building through the production of a racial(ising) affect that favours the proliferation of market dystopias.

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Race Re(con)figurations through Speculative & Environmental Futurity

In this article I problematize, from a critical geopolitical and chronopolitical perspective, the way that climate change predictions and impact assessments, such as those produced by the Intergovernmental Panel on Climate Change (IPCC) and used by the World Bank and United Nations Office for Disaster Risk Reduction (UNDRR), among other organizations, utilize operations of fictioning that have been conducive to processes of race re(con)figuration. Fictioning here is employed not as something that takes place outside reality, but as a process that draws from reality and, most importantly, has the potential to return to it. It is a speculatively pragmatic formative force which, by working through speculation, has the potential to (trans)form. Analyzing race and racialization in terms of "re(con)figuration" is very important for understanding race nonlocally and *transhistorically* – as a non-static structure that is a product not only of spacetime but also an a/effect of material-discursive apparatuses.¹ The first step necessary for understanding these processes is to distinguish between futurity and futurism. Although both can be considered as products of fictioning – "the writing, imaging, performing or other material instantiation of worlds or social bodies that mark out trajectories different to those engendered by the dominant organisations of life currently in existence"² – futurity differs from futurism in the sense that it "constitutes the *present space* of the future, what can be seen *today* as the future."³ For my analysis, the most important aspect of futurity is "what the future *does* or what we *do* with the future"⁴ in the present. In this context, this article tries to experiment with the operations of speculative and environmental futurity, which is the type of futurity produced on the basis of climate change prediction in

a rather speculative way, and which is confessed through the various processes of climate reductionism⁵ involved in, firstly, the preparation of future climate scenarios and impact assessments, and, secondly, the proliferation of weather-related financial markets, for the purpose of hedging risks in the face of disaster's inevitability. My purpose is to examine the ramifications of the reduction of the future to the prediction of climate, taking into consideration how climate terror operates through disaster discourse and how it has shifted development discourse from mitigation and sustainability to adaptation and resiliency. In this context, new development practices are permeated by a pre-emptive⁶ politics which is expressed by the promotion of practices for mainstreaming disaster risk management into poverty reduction and development, and which necessarily leads to a proliferation of market dystopias trading future disaster. Such practices are deemed necessary through predictions that strive to prove that developing countries, predominantly sub-Saharan African ones, will suffer *first and most*. The rationale of this rhetoric, clearly influenced by specters from the past and the future, overdetermining and deprioritizing the present, becomes all the more palpable through consideration of the visual material that is circulated in reports and videos related to climate change predictions. In this way, speculative and environmental futurity with geopolitical rationales becomes operative in the narrativization of future catastrophe which features, first and foremost, black Africa and Africans, equating blackness with absolute doomedness. My main argument is that the way this narrative operates can become obvious through a chronopolitical interrogation which seeks to unpack the temporal dimension contingent in the racial(izing) affect produced by images, videos, and reports alike. By "racial(izing) affect," I mean an affect that emanates from the very foundations of race construction (space and time), in the

way that they are operationalized by specific apparatuses which further reinforce racialization processes, testifying to the way that speculative and environmental futurity re(con)figures race and assists the capitalization of this affect through market dystopias, which first and foremost constitute financial fictions. In this context, I suggest that we understand time as an in/visible technology within the construction of race, and explore this idea through the concept of *chronobiopolitics*, which will be used as a framework for tracing the entangled genealogies of evolution/development/adaptation. My ultimate purpose is to position current racialization processes and affect within an understanding of the institution of racial difference since the 19th century, whereby racial difference is tied to the denial of coevalness, which today is manifested and operationalized through the overdetermination of the raced body by the “gothic future.”⁷

Genealogies of *chronobiopolitics*: evolution & development

Chronobiopolitics can be understood as the political, temporal rationality which takes the administration of life and populations as its subject – to ensure/sustain/multiply life, as Michel Foucault notes,⁸ whereby life is used in such a way that does not imply a distinction between Life/Nonlife.⁹ The *biopolitics* in *chronobiopolitics* aims to trouble the concept’s initial anthropocentric orientation, namely the idea that *bios* (life) is a quality retained only for the hu/man. Designated on the very infrastructure of Western epistemology and its quality of separability,¹⁰ the division of geology and biology led to the false distinction of geopolitics’ and biopolitics’ respective analytics.¹¹ With the analysis of *chronobiopolitics* through the entangled genealogies of evolution/development/adaptation, I aim to show that, at least on the level of these discourses and technologies of power,

there has never been such a thing as mere biopower, since a close analysis of them all reveals the perception of each human population as a product of specific spatial and temporal relations. In short, this is expressed from the oldest theory of evolution, namely Lamarckism,¹² and the fact that in/organic evolution was always conceived as a process of complete unification, through development's relationship with extractivism and environmentally applied engineering processes, such as settlement and seed distribution schemas,¹³ to adaptation's notion of social-ecological systems.

The other core element of *chronobiopolitics* is related to *chronos* (time), and expresses the rationality of putting life in order within the framework of predetermined temporalities, as these have been gradually and ideologically solidified since the beginning of the global scientific mapping of humanity in the 19th century.¹⁴ Firstly, this means that there is a naturalization (e.g. dehistoricization) and universalization of time – that life is supposed to develop in such a way that passes through specific successive stages, and where it does not, it needs to be governed in order to do so. Secondly, that it works through specific relations to the past (silence/oblivion), the present (erasure), and the future (prediction, speculation, and anticipation). Consequently, *chronobiopolitics* is permeated with specific operative logics, such as deterrence and preemption, and structural and temporal norms, such as causality, sequence, and forward-moving agency, and also entails questions of understanding both the past and the future as chronopolitical terrains.

It is my argument that, in order to understand the emergence of *chronobiopolitics*, we need to consider the way that time entered science in the 1850s, reflecting and further reinforcing the idea that "time passed, was time accomplished." The laws of thermodynamics developed in the 19th century reinforced the notion of unidirectional time and a future speeding

toward a chaotic end. Looking at the trajectory of our evolutionist vision of progress, spanning from the evolution era in the period of colonialism to the development/modernization era in the period of Cold War, and eventually to the current adaptation era, a dis/continuous pattern seems to emerge, following what Herbert Spencer, influenced by the laws of thermodynamics,¹⁵ described in his book *First Principles*. Spencer, drawing on geologist Charles Lyell's idea of *uniformitarianism*, sought a sole universal truth that could comprehend all phenomena "from the motion of molecules to the creation of solar systems, the action of individuals and the evolution of species, processes vital, psychological, economic, and governmental."¹⁶ According to his idea of the complete unification of evolution, order is produced from disorder in a manner that reflects the laws of physics, leading to total equilibrium, whereby the most advanced of cultures are those that are most equilibrated. Intermediate stages can be classed as stages of evolution, and are part of the process of equilibration, which, once fully attained, is followed by decay.¹⁷

In this way, evolution is understood as a process of an inevitable unfolding. Events themselves are viewed as unique occurrences which will never again repeat on a progressive linear scale. In this context, relationships between parts of the world, in the sense of both natural and socio-cultural entities, can be understood as temporal relations. This formation of evolutionary time, far from being historically or politically neutral, should be conceived along the historical contingencies that render it unquestionably bound to the colonial project, and which, alongside industrialization, provided the ground on which scientists looked for scientific frames to place then-well-disseminated philosophical ideas of progress. In this context occurred the work of social evolutionists such as E. B. Tylor and Lewis Henry Morgan, who believed that all societies proceed teleologically from savagery to barbarism to civilization, in

a universal process of unfolding. For social evolutionists, the existing societies in the contemporary world represented different stages in the progress of humankind, and the difference in the degree of progress was related to the existence of impediments created by local or accidental circumstances, since the normal or natural developmental sequence was supposed to follow "inevitably from the uniformity of the laws of nature and of human nature."¹⁸ Subsequently, the progress of "primitive" man was seen as retarded, because of the absence of a fit environment that could offer the ground for the development of higher intellectual faculties.

Within such a vision, race becomes a product not only of processes of spatialization (through the connection of place [continent] of "origin," bodies, and forms of consciousness),¹⁹ but also temporalization (the positioning of this triptych in unilinear, universal time). Bodies are supposed to be constituted as such through spatial and temporal relations, whereby the use of the temporal is also meant in geological terms, since evolution is considered as a process that permeates the whole, that happens and passes through environments. Inside that vision, all living societies were placed on a temporal slope and their coevalness (synchronicity/simultaneity and contemporaneity) was necessarily denied.²⁰ Terms such as "civilization," "evolution," "development," and "modernization" all have an epistemological dimension subsuming evolutionary time which transforms terms like "primitive," "savage," "traditional," "un(der)developed," "developing," and "Third World," into temporal concepts, categories of Western thought. The denial of coevalness, which contributed to the emergence of the *chronobiopolitical* rationale, lies with the perceived pathology of the raced body, which becomes perceived as an embodiment of the past. This allochronic rhetoric re/produces the raced body through its inception as a manifestation of *temporal aberrance*, which is what in turn is operationalized through

chronobiopolitical mechanisms such as the civilizing or developing mission, and for the purpose of synchronization with larger temporal schemas.

While colonialism as a project was related to both the denial and promise of coevalness, development was explicitly based on the latter. The beginnings of the idea of development in the sense of legitimization and institutionalization are nowhere better found than US President Truman's 1949 Inaugural Address, specifically, his Point Four Program for "areas needing development." The development discourse institutionalized specific images of the future and of progress, and managed to instrumentalize diverse temporalities for the purpose of the convergence and *syncing* of multiple divergent worlds with the new post-WWII global order. Through the distinction of developmental efforts from the exploitation of the old European colonial project, a new rationality for development emerged, featuring – through strictly temporal concepts – so-called "backward people," and "static," "stagnant," and "dormant societies." In this process, it is crucial to take into account the role of postcolonialist textuality – which works at the level of image and language to reproduce representations of the postcolonial world – precisely because of the power/knowledge relations it reproduces, and the far-reaching ramifications it has in the mechanisms of postcolonial governmentality.²¹ By this, I mean that specific images, such as those picturing drought, famine, malnourished dark-skinned children, chaotic and dirty urban landscapes, and so on, have contributed to the shift in the notion of the "Third World," from a project carrying hope and imaginary for a new world, to a space (somewhere between Africa, Asia, and Latin America) and time ("backward"), and, through this a/effect, have been playing a significant role in the way that development operates as a material-discursive apparatus.

Within that vision, chronobiopolitical mechanisms are enacted on the basis of the idea of catching up, echoing evolutionist

visions. What was supposed to be “primitive” in the 19th century was reconfigured in the 20th century as “underdeveloped” and “traditional” and, hence, “modern” came to be the new “civilized.” Amid the climate of the Cold War, the idea of catching up gradually became all the more dominant within the discussion on modernization, corresponding to the urgency for the acceleration of progress on the basis of the threat of communist subversion, and revealing the way that the logic of deterrence is operationalized, by transforming a future effect into the cause for action in the present. Modernization as a *chronobiopolitical* mechanism was used as a more holistic process, in order to hasten the “un(der)developed”/“traditional”/“Third World” peoples into modernity, sell capitalism, and deal with the communist threat, at the moment when integration into the new global order and the insurance of global security were crucial, precisely because of the process of decolonization that led to the creation of numerous new states.²²

In this way, development works as a material-discursive apparatus which produces governance effects and governmentalization through a developmental rationality, underpinned by knowledge production, specialist expertise, and processes of semiotization and subjectification that seek to upset diverse rhythms and create endless environments of *arrhythmia*. These environments reflect the outcome of processes of dismantling and re/syncing, and testify in general to the way that modern power operates: as a form that is predominantly “concerned above all with disabling old forms of life by systematically breaking down their conditions, and with constructing in their place new conditions so as to enable – indeed, so as to *oblige* – new forms of life to come into being.”²³ Addressing the threats of the desire to catch up with and imitate Europe, Frantz Fanon, in *The Wretched of the Earth*, describes the need to bring “a natural rhythm into existence,” meaning an unimposed one, and makes a differentiation from the

stereotypical idea of returning to nature. In the conclusion of the book he writes: "No, there is no question of a return to Nature. It is simply a very concrete question of not dragging men towards mutilation, of not imposing upon the brain rhythms that very quickly obliterate it and wreck it. The pretext of catching up must not be used to push man around, to tear him away from himself or from his privacy, to break and kill him."²⁴

By expanding this argument and thinking beyond the limits of "Man," the realization arrives that, on the pretext of catching up, development and "expert knowledge" have become so dominant that they have led historically to a dead end of epistemicide and ecocide, precisely because of the way they operate as depoliticizing machines through the silencing of the past and the anticipation of the future. Issues such as soil erosion, deforestation, and malnutrition, evidence of colonialism and development's extractivism,²⁵ have been gradually transformed into problems of development – namely, technical problems that are to be solved with appropriate expertise, after blame has been put on specific *peoples* (such as "irresponsible" Africans) and on *places*.²⁶ After all, the phenomenon in question reflects the way in which the "Category of Blackness," as philosopher Denise Ferreira da Silva defines it, emptied of history and constituted as the absolute site of nothingness and valuelessness, transubstantiates a socio-economic and environmental effect into a moral and mental defect.²⁷ Today, this is manifest in the way that issues of "good governance" are connected with social and environmental concerns within the new aid architecture, mainly preoccupied with the coupling of development and poverty reduction.

Under the influence of the natural sciences and climate change predictions, there seems to be an intensification of the discussion on poverty which is designated on the asymmetry between representations of future climate and social change and

which persists in the conduct of climate impact assessments:

“First the complex relationships that exist between climate and economic performance are reduced to a dependent relationship between temperature and GDP per capita, and then, using projections of future climate warming, future economic performance is predicted for the twenty-first century.”²⁸

This factor, along with the proliferation of future disaster discourse, has shifted development policy in such a way that it is now animated by the logic of mainstreaming disaster risk management into development and poverty reduction. In today’s context of the speculation and accumulation of the unacknowledged losses occurred through colonialism and development, a new form of *chronobiopolitics* of adaptation is emerging, governed by a mode of anticipation-for-emergence, administered through resilience building and preparedness planning under the logic “don’t be scared, be prepared.”

Chronobiopolitics of adaptation

The development phenomenon’s new dimensions have acquired space and legitimacy through the overall depoliticization, scientification, and bureaucratization of climate change discussion, which, through the silencing of the past and the projection of the future, overdetermines and shifts the present. The fact that development itself inevitably brings with it oblivion – via its intense focus on the future, rarely moderated by analysis of the past – is manifest in the current discussion on adaptation, which is defined by expectations of a rather dystopic future produced through climate change predictions and economic forecasts. In this context, pre-emption becomes the main operative logic²⁹ which restores linearity to the present, legitimizes the creation of endless environments of governance, and succeeds in animating a logistics of global turbulence

through the logic of “catching threats that have not yet emerged.” Learning to anticipate (the) nature in this way, especially weather-related disasters and the extreme poverty that these disasters are supposed to cause, constitutes the first step necessary for the nurturing of the social, ecological, and financial resilience that *appears* to be vital for the continuation of economic growth and survival itself.

The shift in development discussion and praxis from modernization and endless progress to sustainability and mitigation, and then onto resiliency and adaptation, can principally be traced back to the 1972 *The Limits to Growth Report* of the Club of Rome, supposedly an application of Futures Studies, created through the use of methods of modelling and simulation, and intended as a prophecy of doom designed to motivate people “to take actions that will prevent such a doomsday from occurring.”³⁰ Other important steps were the 1972 Stockholm Declaration, the *Our Common Future* report published by the World Commission for Environment and Development in 1987 (also known as the *Brundtland Report*, an instrument used to spread the concept of “sustainability”), and Agenda 21 from the 1992 United Nations Conference on the Environment and Development (Eco-92), which largely brought discussion on development back to the international agenda, and launched the concept of “sustainable development,” adding environmental preservation and the rational use of natural resources as imperative in resolving social and economic growth problems. Finally, the resolution “The Future We Want,” which emerged from Earth Summit 2012, constituted a crucial turning point, because, although it renewed and reaffirmed the sustainability goals established in 1992, it contributed to the discursive amplification of resilience as an integral part of adaptation strategies in the face of disaster’s inevitability.

Within the current survival agenda, the ideal of becoming

modern has been replaced by the idea of *poor but resilient*, which has given a new orientation to the development phenomenon. This reflects a major transformation in the *chronobiopolitical* rationale that is epistemologically related to the following two things: firstly, the major advancements of catastrophe theory, and nonequilibrium thermodynamics with its associated theory of self-organization systems, which have been influential for the idea of non-linear change and thus the emergence and dissemination of ideas/temporalities such as uncertainty, shock, surprise, and the re-emergence of the old evolutionist notion of adaptation; secondly, the shift from determinism to indeterminism and the insertion of a probabilistic view into the natural sciences which has enabled – in a rather paradoxical way – the logic of prediction and speculation.³¹ Under this spectrum, contemporary *chronobiopolitical* rationale and mechanisms pass first through systems thinking, social-ecological analysis, and Earth System Science,³² and then through the relationship with the future (anticipation/speculation via forecast and prediction). Within the new condition of anthropogenic climate change and the so-called Anthropocene, coevalness, which was first denied and then promised in the period of modernization/development, has now been deferred. The newly appointed task for the poor – according to the reports, most probably dark-skinned – is now beyond convergence and catch-up; it is rather the task of becoming resilient.

Temporal refiguring of race: time arrives from the future

In this scenario, developing countries generally, particularly sub-Saharan African ones, *will suffer first and most* because of (predictions for) drought, famine, flood, disease, (and estimations for) conflict and migration. As it is commonly reproduced in a rather arbitrary way, *climate change in Africa will hit the poor*

the hardest, an idea that, more often than not, shifts to *disaster hurts the poor the most*. Characteristically expressed in the 2006 *Climate of Poverty* report by the development agency Christian Aid, "What is true for people in sub-Saharan Africa in terms of disease is true for poor people across the developing world."³³ There is a quite specific rhetoric in reports like this, which stands in dialogue with visual material reproduced in such a way, and leads to a positioning and linking of blackness with precarity, poverty, wretchedness, and absolute doomedness, and which paves the path for proposed solutions, spanning technolibertarian capitalism (especially expressed in the form of green developmentalism), through programs for food security, and onto disaster risk management. Take, for example, the following excerpt, entitled "Spiral of despair":

Many of the burdens that poor people in Africa have to endure have always been around. Disease, for example, is not new to the continent. But climate change not only increases the incidence of disease per se but also makes the impact of that disease profoundly worse.

Dealing with HIV, for example, will be made far harder. If there is a famine caused by unusual warming, or a drought, or a spread of another disease, the effect on HIV treatment could be devastating.

As DFID puts it: "The poor have mechanisms to cope with climate variability but many of these will be overwhelmed by the extent of changes or by other pressures on their livelihoods [...] Pastoralists in Kenya were unable to draw on traditional migration strategies during the 2000 drought because land had been sold off to meet income needs and more affluent farmers had erected barriers across grazing lands."³⁴

As becomes obvious from the report, which features two main cases from Kenya and from Bangladesh, there is an overdetermination of the *raced* body by the "gothic future,"

delineated as such through similar reports, assessments, and videos, including images of *non-white* people amid catastrophe and despair in clearly *non-Western* landscapes. In this way, poverty and immiserization become signifiers of the raced bodies which are, first and foremost, black bodies connected to a specific space/origin (Africa), and by extension all the other (non-white) bodies of the “developing” (namely post-colonial) world. As is stated elsewhere in the report, “we are doomed as species; poor people first and then the rest.”³⁵ There is an interesting relationship of dis/continuity in this dialectic with previous *chronobiopolitical* rationales. On the one hand, it is obvious that this rhetoric largely reiterates and builds upon the institution of the “Third World” as a social imaginary signification equivalent to misery, for people who were perceived to be *backwards* and were supposedly needed to be synced with the present through the operations of development and modernization. On the other hand, the discontinuity lies in the fact that it seems it is neither the past nor the present, but rather *the future* that becomes operative in the discussion on development/adaptation.

Through the crumbling of linear time in such a way that time now comes from the future, speculative and environmental futurity re(con)figures race in such a way that blackness as the par excellence other of whiteness and the quintessence of race becomes perceived as a manifestation of a *disjointed temporality*, which is then operationalized through the function of the contemporary speculative time-complex. “What we have with the speculative time-complex,” as Armen Avanesian and Suhail Malik explain in their text *The Time Complex. Postcontemporary*,

“is that the future, which includes the future we don’t know, gets included within the current *reckoning* and the present is coming disconnected from the past. The dismantling of the

linear ordering and the primacy of the present equalizes past, present and future.”³⁶

This quote reflects the way that time is onto-epistemologically related to the argumentation of the report in three ways. Firstly, the future, as delineated by some speculations-conclusions, is taken into consideration for action and policy planning and preparation in the present. Secondly, the past is silenced, and thus disconnected from the present. Take, for example, the reference in the previously quoted passage to the 2000 drought in Kenya. What the report fails to consider, through its restriction to the climate perspective, is that African communalism has been under attack since the 1980s with the implementation of the Structural Adjustment programs of the World Bank and the International Monetary Fund (IMF), which contributed to the commercialization of land and the promotion of land reform, replacing land distribution with land titling and legalization.³⁷ Finally, the present as such becomes erased, and obtains new meaning through the oblivion of the past and the speculation of the future. The present in this way is sensed through futurity: the present space of *the future*.

Disaster, therefore, which today animates development (in opposition to modernization, which used to be considered universally applicable), seems to have a geopolitical purpose.³⁸ The overall figure of the environment seems to shift now, and *will* be shifting – becoming more threatening and bringing with it different ramifications for different geographical areas and social groups. Through a critical investigation of the geo- and chronopolitics of climate change and disaster, we can discern that (spatially and temporally constituted) *racial difference* is reconfigured through the break of linear time (e.g. the future is not what follows the present), which is expressed through speculative and environmental futurity; for the raced body, the dystopic future is already at work in the present. The way that time co-constitutes the raced body and functions in

favor of its operationalization, which takes place through the restoration of linearity in the present, is now greatly shifted, although chronopolitically the overall idea of development as *going forward* still remains at the core. With(in) scenarios of post-apocalyptic futures, resilience dominates development policy, as it corresponds to both the capacity that will help absorb shocks and maintain functions, and the possibility of assisting renewal and reorganization.³⁹ On these premises, the various types of policy papers, action plans, strategies, and so on that combine development and poverty reduction with disaster risk-management technologies and provisions for resilience and adaptation in the developing world (predominantly Africa), testify to the material and discursive ramifications of the speculatively pragmatic formative forces that re(con)figure race and materialize their outmost (financial) potential through operations of fictioning.

Chronobiopolitics			
Discourses/Technologies of Power			
Features	Evolution	Development	Adaptation
Period	19th Century	20th Century	21st Century
Coevalness (Synchronicity/Simultaneity & Contemporaneity)	Denied & Promised	Promised	Deferred
Mechanism	Colonialism	Apparatus of Development	Mainstreaming Disaster Risk Management into Development & Poverty Reduction
Rationale	Civilizing Mission (Upward Progression)	Development & Modernization (Upward Progression)	Resilience Building & Preparedness Planning for Survival (Downward Progression)
Mode of Governance	Coercion through the "rule of force" & Colonial Governmentality through modern power and transition to the "rule of law"	Subjectivation through Post/Colonial Governmentality affecting societies and individuals on psychological and cultural levels; (production of) desire as a transformative force on subjectivity	Logistics of Global Turbulence through Post-Political Governance (partial disposal of the subject)
Signification of the Raced Body through Allochronic Rhetoric	Embodiment of the Past (Primitive/Savage vs. Civilized)	Need to Be Synced with the Present (Un/der/developed/Traditional vs. Developed/Modern)	Overdetermination by the Dystopic Future (poor but resilient)
Time Category that Becomes Operative for the Raced Body	Past	Present	Future
Direction of Time	From the Past to the Present to the Future	From the Past to the Present to the Future	From the Future to the Present
Operative Logic	Accomplishment/Conquering	Deterrence	Preemption
Relevant Sciences/Epistemes	Cultural & Biological Evolutionism	Social Sciences, Economics of Development & Area Studies	Earth System, Climate Change & Resilience Sciences
Bios beyond the Life/Nonlife Divide & the Hu/Man	In/Organic evolution is conceived as a process of complete unification and interaction	Development consists of environmentally applied engineering processes, especially via extractivism	Adaptation is conceived and organized in terms of social-ecological systems consisting of bio-geo-physical units, their associated social actors, and institutions

Table 1. Rationale and key features of different regimes of chronobiopolitics ⁴⁰

Prediction as fiction(ing), blackness & market dystopias in a temporal feedback loop

In order to grasp the relationship between the far-reaching ramifications of the racial(izing) affect produced by speculative and environmental futurity and the uses of financial fiction(ing)s, we need to understand the way in which power today operates predictively and anticipatorily. For this purpose, I will try to disentangle the strange relationship that exists between prediction, fictioning, adaptation, and resilience, and the way it is administered through the logistics of global turbulence, which is itself animated by the contemporary function of threat, expressed in this case by the figure of climate terror. My purpose here is certainly not to take the position of climate change denialism, but rather to show how and with what consequences the whole logic of prediction proliferates within today's temporality of speculation.

In that vein, it is crucial to begin by relating prediction's fictioning capacity (through mathematical simulation and scenario writing) to some specific tendencies that pass through the current transformation of the development/adaptation apparatus. The first is neoconservatism, which is related to the all-encompassing horizon of war. Neoconservative power has affected the way we perceive and relate to climate change and weather-related disasters, which, after Hurricane Katrina, are increasingly presented and treated as problems of imperial management and issues of global governance.⁴¹ The second is neoliberalism, which through its operations for reducing the state, reconfigures climate change as an opportunity for green growth. It is exactly because of the fact that within neoliberalism we are used to living in a permanent state of exception, that neoliberalism manages to capture and incorporate exemption through the use

of insurance and risk-management technologies, which themselves have come very much to the fore since 9/11.⁴² The third is financialization, namely the process that began in the 1980s with the extension of financial interest to areas traditionally considered beyond the market economy. The fourth tendency is post-political governance, which involves the depoliticization of politics, the annihilation of dissensus, and the manufacture of consent. This is primarily exercised through policy planning and preparation by intergovernmental bodies and international organizations, and via action plans, international/(sub)regional strategies, or what could be otherwise be summarized as supranational bureaucracy, proliferating in a remarkable way from the international down to community level (top-down dissemination).

The first part that needs to be unpacked here is the relationship between future climate prediction (scenario development) and fictioning. Climate predictions are produced by the IPCC and used in climate change impact and adaptation assessments, within a framework that contains seven steps. After having reviewed the IPCC's *Technical Guidelines for Assessing Climate Change*, I want to suggest that, if we look more closely at what some of these steps involve, we come to the realization that there are different degrees of fictioning involved throughout the process. In the second step, selection of method, there are four general methods available: experimentation, impact projections, empirical analogue studies, and expert judgement. For impact projections, an array of mathematical models are used to extrapolate the future, and, on that basis, climate effects are assessed by utilizing, first, biophysical models, and then a range of biophysical, economic, and qualitative models, or the integrated systems model. In the fourth step (the selection of scenario, which itself comprises seven steps), the fifth stage is the projection of a future climate and the preparation of a "climatic scenario" that can be "synthetic" (a simple method of

specifying a future climate by adjusting the baseline climate in a systematic, essentially arbitrary manner); “analogue” (constructed by identifying recorded climatic regimes which may serve as analogues for the future climate of a given region; these records can be obtained either from the past [temporal analogues], or from another at the present [spatial analogues]); or a “scenario from general circulation models” (three-dimensional numerical models of the global climate system [including the atmosphere, oceans, biosphere, and cryosphere], which have a number of weaknesses, especially as they are based on a generalized topography and hence disregard locally important features). On the basis of the predicted future climate, the scenario is completed with a projection of environmental and socio-economic trends.⁴³

The second part of the relationship, namely the correlation between fictioning and adaptation, starts with the assessment of impacts which follows scenario development. According to the guidelines, “Impacts are estimated as the differences over the study period between the environmental and socio-economic conditions projected to exist without climate change and those that are projected with climate change.”⁴⁴ One of the types of assessment is “dealing with uncertainty,” which is undertaken via uncertainty analysis and risk analysis. Uncertainty analysis is related to techniques for anticipating and preparing for the impacts of the uncertain futures that were drawn as such through the development of scenarios. “Risk analysis deals with uncertainty in terms of the risk of impact. Risk is defined as the product of the probability of an event and its effect on an exposure unit.”⁴⁵ Since most significant impacts are produced by extreme events, the focus is on the changing probability of climatic extremes and their impacts. Once the impacts have been described, the analysis of response to climate change commences through a *minor* reference to mitigation which deals with the causes of climate change, and a *major* focus on

adaptation, since, after all, as is boldly stated, “the evaluation of mitigation policies is outside the scope of the Guidelines.”⁴⁶ The analysis concludes with the recommendation of adaptation measures which obviously testify to the conviction throughout the process that future climate changes *will* essentially occur and *must* be accommodated in policy. In this way, the logic of adaptation makes manifest how the fictioning of future scenarios operates as a kind of temporal feedback loop from the uncertain, predicted, projected future to the present, and the promotion of adaptation measures shows that the fictioning of these scenarios has further material and discursive consequences.

The climate change predictions of the IPCC proliferate in such a way that they animate what I will call the “logistics of global turbulence,” creating endless environments of governance for the purpose of mitigation and adaptation. These predictions become the means for various international organizations dealing with development to initiate adaptation programs, based either on the outcomes of IPCC estimations or their own analyses, for the purpose of reducing poverty, which itself is increasingly perceived with racial characteristics. Such an example is the aforementioned *Climate of Poverty* report, whose research, “based on current scientific predictions,” reveals that 185 million people in sub-Saharan Africa alone could die of disease attributable to climate change, and on the basis of that and similar figures, presents its recommendations for mitigation and adaptation, which are supposed to be able to tame the catastrophic effects of future disasters.⁴⁷ Another example is the entry on the World Bank’s website for the publication of the report *Turn Down the Heat*, on the page “Understanding Poverty,” which looks at the *likely* impacts of 2°C and 4°C warming across three vulnerable regions. It warns that poor coastal urban communities are among the most vulnerable to climate change, and describes the estimated risks to agriculture and livelihoods in sub-Saharan Africa, along with

other threats that people in South East Asia and South Asia are most likely to face, such as sea-level rise, coastal devastation, and water extremes.⁴⁸

Watching the video *Climate Change in Africa Will Hit the Poor the Hardest*,⁴⁹ which accompanies the aforementioned World Bank report, we become all the more conscious of the relationship between fictioning and speculative and environmental futurity by noticing, first and foremost, *how* and *with what ramifications* Africa increasingly exists as an object of futurist projection. The video starts with the consequences of the prediction of a 2°C temperature rise by 2040. In a rather menacing and sober way, it presents images which could represent each of the consequences of this temperature rise, then moves to the next scene – while implying a cause-effect relation through the use of arrows – featuring a shanty town and accompanied by the quote: “THE POOR WILL SUFFER MOST.” It then reiterates that a 2°C temperature rise equates to droughts which lead to crop failure, which leads to hunger, and suddenly presents Africa, the way it looks on the globe, its name written in bold red capitals, commencing with the message “HIT HARD BY A WARMER WORLD,” featuring a crowded landscape and continuing with another prediction, “BY 2050 10 MILLION MORE CHILDREN MALNOURISHED,” accompanying by a group of black children who are obviously looking back at the camera looking at them, in a semi-joyful, semi-bewildered/curious way.

The video continues with a prediction regarding the distant future: “BY 2100 RAINFALL DOWN 40%,” and once again with the use of arrows moves us to the next scene: “CROP LANDS SHRINK UP TO 90%,” showing a woman farmer in a rather dry landscape who is trying either to



Still image from the video *Climate Change in Africa Will Hit the Poor the Hardest*, World Bank, 2013

remove seeds and clean the soil or harvest a root crop with the use of a hoe, carrying a baby on her back. After that, the following messages-scenes appear: "FOOD PRICES RISE" => "POVERTY GROWS EVEN MORE" => "THE IMPACTS ON AFRICA COULD AFFECT ECONOMIES AROUND THE WORLD."

The video, with its aesthetics of a burning future appearing increasingly imminent, follows a rather common storyline that implies action for climate change in Africa has to be taken, because if not there could be far-reaching ramifications for economies around the world.



Still image from the video *Climate Change in Africa Will Hit the Poor the Hardest*, World Bank, 2013

The part of the by-now-classic narrative that is only implied here is that the droughts that climate change can/will cause, can/will become the reason for conflict and, consequently, migration, a possibility/reality that is very much feared, especially in Europe, where there is a strong right-wing populist narrative about the "threat" of migration and the influx of racialized others. The video proceeds with the question: "SO WHAT CAN WE DO IN AFRICA AND EVERYWHERE?" and responds with recommendations of growing crops that can tolerate more heat and less water, expanding access to energy, supporting green growth, and eventually concludes with the comment that: "TOGETHER WE MUST TURN DOWN THE HEAT."

The video helps us understand the function of pre-emption and threat, and to contemplate the material consequences of the racial(izing) affect created by a specific positioning of blackness, which on the basis of disaster risk-management logic is further operationalized in discussions on resilience through an on-epistemological slippage from possibility (can) to reality (will), in an *ontogenetic* way.⁵⁰ Images of blackness are projected with/through potential future impacts which, under the logic of

equation, reinforce a representation/positioning of blackness through future catastrophe, and future catastrophe through blackness. The video does what all such reports do: it raises awareness about future threats due to climate change – which have been delineated as such through various processes of prediction/fiction(ing) – and disseminates fear. The threat that is currently just looming fills the present without presenting itself through speculative and environmental futurity which translates future threat into present fear. In this context, threat becomes the future cause for action in the present. The word “together” in “TOGETHER WE MUST TURN DOWN THE HEAT” testifies to the way that “governmentality has molded itself to *threat*.”⁵¹ In this context, the logic of disaster becomes so dominant and current that the unquestionable need to build social, ecological, and financial resilience is brought to the fore. Financial preparedness for future extreme events seems to be crucial for sub-Saharan African countries that *seem* that *will* be suffering the most. In his text “Further Considerations on Afrofuturism,” Kodwo Eshun talks about the operations and the hold of predatory futures’ fictioning as follows:

African social reality is overdetermined by intimidating global scenarios, doomsday economic projections, weather predictions, medical reports on AIDS, and life-expectancy forecasts, all of which predict decades of immiserization. These powerful descriptions of the future demoralize us; they command us to bury our heads in our hands, to groan with sadness. Commissioned by multinationals and nongovernmental organizations (NGOs), these developmental futurisms function as the other side of the corporate utopias that make the future safe for industry. Here, we are seduced not by smiling faces staring brightly into a screen; rather, we are menaced by predatory futures that insist the next 50 years will be hostile. Within an economy that runs on SF capital and market futurism, Africa is always the zone of the

absolute dystopia. There is always a reliable trade in market projections for Africa's socioeconomic crises. Market dystopias aim to warn against predatory futures, but always do so in a discourse that aspires to unchallengeable certainty.⁵²

The reliable trade in market projections for Africa's socioeconomic crises that Eshun talks about, are, in this case, related to the financial solutions for disaster risk management promoted by the World Bank through mechanisms such as contingent financing, sovereign catastrophe insurance pools, insurance-linked securities, and derivatives for natural disaster risk management, to name a few, and other organizations and investment vehicles, such as the Global Facility for Disaster Reduction and Recovery (GFDRR) and the Global Risk Financing Facility (GRiF) respectively, which constitute the quintessence of market dystopias. Since the *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters* by the United Nations International Strategy for Disaster Risk Reduction, there has been an intensification of the connection between resilience, disaster, and the development and promotion of so-called alternative and innovative financial instruments for addressing disaster risk. An example here is the World Bank's November 2012 report, *Disaster Risk Financing and Insurance in Sub-Saharan Africa*, which presents a number of options for engagement in the development of financial resilience in the region, precisely because of the fact that, although sub-Saharan African countries are highly exposed to a wide range of adverse natural events, catastrophe insurance penetration remains extremely low. For the post-2015 development agenda, the main international guide seems to be the *Sendai Framework for Disaster Risk Reduction 2015-2030*. Its scope includes the promotion of actions which can protect gains from the risk of disaster, and it has four priority areas: understanding disaster risk; strengthening disaster risk governance to manage disaster risk; investing in disaster risk

reduction for resilience; and enhancing disaster preparedness for effective response and to “build back better” in terms of recovery, rehabilitation, and reconstruction.⁵³

A fitting example of the hold of this *anticipation-for-the-predicted-disaster* logic and its racial(izing) affect is the 2019 World Bank Group’s *Action Plan on Climate Change Adaptation and Resilience*. The brochure’s cover photography is by photojournalist Greta Rybus, who specializes in travel and documentary photography, and it comes with the following caption:

“Community members in the Guet Ndar neighborhood of Saint Louis, Senegal rest in an area where extreme coastal erosion is destroying homes. Neighbors have used a makeshift set up of fishing nets, cement, and other materials to try to bolster the shore. The United Nations considers Saint Louis to be the city in Africa most at-risk from the negative effects of climate change.”⁵⁴

The action plan continues with the presentation of its three major objectives – to boost adaptation financing; to drive a mainstreamed, whole-of-government programmatic approach; and to develop a new rating system to create incentives for, and improve the tracking of, global progress on adaptation and resilience, and illustrates “why adaptation matters” with five pieces of evidence, two of which are related to catastrophic predictions for Sub-Saharan Africa, South Asia, and Latin America,⁵⁵ hence demonstrating the reason for the choice of cover photo. In this context, it sets the scene to argue with confidence that “climate change adaptation requires a different approach to development” – one that includes the use



Cover photography by Greta Rybus from *Action Plan on Climate Change Adaptation and Resilience: Managing Risks for a More Resilient Future*, World Bank Group, 2019

of diversified financing instruments such as development policy finance, resilience-based insurance products, and contingent and other “insurance-type” financing options, among a few others.⁵⁶ The purpose of these financial tools is to hedge risk, which means that they are activated once there is a firm belief that weather-related disasters will most probably occur in the future. In this way, therefore, the future (or, more precisely, futurity) becomes the very condition for the writing of these financial products, whereby financialization operates as a kind of time management,⁵⁷ attesting to the efficacy of fictioning and its operation beyond the level of simulation.⁵⁸

The new market dystopias, embodied by the new financial capital trading catastrophes and weather extremes, are used as an attempt to safeguard against predatory futures and have a contingent racial logic. Images of blackness that feature the dark-skinned poor amid catastrophe and despair contribute to the argument over the primacy of social, ecological, and financial resilience, which is itself an essentially infra-colonizing process for familiarization with disaster which favors the proliferation of market dystopias. By equating blackness with doomedness, these pictures *become* meaning and power: they are circulated in such a way as if they *wanted* to create a feeling of urgency in the face of predicted imminent disaster, or as if they were coming from the future back to the present to provide evidence of the predictions’ and anticipations’ accuracy, transforming imminent danger into immanent threat and thus testifying to the hold of speculative and environmental futurity. Once disaster with racial characteristics and geopolitical reasons has been successfully pre-empted, financial fiction(ing) comes to assist the engineering of the future from the present and the capitalization of that feedback loop from the future to the present. What now animates this capitalization is the produced racial(izing) affect and the way that it is infrastructurally governed and

administered by the logistics of global turbulence.

- 1 For more on “re(con)figuration,” see: Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham & London: Durham University Press, 2007).
- 2 David Burrows and Simon Sullivan, *Fictioning: The Myth-Functions of Contemporary Art and Philosophy* (Edinburgh: Edinburgh University Press, 2019), 1.
- 3 Jean-Paul Martinon, *On Futurity: Malabou, Nancy and Derrida* (Houndmills, Basingstoke, Hampshire & New York: Palgrave Macmillan, 2007), xi.
- 4 *Ibid.*, 1
- 5 Climate reductionism is a methodology that has become dominant in analyses of present and future environmental change. See: Mike Hulme, “Reducing the Future to Climate: A Story of Climate Determinism and Reductionism,” *Osiris* vol. 26, no. 1 (2011), 245–266.
- 6 The way pre-emption and pre-emptive logic are used throughout this text draws on Brian Massumi’s notion, especially his differentiation of pre-emption from prevention and deterrence. *Idem*, *Ontopower: War, Powers, and the State of Perception* (Durham: Duke University Press, 2015), 5: “Preemption is not prevention. Although the goal of both is to naturalize threat, they fundamentally differ epistemologically and ontologically.”; 9: “Preemption shares certain characteristics with deterrence. Like deterrence, it operates in the future present on a future threat. It also does this in such a way as to make that present futurity the motor of its process. The process however is qualitatively different [...] The epistemology of preemption is distinguished from that of deterrence in that it is unabashedly one of uncertainty – and not to a simple lack of knowledge. There is uncertainty because the threat has not yet fully formed.”
- 7 For a contextualization of “gothic future” in relation to environmental futurity, see: Susie O’Brien and Cheryl Lousley, “A History of Environmental Futurity,” *Resilience* vol. 4, nos. 2–3 (Spring–Fall 2017), 13.
- 8 Michel Foucault, *The History of Sexuality (The Will to Knowledge: The History of Sexuality, Volume I)* (New York: Pantheon Books, 1976), 138

- 9 See: Elizabeth A. Povinelli, *Geontologies: A Requiem to Late Liberalism* (Durham: Duke University Press, 2016). This is a reflection on Povinelli's formula, 9: Life (Life {birth, growth, reproduction} v. Death) v. Nonlife.
- 10 For the notion of separability, see: Denise Ferreira da Silva, "Difference Without Separability," in the catalogue of the 32nd Sao Paulo Art Biennial, "Incerteza Viva," published on November 17, 2016, 60: "the view that all that can be known about the things of the world is what is gathered by the forms (space and time) of the intuition and the categories of the Understanding (quantity, quality, relation, modality) – everything else about them remains inaccessible and irrelevant to knowledge."
- 11 Kathryn Yusoff, *A Billion Black Anthropocenes or None* (Minneapolis: University of Minnesota Press, 2018).
- 12 Lamarckism is a theory of evolution that took its name from the French zoologist Jean Baptist Lamarck (1744–1829). According to this theory, an organism evolves through its interactions with its environments, which leads to the acquisition of new characteristics which are passed onto its offspring.
- 13 For a survey of such development programs, see: Christophe Bonneuil, "Development as Experiment: Science and State Building in Late Colonial and Postcolonial Africa, 1930–1970," *Osiris 2nd Series*, no. 15 (2000), 258–281.
- 14 In regard to this aspect of scientific taxonomy, see: Sylvia Wynter, "Unsettling the Coloniality of Being/Power/Truth/Freedom: Towards the Human, After Man, Its Overrepresentation—An Argument," *CR: The New Centennial Review* vol. 3, no. 3 (Fall 2003), 257–337.
- 15 The first law of thermodynamics states that the energy of the universe is constant (conservation of energy), and the second law states that the entropy of the universe tends to a maximum (dissipation of energy) where "entropy" is the term given to the measure of disorder in a system. See: Rudolf Clasius, *The Mechanical Theory of Heat*, trans. Walter R. Browne (London: MacMillan and Co., 1879), 365. Spencer actually preferred the phrase "persistence of force" to "conservation of energy." See: Barri J. Gold, *ThermoPoetics: Energy in Victorian Literature and Science* (London & Cambridge: MIT Press, 2010), 73.
- 16 Ibid.
- 17 Herbert Spencer, *First Principles* (London: John Childs and Son, Printers, 1863).
- 18 George W. Stocking, "The Dark-Skinned Savage: The Image of Primitive Man in

- Evolutionary Anthropology," in: idem, *Race, Culture, and Evolution: Essays in the History of Anthropology* (Chicago and London: University of Chicago Press, 1968), 114.
- 19 For an understanding of the production of *race difference* as a category connecting these three, see: Denise Ferreira da Silva, "Towards a Critique of the Socio-logos of Justice: The Analytics of Raciality and the Production of Universality," *Social Identities: Journal for the Study of Race, Nation and Culture* vol. 3, no. 7 (2001), 422.
- 20 Johannes Fabian, *Time & the Other: How Anthropology Makes Its Object* (New York: Columbia University Press, 2006), 31.
- 21 By the use of "post-" I mean, firstly, a beyond to and an after-thinking of the difficulty of transcending colonial structures and rationalities, and, secondly, issues related to knowledge production and dissemination in practice. See: Stuart Hall, "When was 'the post-colonial'? – Thinking at the limit," *Reading the Periphery* online, <http://readingtheperiphery.org/hall/>.
- 22 By 1960 there were 40 newly independent states, with a combined population of 800 million. For more on this, see: Michael E. Latham, *Modernization as Ideology* (Chapel Hill and London: The University of North Carolina Press, 2000)
- 23 David Scott, "Colonial Governmentality," *Social Text* no. 32 (Autumn 1995), 193.
- 24 Frantz Fanon, *The Wretched of the Earth*, trans. Constance Farrington (New York: Grove Press New York, 1963), 314.
- 25 Here, it is very interesting to take into account what Nick Cullather, drawing on the *Journal of Developing Areas*, notices in his text "Development? It's History," *Diplomatic History* vol. 22, no. 4 (Fall 2000), 643: "a developed area is characterised by 'most of the following': (1) An economy integrated into the international industrial-commercial community; (2) A substantial urban population; (3) A high literacy rate; (4) A high natural resource utilization rate; (5) An established and institutionalized political-government system; (6) General recognition as a developed area."
- 26 See: Bonneuil, "Development as Experiment," 265: "experts were mobilized by the colonial state to help appropriate and master African environments, pathologies, and societies. In British Africa, the 1930s saw increasing concern with soil erosion and deforestation as well as with malnutrition and public health. These brought to power a flood of experts. The gospel of soil conservation legitimized scientific measures (including confinement of people in settlement schemes, where access to land and grazing were restrained) against 'irresponsible' Africans who had to be prevented from destroying their environment."

- 27 This idea draws to a certain extent on Denise Ferreira da Silva, "Toward a Black Feminist Poethics: The Quest(ion) of Blackness Toward the End of the World," *The Black Scholar* vol. 44, no. 2 (2014), 88.
- 28 Hulme, "Reducing the Future to Climate," 254
- 29 Massumi, *Ontopower*, 3–19.
- 30 Wendell Bell, "What do we mean by Futures Studies?," in: *New Thinking for a New Millennium*, ed. Richard A. Slaughter (London and New York: Routledge, 1996), 18.
- 31 This analysis is very much informed by Ilya Prigogine's work, in collaboration with Isabelle Stengers, especially his book *The End of Certainty: Time, Chaos and the New Laws of Nature* (New York, London, Toronto, Sydney, Singapore: The Free Press, 1996). Here, I say, "in a rather paradoxical way," exactly because Prigogine spoke about the need to go beyond probability amplitude in quantum mechanics and trajectory dynamics in classical mechanics using probabilities themselves, but stressed that "from the very beginning, it is impossible to speak of trajectories," 43. On p.189 he writes: "Physical laws lead to a new form of intelligibility as expressed by irreducible probabilistic representations. When associated with instability, whether on the microscopic or macroscopic level, the new events of nature deal with the possibility of events, but do not reduce these events to deductible, predictable consequences."
- 32 Earth System Science is what used to be called ecology; it relies on studies of the Earth's past behavior and models to anticipate future behavior in response to pressures.
- 33 Christian Aid, *Climate of Poverty Report: Facts, Fears, and Hope* (London, 2006), 2.
- 34 *Ibid.*, 12.
- 35 *Ibid.*, 14.
- 36 Armen Avanesian and Suhail Malik, "The Time Complex. Postcontemporary," *Dis Magazine* online, <http://dismagazine.com/discussion/81924/the-time-complex-postcontemporary/>.
- 37 Ambreena Manji, *The Politics of Land Reform in Africa: From Communal Land to Free Markets* (London: Zed Books, 2006).
- 38 See, for example: Christian Aid, *The Climate of Poverty, 2*: "According to the UK government's Department for International Development, some 94 per cent of disasters and 97 of natural-disaster-related deaths occur in developing countries.

Scientific opinion is moving inexorably towards acknowledging that the increasing incidence and severity of 'extreme weather events' that provoke many disasters is connected to climate change."

- 39 This reflects the main capacities of resilience, which first emerged in ecology and clinical psychology. See, for example: Carl Folke, "Resilience: The emergence of a perspective for social-ecological systems analyses," *Global Environmental Change* no. 16 (2006), 253–267; Michele M. Tugade, Barbara L. Fredrickson, and Lisa Feldman Barrett, "Psychological Resilience and Positive Emotional Granularity: Examining the Benefits of Positive Emotions on Coping and Health," *Journal of Personality* vol. 72, no. 6 (December 2004), 1161–1190.
- 40 The presented table is an attempt to approach schematically some of the ideas regarding chronobiopolitics. The distinctions as presented in the table should not be understood as absolute, and the different discourses/technologies of power should not be perceived as following a sequence. It should be obvious from the text that there are no clear-cut distinctions, as a lot of times in transition periods, some of the existing logics can transubstantiate to something new, leave traces, leak to another regime, return, or, more rarely, disappear completely.
- 41 Massumi, *Ontopower*, 43
- 42 *Ibid.*, 53
- 43 Intergovernmental Panel on Climate Change, *IPCC Technical Guidelines for Assessing Climate Change Impacts and Adaptations* (United Kingdom and Japan: University College London and Center for Global Environmental Research, 1994), v–ix.
- 44 *Ibid.*, ix.
- 45 *Ibid.*
- 46 *Ibid.*
- 47 Christian Aid, *The Climate of Poverty*, 2, 38–41
- 48 *Turn Down the Heat: Climate Extremes, Regional Impacts, and the Case for Resilience*, World Bank, <https://www.worldbank.org/en/topic/climatechange/publication/turn-down-the-heat-climate-extremes-regional-impacts-resilience> (accessed October 10, 2020).

- 49 *Climate Change in Africa Will Heat the Poor the Hardest*, video, 1:44, World Bank, June 18, 2013. <https://www.youtube.com/watch?v=7njmXZLOSx8&t=1s>.
- 50 Massumi, *Ontopower*, 13, "The logic of preemption operates on this affective plane, in this proliferative or *ontogenetic* way: in a way that contributes to the reflex production of the specific being of the threat."
- 51 For an analysis of the time-form (futurity) of threat, see: *ibid.*, 174–175.
- 52 Kodwo Eshun, "Further Considerations on Afrofuturism," *CR: The New Centennial Review* vol. 3, no. 2 (June 2003), 291–292.
- 53 "What is the Sendai Framework for Disaster Risk Reduction?," United Nations Office for Disaster Risk Reduction (UNDRR), <https://www.undrr.org/implementing-sendai-framework/what-sendai-framework> (accessed October 10, 2020).
- 54 World Bank Group, *Action Plan on Climate Change Adaptation and Resilience: Managing Risks for a More Resilient Future* (Washington, DC: World Bank, 2019), 1.
- 55 *Ibid.*, 5–6.
- 56 *Ibid.*, 12.
- 57 Burrows and O'Sullivan, *Fictioning*, 386.
- 58 This argument also becomes obvious from the Global Risk Financing Facility's brochure, "Supporting Early Action Towards Climate Shocks, Disasters & Crises," where it states on p. 8: "Enabling Early Action FOR Financial Resilience. A positive feedback loop for an uncertain future."

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