



In the circuits of carbon capital: Human work, transnational firms and the (dis)articulation of ethical life in a time of climate disruption

Pierre-Louis Choquet

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Paris, le 2 avril 2024

Le document qui suit consiste en une version remaniée des quatre premiers chapitres de ma thèse de doctorat ; ayant un temps hésité à en retravailler le manuscrit en vue d'une publication, j'ai pour l'heure abandonné ce projet. Si vous souhaitez lire le document original, n'hésitez pas à me contacter : pierre-louis.choquet@ird.fr

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**DEGREE OF DOCTOR OF PHILOSOPHY
REPORT OF THE EXAMINERS
FIRST EXAMINATION
CONFIDENTIAL**

GSO.11a

Board/Department of:		Geography
Candidate's Name:		Mr Pierre-Louis Choquet
Student No.		761695
College:		St Edmund Hall
Examiner Names:	Internal:	Professor D Wojcik
	External:	Prof Dr R Rosa
Supervisor(s):		Professor G L Clark
Title of Thesis as approved by the Board/Department:		Fragmented Horizons: Multinational Firms & Ethical Life in the Anthropocene

We have examined the above-named candidate for the degree of Doctor of Philosophy, and report to the Board/Department as follows (*please tick one box only*):

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Recommendation			
<input checked="" type="checkbox"/>	1.a Award of the DPhil as the thesis stands We are satisfied: <ul style="list-style-type: none"> i) the candidate possesses a good general knowledge of the particular field of learning within which the subject of the thesis falls; ii) that the candidate has made a significant and substantial contribution in the particular field of learning within which the subject of the thesis falls; iii) that the thesis is presented in a lucid and scholarly manner; iv) that it merits the degree of Doctor of Philosophy; and v) that the candidate has presented a satisfactory abstract of the thesis. 		
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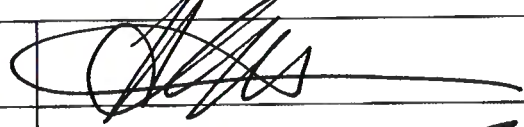
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Full Name:	PROFESSOR D WOJCIK		

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Degree of Doctor of Philosophy

REPORT OF THE EXAMINERS

Fragmented Horizons: Multinational Firms & Ethical Life in the Anthropocene

Pierre-Louis Choquet, St Edmund Hall Oxford

In his thesis, Pierre-Louis Choquet seeks to explore the contours of a 'geo-sociology of the good life', which is to say: to explore the conditions of possibility of ethically grounded human action in the age and context of dramatic environmental destruction and climate change. Yet, while this is ultimately a normative concern, the thesis is by no means just a contribution to social philosophy or ethics. Quite on the contrary, the author develops a highly original and innovative approach which combines the insights and methodology of social philosophy with the sociology of capitalism and (economic) geography, thereby drawing on the findings of the earth sciences, too. And while a most significant achievement of this thesis is the reformulation of the concept of alienation as a 'two-way' distortion in the dominant human forms of relating to the world through the modes of work, the most remarkable trait of it is the fact that Pierre-Louis Choquet actually manages to ground this conception in a thorough empirical analysis of the work environment, the self-presentations and the actual, factual world-transforming activities of the French corporation TOTAL. Thus, while the empirical analysis is informed by and grounded in a philosophically and sociologically derived and developed conception of 'alienation' as failure to properly 'appropriate' the world, i.e., to participate in co-shaping it in a normatively and politically salient sense (in the sense of 'praxis'), the socio-philosophical approach that leads the author to formulate a conception of 'dwelling' as the dialectical opposite of alienation, i.e. as a positive way to relate to the world, is just as much informed by the empirical observations and findings. Hence, this is one of the very view pieces of work in which the empirical and the theoretical elements actually and effectively reinforce and inform each other.

The core insight Pierre-Louis Choquet formulates as a result of this endeavor is the existence of a deep rift, or schism, between the actual material and semiotic flows created by Total's activities on the one hand and the articulated and symbolic self-presentations (as a company concerned with

environmental safety and justice) on the other hand. This leads to a corresponding 'gap' between the poetic dimension of what employees do (fulfill their tasks, accumulate capital and pollute the environment) and the praxic dimension of what they would like to do or feel expected to do to shape and appropriate the world. Hence, this is a significant contribution to social philosophy and Critical Theory's long-standing endeavor to develop a conception of alienation which can actually be 'put to work' in empirical analysis, and to formulate a coherent account of a 'non-alienated' way of relating to the world, while at the same time, it is a fascinating empirical reconstruction of the (alienating) material and symbolic relationships to earth and the environment prevailing at TOTAL.

The thesis consists of nine chapters. After an introduction that sets the stage by outlining the rationale and context of the thesis, the second chapter, devoted to methodology, explains the details of the author's empirical resources and fieldwork at TOTAL. Positionality and interviewing techniques are also explained in detail. The following two chapters unpack the concept of alienation, first through a critical review of related work in social philosophy and political ecology, and next by delineating the objective, subjective and relational forms of alienation. Chapter 5-7 delve into the case of TOTAL, starting with the 'sustainability apparatus' at TOTAL's, through the firm's institutional trajectory, to the role of human work in the transformation of nature-society relationships. Chapter 8 offers the concept of dwelling as a potential part of the solution to the problems of alienation in Anthropocene. Chapter 9 concludes with implications of the research findings and directions for future research.

Notwithstanding the strengths of the thesis, during the examination we have raised questions for the candidate to consider, regarding among other issues: his relationship with TOTAL, details of the methodology, the distinction between subjective and objective alienation, the novelty of the concept of dwelling, and contributions to geographical literature. The questions aimed to assess both the candidate's depth of understanding of specific issues within the thesis, and his ability to discuss the wider academic debates in which his work is (and could be) situated. Both examiners are happy with the robustness of the candidate's answers and have no hesitation in recommending that the degree of Doctor of Philosophy should be awarded as the thesis stands.

Professor Hartmut Rosa
Professor Dariusz Wójcik

CHAPTER 1

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Introduction

“If you don’t want to talk about *capitalism*, then you should be silent about *fascism*”. Although Horkheimer’s famous remark dates back to 1939, it does not seem to have lost much of its appeal. In the decade following the 2008 crisis, the global economy transformed at an accelerated pace: if it remains questionable whether its structure had ever looked like an “island model” of international economic interaction (with sovereign nation-states engaging trade relations with one another *à la* Ricardo), it became clear that it was at least equally relevant to describe it as an “interlocking matrix” of corporate balance sheets (with transnational firms and megabanks extending their networks of subsidiaries and branches beyond boundaries). In a few years only, the staggering boom and consolidation of the digital industry, the rush to unconventional hydrocarbon production, and the spectacular rise of an Asian middle-class (to mention just a few driving forces), created new, or deepened existing, interdependencies between geographically-distant spaces of production, consumption and financing – which were suddenly laid bare with the outbreak of the Covid-19 pandemic. This unprecedented level of global macroeconomic integration has come along, however, with an unprecedented explosion in wealth inequalities. It is precisely in this climate of insecurity and of disorientation that right-wing authoritarian leaders (from India to the United States, passing through Brazil and Australia) started to reap the political rewards of a poorly-managed 2008 crisis. Right at the same time, series of record-breaking temperatures were being observed year after year on every continent: anthropogenic climate change, which had long remained a background noise, increasingly sounded like a deafening sound alarm.

As we have embarked the 2020s, the ‘fossil trinity’ of coal, oil and gas still constitutes the core energetic propeller of the world economy, and the business-as-usual flow of greenhouse gases emissions (GHG) that their combustion generates imperceptibly modifies the chemical composition of the atmosphere, one day after another. Since the early days of the Industrial Revolution, cumulated emissions have caused the different compartments of the Earth system to absorb a larger share of the sun’s incoming energy, thus inducing a cascade of uncontrolled environmental transformations – to the point that we have now entered a new planetary regime. Over the last decades, the patient, meticulous concatenation of a myriad of studies conducted by teams of dedicated Earth system scientists have drawn indeed the contours of a new world: the rock-solid, immutable and disposable

‘Earth’ that had polarized western imaginaries since the dawn of modern times has indeed literally disappeared, giving way to a fragile, reactive, and precarious ‘Gaia’ – a meta-stable biophysical entity, made up of an inextricable network of co-variant feedback loops. From a more anthropocentric perspective, Gaia thus resembles a “critical zone” with frail equilibriums in which we have to live and that admits no outside (Lenton and Latour 2020). As the most basic material conditions for the flourishing of human societies, hitherto taken for granted, appear threatened by the (increasingly probable) prospect of a planetary carbon overshoot, it is clear that Horkheimer’s diagnosis should be reformulated and amplified as follows: “if you don’t want to talk about *extractive capitalism* [or about any other extractive mode of production¹], then you should be silent about *anthropogenic global warming*²”.

This intuition lies at the core of the present book. In the wake of the Paris accords signed in December 2015, the United Nations Framework Convention on Climate Change (UNFCCC) had committed its parties to “hold the increase in global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C”: a little more than five years later, many indices suggest that this last-ditched window is about to close. Multilateral efforts to collectively ramp up mitigation efforts have failed, and beating the worst-case scenarios established by the Intergovernmental Panel on Climate Change (IPCC) seems to have become the new normal. In such a context, it is certainly possible to interpret anthropogenic global warming as a necessary moment, in the sense that it manifests deep-seated contradictory dynamics that have long shaped capitalist societies, and that keep cascading onto us from the past to saturate our present – thus constraining and shaping all possible future developments³. Seen in this light, global warming appears therefore as the deferred, tragic signature of the modern aspiration to secure ‘freedom from want’ (that is, political autonomy *cum* material abundance), which retrospectively appears to have been nearly systematically achieved through the structuration of extractive modes of production (Charbonnier 2020).

However, contending that we are now collectively moving in the face of a *necessary conjuncture* does not impede to take the latter as something other than a *product of contingency* (Wainwright and Mann 2017: 23). By plunging into the hybrid constellations of human beings, organizational apparatuses, material infrastructures that undergird the business-as-usual activities of Total, a major transnational oil and gas company (TOC), I precisely seek, throughout this book, to shed light on how contingency and necessity are mutually enveloped in the formation of ‘carbon capital’. In this endeavor, I mobilize a qualitative material gathered on the course of a five years long (2014-2019) research project, in the context of which I could undertake fieldwork sessions in various entities of Total’s Exploration & Production (E&P) branch – in France (i.e., at the Paris-based headquarters,

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- 1 Here, the emphasis on capitalism is justified contextually by the global triumph, since the 1990s, of this flexible mode of production (see Hall and Soskice) – of which the ‘socialism with Chinese characteristics’ certainly constitutes a specific branch, notwithstanding its name. During the 20th century, Soviet state socialism was evidently no less reliant on hydrocarbon extraction than are and have been the different varieties of capitalism. For an account of how such a productivist (and hence, extractivist) bias got ingrained in modern imaginaries, see Audier.
 - 2 I do not specifically engage the task of highlighting the many connections between existing between right-wing authoritarianism and climate denial – a topic on which a rich scholarship is already available. See, for example, Latour.
 - 3 Such a Hegelian philosophy of history does not purport to disclose an already-achieved *telos* that the ‘cunning of reason’ would realize behind humans’ backs; rather, it builds on the modest premise that “the necessity that is to be found in history as philosophically comprehended is only that of the necessity of making sense of things and making sense of making sense” (Pinkard 2017: 167). Said differently, this philosophy of history does not consist in predicting an inevitable future, but in elucidating the paths along which the contradictions that make up the present are likely to unfold.

and in the main technical center of the branch, located in Pau), in the Republic of Congo and in the United States (countries where Total E&P had subsidiaries). Thanks to a research agreement signed with the firm at the beginning of my doctorate, I was given the authorization to solicit employees for semi-structured interviews, and I conducted a little less than sixty of them on the course of the project. Moreover, I was able to participate in projects involving research and development (R&D) teams and external social scientists, in exchange for giving feedbacks about my research. This agreement thus gave me the opportunity to pass through the security gates of the Total tower, where I could attend a variety of meetings and workshops – and get progressively attuned with an engineering workplace culture that revealed particularly prone to translate corporate social responsibility (CSR) commitments (and the research outputs of social scientists) into manageable quantified indicators. However, this access to Total never looked like an open door policy. I knew from the outset that interviewing employees about their views on their employer’s industrial strategy would be a difficult business, and I could only proceed very cautiously, privileging personal recommendations: in the different sites of fieldwork, the first circle of interviewees often helped me towards identifying further potential respondents. Moreover, I could not have access to the enormous quantity of private documents (e-mails, internal notes, strategic reports, minutes from meetings, payroll data, and the like) that are routinely generated in the corporate realm: exploiting such a mass of data would have been, no doubt, a daunting task, but it would certainly have allowed me to reconstruct a more accurate picture of Total’s internal power structure⁴. Although I had the opportunity to get immersed in the firm, I was thus somehow still confronted with the tip of the iceberg. For this reason, corporate environments never appeared to me as being other than edgy, permeated with secrecy and implicit meanings: as I gradually got experience and multiplied interviews, they became at best “semi-transparent”, to cite Merleau-Ponty.

Over the years, a growing number of social scientists have made the observation that the change in geological regime that we are currently going through signals a transition not so much to the ‘age of man’, but rather to the ‘age of capital’⁵. This modest incursion in a TOC thus allowed me to push this claim to its limits, by asking: if that is effectively the case, then, what actually denotes the hieroglyphic name of ‘capital’ – or, even more precisely, of ‘carbon capital’? Of course, I knew from the beginning that this question could not bear any definitive, exhaustive answer, and that my study would be perspectival, and thus fragmentary. The global fossil fuel industry is indeed extremely diverse: as anyone can guess, the institutional arrangements that set out the extractive activities deployed by Coal India, Gazprom, or Pemex are deeply variegated; and in this wide universe, it is worth stressing that TOCs (i.e., investor-owned listed corporations) only hold a minor fraction of proved reserves (Heede and Oreskes 2016) and are characterized by very different corporate cul-

4 Of course, this raises legitimate questions about the legally private status of TOCs, and of transnational companies in general. Although their internal organizational rules have huge geo-social distributive effects, they are elaborated through discretionary procedures – and as such, they evade both public scrutiny and democratic control.

5 Diverse hypotheses are still being discussed: different scholars antedate the start of the ‘Anthropocene’ to (1) the agricultural revolution in the Neolithic period (Ruddiman 2003); (2) the introduction of smallpox to the American continent by European settlers in 1610, when approximately 50 million indigenous deaths caused a drastic reduction in farming, natural reforestation and a subsequent dip in global carbon dioxide levels (Lewis and Maslin 2015); (3) the invention of the steam engine by Watt (Steffen et al. 2011) – of which the subsequent quick-paced diffusion responded mostly, Malm (2016) argues, to class interests (hence the ‘Capitalocene’ thesis); or (4) the detonation of nuclear bombs, which generated particles that are now easily identifiable in stratigraphic records (Zalasiewicz et al. 2015).

tures (e.g., between European and American majors). Although something like a ‘generic extractive regime’ could certainly be inferred from the family resemblances that all these businesses certainly share, I do not aim to develop such a comparative approach⁶ – nor do I aim to outline ‘another history’ of the oil and gas industry, or of Total as a firm, showing how each of these (meta-)actors has contributed to bringing us today at the very edge of critical planetary thresholds.

This book rather consists in an exercise in contextual moral philosophy: by entering the ‘hidden abode of production’ and describing the multiple mediations that constitute it, I seek to evaluate whether it is possible for individuals working in transnational firms to articulate a sound ethical life (and one intersubjectively recognized as such) when they get involved in corporate activities that directly jeopardize planetary equilibriums – Total’s extractive capacity v. anthropogenic climate change being here a paradigmatic case. In this endeavor, I contend that the concept of alienation can fruitfully be ‘put to work’ to sieve through the dense material collected during the interviews. The concept allows indeed to emphasize how the working activities of living individuals and the enduring reality of the corporate organization (which include all its underlying material infrastructures) are entwined. In this respect, alienation appears as a mediating concept that points towards the dialectical unity of subjective and objective determinations (i.e., of patterns of lived experience and of social formations) in the sphere of production: mobilizing it therefore enables to develop fine-grained descriptions of the dynamics that shape the social world, and to elucidate at least partially the distant, diffracted impacts of these dynamics on the biophysical environment. This requires the concept of alienation to be stripped away from the strong anthropocentric bias that has long been attached to it in the tradition of critical theory – which should not be construed anymore in the terms of a social philosophy, but rather of a more encompassing *geo-social* philosophy⁷.

Another crucial feature of the concept of alienation is that it bears a strong evaluative dimension: its use makes it possible to emphasize the links between the ethical experience of working individuals and the structural normative deficiencies of the social fields in which their productive activities get deployed. Once mobilized as a yardstick for geo-social critique, the concept of alienation helps to clarify the conditions required for individuals to relate appropriatively to the practices that they deploy at the workplace⁸. For this appropriation to be effective, these practices need not only to resonate with their personal aspirations, but also with the demands for justice expressed by external stakeholders (in)directly affected by corporate activities. This double-edged (i.e., descriptive and normative) recourse to alienation thus forms the guiding principle of this book: it allows to critically engage the generic form-of-life that underpins Total, and to explore the (at least hypothetical) conditions under which counter-movements could emerge, both inside and outside the corporation, in or-

6 To the best of my knowledge, my effort to outline an in-depth description of the corporate environment of a TOC has no equivalent in the recent scientific literature. This is undoubtedly due to the fact such milieus are notably difficult to penetrate. If accessibility is clearly a limiting factor, the relative dullness of corporate bureaucracies, which Graeber (2015: 45–104) characterizes as “dead zones of imagination”, also amplifies their lack of attractiveness to social scientists, who rather enjoy studying exotic life-worlds – with the risk, though, of looking away from the exploitative dynamics that most contribute towards accentuating environmental degradation (Hornborg 2017).

7 As far as I know, Latour (2018) has been one of the first social scientists to use this epithet ‘geo-social’. In what follows, I often use the adjectives ‘geo-social’ and ‘socio-ecological’ interchangeably. However, ‘geo-social’ better captures the enveloping of the social by the natural, with the prefix ‘geo-’ implicitly hinting at this encompassing relationship; ‘socio-ecological’, by comparison, suggests more of a juxtaposition.

8 In this dissertation, I deliberately use the neologism “appropriatively”, which is introduced in the translation of Jaeggi’s (2014) book on alienation in order to designate a proactive way, for agents, of relating with the relationships in which they are always already involved – see details in chapter 3.

der to keep in check a global dynamics of hydrocarbon extraction that the company directly contributes to propelling.

As it turns out, my effort to unpack carbon capital through the prism of alienation does not aim to offer a philosophical resolution to the antagonism between phenomenological and structural readings of Marx (say, between Merleau-Ponty's and Althusser's approaches) – rather, it aims to explore the liminal zones where their respective explanatory power can generate productive tensions⁹. In this perspective, each member of Total's workforce appears as a living individual immersed in the corporate context: as such, he has to be construed as being both active ("*agissant*") and subjected ("*assujetti*"), that is, as both phenomenologically constituting (flesh) and structurally constituted (body) – with these two moments growing out of each other in a dialectical fashion. Such a balanced approach allows to shed light on how human (extractive) work effectively reconfigures the relational canevass of geo-social reality once it is harnessed and streamlined through the wage relation. It enables therefore to give an accurate picture of the dynamics of accumulation as organized by transnational firms – one that emphasizes both its objectivity (i.e., its unfolding as a processual reality that responds to seemingly endogenous logics) and its ultimate mundane anchoring in the working activities deployed by a multitude of singular individuals, which entails in turn the business-as-usual structuration of complex material flows.

In elaborating methodological and conceptual tools for making sense of carbon capital (at least as it gets manifested in Total's case), this book draws on a variety of disciplines and of intellectual traditions, which are mobilized alternately in order to interpret variegated sources of empirical data. As such, it should be understood as an invitation to *resist* totalizing narratives when it comes to describing the agency of TOCs. If Total – taken as a whole, i.e., as an organizational entity of planetary proportions – effectively appears to be subjected to the *perpetuum mobile* of capital, this subjection is not realized in a homogenous fashion; rather, it proceeds from the dynamic stabilization of a multitude of contradictions that unfold in an internally-differentiated corporate realm. Shedding light on these contradictions implies indeed to point towards the possible fault lines and rivalries that actually fragilize Total's power structure, or to expound the competing value claims that are encapsulated in a seemingly-unified corporate culture. By this endeavor, I seek to outline a more dereified account of the firm: although such a project could be deemed as politically paralyzing, I suggest that it has precisely the reverse effect. Such an approach leads, of course, to present the agency of Total's employees as being heavily conditioned by objective systemic constraints: however, it enables to circumscribe more precisely the mediations that instantiate these constraints, and to think about how they could be fought against.

In the two chapters that follow this introduction, I examine the intellectual challenges that are associated with the effort to rebuild critical theory so that it can be effectively harnessed to unveil the unjust power relations that structure a society shaped by extractive capitalism.

Chapter 2 begins by demonstrating that the development of a sound critical theory cannot but go alongside with a critique of political economy. This is less evident than it could seem at first glance. In the last fifty years, the development of critical theory as a distinct field of philosophical research

9 While the first approach emphasizes how alienated subjects can deploy a revolutionary praxis endowed with a transformative power, the second stress the salience of objective systemic constraints, and the capacity of these constraints to perpetuate themselves through the reproduction of ideologies – or, conversely, to blindly destroy their own conditions of possibility

has been characterized by an intensification of its internal debates; yet, the considerable sharpening of its self-awareness has arguably been accompanied with a recalibration of its concerns away from the systemic nature of power and of its uneven distribution through (fast-changing) capitalist social structures. Some have suggested that these transformations in the field – that have somehow mirrored larger socio-political dynamics such as the restructuring of the academia and the decomposition of social movements in the neoliberal age, the upsurge in global inequalities after the 2008 and Eurozone crisis, etc. – have gradually encoded an implicit support of the status quo, thus leading to a domestication of critique. In this chapter, I argue that insofar as it is largely underpinned by socio-economic drivers, the ongoing disruption of the Earth's most fundamental biogeo-chemical cycles legitimates a renewal of the functionalist critique of capitalism (i.e., one that identifies the structural deficiencies of this mode of production as objective contradictions) – without though disqualifying the moral and ethical critiques. I suggest that these critiques are not mutually exclusive, but rather that they can complement and dovetail each other. The subsequent development of the case study (chapters 4 and 5) endorses, I argue, this position.

Chapter 3 prolongs the intellectual discussion, and develops the framework outlined in chapter 2 by exploring further the decisive salience of the ethical critique. I argue that the concept of alienation contains rich interpretive resources with which to grasp the fundamental traits of the ethical experience of individuals in contemporary capitalist societies. Retrieving this heuristic potential of alienation requires first fixing the concept by dismissing its polemical, romantic resonances, and making it instead the operator of a sound analytical critique of deficient forms-of-life. On this basis, the concept can be used by individuals in order to disentangle the bundle of social and ecological relations that structure the forms-of-life into which their own agency take shape (e.g., the workplace), and to better identify the patterns of domination that might distort them. By putting a strong emphasis on the materiality of social relations, I contend that this reformulated concept of alienation enables to supersede the strong anthropocentrism that has long underpinned critical theory. Yet, I argue that its full elucidation requires shedding light on its dialectical opposite, which I tentatively call 'belonging'; furthermore, I suggest that the spectrum covered by these two concepts can only be made intelligible against the background of ordinary experience, in which the generic human form-of-life is shaped by the constant interaction between embodied symbol-users (i.e., us) and the rest of the material world. More specifically, these concepts enable to normatively assess the qualitative texture of ordinary experience (which will be of utmost importance in chapters 4 and 5), and through this to help us circumscribe the anthropological core of the historical materialism that the present work seeks to rely on.

Chapter 4 lays out the empirical findings of the case study. This is carried out by retracing the ways through which Total instituted and sustained climate change as a matter of concern for the organization, since the end of the 1970s, as a way to emphasize the cultural/cognitive dimension of alienation. More specifically, I analyse the circumstances under which a specific collective imaginary gradually took shape in the firm and then spread both within and outside it: for that matter, I mobilize the Foucauldian concept of apparatus, which allows me to give an account of the complex dynamics that underlie this process of emergence. Yet, a thorough examination of the firm's business-as-usual activities suggests that the elaboration of this corporate discourse has contributed towards framing their substantive outcome in a distorted, but vivid way: smart, selective communication bolsters corporate legitimacy while obscuring the massive material flows that extractive operations effectively generate. In making sense of the gap, I reveal some significant theoretical shortcomings in the Foucauldian framework, the relevancy and scope of which I assess critically; while it helps to

diagnose key features of the process through which corporate discourse takes shape, the framing it induces stands in the way of working out other facets sufficiently.

Chapter 5 outlines further the empirical findings of the case study. I develop a contextualised analysis of the evolution, over the last few decades, of the dynamic of capital accumulation that has underpinned Total's growth, and I elucidate its concrete determinations by highlighting how it has continuously taken shape through the deployment of infrastructures and the processing of material flows. From this viewpoint, the firm appears to have contributed to intensifying the shift from an organic- to a fossil-based economy – hence, to inducing a sweeping transformation of the nature/society metabolism. On the basis of this analysis, I engage in a stylized reconstruction of the intra-firm organisational dynamics that currently shape the power structure of Total, and argue that these have considerable explanatory power over both the emergence of the corporate climate imaginary and the large-scale degradation of the natural environments that extractive activities involve. Clarifying these dynamics enables to avoid simplistic descriptions of the corporation as an unshackled geosocial power entirely stripped of human agency; rather, it gives the opportunity not only to develop a nuanced account of how the 'capacity to organise' has become the locus of corporate accumulation, but also to characterize further the nature of the paradoxical autonomy that the firm ultimately retains over its constituencies as a collective agent.

Chapter 6 extends my effort to present the empirical findings of the case study. In order to refine further our understanding of the historicity of capitalist accumulation, I develop a comprehensive analysis of the role that human beings continue to play in sustaining its dynamism. An in-depth enquiry pinpoints human work as the most determining factor in the animation and reproduction of socio-economic structures, and in the coextensive, mediated transformation of nature-society metabolism. However, to appreciate fully the significance of human work rather than considering it in its generic sense as an abstract, static category, I suggest that one should interpret it as a specific, concrete form of industrious activity performed by embodied individuals at the workplace – an activity that always takes shape in a cooperative context, itself made necessary by the division of labour. Yet, both the quick-paced fragmentation of global production networks and the continued qualitative transformations of human work (two dialectically-related phenomena) have led to its invisibilisation. Although it still retains a decisive generative function in the material reproduction of society, human work is indeed poorly construed as such – even by workers themselves. In this respect, Total's case is no exception: I argue that subjective alienation denotes a typical situation, in which employees and managers fail to consider the world-making potential of their working activities (both at the individual and collective level), and to construe them as decisive moments of an accumulation process that effectively transforms nature. From this viewpoint, the alienation of human work appears as a decisive vector to the widening of the material/ideational discrepancy explored in chapters 4 and 5. Exploring the conditions under which it could be superseded is the focus of the next chapter.

Chapter 7 seeks to draw the normative implications of the empirical case study. In the wake of the first developments of chapter 3, I develop a more explicit image of the positive dialectical opposite of alienation, 'belonging' – notably by discussing the merits and limits of using this concept against the backdrop of a baseline anthropological model. I suggest that its mobilisation as a normative yardstick does not imply that it is construed as a purely freestanding principle: if it retains some thin invariant features, it remains fundamentally open-ended and in need of being continuously (re)defined as a response to the changing forms of alienation. As such, it enables to evaluate the concrete practices in which individuals collectively engage (from within existing forms-of-life), depending on whether they are oriented towards consolidating or weakening the general structures of

human self-realization – an evaluation which, of course, requires prudence and self-reflection. On this basis, I harness the concept of ‘belonging’ and scrutinize the material of the case study in order to demonstrate that two legal building blocks of the corporate power structure (i.e., the wage contract and the limited liability corporation) channel – or have historically channelled – deficiencies that (still) impede a greater fulfillment of human work’s inherent normative promises, thus undermining the prospect of realizing geo-social freedom in the sphere of the market. In a context where the organization of a rapid phase out from fossil fuel extraction should be made a top priority, these findings raise a number of questions about the means and ends that a radical praxis should set in order to deploy effective, institutionalizing countermoves; they also cast doubt on the idea that ethical life could ever be collectively achieved without organizing a sweeping change in corporate governance.

In the concluding chapter, I outline the main contributions of the book, and reflect on possible avenues to achieve climate justice. The diverse institutional configurations of carbon capital impede of course any simple, replicable answer to this planetary challenge: however, the case study on Total suggests that a global shift in attention towards the private sector (which scholars often dismiss as infrapolitical) is urgently needed. Regardless of whether they are state-led or investor-owned, transnational coal, oil and gas companies are indeed *the* organizations that keep on selling business plans which future relinquishment presupposes the triggering of new cycles of fossil fuel extraction in the present – and are, for this very reason, key catalyzers of the climate catastrophe that is now accelerating. In such a context, it is therefore quite clear that the “sweeping change in governance” that would be most needed in the fossil fuel industry should be purely and simply construed in terms of a “planified dismantlement of its organizational and corporate structures” – a change that would undoubtedly require a radical, transformative collective action to be brought about.

CHAPTER 2

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Elementary remarks: critical theory and the historical dynamics of capitalism

1. Introduction

In the last two decades – and perhaps even more clearly since the global economic crisis of 2008 –, the idea that “it is easier to imagine an end to the world than an end to capitalism” has taken root in a way that neither Jameson nor Žižek (to whom the quote is attributed) could have expected. Since the early 2010s, the persistent widening of wealth inequalities, the rise of unprecedented forms of authoritarian nationalism, and the accelerated destruction of planetary ecosystems have cumulatively combined, thus instilling a sense of disarray among progressive political formations and social movements. Many scholars have suggested that these processes were in fact deeply intertwined, and that they could be interpreted as manifesting the objective contradictions of an ever-mutating capitalist mode of production¹. However, a somewhat simple (but particularly thorny) question has remained largely unaddressed by critical theorists: *what is to be done?* Or, to put it more precisely: how, in the current circumstances, should one’s *praxis* be oriented in order to realize (at least part of) its transformative potential? In many social contexts, the exercise of practical reason seems to have become an immensely complex, nearly defeating task. The last half a century of economic and financial globalization, has indeed achieved the “unity-in-separation” (Endnotes 2016) of market society at a planetary scale: through the intensification of commercial exchanges, human beings have reached an unprecedented level of *material interdependency*, with everyone counting on each other’s labor from the tail ends of sprawling transnational production networks to have its most basic needs fulfilled; at the same time, this quick-paced fragmentation of the social fabric, mostly driven by the blind (but coercive) constraint of competition, has left them atomized, unable to understand and act upon the circuits that sustain their material life – thus putting them in situations of deep *spiritual isolation*. The on-going polarization of these two mutually reinforcing processes continues to fuel the widespread sense of a general disarticulation of moral experience². This

1 Not a monist approach. Varieties of capitalism. Particularities. Yet, there are patterns.

2 This phenomenon is, of course, is a necessary correlate of the unchecked deployment of market forces. Marx offered, throughout his works, vivid descriptions of how this experience of moral disarticulation was caused by the groundswell of capitalism “turning everything solid into thin air”; decades later, Weil inscribed in her notebooks unsurpassed accounts of the spiritual misery engendered by the division of labor; more recently, Rosa suggested that our day-to-day experience of an ever-accelerating social world (having capitalism as its central motor) could paradoxically be rendered in terms of petrification.

state of affairs warrants, I suggest, a recalibration of critical theory. A reason why it has become “easier to imagine an end to the world than an end to capitalism” might certainly lie, after all, in the fact that critical theory has fell short of the expectations that have been, and still are, associated with its historical legacy. One of these it that it produces a philosophy of *praxis*, building on a comprehensive understanding of the contradictory dynamics that saturate the social world in order to pre-identify the range of possible transformative actions. A notable exception in this respect has been Young’s (2004; 2013) effort to propose context-sensitive responses to the moral and political challenges raised by the crystallization of structural injustice throughout transnational production chains.

In this chapter, I contend that the enterprise of critical theory should venture more decidedly in this direction, and be more systematically linked with the project to develop a non-reductionist Marxian critique of political economy. This, of course, does not the least imply to fall back in the kind of gross economicistic determinism that some dogmatic currents of Marxism came to champion in the 20th century – but rather to take seriously the core Marxian intuition that “the basic form of the historically given commodity economy on which modern history rests contains in itself the internal and external contradictions of the modern era, [and that] it generates these contradictions over and over again in an increasingly heightened form” (as formulated by Horkheimer 1972: 227). Reaffirming this connection therefore consists in emphasizing that the socially constituted character and the historicity of contemporary forms of life (and, hence, the intrinsic interrelatedness of subject and object) are in most cases best elucidated when these forms of life are grasped through descriptions that make their position vis-à-vis the dynamic of capital accumulation more explicit. The reason why such an effort is needed precisely lies in the fact that in the last decades (professional) critical theorists have proved less and less able to link up their philosophizing with the concrete, determinate (geo-)social problems that were being generated by the continuous planetary expansion of market forces – and in need of being addressed. As I shall demonstrate in this chapter, this phenomenon finds a historical explanation: as first generations of critical theorists did their best to escape the pitfall of epistemological objectivism (which characterized Soviet Russian dialectical materialism and its offshoots), they prepared theoretical avenues that would contribute to leading later generations on the opposite slipping slope of epistemological (inter-)subjectivism. The latter denotes, as I understand it, a decoupling between the degree of sophistication and self-awareness attained by theory (i.e., in its effort to map out the moral and ethical complications that are associated with the critique of a form of life at a purely formal level), and its effective ability to integrate objective empirical elements and to clarify how it could, *qua* theory, orient a transformative praxis that would be clearly directed against well-delineated, concrete structures of domination. The consolidation of this decoupling has resulted, I suggest, in the erosion of the “dialectical imagination” (Jay 1996) that has long been recognized, since the Left Hegelians, the hallmark (and perhaps the only *raison d’être*) of critical theory.

Arguing in favor of a more systematic connection between critical theory and the critique of political economy implies, in my view, to reclaim a modest epistemological optimism (in line with Horkheimer 1993: 1-15) – one that seeks to supersede these symmetrical pitfalls of epistemological subjectivism and objectivism, by seeking to resist the parcellization of knowledge, and thus to achieve a better integration of philosophy and the empirical social sciences. I suggest indeed that insofar as the ongoing disruption of the Earth’s most fundamental biogeo-chemical cycles is underpinned by socio-economic drivers, its taking into account legitimates a renewal of the functionalist

critique of capitalism (i.e., one that identifies the material disturbances of this mode of production as objective contradictions) – without though disqualifying the moral and ethical critiques. This diagnosis thus legitimates the claim that in our contemporary capitalist society, an immanent critique of economic forms of life should go beyond a purely normativistic approach, and possibly recognize the sheer functional incapacity of globalized markets to mediate a minimally-demanding form of geo-social freedom.

In order to develop fully this argument, I proceed as follows: in the next section, I examine in more details the legacy of the early Frankfurt school, and the advantageous efforts that first generations of critical theorists accomplished in order to debunk the epistemological objectivism that was the associated with the hard-line, mechanistic Marxism that prevailed at the time. I show that although it was entirely legitimate in this respect, the moral-ethical turn that they initiated (Habermas being a key figure here) in the post-war period gradually induced both an impoverishment of the dialectical imagination that had been so distinctively associated with critical theory – and a slow drift towards a subtle form of epistemological subjectivism. In the third section, I give an account of how, right at the same time, the amount and diversity of data produced by the empirical sciences dramatically expanded, mirroring an unprecedented need to describe and make sense of the increasingly complex structures of fast-changing modern societies. However, in most cases, these descriptions were mostly elaborated according to dominant positivist standards – which was less of a problem, of course, in the natural sciences than in the social sciences, where objectivistic framings of the global political economy continued to be dominant. I suggest that these positive empirical results can be tentatively mobilized and reintegrated in the dialectical effort to produce a contextualized critique of determinate forms of life – one that recognizes the ultimate anchoring of social formations in alienated human work. In the fourth and last section, I recapitulate the argument and contend that such a recalibration of critical theory is deeply reliant on the carving out of a three-dimensional (functionalist, moral, ethical) critique of political economy (broadly in line with Jaeggi 2016).

2. The legacy of the early Frankfurt school and the moral-ethical turn

In this section, I seek to retrace the historical transformations of critical theory and its progressive drift towards a subtle form of epistemological subjectivism. I first shed light on Horkheimer's early intuitions about the importance of constituting critical theory as an interdisciplinary research project, and emphasize the frail arrangements that underpinned his approach. I then explain how the late Horkheimer and subsequent critical theorists successively reinterpreted the gist of a critical theory of society, and stress how their attention got gradually deflected from the underlying processes governing the material reproduction of society.

2.1. The sources of dialectical imagination: the interwar period

A few years only after the end of the First World War, left-wing intellectuals of Germany were faced with a dilemma: they could either support moderate socialists (“revisionists”) and the freshly-created institutions of the Weimar Republic, or accept Moscow's leadership and align with the orthodox line of the Communist party. An alternative, however, had been certainly left opened by the horrifying material and spiritual destruction generated by the war – and it would consist in producing a radical reexamination of the very foundations of Marxist theory. In the early 1920s, Lukács (1972) and Korsch (2013) independently diagnosed that the (so-called) orthodox Marxism had “collapsed into a completely determinist and objectivist-materialist theory of history in which the so-

cialist end-goal had been projected onto the vague and distant horizon of a long road” (Breiner 1972); both stressed the necessity of recovering the practical impulse in Marxism – which loss, they argued, was mostly attributable to a rejection of Hegel and to the subsequent abandonment of the dynamic, historical-dialectical type of materialism that had never ceased to characterize Marx’s approach (Feenberg 2014). Their books were immediately perceived as presenting a threat (i.e., one of idealist deviation) to revolutionary discipline, and they were virulently condemned by the Comintern as revisionist heresies (Breiner 1972; Jay 1984: 81-149). When Horkheimer took office as a director of the *Institut für Sozialforschung* (IfS) in 1930, the institution had been under the influence of such an unimaginative, rigid Marxism throughout the 1920s (Jay 1996). Significantly influenced by Lukács and Korsch (Jay 1984: 197), he and his young colleagues (Fromm, Pollock, Adorno, Lowenthal, Marcuse, Benjamin) had clearly grasped that neither the all-encompassing economic determinism attached to doctrinaire Marxism nor its attachment to the mystical necessity of progress were of use in the effort to interpret increasingly complex social phenomena. As this new generation of intellectuals felt a growing disillusionment with the postponement of the revolution, their collaborative work at the IfS soon consisted of a philosophically-minded inquiry into the empirical causes of its incessant deferral (Vandenberghe 2009: 161-170)³. This required to develop a new dialectical imagination and supersede the parcellization of knowledge, a task which according to Horkheimer could be achieved

“to the extent that philosophy as a theoretical undertaking oriented to the general, to the ‘essential’, is capable of giving particular studies animating impulses, and at the same time remains open enough to let itself be influenced and changed by these concrete studies.” (1993: 9)

This methodological hypothesis about the possibility of a continuous dialectical interpenetration of philosophy and the social sciences is basically the one that I reclaim and seek to actualize in this book.⁴ Of course, this interdisciplinary approach should be prioritarily interpreted as a programmatic agenda, and even as a regulative ideal, since its concrete realizations in history always arose in the context of fragile, transient institutional arrangements.

It is indeed only during a few years (late 1920s-early 1930s) that the totalizing impulse behind the IfS could bear its fruits. As Germany slowly slid into fascism, it was becoming clear that the emergence of class consciousness in the proletariat could not be interpreted as a straightforward process, but rather as a many-layered one: the simplistic equation between ideology and false consciousness could not be taken for granted. A multitude of psychological factors had to be taken into account, and their disentangling required a novel kind of scientific enterprise, which Horkheimer and Fromm jointly undertook by creatively combining Marxist theory and psychoanalysis in the effort to describe the rise of the “authoritarian personality” (Kouvelakis 2019: 97-109; Abromeit 2011: 185-226). Around the same years, Pollock and Neumann sought to document and interpret the deep transformations of the capitalist economy in the wake of the 1929 crisis, and debated on whether the emergence of an unprecedented form of state capitalism (soon to become the *Führerstaat* of National Socialists) signalled an absorption of the political realm by the economic

3 This unexpected turn of events was thus not interpreted as a refutation of Marx’s theory, but its underlying factors had to be explained by critical theorists.

4 A geo-social research such as the one I seek to develop thus aims to take into account empirical research findings without renouncing a holistic perspective. This project requires, I have suggested, a certain dose of epistemological optimism: Horkheimer himself judged that “no individual is capable of adopting such an approach, both because of the volume of material and because of the variety of indispensable auxiliary sciences.” (1993:10) – but he lived in a time when the circulation of scientific knowledge was not as fluid and generalized as it is now. This book thus constitutes a modest attempt to temperate his sobering observation.

one, or just the reverse (Abromeit 2011: 394-410). As the interdisciplinary project took its amplitude, however, it was becoming increasingly clear to IfS members that the material conditions that could have paved the way to the self-emancipation of the proletariat were being gradually debased: the prospect that a collective subject would intervene historically to restore a normative totality thus nearly entirely vanished. By losing its natural recipient (i.e., a powerful proletariat in search of clear descriptions of a social reality waiting to be transformed), critical theory had evidently become a free-floating enterprise, addressed to a non-circumscribed, non-organized, and largely passive “public” (made of a mixture of students, members of social movements and of political formations) – a condition that has not changed until the present day.⁵ As he grew increasingly pessimistic about the political situation in Europe, Horkheimer came to favor a teleological interpretation of the dynamics of capitalism, seeing its successive mutations (from liberal, to monopoly, and then to authoritarian state capitalism) not as a historically contingent process largely shaped by class struggle, but rather as manifesting the deployment of an implacable developmental logic – which would culminate with the advent of a stabilized regime (i.e., authoritarian state capitalism) devoid of any meaningful internal contradiction. Even if the effective ability of the IfS to develop its interdisciplinary research programme soon became threatened by the rise of National Socialism (which accelerated the geographical dispersion of its members), it is therefore worth stressing that Horkheimer’s shift in his interpretation of the historical dynamics of capitalism in the 1930s was no less decisive in putting an end to it. During the most productive years of the early Frankfurt school, it is indeed the relatively agnostic stance of IfS members towards the directionality of history (as opposed to the overly optimistic views of orthodox Marxists) that ultimately motivated their effort to conduct detailed empirical research on the changing conditions of capital accumulation and class struggle – only such a rational investigation could possibly circumscribe the avenues of a revolutionary *praxis*. As Horkheimer became increasingly pessimistic about the emancipatory potential of Western reason, developing a systematic critique of political economy appeared less and less as a necessity: as a result, his critical theory shifted in focus and morphed into a “phenomenology of integral domination” (Kouvelakis 2019: 185), stressing the irresistible rise of instrumental reason and the correlative end of any possible *praxis*.

In suggesting that the interwar years constituted a golden age for critical theory, I do not, however, mobilize a retrospectively fantasized image of the Frankfurt school and of its effective achievements over this short-lived period – notably for what regards its seeming success to articulate the enterprise of critical theory with the critique of political economy. As it happens, this effort was indeed undertaken by only a handful of intellectuals, in a context where the economic and financial circuits of capitalist society had already attained significant levels of complexity (Brink 2015). Even if their effort to decipher the internal connections (and unmask the false oppositions) between alienated individuals and alienating social formations only had very little practical impact, these scholars nevertheless produced balanced, context-sensitive descriptions on the conditions of possibility for a transformative collective action – thereby watering the seeds of the dialectical imagination that had been initially sowed by Hegel and Marx. In this respect, the epistemological intuitions that undergird their approach remain entirely valid (see Borman 2017).

2.2 A deflected attention

The years that followed the disbandment of the early Frankfurt school and the exile of most of its members to the United States accelerated the transformation of the project associated with critical

5 One should not overestimate the previous connections that scholars of the early Frankfurt school

theory, in the sense of a general loosening of its link with the critique of political economy. In this section, I retrace the intellectual trajectories of Habermas and Honneth, and contend that the moral-ethical turn that they imparted to critical theory, although it was certainly justified from a purely philosophical standpoint, contributed to its growing formalization – thus reducing its interface with the empirical social sciences and altering its readiness to identify the accumulation of capital as the key (which does not mean the sole) catalyst to social change.

In the previous subsection, I have suggested that this shift in focus away from the concrete workings of political economy had begun with Horkheimer's radicalization of Pollock's thesis on the ineluctability of state capitalism (Brink 2015). His later collaboration with Adorno – who had already showed in the 1930s more interest for the socio-cultural, rather than for the economic aspects of alienation – oriented them both towards the elaboration of a negative philosophy of history. After the second world war, the pessimistic diagnosis of a self-destruction of reason seemed indeed to be empirically confirmed at every corner by the quick-paced industrialization of culture throughout the West (Adorno and Horkheimer 1997). Two decades later, the unexpected reception of Marcuse's works (*Eros and Civilization* and *One-Dimensional Man*) on American campuses would trigger the eclosion of an "artistic critique" of capitalism (Boltanski and Chiapello 2007) privileging an expressionist denunciation of alienating objectivities, over a sober commitment to their analytical debunking (i.e., through an in-depth critique of political economy).

In retrospect, it would be wrong to consider that Habermas' initial gist consisted of an attempt to prevent this withering of the link between critical theory and the critique of political economy. Rather, it demonstrated a double-edged effort (1) to salvage reason from the philosophical impasses in which his predecessors (and chiefly, the late Horkheimer and Adorno) had ended up by retrieving its plurivalence, and (2) to reconstruct Marxism on a sound historical-materialist basis, freed from the reductionist utilitarian anthropology that had become associated with it by default (Habermas 1975). The German philosopher firmly contested the idea of an all-encompassing instrumental reason, and argued that socialized subjects could not be construed simplistically as rational-purposive actors (i.e., actors whose interests could be automatically inferred from their objective position in the social matrix), but that they were simultaneously (and irreducibly) moral actors, always-already capable to formulate a number of normative claims related to their life conditions. While holding this, however, Habermas defended a marked dualism – considering indeed that human work could solely respond to instrumental interests, and that the potential of communicative action could only be disclosed in the public sphere, through the reciprocal exchange of rational arguments. With Habermas, critical theory thus shifted its attention further away from the critique of political economy in order to focus on the normative kernel of democratic institutions.⁶ His insistence on the centrality of language, combined with the view that its unique telos was to achieve undistorted, rational speech, attracted disagreement. Honneth and Joas (1988), in particular, stressed that this approach conveyed a latent idealism that risked inducing a "linguistification" of critique – that is, a recentering of critique on its formal-cognitive component, to the detriment of its deeper material, sensuous substratum (quite evidently reclaimed in descriptions of exploitative economic relations). Both inspired by the comprehensive holisms explored by pragmatists (Mead) or heterodox Marxists (Merleau-Ponty, Markús), the two scholars sought to recast critical theory on a sound material basis, i.e. one emphasizing the inescapable bodily anchoring of socialized subjects. While seeking to address the shortcomings of Habermas' reductive conception of work (Honneth 1981), Honneth basically endorsed his fundamental view (shared by Benhabib 1986) that critical theory primarily consists in

6 On this point, the critical analysis by Kouvelakis (2019: 373-429) of Habermas' trajectory as a consensual public intellectual in postwar (and soon neoliberal) Germany is worth considering.

an inquiry into the normative deficits of society.⁷ However, he insisted that the normative expectations raised by subjects could not be reduced to purely freestanding linguistified arguments, but rather that they expressed thicker demands that their entire personal integrity be recognized – and not just discrete cognitive claims (Honneth 1996). Clarifying the scope and nature of these “embodied” normative expectations thus required to document empirically the sources of social discontent, and hence to produce contextualized phenomenological descriptions of experiences of suffering.

Despite his efforts to re-articulate critical theory with a critique of existing social formations, Honneth has, in recent years, met growing criticism. Although some have stressed the incoherences and weaknesses of his theoretical framework at the formal level – others have targeted, through his works, the broader evolution of critical theory as a scholarly discipline and its political insertion in public debate. The main philosophical objections, which I shall discuss at greater length in the fourth section of this chapter, have notably emphasized Honneth’s difficulty to found a genuinely immanentist critique of forms of life – and identified the limitations of his reconstructive approach (see Jaeggi 2009, 2018; Solinas 2019; Fazio 2019): they have also pointed towards the limits of his normativism (elaborated in reaction to the anti-normativism of hard-line Marxists), by shedding light on its proclivity to epistemological (inter-)subjectivism – seen by these Marxists as inevitably linked with a watered-down political reformism (Borman 2017, 2019; Kouvelakis 2019).⁸ His re-interpretation of the concept of reification (Honneth 2008) appears particularly illustrative in this respect: as Kavoulakos (2019) points out, Honneth construes reification as an emotionless, psychologically-distanced individual attitude towards the social world. Seen in this light, reification does not appear anymore as a *thick* socio-ontological category that allows to grasp the processual reality of a social world structured by the commodity form (as in Lukács 1972), but rather as a *thin* epistemic concept, enabling to track the “cognitive errors” made by subjects as they simply forget that every act of cognition owes its existence to an antecedent act of recognition (Honneth 2008: 59) – as if, at the end of the day, reification consisted in a category mistake detectable only on the subjective side.

This shift in interpretation epitomizes a broader “compassionate turn” in critical theory (Autric 2020), and an erosion of its motivational basis: as the technical workings of the globalized market economy become increasingly illegible and opaque (and, correlatively, as the mere idea that “taking back control” could actually mean something withers), the *locus* of critique considerably narrows, finding its ultimate *raison d’être* in phenomenological descriptions of experiences of suffering (Trom 2008) that are often severed from a rigorous exposition of the background systemic pro-

7 In these conditions, even conflicts seen by their participants as aiming at a redistribution of material resources could be reformulated as normative conflicts –with cultural interpretations playing a key role in establishing “whether, with regard to the actual division of tasks, the prevailing evaluative schemata for social achievements and contributions are in fact just.” (Honneth and Fraser 2004)

8 It is certainly possible to raise this objection more generally against “normative” critical theorists who may have taken the moral-ethical turn too happily. When Jaeggi seeks to retrieve the heuristic potential of the concept of alienation (2005), or to clarify the avenues to a critique of forms of life (2018), she draws on the Left Hegelian and pragmatist traditions to reclaim “thick” accounts of social life. Her demonstrations remain most often positioned at a purely formal level, where they reach high levels of sophistication. Despite their impressive intellectual rigor, however, they leave the reader easily dissatisfied when it comes to figuring out *whether* (and *how*) these theoretical advances can actually “make a difference” (from a purely pragmatist standpoint) for situated subjects as they struggle to interpret and transform the concrete situations in which they are thrown. By saying this, I do not challenge the legitimacy of philosophical conversation as such (better arguments are *always* needed), but rather the potential consequences of its becoming self-absorbed in ever-ramifying internal debates. Although entirely legitimate *per se*, a hypertrophied theory risks therefore losing sight of how it could be practically plugged onto concrete problems and situations, thus ending up in the ivory tower of a worldless epistemological (inter-)subjectivism. A “reality check” for critical theory thus consists in assessing whether its theoretical production effectively helps alienated subjects to clarify their understanding of the alienating objectivities with which they are faced and that govern their lives, and to have a sense of how they could practically transform them.

cesses that generate them. In this respect, the original research programme developed between French philosophers (Renault, Haber, Paltrinieri), sociologists (Gaulejac, Dujarier), and psychiatrists (Dejours) is a case in point: despite its pathbreaking achievements (which obviously honor the interdisciplinary tradition of critical theory), its field of attention has remained mostly focused on (inter-)subjective contexts – to the detriment of an elucidation of the wider socio-economic fields in which these contexts dynamically take shape.

This work precisely seeks to address this limitation, by showing that accounts of alienated human work can (and should) be inserted into a wider critique of political economy, beyond localized descriptions of the micro-conditions in which it gets concretely harnessed as “labor force”. In the next subsection, I outline a brief overview of the empirical fields that have been insufficiently addressed by critical theory, thus leaving it unable to keep up with its highly demanding *raison d’être* – which precisely lies in its ability to show how theory and *praxis* can and should be dialectically articulated.

3. Critical theory outrun? Missing the rise of global capital and the material disruption of planetary boundaries

In a time of ecological cataclysm, retrieving the missing link between critical theory and the critique of political economy requires, I suggest, to consolidate the dialogue between philosophy and the empirical sciences. A core (though implicit) premise of this intellectual project lies in the endorsement of a sober, deflated conception of progress, one that understands it as no more (and no less) than “the criticism of existing conditions, [and] the encouragement to change them” (Horkheimer 1978: 92-93) – and that definitively abandons “hyper-Hegelian” philosophies of history. It is striking in this respect to notice how Lukács (1972) and Postone (2008), in spite of the seven decades that separate the publication of their respective works of reference, were tempted (like many others) to produce such totalizing narratives. While in 1923 Lukács optimistically construed the proletariat as the concrete instantiation of Hegel’s Spirit and hence as the operator of a universal redemption, Postone pessimistically diagnosed in 1993 a complete inversion of this scheme, with global capital basically taking up this all-encompassing role – and becoming henceforward the effective operator of a no less universal damnation. Despite the theoretical advances made possible by their works, it is worth underlining that these philosophers have tended to neglect the concrete empirical determinations upon which their claims were supposed to be based. This was evidently the case for Lukács: our retrospective understanding of the early 1920s (and of the subsequent decades) clearly challenges the idea that an organized proletariat was then spontaneously emerging, and on its way to supersede capitalism. But this was also true for Postone: although he was certainly right to equate the acceleration of economic globalization in the 1990s with the full historical realization of capital’s potential as an abstract, impersonal form of domination, his demonstration barely gave any empirical evidence of the type of mediations that actually conditioned and structured the homogeneous deployment of capital as a (seemingly) autotelic objectivity (Monferrand 2020). In this respect, Postone’s approach clearly risked (and still risks) falling into what Pineault (2008) has called an “expressivist critique”, in which capitalist objectivities tend to be depicted as being evil-minded and monstrous *per se* – thereby becoming reified, and without in need of being further analytically unpacked.

In comparison, Honneth seems clearly committed to avoid this pitfall. In *Freedom’s right* (2014), he seeks to examine whether it is possible to realize the normative promise of social freedom within the economic sphere of the market – and this requires that he scrutinizes empirical studies in order

to understand and assess the actually “existing conditions” (in Horkheimer’s sense). However, despite this valuable commitment, Honneth’s analysis remains fragile: his depiction of the economy contains almost no discussion of money and finance, and it barely analyzes the agency of business corporations (Yeomans and Litaker 2017); furthermore, it fails to grasp the endogenous dynamics of globalization processes – and thus tends to posit them as being wholly externally dictated (Schmalz 2019). On the whole, Honneth’s engagement with available empirical studies seems too narrow in scope for his normative evaluation of the economic sphere of the market to be convincing. The difficulties he (like Postone, and nearly all other critical theorists) is faced with derive in part, I suggest, from the deep transformations that academia has undergone over the last decades, in the sense of an increased professionalization and intensified disciplinary specialization – two phenomena that have jointly shaped the conditions in which theory is elaborated and sanctioned. Of course, these difficulties simultaneously reflect the fact that over the last decades, modern societies have seen their architecture continuously transformed by an ever-accelerating process of functional differentiation, itself largely driven by the recomposition and ramification of the global division of labor. The combination of these different structural factors explain, I suggest, why critical theorists have found it increasingly hard to produce “totalizing, concrete, living [and, I would add: empirically-informed] images of reality” (Vandenberghe 2009: 165). In the remainder of this subsection, I go through some of the empirical fields which I think should be given more attention. It is precisely (some of) the findings that have been attained in these various fields that I try to articulate with one another in the later chapters of this book: in undertaking this, I seek to challenge the epistemological objectivism of these scientific disciplines, by highlighting the fact that their proclivity to describe specific segments of geo-social reality often leads them to abstract these segments from their wider relational context, and thus to obfuscate their ultimate dialectical genesis in the productive, consumptive, and accountive agencies (Yeomans and Litaker 2017) deployed by living individuals.

The first body of literature that needs being addressed is situated at the intersection of economic sociology, economic geography and organization studies, and allows to retrace the successive transformations in the conditions of capital accumulation in the sense of a greater *concentration* and *homogenization* of corporate power.

At the beginning of the 20th century, the consequences of the diffusion of the limited liability corporation as a legal device to structure economic production, and of the structuration of a nascent financial industry (banking, insurance, etc.) were not clearly appreciated in Europe. Although Hilferding (1970) correctly diagnosed the transition of capitalism from a liberal form (centered on the figure of the individual bourgeois-entrepreneur, and characterized by atomized competition) to an oligopolistic form (marked by a fusion of industrial, commercial, and financial rationalities and the engagement of a race for scale), he still considered, like Marx (1993: 568-570) before him, that this transformation of relations of production reflected a necessary point of transition towards the self-abolition of capitalism and the definitive advent of socialism. It is certainly in the United States that the phenomenon of the large corporation started to be considered for itself – that is, outside of its inscription in a historical series supposed to lead necessarily to socialism. Throughout the Gilded Age (1870s-1900s), big businesses had demonstrated their capacity not only to adapt the demands of technological development and to accompany the growth of markets, but also to co-opt political elites and institutions (L’Italien 2016; Roy 2007). If Veblen (2012 [1921]) was one of the economists first to discuss the problems raised by the emergence of large bureaucracies governed by engineers and technocrats, it is only with Berle and Means (1991 [1932]) that the “organizational turn” of American capitalism benefitted from a systematic treatment – in the sense of an analytical

elucidation of the separation of ownership and control that had already become observable in most large corporations. As World War II erupted, Rizzi (in Italy) (1985 [1939]) and Burnham (in the United States) (1972 [1941]) both construed bureaucracy as a total social fact, eating up not only capitalist societies, but also (supposedly-)communist ones – i.e., the Soviet Union. In the post-war period, Galbraith's (2007 [1967]) economic theorizing clearly sought to clarify the scope and meaning of this deep-seated phenomenon (which he thought, like Schumpeter, it had brought capitalism somewhere around its end), while Chandler's (1977) works provided landmark retrospective insights into the historical genesis of large business organizations. Since then, social scientists have sought to make sense of this organizational capitalism at multiple levels.

At the macro-scale, financial markets have reached unprecedented levels of integration (as evidenced by the spectacular increase in the number and volume of transactions and the multiplication of parallel financial ecosystems) (Dixon 2014), and new systemic financial organizations – such as megabanks (Ioannou et al. 2019), pension funds (Fichtner et al. 2017), or sovereign funds (Clark et al. 2013) – have emerged and acquired considerable market power, notably by remodelling the networks of corporate control (Vitali et al. 2011; Haberly and Wójcik 2017). In the wake of the 2008 crisis, a growing body of scholarship has emphasized the porosity between these private organizations and the macro-institutions of the state (Alami and Dixon 2019), and analyzed the endogenous instability of financial capitalism and the unprecedented role of states and central banks in ensuring the liquidity of markets (Gabor 2020, Petry 2020, Tooze 2018). These entwined, large-scale phenomena have jointly contributed to accelerating the mutation of the background market infrastructures in which organizational capitalism is enframed.

At the meso-scale, business firms themselves have evolved and adapted to these changing macro-conditions. Despite the fifty year interval that separates their works, Baran and Sweezy (1968) and Duménil and Lévy (2018) have produced empirically-informed interpretations of the persistent hegemony of the large corporation. The second, in particular, have advanced insightful hypothesis about the nature and scope of its transformation in the age of financialization (other important economic contributions include Lazonick 2012; Lin and Tomaskovic-Devey 2013). In parallel, recent historical scholarship has revealed how large corporations have managed to act upon the fields in which they were inserted, whether it be in Europe (Abdelal 2007) or in the United States (Fligstein 1992; L'Italien 2016; Winkler 2017) – thus progressively gaining growing positional power in the definition of market rules. This unprecedented rise of large business firms has motivated in-depth studies on intra-firm organizational dynamics, or on the distribution of corporate power in and outside the firm (Banerjee 2012; Miller and Rose 1990; McKinley et al. 2012; Courpasson et al. 2015).

At the micro-level, the reproduction of organizational routines (Feldman 2016) depends in turn on the activation of multiple processes of subjectivation (Nicoli and Paltrinieri 2016). In recent years, an increasing body of scholarship has been dedicated to the exploration of the historical determinants to the construction of managerial authority (Cohen 2013; Le Texier 2016), and showed that the latter becomes effective when it harnesses working activities and gets them cognitively and practically oriented towards the reproduction of the organization as a whole. This ever more intense mobilization of the labor force (Supiot 2015; Trentin 2012) has exacerbated a variety of contradictions and tensions (Pérezts et al. 2011).

Such intersecting perspectives on the business firm are needed, I contend, in the effort to grasp the deep, enduring “organizationality” of contemporary capitalism – which has outlived the successive waves of criticism that had been directed against it. Since the 1990s, the triggering of new cycles of accumulation on a global scale have indeed coincided with the unfolding of an underlying

centripetal dynamics, characterized by a further concentration of power in a few centralized corporate hierarchies – attained notably through successive waves of mega-mergers and acquisitions (Philippon 2019). As Duménil and Lévy (2018) have observed, this stabilization of “managerialism” as a global mode of production that we have all witnessed in the last two decades is highly perplexing from a practical viewpoint: the findings of empirical sciences tend indeed to emphasize the deep embeddedness of organizations in their wider social and cultural environments, as well as the many constraints that play upon their dynamic structuration – thus stressing their overall inertia and spontaneous reluctance to be taken over and transformed by a collective *praxis*.

The second body of literature that should be engaged with by critical theorists mostly consists of two interrelated fields, namely economic geography (again) and international law. Its exploration aims this time at deciphering the centrifugal dynamics associated with (and powered by) capital accumulation, making it a vector to the intensification of variegated processes of spatial *differentiation* and *fragmentation*.

In the 1950s, Schaefer’s (1953) criticism of the regionalism that still imbued economic geography paved the way to a reinvention of the discipline: quantitative methods and spatial analysis were quickly harnessed, as areas of research ramified with industrial relations, urban planning, transports, regional development and international trade becoming classical subfields of study. In a context where neoclassical, positivist schools of thought largely prevailed, Harvey (2009 [1972], 1981) challenged their theoretical premises and underlined the heuristic relevance of a Marxist dialectical approach to track the peculiar spatialization of cycles of accumulation.⁹ In the 1990s, a “new economic geography” would emerge (Krugman 1991, 1998) and build on improved modelling techniques in order to better explain the mobility of factor inputs and the structuration of core-periphery patterns: as economic globalization was in its full swing, scholars started paying more attention to dynamics of innovation and clusterization (Grossman and Helpman 1991), or to the rise of networks (Castells 1996). At the turn of the 21st century, Hall and Soskice (2001) famously defended the hypothesis that there was not just a single, unified capitalist mode of production, but rather “varieties” of capitalism reflected in the different institutional settings of liberal and coordinated market economies. Since then, their hypothesis has been extensively discussed and enlarged, benefiting from in-depth studies on the Anglo-American (e.g., Clark and Wójcik 2007), German (e.g., Clark and Wójcik 2007), French (e.g., MacLean 2008), Chinese (e.g., Petry 2020) (etc.) contexts. Beyond these regional approaches, economic geographers have significantly contributed to describing and making sense of the continuous reconfiguration of production networks (Coe et al. 2008; Coe and Yeung 2015), notably by highlighting the spatial disaggregation of entire industries (Peck 2017) and the resulting transformations in the geography of labor (Herod 1997; Castree 2007). Unsurprisingly, these dynamics of spatial fragmentation have been accompanied by the intensification of the recourse to tax havens (Fichtner 2016; Garcia-Bernardo 2017) and to flags of convenience (Campling and Colás 2017) in the structuration of global wealth chains.

In this context, international relations and law scholars have outlined the mounting pressure generated by the steady rise of transnational private actors (Muir-Watt 2011) on the classical Westphalian order (Grovgui 2002), while challenging the idea that this order had ever had a “dense” historical consistence *per se*: accounts of its deep imperial-colonial lineages (Benton 2010; Ogle 2017) have been decisive in this respect. Since the 1970s, the negotiation of investment treaties se-

9 If Harvey’s works certainly reflect a strong commitment to dialectics, his analysis of socio-spatial dynamics (such as land use change, urban development, industrialization, and the like) remains mostly posited at the macro-level : in this respect, it comes under the category of epistemological objectivism.

curing capital rights (Slobodian 2018), the normalization of commercial arbitrage (Grisel 2017; Cutler 2020), the intensified privatization of law-making (Pistor 2018), or even the proliferation of standards (Graz 2019) have jointly contributed to constituting the activities of business corporations as a new source of normativity (Robé et al. 2016; Teubner 2011). The latter has proved sufficiently malleable to bypass and hollow out the normativity of democratic political institutions, by turning law into a vehicle through which value can be generated (L'Italien 2016). The hypothesis that we have transited to a transnational pluralist legal order has now received greater attention (Lhuillier 2016) and is corroborated by an increasing variety of empirical studies – e.g., on contract law (Lhuillier 2015), labor law (Thomas 2018), etc., each giving evidence of the quick-paced hybridization of normative frameworks.

Regardless of whether they are grasped through a juridical or geographical lens, the concrete outcomes of this joint dynamic of fragmentation and differentiation point towards the centrifugal dynamics of capital accumulation. As such and once again, the empirical realities they circumscribe prove highly disconcerting from a practical viewpoint: the increasing interconnection of infrastructures has led indeed to an impressive (in fact, planetary) dispersion of responsibilities, thus siphoning away moral imaginaries and complicating the role of critical theory in its effort to outline empirically-informed descriptions of the affordances¹⁰ that could be concretely seized in order to transform norms and practices and attain radical social change at a meaningful scale.

The third body of literature that needs being more intensely addressed by critical theorists straddles the environmental and social sciences, and delineates the broader (i.e., non-human natural) context in which the trajectory of the capitalist mode of production has historically taken shape as a dynamic of *captation* and *appropriation*.

As Foster and Burkett (2016) have suggested, Horkheimer's effort to launch and sustain a research program combining philosophy and the social sciences led to exclude the natural sciences from the "dialectical imagination" of Western Marxism. Even though later critical theorists showed increasingly eager to denounce the destruction of nature in the industrial age (see the developments on Adorno in the next chapter), it remained unclear whether the actual realization of their normative commitment to human flourishing (which, in the case of Marcuse, nearly takes the form of a "fully automated luxury communism") could pass the stress test of bio-geophysical planetary constraints. In other words, critical theorists have tended to lack a sound empirical understanding of the deep-seated connections existing between modern images of the good life and their underlying metabolic premises (e.g., a significant consumption of fossil fuels).

Retrieving such a "material reflexivity" (Charbonnier 2020) certainly implies engaging a more thorough dialogue with the natural sciences. In the last half century, significant advances have been attained in the understanding of the Earth as an integrated, dynamic entity, composed of mutually-coupled compartments (emerged land, oceans, cryosphere, atmosphere) (Lenton 2016). Having first largely benefited from US military patronage after World War II (atmospheric physics, oceanography, or geosystem sciences then appeared vital to emerging weapons systems – Doel 2003), so-called Earth system sciences became increasingly interconnected to a variety of other disciplines (hydrology, glaciology, ecosystem sciences, biogeography, plant biology, etc.). In the wake of Meadows' et al. (1972) inaugural attempt to modelize mankind's ecological footprint, the constitution of a transnational scientific community – under the auspices of the Intergovernmental Panel on

10 As I shall later explain, these affordances can be detected either at the subjective or objective level, depending on whether they diagnose, for example, a critical consciousness that could be easily bolstered (subjective level) or organizational-institutional flaws in structures of domination that could be practically remediated (objective level).

Climate Change (IPCC, founded in 1988) or of the Intergovernmental Panel on Biodiversity and Ecosystem Services (PBES, founded in 2012), to mention the most well-known bodies¹¹ – gradually enabled to achieve important progress both in the quantitative measurement of planetary material flows and in the qualitative assessment of the trajectory of marine and land ecosystems. In the last two decades, unprecedented levels of precision have thus been attained in the calculation of the “human appropriation of net primary production” (Haberl et al. 2014; Smil 2013). The daunting (yet entirely probable) prospect of a breakdown of the Earth system has increasingly led scientists to clarify the consequence of their findings for global governance issues (Rockström et al. 2009, Steffen et al. 2015, Steffen et al. 2018) – with some of them going all the way down to the identification of existing bottlenecks and the proposition of possible institutional fixes (e.g., Galaz et al. 2018; Österblom et al. 2015; Newell and Simms 2019). For all their merits, these scientific redescriptions of the Earth system as a dynamic, living entity suffer from a strong objectivist bias: by spontaneously privileging a planetary scale of analysis, they have not helped situated actors to make sense of their immediate *milieu* as being part and parcel of a thin, vulnerable life-supporting relational canvas – one potentially impacted by their action. Path-breaking epistemological discussions and empirical investigations on the concept of critical zone (Gaillardet et al. 2018; Arènes et al. 2019) have sought to address this limitation, by paving the way to the development of a more contextualized Earth system science.

If sharpening the material awareness of critical theory certainly requires engaging a robust dialogue with the natural sciences, it no less requires that its philosophical impetus becomes more receptive to (and lets itself being altered by) the empirical findings of the social sciences that have long been engaged in the systematic elucidation of nature-society interactions, such as environmental history, hazard and vulnerability studies, environmental sociology, ecological economics, political ecology (among others). Although these disciplines have explored specific fields of research and developed increasingly refined theoretical frameworks, they are still driven by the same impulse: all of them seek indeed to shed light, with different tools and concepts, on how human collectives actually negotiate (or have negotiated) their insertion into a wider, overarching non-human material world. For instance, Blaikie and Brookfield (1987) have, in their seminal work on the socio-economic determinants of land degradation in the Himalayas, stabilized a definition of political ecology as “combining the concerns of ecology and of a broadly defined political economy” – clarifying that this approach “encompassed the constantly shifting dialectic between society and land-based resources, and also within classes and groups within society itself” (Blaikie and Brookfield 1987: 17; see also Martinez-Alier 2003: 70-72; Robbins 2011: 14-19). At the time, their research agenda aimed not only to challenge the (implicit) objectivist epistemology of the Malthusian narratives that had resurfaced and gained influence in previous decades, notably in the wake of the works of Ehrlich (1968), Hardin (1968) and Meadows et al. (1972), but also to offer a theoretical sounding board for the broad-based environmental interest that had flourished in the 1970s. While fostering a healthy revivification of the debate between realists and constructivists about the status of “nature” (for a balanced accounts of each position, see respectively Demeritt 2001a, 2001b and Hailwood 2015), the structuration of this variegated body of disciplines has somehow synthesized a higher stage in the rationalization and systematization of the description of nature-society relationships (for a remarkable geographical case study, see Turner 2008a, 2008b, 2009), and yielded important theoretical insights about the fundamental embeddedness of human agency – i.e., its inescapable relational inscription in a finite material world. In this respect, Hornborg’s (2009, 2020) contributions to the

11 One could mention other smaller, regional panels, dedicated to the monitoring of no less important geo-chemical cycles – such as the European Union Nitrogen Export Panel (focused on the nitrogen cycle).

elaboration of the concept of “ecologically unequal exchange” are worth considering: as his historical reconstruction of British cotton trade suggests (2006), imperial powers have imposed technology and money to their colonies and/or peripheries as a way to extract (labour) time and (natural) space to their own benefit. Seen in this light, all the “economic development” attained in the West during the last two centuries cannot but look like a “zero sum game”, played almost entirely at the expense of the poorest nations. And of course, this dynamic still unfolds, assuming increasingly complex forms as the economy becomes more and more interconnected.

Although these vast bodies of empirical knowledge (on the one hand, about the functionings of nonhuman nature, and on the other hand, about the wide range of possible nature/society compositions) have been poorly addressed by Western critical theorists, it is worth emphasizing that they have been more readily mobilized in the Global South. In a diversity of contexts, socio-environmental leaders have indeed showed a remarkable propensity to harness scientific descriptions (alongside with descriptions articulated through indigenous traditions) of their damaged natural livelihoods as the motivational sources of a radical *praxis* (Martinez Alier 2003). In comparison, Western critical theorists have remained largely oblivious to the fact that “the seemingly dematerialized post-industrial society continues to depend on a material-intensive, largely machine-operated and ecologically destructive foundation” (Haberl et al. 2011). Deeply influenced by a (then largely) hegemonic productivist imaginary, they have failed to see that the hidden workplace ecologies of a only handful of sectors (hydrocarbon extraction, mining, chemicals, cement, steel) were in fact the determinants of the wider socio-metabolic dynamics (Barca 2015, Huber 2013, Huber 2017), and that they were, as such, highly critical.

In this subsection, I have argued, in the wake of Honneth, that the effort to identify the structural limitations imposed on human self-realization required that critical theorists develop a thorough dialogue with the empirical sciences, be they “social” or “natural”, in order to make sense of the wider context into which a radical *praxis* can (and should) take shape. If this argument certainly resonates with Honneth’s claim that “the norms or principles to which critique refers [can] *only* be those that [are] in some way anchored in *historical reality* itself” (2009: 49, emphasis added), it also points towards its intrinsic limitations. His construing of “historical reality” appears indeed underpinned by strong anthropocentric assumptions: as such, it is entirely located in the realm of human affairs, thus barring the non-human natural world as a possible autonomous source of normativity. This illuminates, I suggest, the limits of Honneth’s effort to accentuate the “recognition-theoretical turn” of critical theory that had been first initiated by Habermas: as such, this gist has arguably led to narrowing critical theory to an inquiry into the “normative sources of social discontent” (Fraser and Honneth 2004: 128-129), with the risk of making it blind to objective processes that unfold at the margin of human attention. Addressing this shortcoming is the purpose of the next subsection.

4. Carving out a three-dimensional critique of political economy

In this last subsection, I argue that it is necessary to challenge the blindspots of Honneth’s normativism, in order to lay the basis of a more decentered (that is, less anthropocentric) critical theory. In this endeavor, I build on Jaeggi’s (2016) effort to reconstruct the three main strategies (i.e., functional, moral, ethical) which, according to her, are recurrently mobilized when it comes to producing a critique of political economy. Her position synthesizes a subtle equilibrium: while insisting that these three strategies are mutually interwoven (according to Jaeggi, a functional critique cannot but take shape in a “thin” moral framework, which in turn owes its consistence to “thick” ethical as-

sumptions about the good life), she simultaneously emphasizes that they remain somehow irreducible to one another. This is notably evidenced by the fact that their respective mundane undertaking generate very different productive effects (different “ways of world-making”, as Goodman would have it); and it is precisely these practical nuances that ultimately safeguard the irreducibility of the three strategies of critique (Fraser and Jaeggi 2018). Defending this line of argument enables, I suggest, to open a modest way out of the strong anthropocentrism that has long characterized western Marxism. Before clarifying why this is the case, I quickly shed light again on the shortcomings of Honneth’s approach.

As briefly explained in the previous subsection, my main objection to Honneth is that his normativism, although it reveals highly productive (i.e., when it comes to showing that conflicts seen by their participants as aiming at a redistribution of material resources are fundamentally value-laden), can also pass a threshold of counterproductivity. In a landmark discussion with Fraser, he seems to anticipate this, by affirming that

“a critical social theory that supports only normative goals that are already publicly articulated by social movements risks precipitously affirming the prevailing level of political-moral conflict in a given society: only experiences of suffering that have already crossed the threshold of mass media attention are confirmed as morally relevant.” (Fraser and Honneth 2004: 115)

Although the German philosopher waves the risk of forgetting disturbances that do not “cross the threshold of mass media attention”, he proves prone to refer to “principles of mutual recognition that are considered legitimate by the members of society themselves”. As a result, Honneth ends up insisting nearly only on experiences of suffering that are intersubjectively recognized as such, despite his affirmation to do the contrary. This indicates, I contend, a form of latent solipsism. In this perspective, phenomena that unfold behind our backs can only become a matter of concern insofar as they are linguistified and articulated as vectors in struggles for recognition. And this is problematic, because it does not help us to figure out how to deal with phenomena of planetary proportions (e.g., the melting of permafrost, the acidification of oceans, etc.) that do not really activate normative potentials obviously linked to our everyday experience – since their mode of existence transcends our ordinary corporeal experience and remains imperceptible to our senses (Casey 2017). Even if it is certainly inevitable that we “reach out” to these nonhuman phenomena by making sense of them through our categories, this process (of linguistification-conceptualisation) does not exhaust their mundane reality – which ultimately exceeds our human grasp of it. And it is precisely because planetary environmental baselines are shifting, and because this threatens the metastability of the Earth system as such, that a renewed functionalist critique is needed (i.e., one partially detached from a strongly anthropocentric moral framework). Contemporary findings from Earth system scientists enable indeed to refine our understanding of the entrenched dysfunctionality of capitalist relations of production: they are so not only because they create massive poverty – but also, and no less importantly, because they perturbate nonhuman ecosystems in ways that exceed by far our imagination (Malm 2019). As I have suggested, Honneth’s monistic theoretical framework is particularly ill-equipped to take these new elements into account.

In comparison, Jaeggi’s approach is more flexible. If she recognizes the deep entwinement of the three strategies of critique, she more readily insists on their specificity and on the degree of latitude that each of them retains (see, in particular, Fraser and Jaeggi 2018). While integrating the theoretical advances brought about by Honneth’s normative turn, her framework loosens its monism, and

appears thus more susceptible to host a reinforced, enlarged functionalist critique – one that proves prone to detect “liminal” dysfunctional dynamics that have not yet crossed the threshold of public attention (and that cannot, for this reason, be straightforwardly construed as “normative deficits”). By making critical theory more receptive to the findings of the empirical sciences that describe these background, poorly visible dynamics, Jaeggi’s approach can reinvigorate its “dialectical imagination” (Jay 1996), and help it supersede the “compassionate turn” (Autric 2020) where it has become stuck – as well as the worldless epistemological (inter-)subjectivism that is attached to it.¹² In particular, it provides a sound basis to initiate a thorough dialogue with the Earth system sciences: this enables to reframe forms of life shaped by capitalist relations of production, consumption and financing (Yeomans and Litaker 2017) as being geo-socially constituted – that is, as being ultimately inserted in, and maintained through, a wide variety of nonhuman ecosystems, which metastability can no longer be taken for granted (precisely because they are altered by the deployment of these relations).

5. Conclusion

In this chapter, I have argued that reviving the interdisciplinary agenda of the early Frankfurt school was much needed in the effort to elaborate a sound philosophy of *praxis* – that is, one that would orient and justify its contextual deployment by drawing on the resources from a non-reductionist Marxian critique of political economy. In this endeavor, I have shed light on the gradual drift of Habermas’, Honneth’s (and even Jaeggi’s) intellectual enterprises away from the intuitions that had driven Horkheimer in his early years as a director of the IfS. As I have suggested, their works show indeed a remarkably sophisticated treatment of philosophical problems (which is entirely legitimate *per se*), but this self-awareness tends to come at the cost of a sustained engagement with the empirical sciences – in particular with those that seek to decipher the workings of the capitalist economy. Therefore, the “de-normativization” of critical theory which is, I think, urgently needed does not respond a theoretical imperative (since attempts to solve philosophical perplexities are always justified), but rather a pragmatist test (about its effective ability to deliver a philosophy of *praxis* aimed at transforming actually existing unjust geo-social structures). And as such, I contend that this “de-normativization” is best attained when the three interwoven strategies of critique (functionalist, moral, ethical), are each recognized as irreducible, non-interchangeable moments. This configuration leaves room for a renewed, decentered functionalist critique, paying closer attention to the unprecedented perturbation of planetary ecosystems that the continuous expansion of market forces induces – which is a bad news not only for human societies, but more widely for all the biotic communities that compose the Earth system.

In the next chapter, I argue that the strong anthropocentric bias that has long been associated with the concept of alienation – a touchstone in the theoretical apparatus of critical theory since Marx’s early writings – can be significantly corrected. Once recast on proper (that is, weak anthropocentric) theoretical foundations, the concept of alienation proves particularly commendable in the effort to flesh out a philosophy of *praxis* based on a principled critique of geo-social forms of life.

12 As I have suggested in footnote 8, Jaeggi’s theoretical apparatus appears itself highly formalistic (and thus, somehow worldless) as long as it is not mobilized to reframe the findings of positive sciences so as to emphasize their dialectical, norm-laden “thickness”.

CHAPTER 3

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Alienation and the task of geo-social critique

1. Introduction

In this chapter, I seek to outline a comprehensive picture of alienation – one that simultaneously encompasses estrangement “from society” and “from nature”. I suggest indeed that once its theoretical apparatus is so restated, this concept of alienation can be used as a yardstick in the effort to develop a critique of deficient geo-social forms of life. But before this is the case, such a conceptual clarification is certainly required: in a time when the pursuit of economic growth is increasingly recognized as a catalyst of the global environmental crisis, people often talk about “being alienated” without feeling the need to delineate the categories that could help them specify the precise determinants of this experience. The question of whether they are estranged “from society” or “from nature” seems strange, because they tend to take the world in which they actively participate as a continuum in which human and nonhuman parts are deeply intertwined. In this context, talk about alienation often appears thus vague and imprecise. The genealogy of the concept reflects this ambiguity: although Marx gave alienation a pivotal role in his early *Economic and Philosophical Manuscripts* (1988 [1844]), its analytical potential was soon revealed to be insufficient for a cornerstone role in a thorough critical theory of society – in fact, the concept actually disappeared from his mature economic writings. It is only later, in the 1960s-70s, that the concept of alienation returned to usage: Lukács’ (1972 [1920]) long-ignored works were rediscovered, and Sartre’s (1957) and Marcuse’s (1972) parallel efforts to bridge gaps between Marxism and phenomenology and psychoanalysis (respectively) gave young Western generations a new language through which to express their existential frustrations (Haber 2007). Precisely at the same time, however, Althusser (2010 [1965]) insisted that the concept of alienation could be nothing but a “pre-Marxist ideological concept” forged during Marx’s early romantic period – i.e., before achieving his “epistemological break” and starting to develop a scientific critique of political economy. Althusser explicitly lamented that “many Marxist philosophers [still] seem[ed] to feel the need to appeal to alienation” (2010: 239). Other observers underscored the ambivalent effects of a widespread use of alienation by student movements: Ricœur (1968) went so far as to qualify as “flawed” a concept he considered

subject to both a “semantic overload” and “proliferating ambiguity” – a diagnosis that would anticipate a later critique by Schacht (1971). According to both Ricœur and Schacht, the polemical use of the concept and its general imprecision had definitively compromised its heuristic potential. The question, however, whether this diagnosis still holds today remains open. I suggest that this is not the case, and I contend that recent debates in philosophy and the social sciences allow us – and, in fact, they *encourage* us – to retrieve and consolidate the critical resources traditionally associated with the concept of alienation. The theoretical framework that I mobilize to defend the concept of alienation employs a dialogue between two subfields (i.e., critical theory and environmental philosophy); this favors a nuanced interpretation of the concept, one that stresses its inherent plurivalence. Although such an open-endedness could be deemed as a deficiency, I maintain that it should rather be viewed as an advantage. This shift in the interpretation of alienation enables, I argue, to clarify the strengths *and* limitations of a moral-ethical critique of capitalist geo-social relations: while confirming its inescapable importance in the elaboration of a philosophy of *praxis*, it challenges its all-encompassing pretensions, and highlights the need to combine it with a functional critique – notably one that traces how the continuous expansion of market forces generates unprecedented perturbations on the Earth system. In our contemporary context, it is indeed clear that our self-realization as free persons cannot be sought at the expense of the nonhuman natural world, which appears increasingly fragile and exhaustible. Elaborating a more balanced and decentered (i.e. less anthropocentric) conception of alienation can demonstrate this concept’s capacity to play a central role in a principled geo-social critique of existing human forms of life – and especially of those that sustain the accumulation of capital.

In the wake of this introductory section, I develop my discussion of the concept in four successive steps. In the second section, I analyze the two mutually-constitutive facets of social alienation, and put into perspective the recent attempts to recast a relational (rather than substantial) interpretation of the concept. I argue that although the achievements attained by contemporary social philosophers are significant, they remain ill-equipped to take into account the current global environmental crisis. In the third section, I emphasize the need to consider the advances of environmental philosophy in the effort to remedy this shortcoming, and I provide an up-to-date interpretation of alienation – i.e. one that resists both the temptation of human exceptionalism that pervades modern philosophy, and the symmetrical temptation of dismissing altogether the idea of human distinctiveness. In the fourth section, I argue that the “unstable” conception of alienation that results from this discussion strengthens – rather than undermines – the commonsense intuitions that surface in ordinary language: by recasting these intuitions on firmer theoretical grounds, the concept of alienation thus provides the heuristic resources agents need to develop a more robust geo-social critique of the forms of life they are engaged in. The fifth and final section consists of a coda, in which I contend that the concept of alienation can be further elucidated if one sheds light on the background anthropological assumptions that it inescapably brings about. I address the theoretical problems linked with the (risky) attempt to say something about “human nature”, and suggest that specifying it further is commendable – insofar as it emphasizes the context-dependence of the concept of alienation, and the need to conceive of a *praxis* reconciled with our human finitude.

2. Social alienation in contemporary capitalist societies

In this section, I seek to delineate the contours of social alienation. However, the variety of phenomena that this expression subsumes is potentially so vast that an initial point must be clarified. In what follows, I presume that the alienation of human labor that is coercively institutionalized through the wage system has been (and still is) one of the core driving forces of the capital process – and hence a source of widespread social alienation (*lato sensu*). However, I do not attribute an exorbitant status to the alienation of human labor: even if its continuous reproduction is a decisive, central moment in the unfolding of capital, it always occurs in contexts that are heavily shaped by nonhuman forces, which must be delineated.

Since the industrial revolution, the domestication of the generative potentialities of coal, oil, and gas has induced a metabolic rift of planetary proportions, which now clearly lies in the background of many contemporary experiences of alienation. The staggering productivity of the first steam engines derived from their capacity to convert highly-compressed relics of photosynthetic activity into mechanical energy: their large-scale adoption (and the subsequent generalization of internal combustion engines) thus created novel connections between human history and the deep, nonhuman history of the Earth (backwards, with the Carboniferous; forward, with the Anthropocene). All this clearly suggests that the launch of the first cycles of capital accumulation did not only proceed from an unprecedented mobilization of human activity through the generalization of wage labor, but also from a (perhaps) even more impressive harnessing of the generative potentialities of nonhuman constituents of the natural world (i.e., biomass, minerals, fossil fuels, etc.). Of course, the use of the concept of alienation inevitably suggests an emphasis on the salience of human activities in the structuration of the capital process. Without reconsidering this core claim (after all, capital is a cultural construct, reproduced in and through concrete practices), I purport to emphasize the relative contingency of how human activities partake to this process, and thus to suggest that their centrality has somehow become decentered, mostly because of the intense recourse to fossil fueled machinery.¹

In what follows, I propose an interpretation of the concept of social alienation that demonstrates its composition of two mutually-constitutive facets (one subjective, one objective): highlighting both aspects of this concept indicates how it can be harnessed to introduce analytical distinctions that help to describe and interpret a fluid, entangled reality. After having delineated the characteristics of each facet in the first two subsections, I contend that social alienation is not a purely descriptive, normatively-freestanding concept – but that it inevitably bears an evaluative dimension.

2.1. The objective facet: congealed forms of value

Most accounts of social alienation place their exclusive focus on individuals, that is on *who* is subject to alienation and *how* this phenomenon is manifested in the life of those who experience it (whether consciously or not). However, this approach is incomplete: it insufficiently attends to *what* actually generates alienation. In the wake of Haber (2013), I suggest that Marx's (1992a) basic framework of capital as the ultimate (objective) recipient of the (subjective) alienation experienced by atomised workers still deserves attention.

1 The “decentered anthropocentrism” that I favor thus builds on Hornborg's (2017) crucial claim that it is not “justified to dissolve the crucial difference between purposive agency and merely having consequences.” While “purposive agency” connotes an intentionality that is only to be found among sentient living beings (and in particular, in the human genus), “having consequences” is a property of artefacts and social formations.

Over the last two centuries, however, countless series of mutations, ramifications, recompositions, have gradually turned capital into a polymorphic, mind-defeating phenomenon, expanding at multiple scales at the same time – permeating the smallest pores of our lives while shaping the trajectories of entire societies. For these reasons, some consider capital a confusing *non sequitur*, an idealized abstraction imbued with metaphysical overtones, a scapegoat devised by its critics only to be demonized. From a critical realist standpoint, however, I contend that capital denotes a deeper level of reality: neither a first principle lying behind its constitutive agencies, nor an theological attractor situated beyond them, it rather consists of a relational process that supervenes upon them. Just like a Van Gogh painting is something more – yet nothing less – than the colour pigments that are laid on the canvas, capital is something more – yet nothing less – than its constitutive agencies (on supervenience, see List and Pettit 2011) – and as such, it therefore animates both material and ideational components. This, we suggest, is certainly the middleground view that Marx had in mind when he claimed that “capital is not a thing, but a social relation between persons, established by the instrumentality of things” (1992: 932). Its transient substance is therefore “unsubstantial”, entirely dispensed through relations – thus fully disclosed and nonmysterious. Yet these relations cannot be made intelligible outside of their processual deployment, which unfolds in time: as Marx underlines, it is indeed fundamentally in history that capital “preserves itself [...] by constantly multiplying itself”, which it does by “subordinating all elements of society to itself, or in creating out of it the organs which it still lacks” (1993: 270;278). This salience of this temporal motif authorizes to construe capital as proceeding from a logic of investment (rather than of production or of exchange): its propulsive dynamism and its legitimacy as a mode of exerting power does not come from the replication of the past, but from the anticipation of the future. This is, at least, what the enormous growth of credit suggests. When a line of credit is created, it is indeed nothing but a form without a content, in want of being filled. Repaying the debt (principal and interests) thus requires putting to work a variety of generative potentialities and taking control of them in order to secure a stable stream of income – often with only secondary concern for the social and ecological costs incurred. With the unfolding of the capital process, it is therefore “not so much the past, but the future that weighs on the brains of the living” (Levy 2017), as these are forced to hold the diffracted promises that make up the economy in which they are all entangled. Objective alienation precisely lurks in this presentation of capital as a reified, inescapable future, which “ghostly objectivity” comes to haunt the present (Lukács 1972).

Of course, individuals never encounter capital “as such”: rather, they experience it in a diffracted way as they deal with its more-or-less stabilized figures (e.g., machines, algorithms, organizations, etc.) at the workplace and beyond. These figures are, of course, only intermediary moments in the deployment of the capital process, and mediate its endless drive to take hold of the present in the name of the future: at the same time, their cristallization implies a continuous re-arrangement of material flows, which *de facto* configures increasingly artificialized ecological niches (Moore 2015). For example, if I sell my labor force to a company, I can experience the machine with which I am working, and/or the corporate department to which I belong, and/or even the patterns of rules that structure intra-firm social interactions – as each retaining a certain kind of autonomy and simultaneously exerting constraints over my agency (discussion on the resultant forms of subjective alienation will follow). If I take for granted the apparent autonomy of these figures (i.e., by conferring them a kind of transcendence over social life) and of the landscapes they shape, then I will probably configure my agency to the expectations they place upon me, and thus contribute to the re-

alization of the promise of future pecuniary valuation from which they proceed and to which they are subordinated. From this viewpoint, it is clear that the presentation of capital as reified does not occur through an unmediated self-disclosure, but through the ordinary dealings that I develop with its transient figures. In this context, I contend that the objective facet of alienation points precisely towards these figures of *insofar as agents, in their subjective mind states, target them as objects external to themselves and relate to them as such, thereby establishing their false objectivity behind their back.*²

Since the dawn of industrial capitalism, there has been a continuous effort to circumscribe the changing figures of capital that instantiate objective alienation. The case of the steam engine in industrial England is illustrative: as Malm's (2016) study suggests, its swift introduction into factories hugely affected laborers' working conditions by dictating a ceaseless acceleration of production rates and an unprecedented intensification of discipline. In this context, the demonisation of steam engines quickly became an integral part of British working-class culture: this propensity of laborers to personify machines indicates that these were not only perceived as material, inert, spatially-circumscribed devices being imposed to them – but also as epitomes of deeper patterns of exploitative social relations, of which they were the concrete manifestations. Although machines (from steam engines to server farms) can still be recognized as figures of capital, the unprecedented integration of relations of production and exchange through successive waves of economic globalization has enabled a multitude of other segments of social life to present themselves as emancipated powers, gifted with their own self-consistency. This is notably the case of business firms. Over the course of the last century, these private organizations, which are often spontaneously recognized a form of agency (List and Pettit 2011), have been the vectors of a deep, uncontrolled transformation of public life. Their growth was notably made possible by the consolidation of property rights, the structuration of corporate law, and the gradual lifting of constraints on the creation of limited liability corporations (Ireland 2010). Insofar as incorporation likens them to real persons, business organizations appear as figures of capital that are more dynamic, and spatially-unbound than machines – but no less significant.

Once this is said, it is crucial to insist that such figures of capital (machines, organizations – but many other segments could have been identified) are not mutually exclusive: rather, they tend to overlap in social life, and to interweave at different scales. **Taken altogether in their cumulative dynamism, they constitute (and point towards) the processual reality of capital, which appears as the ultimate – and as such liminal, ungraspable – locus of objective alienation. And it is precisely when individuals fail³ to relate to these figures for what they are (i.e., more-or-less stabilized nexus of relations entangled in the wider process of capital) that these falsely appear unshackled and autonomous – thus obfuscating the working activities that ultimately underpin their wealth-generating (and earth-shaping) capacity.**

2 Like this definition of the objective facet of alienation, the three complementary definitions of its subjective facet that I shall outline in the next subsection will appear in italics.

3 This phenomenon certainly derives from the intrinsic limitations of our cognitive abilities as embodied individuals. As we, human beings, navigate complex environments, we cannot help but use the (semi-)rigid categories of language in order to stabilise and make sense of the processual fluidity of social life around us. Our attention span is not unlimited; it also seems unavoidable that every time we seek to disentangle the dialectical constitution of a specific segment of social life (e.g., as we are engaged in some sort of problem-solving activity), we will temporarily “take for granted” the existence of other segments – thus “forgetting” (both cognitively and practically) their relational nature. As Cassirer has it, “we cannot engage the functions intended to edify the reality of experience while simultaneously submitting them to critical investigation” (cited in Vandenberghe 2008: 11).

2.2. The subjective facet: estranged human activity

In this subsection, I return to the more commonsense meaning of (social) alienation by focusing on the concrete ways in which individuals experience it. Before going into greater detail, I would like to emphasize that the following description of the subjective facet of alienation will be clearer if we consider it against the backdrop of a self radically immersed in the world, with this relational embedding being the individual's inescapable condition. In other words, the beliefs that individuals can abstract themselves from the world to find refuge in an inward, pre-social self, or that they can lose (or retrieve) an authenticity that predates the social relations in which they are engaged, are both equally impossible. As Jaeggi (2014: 217) states it, "if the self emerges only in relation to *something* [...] [then] this world is always a social world." In her perspective, alienation can no longer refer to the loss of a substance; rather, it is better interpreted as the unfortunate transformation of a set of relations. In what follows, I demonstrate that this approach has reached a consensus in contemporary social philosophy. To this end, I scrutinise how three philosophers (Fischbach, Haber and Jaeggi) have followed this line of reasoning, each giving evidence of how alienation denotes an experience of estrangement.

By suggesting that alienation *characterizes the experience of "de-objectified beings", who have somehow "lost [access to] the world"*, Fischbach (2009) is the only one of these philosophers who still mobilizes the semantic field of "loss". A careful cross-reading of Marx and Heidegger underpins his neo-Arendtian diagnosis, for both philosophers emphasized that the emancipated subjectivity that modernity so praised had remained abstract, formal and unable to give an account of individuals as beings with needs. According to Fischbach, this is the case because the emergence of this subjectivity rested on a primal dissociation between the subject and objects, which the deployment of technology and capitalism continually fuelled. Overcoming alienation presupposes that individuals oppose the social processes that accentuate this deprivation from the world. This implies that they elaborate new ways of objectifying their own being – or, in other words, that they develop meaningful, de-reifying links in their social life.

Although they display different accents, the accounts by Haber (2007) and Jaeggi (2014) converge in several important ways and, more specifically, highlight the shift from a substantial to a relational conception of alienation. Using a diachronic analysis, Haber stresses that, from the early developments of psychoanalysis down to postmodernism, the intellectual achievements of the 20th century have dealt the decisive blow to "naïve/easy" conceptions of subjecthood. Far from being self-sufficient, one needs to understand the individual subject as "always-already exposed to alterity" (Haber 2007: 211); as such, her consistence is constituted through an openness to herself (*Selbstwelt*), to the other (*Mitwelt*) and to the world (*Umwelt*) – with these three instances unfolding simultaneously. Haber suggests that alienation *refers precisely to the alteration of those very relationships that concretely instantiate this openness*. A reconstruction of the concept thus entails "going through a symptomatologic study of how these relational distortions are manifested" (Haber 2007: 238), by focusing successively on the three aforementioned "worlds".

Though constructed in a very different way, Jaeggi's (2014) baseline argument shares many of Haber's insights. Drawing on both the analytical and continental traditions, the German philosopher develops a thorough theoretical framework that aims to supersede essentialist interpretations of alie-

nation by a robust recasting of the concept in relational terms. Conducting such a conceptual renovation opens new perspectives for critical theory: it confers on alienation a pivotal role in the production of an “immanent critique of forms of life” (Jaeggi 2015) that does not need to appeal to ultimate ethical values. Building on an in-depth analysis of four empirical cases that each shed light on specific facets of alienation,⁴ Jaeggi concludes that if “self-alienation is also alienation in and from the social world [a hypothesis she defends], then the problem, understood as a disturbed relation to self and world, can be solved only in, not beyond, the world of social practices” (2014: 217). Alienation thus points towards *the very experience of the individual who fails to relate proactively to the social practices in which he or she is ineluctably engaged* (be it in her family life, at the workplace, etc.). Conversely, this suggests that self-realization is “to be understood not as a realisation of something [...] but as a way of being active”. Jaeggi (2014: 206) continues by underlining that “we realise ourselves insofar as, through this externalisation, we emerge out of the “night of possibilities” into the day of reality (Hegel).” Her argument that self-realisation is only possible through activity in (or contact with) the world underpins her critique of other influential “contemporary “worldless” accounts of self-realisation”, which tend to focus exclusively “on the realisation of individual uniqueness [and] on originality” (2014: 209), as well as conceiving of deliverance from alienation in terms of self-invention. According to her, such a Rortyan conception of self-realisation is unsatisfactory, for it implicitly suggests that the self “invents itself as something new, and that it is free and unhindered in this fashioning process” (2014: 188). Against this seemingly demiurgic model, she defends her view that self-realisation is best clarified when framed in terms of self-appropriation, as a process “in which finding and inventing, constructing and reconstructing, are equally primordial. [...] The process of appropriation [thus] always reckons with the existence of something prior that it takes over and transforms” (2014: 188). Jaeggi’s attempt to anchor alienation in a renovated, explicitly Hegelian framework enables her to develop a “thick” understanding of the concept, which draws on an embedded and comprehensive image of the self-in-the-world that does not overemphasize cognitive reflexivity. In this respect, her project resonates with the work of Dreyfus and Taylor (2015). From what precedes, it thus seems quite clear that Jaeggi’s overall schema is largely compatible with the arguments that both Fischbach and Haber deploy⁵.

2.3. Description and evaluation

I have outlined above a two-sided approach to social alienation, arguing that an analytical distinction between its objective and subjective facets (i.e., congealed forms of value *and* individuals estranged from their own activities) sharpens our perception of how certain relational patterns structure the social world. I also argued that this inquiry should presume against the realist hypothesis that there is not a clear-cut line between the self and the social world, but that the two are inescapably entangled in the same continuum. From this point of view, social alienation is a descriptive concept that can be deployed in order to enhance our understanding of the mediations that di-

4 Jaeggi suggests that subjective alienation often manifests in (1) a feeling of powerlessness in the face of one’s actions, (2) the loss of authenticity in social roles, (3) the experience of internal division, or (4) indifference to the world. Note that Jaeggi does not seek to delineate the specific role played by the alienation of human labor in amplifying these negatively-charged experiences.

5 Note that our positive appreciation of Jaeggi’s effort to outline a thick understanding of alienation (i.e., implicitly based on a comprehensive image of the self-in-the-world) remains posited at a philosophical level: as such, it does not undermine our previous observation that Jaeggi’s works lack a sustained engagement with the empirical social sciences (see previous chapter). Likewise, Haber’s description of objective alienation is philosophically sound: but as such, it remains equally underspecified from an empirical viewpoint (Autric 2020).

alectically constitute the social world. As Ollman remarks, the concept of alienation effectively allows to shed light on how

“people acquire their conception of reality from what they experience (they reify the forms of value because of what occurs in the metamorphosis of value), and [how] their conception of reality helps determine what they experience (the metamorphosis of value only occurs through the reification of the forms of value)” (1976: 204)

Yet at the same time alienation can serve the function of an evaluative concept: for the case of the alienation of human labor, for example, I consider, along with the Marxian tradition, that it is bad and to be overcome.⁶ To demonstrate the analytical value of social alienation we can therefore apply both its descriptive and evaluative functions to the particular context of the workplace.

First, this concept appears as a heuristic tool that allows to emphasize connections between the working activities deployed by living individuals on the one hand, and ossified, thing-like social formations on the other. As these two opposite poles are re-described through the prism of alienation, they do not appear rigidly opposed, but rather mutually constituted in a fluid process. This does not mean that they symmetrically co-emerge in an ever-flowing present: rather, it is more accurate to describe their intertwined genesis as occurring through desynchronized, differentiated temporalities, in a morphogenetic process (Archer 2007). Since the objective facet of alienation points towards parcels of congealed labor (i.e. crystallised *past* social activities), these constitute an always already present context that is a decisive condition to the continued reappearance of its subjective facet, i.e. individuals actually experiencing an estrangement from their own activities. This observation resonates with Haber’s claim that there is something like a “methodological primacy of subjective alienation, which is experienced as such [and so can therefore be subjected to phenomenological inquiry], over objective alienation [congealed value forms], which is rather understood as a sociological phenomenon” (2008) (see also Hetzel 2015). The foregoing reasons thus suggest that harnessing the concept of alienation enhances the clarification of this subject/object divide.

However, and this is the second point, the very existence of this divide signals an uneven distribution of power that favours some while discriminating against others, depending on the position they respectively occupy in the social matrix. Considered in this perspective, the alienation of human labor appears *normatively* questionable – for it is predicated on (while accentuating in turn) a distortion of social relations that fetters the practical progression towards a horizon of autonomy (Honeth 1982; Cohen 2001). This horizon takes the free cooperation of individuals in the sphere of production as an egalitarian ideal of workplace relations (Anderson 2017), and conceives every concrete step taken towards the superseding of the wage relationship as a desirable intermediary objective.

All of this being said, I thus argue that it is therefore justified to consider that since the beginning of the Industrial Revolution, the generalisation of the alienation of human labor has significantly contributed to accentuating social alienation in general, by increasing the prospect that individuals would fail to find themselves “at home” (or fail to experience themselves as autonomous beings) in a world more and more intensely depersonalized by market forces. In this light, social alienation

6 There are types of social alienation that are positively-charged. In psychoanalysis, the fact that a child experiences the figure of his/her father (or mother) as alien (i.e., that he/she experiences “defusion”) is a necessary (and thus desirable) stage in the development of his/her individuality.

thus appears to be an obstacle to the development of free personality – and as such, it should to be overcome.

3. Alienation from nature: to be overcome, or not?

In this section, I seek to outline a more precise definition of “alienation from nature”, and to demonstrate that it is by no means reducible to social alienation, although neither can it be entirely disconnected from it. In this endeavor, I first stress the important contribution of environmental philosophy to these debates, before turning my gaze to social philosophy. After having expounded the connections existing between these two fields, I offer a brief explanation of why critical theory has lagged behind in appreciating the era-defining character of the global environmental crisis.

3.1. From environmental philosophy...

An important insight from contemporary environmental philosophy suggests that alienation from nature can, under certain conditions, be considered as a qualified good. In this respect, Hailwood’s (2015: 16) proposal to disentangle three distinct ideas of nature is helpful: *the natural world* refers to the all-encompassing sense of nature (“all that exists”); *nonhuman nature* obviously denotes the parts of the natural world that are not human, but also those that have not been (materially) shaped and (semiotically) interpreted for human-oriented purposes; and *the humanized environment*, or *landscape*, designates the parts that have been shaped/interpreted. Against this backdrop, Hailwood suggests that an appropriate participation in the natural world requires both drastically limiting the reifying effects of human “landscaping” activities while so endorsing some estrangement from the nonhuman. The latter task requires recognizing the inescapable otherness and difference of nonhuman nature – a perspective that has been extensively explored by biocentric and ecocentric philosophers (for the former, see Rolston 1989; for the latter, Callicott 2014; Leopold 1968). The concept of “alienation from nature” thus conveys contrasted normative evaluations depending on the idea of nature that is evoked. For the examples, if by nature we mean “landscape”, then “alienation from nature” will often be valued negatively (e.g., human communities being confronted with undesirable transformations of the material world – see the example in the following paragraph); but if by nature we mean “nonhuman nature”, then “alienation from nature” will be, to some extent, valued positively (i.e., recognising that orchids, albatros and even whole biomes flourish in forms of life that are beyond our grasp; this offers us an insight into the uniqueness of our human experience).

As Hailwood states it, “landscaping is the ongoing historical process through which humanity physically shapes its environment [and] fills it with symbolic meaning” (2015: 41): by this definition, relations between persons are thus mediated by the humanized environment. In this context, estrangement from the landscape often signals a lack of justice (both distributive and recognitional) that derives from uncontrolled and/or unintended anthropogenic transformations of nonhuman surroundings. These transformations can be propelled by the deployment of human forms of life marked by an uneven distribution of power; this deployment shapes not only social contexts but also (and simultaneously) natural ones (Boonstra 2016), thereby generating “diffracted” forms of violence that can jeopardize livelihoods (Nixon 2011). Following the Marxian tradition, it seems that the diffusion of this form of estrangement derives, to a large extent, from a generalisation of the alienation of human labor – there is thus a close connection between alienation “from society” and “from nature” (when “nature” stands for “landscape”). This is notably evident in the case where lo-

cal communities can no longer recognize themselves as part of their native habitats because key ecosystemic functions have been perturbed by activities of extraction (which are, of course, landscaping activities of a particular kind – see the developments of Chapter 5 on Total’s activities in the Russian Arctic and their impacts on Nenets communities).⁷ As we will see later in Chapter 5, Total’s employees also experience estrangement: being under the authority of their corporate hierarchy, they engage in activities that subject nonhuman parts of the natural world (e.g. remote hydrocarbon deposits located deep beneath the tundra) to practices of rational landscaping. In this case, the implicit endorsement of a form of human exceptionalism reduces nonhuman constituents of the natural world to the status of inert matter (crassly, stuff) – and thus presupposing that they can be manipulated at will according to human instrumental needs. In both cases, this experience of estrangement from the landscape is negatively charged. The situation of Nenets communities is, of course, worse: their capacity to engage in virtuous landscaping activities and to feel “at home” in the Arctic is obstructed by the enormous scale of an industrial pollution generated by others. Total’s employees, on the other hand, may certainly feel at odds with the transformations that their collective work imposes upon the nonhuman environment – but the fact remains that most of them have chosen this job, and that they earn a comfortable wage from it. Thus these two positions, while sharing a slight family resemblance, differ in significant ways. More fundamentally, what makes this landscaping process normatively questionable (both for those who generate it and for those who suffer from it) is that it can alter the prospects of persons experiencing some form of *positive* estrangement from nonhuman nature. Returning to our first example, with the disruption of the ecosystemic processes that supported their livelihoods in the Russian Arctic, Nenets communities have thus lost the traditional landscapes that had long been vehicles of recognition for their members; these landscapes had indeed shaped and imagined in ways that valued some forms of estrangement from nonhuman nature (traditional animist cosmologies conceive of the world as saturated with deities and spirits – all of them enmeshed in vegetal and animal forms of life). As far as Total’s employees are concerned, the failure to endorse some estrangement from nonhuman nature derives from the full-scale instrumental agenda that constitutes the normative horizon of their landscaping practices. In this case, the idea of an inescapable “otherness” of more-than-human nature is completely eclipsed, and a wholly utilitarian perspective has been mobilized to justify extraction.

3.2. ...to social philosophy back again

All this considered, it is clear that “alienation from nature” can receive either a negative or a positive appreciation depending on the context of its use. This challenges the widely-received idea that alienation is inherently a bad thing that should be overcome; it also points towards the necessity to develop more decentered and modest conceptions of human agency. Among critical theorists, Adorno was certainly one of the first to explore this avenue: from the 1930s onwards, his bleak appreciation of the historical trajectory of Western societies led him to reject Marx’s conviction that the advent of classless society would coincide with a rational (and therefore harmonious) mastery of nonhuman nature. Around the mid-20th century, the global environmental outlook was already quite sobering: most human societies were embarking on the path of industrial development, and it appeared blatant that the pursuit of economic growth implied a violent subordination of the nonhuman natural world to mercantile interests. Although Adorno viewed human history and nonhuman nature

⁷ At this stage, my sketchy presentation of the Russian case only seeks to provide a thought experiment that serves the purpose of the philosophical argumentation. More empirical details are given in Chapter 4.

as dialectically entwined, he considered it was utter non-sense to fully absorb the latter into identity-thinking – that is, to subject it compulsively to the unifying impetus of human thought (Adorno 1984, 2015). In this perspective, he interpreted the Western world’s proclivity to environmental destruction as a marker of its cultural decadence – itself marked by an irrepressible, deeply-buried temptation to negate otherness (Cook 2011; Cassegård 2017). Schmidt, one of Adorno’s former students, famously suggested that the mature Marx had abandoned the utopian aspirations of his early writings about a resurrection of the whole of nature, and dismissed on this basis the prospect of a reconciliation between human history and nonhuman nature through socialism. He hinted that man’s wrestle with the elements would probably have no end – which did not necessarily imply, of course, that this wrestle would inevitably take the form of a ruinous antagonism (Schmidt 1971). Around that same period, Marcuse’s (1989) position revealed more ambiguous. On the one hand, it bore evident traces of Adorno’s non-identity thinking, making clear that the emergency to renounce exploitative relationships with nonhuman nature implied to surrender to “the impenetrable resistance of matter”, and hence to recognize that “nature is not a manifestation of “spirit”, but rather its essential limit” (1989: 69). On the other hand, its overarching framework still seemed to be imbued with instrumental, strongly-anthropocentric values (betraying the persistence of some sort of identity-thinking): Marcuse could thus start a chapter on “nature and revolution” by asking “what is involved in the liberation of nature *as a vehicle of the liberation of man?*” (1989: 59, emphasis added).

Fifty years later, it is possible to consider that alongside Jaeggi’s defense of a three-folded critique of capitalism, Rosa’s (2019a) recent reconstruction of the concept of “resonance” has certainly contributed to clearing the last remnants of identity-thinking that were still ingrained in the theoretical apparatus of critical theory – thus giving it the robust normative horizon it needed to deploy a principled critique of alienation. Influenced by the Romantic tradition, Rosa contends that developing resonant relationships with nonhuman nature requires dismissing the idea – frequently associated with (post-)modern formulations of the ideal of autonomy – that it is, as such, essentially disposable for human ends. Reminiscent of Adorno’s intuitions on non-identity, Rosa’s proposal is quite unprecedented in the Hegelian tradition: it explicitly conditions the realization of free personality to the possibility of experiencing nonhuman nature as a realm that essentially *transcends* our existence, and that ultimately retains an irreducible heteronomy – regardless of any modifications we could make to it through practices of landscaping. This experience of resonance, Rosa contends, cannot be socially organized: if its spontaneous appearance often arises in environments characterized by limited human interference (rather than in landscapes destroyed by human activities), its triggering remains uncontrollable. Although Rosa’s contribution on this point could be deemed as minor, I argue that it is decisive: by favoring – more explicitly than Jaeggi – a “weak” rather than a “strong” anthropocentrism (the latter having long been championed by modern Western culture), it confirms a shift in the wider political imagination that inspires critical theory, and prepares the stage for an in-depth dialogue with environmental philosophy and empirical Earth system sciences.

3.3. Connecting the dots

Although the previous developments suggest that “alienation from nature” can be adequately captured by critical theory, it is worth highlighting the shortcomings that have blunted the potential of this school of thought – up until today. When Horkheimer created the so-called Frankfurt School in the early 1920s, he laid the foundations of an interdisciplinary research program that initially aimed

to connect philosophy and the social sciences: Foster and Burkett observe that as a result, “most Marxian theory in the West became associated with a social science that was divided off from natural science” (2016: 225). Over the long-term, the persistence of this blindspot led to an “eclipse of material reflexivity” (Charbonnier 2020): even though later critical theorists showed increasingly eager to denounce the destruction of natural habitats, it remained unclear whether the actual realization of their normative commitment to human flourishing could pass the stress test of bio-geo-physical planetary constraints. As showed in the last chapter, critical theorists – from Habermas to Jaeggi, by way of Honneth – have tended to lack a robust empirical understanding of the deep-seated connections existing between modern images of the good life and their underlying “metabolic” premises (e.g., a significant consumption of fossil fuels). This lack of “material awareness” is indubitably a severe weakness: in what follows, I seek to clarify how it could be addressed, and I suggest some avenues for future research.

4. Alienation as the yardstick of a principled geo-social critique

In this section, I contend that a rearticulated concept of alienation (i.e., combining alienation “from society” and “from nature”) is useful not only to develop fine-grained descriptions of the ethical experience of individuals in contemporary societies, but also to help them develop a normative analysis of the forms of life they inhabit – by scrutinizing both their social structure and their position vis-à-vis the dynamic of capital accumulation, as well as their relational insertion in the wider natural world. Employing this concept in this unified way allows, I suggest, to reconstruct a more robust ethical critique of capitalist relations of production, consumption and financing – one that recognizes that the forms of life that result from them are ultimately built into a nonhuman nature that is bound to remain alien to us. This non-identity thinking does not, of course, dispenses from paying attention to the tremendous environmental perturbations that are blindly generated by coercive social-economic dynamics: rather, it encourages the ethical-moral critique to recognize its own anthropocentric bias, and underlines the need to combine it with a more decentered functionalist critique.

Once reframed in this way, the concept of alienation can be used heuristically as a way of ordering and interpreting dense empirical material with appropriate analytical categories (e.g. in our case, the “social”, the “natural”) (Hornborg 2017), so as to orient individuals in their effort to deploy a transformative praxis. This effort of disentanglement, far from being straightforward, however, proves rather challenging – indeed, the flow of experience that it aims to elucidate essentially presents itself as raw and indiscriminate. Individuals experience the “social” and the “natural” as fundamentally enmeshed, and thus any attempt to analyze their own situation of alienation will require sorting the “wheat from the chaff”. This exercise, however, will help them assess the extent to which these forms of alienation should be overcome – or just simply lived with. Consider the alienation of human labor, for example. Although it is often described as the pure expression of social domination, this domination is never purely freestanding: its effectuation is always mediated by infrastructures (for a discussion of this term, see Carse 2017) that are made of non-human components. The day-to-day use of these infrastructures by embodied individuals shapes collective participations to the wider natural world. From this perspective, the “social” is therefore built and maintained through the “natural” (Adorno 1984). The status of these infrastructures is ambiguous, however: take the case of a manager working in the glass and steel skyscraper that hosts his corporation’s headquar-

ters. In this highly-technological landscape, the managers' immediate nonhuman surroundings can be interpreted as embodiments of human agency and intentions that exert a diffuse control upon his action. In this (Marxian) perspective, "[the manager's] "coping" in or with this environment consists in simply acting out the "appropriate" habitual behaviours the artefacts are designed to enable with "convenience"." (Hailwood 2015: 225) A significant part of the alienation that is structured by the wage relation is therefore actualised through a constellation of things (big and small – from the reinforced concrete structures of the building to the architecture of its IT systems) that have been arranged notably through the investment of wealth gained from previous cycles of accumulation. Insofar as infrastructures enable structurally unjust social activities and relations *from the past* ("dead alienated human labor") to "cumulatively crystallise" and radiate back onto the *present*, the alienation they convey can be deemed negative – and thus sought to be overcome. But insofar as they retain an irreducible nonhuman component (sand, cement, water, iron, coke, copper, plastic, etc.), this alienation must also retain a residual positive value – as long as we consider that estrangement from nonhuman nature is a qualified good. In this case, however, the possibility of experiencing this "inescapable otherness" positively (i.e., as a source of resonance, as Rosa would have it) is significantly obstructed by the fact that the nonhuman component is rendered nearly invisible by its reification to serve human purposes.

At this junction, I wish to make the following point: the geo-social problems raised by this inertial resistance of material infrastructures (which is, as I will later show, particularly blatant in Total's case) have been largely underestimated by critical theorists in the last two centuries. This blindspot can be at least partly explained as a deep-seated legacy of Hegel's system, a system that Voegelin (1987) considered to be a perfect epitome of the renaissance of gnosticism in modern times.⁸ According to Voegelin, Hegel's dialectics reflect the belief that human beings can transform the fundamental structures of reality through knowledge and action, thus positing that the world is both available and transparent, entirely malleable to human will. This emphasis on the world-making potential of the human will reflects the modern conviction that it is ultimately possible to achieve rational mastery over (human and) nonhuman nature. As European countries embarked on the Industrial Revolution, this conviction gradually sedimented into a generalised Saint-simonian productivist bias that construed industrial and technological development as ultimately subordinated to social and political ends – and thus, as entirely controllable (Audier 2019). As a consequence, the prospect that entire societies could enter trajectories that would ultimately project them in situations of nearly-irreversible infrastructural lock-in has remained largely underproblematized by social theorists.

The case of Jaeggi is telling. Her attachment to the Hegelian tradition of social philosophy commits her to a worldly (rather than worldless) account of self-realization, which, in her words, presupposes that "there is always something previously there." This "something previously there" must be appropriated and transformed by the agent as she engages in practices that seek to overcome alienation. Jaeggi therefore implies that in this effort, the agent has to reckon with the "obstinacy"

8 With its roots in first century AD, gnosticism consists in a collection of religious ideas and mysteries which originated in early Christian and Jewish sects, and never ceased to resurface throughout Western culture since then. A common feature in most gnostic cosmogonies is the conception of the material world as intrinsically evil – which implies that salvation can only be obtained through the participation in a speculative system. Voegelin suggests that gnosticism re-emerged in modern times during the English Civil War (which was marked by an intensification of religious zealotry) before growing even larger and becoming entirely secular with the French Revolution.

of this “previously there” – but in my opinion, her description of what the latter expression denotes is too elusive: other than the self’s internal resistance, she only mentions external “social processes” (2015: 189). Her accounting, I argue, is too thin: it risks overlooking the fact that struggling against unjust social processes necessarily implies struggling, at the same time, against the nonhuman infrastructures through which they become actualised. This would require first of all a precise description of these various types of infrastructures – a task I will try to come up with in chapter 5 –, in order to characterize their mutual configuration and respective levels of inertia. In this view, it is therefore not only “the tradition of all dead generations [that] weighs like a nightmare on the brains of the living” (Marx 1996 [1852]) *but it is also* their “infrastructural legacy” – since infrastructures effectively constrain the recomposition and transformation of the various sets of social rules and conventions that give shape to human agency (Barry 2013). Once this inertial resistance of nonhuman infrastructures (i.e. their ability to frame certain patterns of power relations and correlative practices) is more clearly delineated, I contend that we can address them with three types of practical attitudes: destruction (as Ludd would have it), desertion (as Melville’s famous anti-hero Bartleby would have it), and reflexive reorganisation.⁹ This final option suggests that agents can collectively deploy a *praxis* that reshapes deficient infrastructures in order to alleviate the patterns of alienation that they structure (Feenberg 1999; Boyer 2017): however, such transformative achievements are likely only to be local and limited in scope – furthermore, they must count on some residual estrangement from the nonhuman surroundings (even once these have been re-arranged so as to be stripped from the domination patterns that were encapsulated into them). By contrast, the first two options (destruction and desertion) may be preferable when and where infrastructures are deemed to be so wholly saturated with historical coercive power relations that they cannot be taken back and transformed. The moral implications of each of these possible practical positions vis-a-vis material infrastructures constitutes a philosophical problem that logically emerges from the foregoing discussion on alienation – and it will unsurprisingly re-emerge in our analysis of Total’s case study.

5. Coda: Unpacking (thin) anthropological invariants

I wish to emphasize here that the developments in the previous section only allowed us to establish how alienation manifests itself (that is, as the incapacity of individuals to deploy a *praxis* that de-reifies the geo-social formations to which they partake) without saying much (if anything) about the structure of the relational self, the thriving of which alienation blocks. At this stage, the crucial point here is to avoid the kind of idealism that Marx (1977: §279) diagnoses in the late work of Hegel: “precisely because Hegel starts from the predicates of universal determination instead of from the real ens (*hypokeimenon*, subject), and because there must be a bearer of this determination, the mystical idea becomes this bearer.” It is therefore of utmost importance, I argue, to describe more precisely who is this self that alienation is affecting. In this endeavour, I aim to specify Marx’s overarching description of man as a “corporeal, living, real, sensuous, objective being” (1988: 154) without, however, ascribing to it a pre-existing, substantial nature.¹⁰ In what follows, I argue that

9 This line of argument parallels Hirschmann’s (1990) famous argument on exit, voice, and loyalty.

10 Therefore, the Greek word *hypokeimenon*, which Marx used, is problematic. Introduced by Aristotle in the *Metaphysics*, *hypokeimenon* designates “the ultimate substratum, which is not predicated of anything further” (Dea et al. 2017) or alternatively, “that which remains unchanged as it underlies the process of all change” (Gadamer 2000; see

uncovering some elementary features of this concrete self can enrich our understanding of alienation, for it will more precisely highlight the nature of the relational canvas on which it gets manifested. But before this, I anticipate an objection that has been commonly waved against the attempt to link a philosophy of *praxis* with a background philosophical anthropology.

5.1. Is philosophical anthropology necessarily regressive?

The very idea that the concept of alienation needs – at least implicitly – a reference to a “universal anthropological substratum” (or, more simply, a “human nature”) does not go without saying. As Taylor astutely notes, “the very words [*human nature*] ring alarm bells”, as “we fear that we may be setting up some reified image, in the face of changing forms of human life in history, that we may be prisoners of some insidious ethnocentrism” (preface to Honneth and Joas 1988: vii). Avoiding such pitfalls requires to elaborate an open-ended, post-metaphysical rendering of “human nature”, one susceptible to stress “the unchanging [or, to be more precise: the *nearly*-unchanging] preconditions of human changeableness” (Honneth and Joas 1988: 7). These are, I will contend, shaped to a large extent by our generic bodily constitution, which contours are notoriously hard – but not entirely impossible – to draw.

Since the early days of critical theory (and in fact since Marx’s critique of Feuerbach), attempts to stencil the philosophy of *praxis* from a broader philosophical anthropology have been regarded with much skepticism. Against this tradition of thought, I hold that recognizing the ineluctability of this mutual relationship and striving to elucidate it is not only entirely legitimate, but also much needed. Just like Wittgenstein (1972: §343) could write that “if I want the door to turn, the hinges must stay put” – I suggest therefore that “if we want to manipulate a productive, context-sensitive concept of alienation, then it must be somehow be anchored in a given conception of human nature”. I want to emphasize that this “given conception of human nature” is reminiscent of the Wittgensteinian barely visible “hinges” on which all of “our propositions turn”: insofar as it constantly unsettles our efforts to grasp it (e.g., through a totalized, self-enclosed conceptual description), it is bound to remain always in need of being articulated further.

Before giving more details on this, I retrace the baseline of Lukács’ (1972) argument against Bernstein’s revisionism, which captures indeed the gist of the critique that has been repeatedly directed since then against critical theorists who have endeavored to delineate a philosophical anthropology. For Lukács, the fatal error of revisionism lies in its abandonment of the Hegelian-Marxian dialectical method, and its regression into a degraded form of Kantian transcendentalism. While revolutionary dialectics “[dissolves] the definite contours of the concepts (and the objects they represent)”, hence opening a “continuous process of transition from one definition into the other” (1972: 3) that paves the way to a practical transformation of reality, bourgeois transcendentalism succumbs to the temptation of opposing external norms (themselves often justified by an idealized conception of “human nature”) to a living reality. As the line of argument goes, seeking to delineate a philosophical anthropology necessarily implies to fall back into a whig interpretation of history –

also De Libera 2008). The idea that the self could be “standing under” the accidents added onto it obviously does not fit with my attempt to outline an account of its relational reality. If the latter is taken seriously, one cannot designate the self as the “bearer of alienation” (a formulation that still mirrors the subject/predicate model), but rather described as being “perturbed by a distortion of some of its constitutive relations”, which is a formulation that better reflects the porosity of the self-world boundary (see Taylor 2007:35).

one that construes it as a nearly-irresistible march towards the ever-more completion of a set of idealized norms (e.g. Kant's peace program, supposed to prepare a federation of free states). Kouvelakis, for example, argues that Habermas ceased to present history as the conflictual outcome of a struggle (that dialectics precisely seeks to clarify and orient from the inside) as soon as he started to elaborate a philosophical anthropology (2019: 321-350); in the same manner, Honneth, who elaborated a philosophical anthropology from the outset (Honneth and Joas: 1988), is guilty of the same naive idealism (2019: 445-466; see also Kavoulakos 2017). By reintroducing transcendental reference points, the German philosophers have thus bracketed the immanentist requirements of the dialectical method without even noticing that the inclination to do so was itself the expression of the deeper material contradictions of the contexts in which they were evolving as thinkers (hence their sluggish denunciation of the neoliberal *status quo*, Kouvelakis 2019): for this reason, they have thus produced "traditional theory" in the sense explicated by Horkheimer (1973: 188-243). *Contra* this Lukácsian perspective, I suggest that the thesis of a necessary internal connection (between the effort to excavate a philosophical anthropology, and the recede into a whig conception of history) does not hold from a philosophical standpoint. Said differently, I argue that the dialectical method can be coupled with, and benefit from, a reflective attempt to delineate more precisely what "human nature" consists of.

In his landmark effort to elaborate a philosophy of revolutionary *praxis*, Lukács insists that the historical process is integrally transparent to "the dialectical relation between subject and object in the historical process" (1972: 3), which he considers is fully undertaken by the world proletariat on its way to abolish capitalism. Insofar as it presupposes that the *whole* rift between subject and object could be transcended by revolution, this claim is, I suggest, completely flawed, and grossly anthropocentric. Our capitalist-modern *status quo* is, in fact, made up of nonhuman elements that cannot be transfigured by human praxis, and that for this reason will get manifested to us as external and alien, whatever we do. Or should Lukács have dismissed, say, astrophysics as a bourgeois science? As it appears, it is unclear indeed what a revolutionary praxis of astrophysics – one that would bridge the gap between us (i.e., the knowing subjects) and the objects that this science seeks to describe (i.e., black holes and galaxies) – should look like. And then, what about the status of climate science? A purely dialectical-immanentist perspective would insist that its idealized objectivities can be dissolved if we take a historical outlook. As I have said earlier, our very technical ability to scrutate the Earth system initially proceeded from the quick-paced sophistication of weapon systems during the Cold War (Doel 2003); this phenomenon, in turn, would never have occurred if imperial power had not historically become the exclusive prerogative of highly-industrialized nations; and the rise of these, finally, would have presumably never been possible if the contingent synergy between the nascent capitalist mode of production and the burning of fossil fuels had not been experimented in 18th century England (Malm 2016). Viewed through such a radically immanentist lens, the IPCC cannot anymore be simply construed as a freestanding, truth-keeping institution; rather, it must be interpreted as an expression of the objective contradictions that run (and have historically run) through capitalist modern societies. If the initial spark described by Malm (2016) had not occurred, human societies would have taken a different metabolic pathway – and neither anthropogenic climate change nor the IPCC would have existed altogether. Although I happily endorse the claim (evidently supported by this historical reconstruction) that anthropogenic climate change is a symptom of the objective contradictions brought about by capitalism, I consider nonetheless that

its mode of existence places us in front of a practical aporia, which ultimately fragilizes the dialectical-immanentist stance. Since the enormous inertia of the climate system (linked to the longevity of CO₂ in the atmosphere) forces us to consider past emissions as a given reality that stands externally and rigidly opposed to us, this invisible segment of the natural world cannot be taken up and transformed through revolutionary human praxis, and can thus be rightly considered as fixed – at least, as long as we choose a temporal frame of reference that is commensurate with the time horizon that we set to this *praxis* (say, a generation or two). Affirming the contrary (i.e., that this invisible segment *can* be effectively taken up and transformed) implies, I suggest, to negate the tragic dimension of history and to endorse a gnostic, mystified conception of social change.¹¹

What these two examples (astrophysics and climate science) suggest is that the clear-cut divide between dialectical and bourgeois science that implicitly underpins Lukács’ framework cannot be endorsed as such. Recasting the philosophy of praxis on a firmer theoretical ground instead requires, I argue, to bracket temporarily the dialectical nature of certain segments of reality, so as to use them as the “fixed hinges” on which the “door” of transformative action can turn. This recalibration amounts to advocating for a mixed approach – one that emphasizes the need to produce scientific descriptions of the dialectical nature of reality, while simultaneously circumscribing the outer limits of the general field in which human praxis gets actually deployed. But then, the following question logically emerges: since the number of “fluid processes” that dialectically shape human forms of life is virtually limitless, then how can we decide which of these processes should be (at least temporarily and for the matters of a philosophy of praxis) be frozen into “fixed hinges”? The criterion that I suggest is the most appropriate to operate this discrimination consists in looking at the *wavelength* of the process – that is, the temporal frame of reference that is best fitted to describe its deployment – in order to assess whether it can be dialectically modified by reflexive human *praxis*.

Seen through this lens, the socio-cultural dimensions of human life (e.g., modes of economic exchange, religious beliefs, family structures, gender relationships, etc.) are evidently characterized by a short wavelength: and because of this high plasticity, they evidently cannot be “frozen” in the talk about “human nature” (which then becomes highly particularistic). In comparison, some of the most elementary features of our bodily condition (e.g., bipedism, vertical station, brain size, articulated language) can be “frozen” – precisely because they are the outcome of processes (e.g., of gene transmission, natural selection, species co-evolution) that evolve at a very slow rate and that we cannot willingly control.¹² In this perspective, the “human nature” that becomes the object of anthropological research can thus be tentatively defined as the *generic structure of basic needs, deduced from these elementary features of our bodily inscription into the natural world and from the universality of our cognitive aptitudes*.

Outlining such a reasonably stabilized image of the embodied human self clarifies the type of being “onto which” alienation can be diagnosed. Conversely, confronting this image with our current knowledge of the on-going perturbation of the Earth system enables to delineate the outer limits of

11 In this respect, the theorists (see Kouvelakis 2019) who envision revolution as the superseding of *all* objective contradictions (and hence, as triggering a transfiguration of the world as it is) are symmetrically opposed to the eco-modernist engineers who claim that anthropogenic climate change should be fixed with geoengineering. Both approaches share the gnostic premise that the natural world is entirely malleable to human will.

12 There are of course tangential cases, where drawing the divide line between socio-cultural and biophysical processes is particularly difficult – see next subsection.

the “safe operating space” (Rockström et al. 2009) inside which the “historically developing potentialities” (Jaffe 2015) of human *praxis* can effectively take shape in the sense of a fuller, thicker achievement of “belonging”.¹³ If this whole line of argument is correct, then the project of retrieving an idealized description of a (temporarily frozen) “human nature” no longer appears regressive: on the contrary, it offers a context-sensitive framework against which one can normatively evaluate empirical situations as falling under the category of alienation, or conversely of “belonging”.¹⁴ In so doing, it accommodates the deployment of a *praxis* reconciled with our human finitude.

5.2. Embodied symbol users

In this subsection, I seek to specify further Marx’s description of man as a “corporeal, living, real, sensuous, objective being” (1988: 154) by suggesting that we, as human beings, are embodied symbol users, always-already involved in processes of ecological niche-making. In this endeavor, I first recall that throughout the 20th century, various branches of contemporary philosophy have contributed to laying the basis of this paradigm, and highlight in particular the significance of Ricœur’s effort to couple phenomenology and hermeneutics. Then, I outline two important contributions in evolutionary anthropology and cognitive psychology that give more empirical substance to Ricœur’s (rightly-founded) philosophical intuitions; I argue that these help us get greater insight about what it takes for the “human animal” to get meaningfully inserted in the natural world.

The originality of Ricœur’s effort to draw the contours of a philosophical anthropology lies in his attempt to articulate “what could be called the graft of the hermeneutic problem onto the phenomenological method” (Ricœur 1974: 3). As some have suggested (Gschwandtner 2017; Pierron 2013), this coupling is particularly relevant when it comes to drawing the contours of the primordial condition of the human embodied self. While the “short path” of phenomenology enables one to explore the “ontological density” of our belonging to the world, the “long path” of hermeneutics insists that this density can only be grasped through the mediation of reflection, which establishes intelligible links “between the understanding of signs and self-understanding” (Ricœur 1974: 16). This graft of the “hermeneutic slip” onto the “young plant” of phenomenology (Ricœur 1974: 6) works particularly well when it comes to describing the ethical experience of individuals who are involved in social structures that are increasingly integrated into globalized production chains. As I shall discuss later, their access to nonhuman nature, far from being direct, is rather strongly mediated, and can only be made explicit through an intense work of interpretation.

13 If we dismiss a whig conception of history, this (always partial, fragile, and compromised) achievement of belonging can only materialize through an antagonistic superseding of alienated forms of life.

14 The concept of “belonging” that I use as a dialectical opposite to alienation has a family resemblance with Rosa’s concept “resonance”. Although Rosa’s (2019a) systematic presentation of resonance as the dialectical opposite to alienation appears as the most convincing attempt to reconstruct conceptually the positive alternative in contemporary critical theory, it retains some important shortcomings. In particular, Rosa does not propose a systematic analysis of the ecological preconditions that should be met for an experience of resonance to be genuine, even if he sometimes touches upon the topic – e.g., when he suggests that a neoliberal manager who flies to Bali to spend his holidays in a five star hotel is experiencing a reified form of resonance, ultimately made possible by his instrumental relations to the world (Rosa 2019b: 68-69). The claim I have defended in this subsection (i.e., that the effort to circumscribe a philosophical anthropology contributes to sharpening the context-sensitivity of the critique of alienation) can thus be interpreted as an effort to re-embed further resonance. In this perspective, the human experience of resonance cannot materialize unless a set of very basic biophysical preconditions are secured (e.g., a reasonably metastable Earth system, resilient regional biomes, etc.) – and *a fortiori*, it cannot genuinely materialize in forms of life that directly or indirectly contribute to destroying these very basic biophysical preconditions.

Before elaborating on the crucial de-centering that hermeneutics operates, I briefly outline the salience of phenomenology. Here, it is important to recall that the emergence of this school of thought in the wake of Husserl in the early twentieth century gradually allowed thinkers to recast the problem of the fundamental embeddedness of human experience and to undermine the pretensions of objectivist/positivist thinking. In their many attempts to supersede the flaws inherent in the Cartesian/Kantian transcendental reductions, phenomenologists have developed various accounts of our unsurpassable anchoring in a corporeal condition, recognized and “experienced as the existential mediation between the self and the world” (Ricœur 1991:150). Dreyfus and Taylor (2015), drawing notably on Heidegger, Merleau-Ponty and Wittgenstein, have developed an in-depth argument along these lines. According to them, the self has an “original contact” with the world that “provides the sense-making context for all [its] knowledge constructions, which, however much they are based on mediating depictions [that is depictions that build on representational cognition], rely for their meaning on this primordial and indissoluble involvement in the surrounding reality” (2015: 18). This formulation suggests how “thick” is the phenomenology that Dreyfus and Taylor aim to develop. Indeed, it seeks to highlight that the deployment of our reflexive self is predicated on the constant mobilization of an infinite diversity of pre-reflexive functionings, through which our body “fuses” with the world. From this perspective, it becomes clear that the surrounding reality that sustains us reaches a deeper level than any description of significance attribution we might make of it. This amounts to saying that our being-in-the-world ultimately exceeds the grasp we have on it. By suggesting that our primordial anchoring in a corporeal condition constitutes a transcendental one, Dreyfus and Taylor argue that they supersede the aporia that ruined their predecessors’ philosophical projects. As such, their attempt to escape solipsism¹⁵ and to retrieve realism has yielded an account of the self that offers a sound enough basis for us to give reason to the “thickness” of the lived experience of individuals.¹⁶

However, if the “short path” of phenomenology uncovers the existential density of our belonging to the world, the perspective it opens bears the risk of remaining largely insensitive to the specific cultural contexts in which this disclosure of the self concretely materializes. As Ricœur puts it, the truth of the Cartesian cogito is indeed “a vain truth; it is like a first step which cannot be followed by any other, so long as the ego of the ego cogito has not been recaptured in the mirror of its objects, of its works, and finally, of its acts” (Ricœur 1974: 17). It is therefore only through a detour, opened by the “long path” of hermeneutics, that the self can come to affirm its transient consistency. In this determination, the deployment of interpretation – this “work of thought which consists in deciphering the hidden meaning in the apparent meaning, in unfolding the levels of meaning implied in the literal meaning” (Ricœur 1974: 13) – is crucial. In much the same way as the interpretation of an ancient philosophical text reveals the “profound intention of overcoming distance and cultural differences and of matching the reader to a text which has become foreign” (Ricœur 1974: 4), the

15 Since Descartes, solipsism has always been the main threat to the idealist tradition. Ricœur (1961: 9) recalls how Husserl, who famously argued that phenomena are the correlates of intentional life, finally found it extremely difficult to escape the figure of an “idealist subject locked in its system of meanings” and to go beyond the diaphanous image of the world as “the horizon of all [the subject’s] intentions”. Like most of his predecessors in the idealist tradition, Husserl had a hard time proving that there was an effective world “out there”. Since then, the debates on this question have been considerably refined, as Taylor and Dreyfus’s critique of Rorty suggests.

16 The other philosophical tradition that has paralleled phenomenology (and proved equally relevant) in retrieving this embodied condition of the self is, of course, American pragmatism (Peirce, James, Mead, Dewey, Rorty). Contemporary research in philosophy suggests that a dialogue is now under way between these traditions (see notably Madzia and Jung 2016).

work through which the self interprets its being-in-the-world betrays its desire to decipher the multi-layered relations of which its corporeal condition is made up and to integrate these into the actual comprehension that it is able to have of itself. Ricœur (1991) himself argued at length that it was possible to transpose this paradigm of textuality beyond the experience of reading, and to consider it as a deep structural feature of our being-in-the-world. From this viewpoint, the activity of interpretation is no longer a prerogative of the reader, since it is also harnessed by the self, who orients it towards the world (rather than towards the text) in order to give reason to the spatio-temporal inscription of her action, in a constant effort to unfold further her understanding of its possible meaning.

The philosophical anthropology (conjoining phenomenology and hermeneutics) that I have briefly unpacked is consistent with recent advances made in the fields of evolutionary anthropology and neuroscience. In what follows, I analyze successively the landmark contributions of Deacon (1997) and McGilchrist (2019) (who pertain respectively to those two fields) and suggest that their empirical observations actually corroborate (and thus flesh out) the philosophical intuitions that I have just exposed. The “fluid processes” that they are each keen to study have, as I shall explain, different “wavelengths”: while Deacon identifies the capacity for symbolic reference as a distinctive feature of the human condition (and hence, as an invariant trait across cultures) by retracing its emergence out of millenia of natural selection, McGilchrist emphasizes the plasticity of the brain (and in particular, of hemispheric lateralization) by giving evidence that cerebral activity is intensely shaped by changing socio-cultural contexts. Therefore, their conclusions both enable to specify the fundamental bodily-cognitive anchoring that characterizes our human nature, while definitively dismissing the temptation to reify it as an always-already given reality.

In his landmark book on the co-evolution of language and the human brain, Deacon (1997) gathers evidence from contemporary research in evolutionary biology and brain anatomy in order to show that over the course of an extremely long period¹⁷, natural selection has operated as a sieve that has slowly sorted our capacity to acquire symbolic sign-usage. As he goes on to offer an analytical reconstruction of the historical trajectory of embodied cognition, Deacon mobilizes Peirce’s triadic semiotics and its famous distinction between iconic, indexical and symbolic modes of reference – which basically runs as follows:

“icons are mediated by a similarity between sign and object; indices are mediated by some physical or temporal connection between sign and object; symbols are mediated by some formal or merely agreed-upon link irrespective of any physical characteristics of either sign or object.”
(Deacon 1997: 70)

Establishing this trichotomy, Deacon argues, is essential in order to capture the “intrinsically hierarchical and emergent nature of the referential processes that underlie [human] mental processes” (1997: 442). Over hundreds of thousands of years, Deacon explains, hominids could indeed only rely on iconic and indexical modes of reference as they interacted (like most animal species still do today). Since these two modes presuppose the “physical co-presence of sign and signified” (Jung 2016), such hominids could not but create referential networks that were immersed in (and bound to) their immediate biophysical *milieu*. As the symbolic ability slowly and contingently emerged out of evolutionary trial and error, an irreversible “threshold” (Deacon 1997: 79-92;) got crossed when

¹⁷ It presumably started with *Homo habilis* roughly 2.3 million years ago and unfolded during approximately 1.5 million years thereafter (1997: 409).

it grew sufficiently sophisticated to become itself a selective trait. From this moment on,¹⁸ hominids proved increasingly talented at manipulating (symbolic) references that were ungrounded from the real biophysical world – hence adding as many virtual facets to their lives. As a result, they became more and more prone to re-ordering their immediate surroundings “from outside”, by obeying new norms that they had forged in this evanescent, merely symbolic virtual world. As Deacon puts it, this deep transformation of language thus “provided human selves with an unprecedented sort of autonomy or freedom to wander from the constraints of concrete reference and a unique power for self-determination” (1997: 454). From all this, and prior to any normative judgement, it is therefore quite clear that Deacon’s empirical study tells us something quite clear about our “human nature”: it (at least partly) comprises an *inclination to produce idealized objectivations* that runs deep-seated in our generic bodily-cognitive constitution. For the very reason that the wavelength of this fluid process (i.e., the co-evolution of language and the brain) is extremely long, we can consider its current configuration as fixed: said differently, the philosophy of *praxis* cannot, in the current state of affairs, take up and transform our human inclination to produce idealized objectivations; rather, it must count with it as a building block of our “human nature” – for better or for worse.

In comparison, McGilchrist’s (2019) important research on the lateralization of brain hemispheres deals with fluid processes that deploy over much shorter periods of time. Drawing on a wide-ranging body of literature that straddles neuroscience, psychiatry and cognitive psychology, he demonstrates that the way human beings relate to the world is conditioned by the divided structure of the brain. Extensive empirical evidence from research on patients with neurological/psychiatric pathologies suggests indeed that each hemisphere “attends” reality in two different, and sometimes conflicting ways: while the left hemisphere scrutinizes a given lived situation by abstracting from it what is already known, objective, instrumental, explicit, quantitative, replicable, the right hemisphere proves spontaneously receptive to their unknown, contextual, open-ended, implicit, qualitative, singular facets. Since these hemispheric discrepancies are cleared below the level of conscious awareness, the divided structure of the brain remains unavailable to introspection and thus goes unnoticed at the individual level. However, and this is McGilchrist’s key hypothesis, it is possible to discern how these discrepancies play out at a supra-individual, socio-cultural level: on this basis, he suggests that it is retrospectively possible to identify patterns in the way human societies have “dealt with” this fundamental asymmetry at different periods in the past (2019: xv). The great achievements of Greek antiquity and European renaissance can thus be interpreted as the manifestations of self-confident, vibrant, polyphonic forms of culture, that incidentally turned out to be hospitable to the productive tensions of a frail bihemispheric equilibrium: in comparison, the periods marked by greater uncertainties (e.g., the aftermath of the fall of Rome, the beginnings of the industrial revolution) are likely to have coincided with a rupture of this equilibrium, and an accentuation of the residual role played by the left hemisphere.¹⁹ McGilchrist holds that this sobering diagnosis still applies to our contemporary world, where

18 Mind you: in evolutionary biology, a “moment” or a “threshold crossing” might last generations.

19 McGilchrist repeatedly eschews suspicions of reductionism. According to him, changing patterns in the lateralization of cerebral activity never unilaterally dictate social change: rather, they can catalyze, or temper it – but always in a dialectical fashion. In the stream of experience, the left hemisphere appears inclined to discover more of what it already knows, and tends to activate positive feedback: in contrast, the right hemisphere expresses more receptivity, and tends to activate negative feedback (2019: 87).

“the left hemisphere’s world has become externalised, so that when the counterbalancing tendency of the right hemisphere to check with the real world of experience is brought into play, it is already subverted: the world ‘out there’ is already colonised by the left hemisphere’s vision.” (2019: xxiv)

Critics of McGilchrist have rightly pointed out that the verification of his working hypothesis – and notably, of its retrospective historical validity – raised a number of methodological challenges (see his responses, McGilchrist 2019: i-xxvi). But beyond these debates, however, his overall demonstration is consistent enough to evidence a common trait of our “human nature” (one that specifies further the one excavated by Deacon), reflected in the fact that *those of our bodily-cognitive pre-reflexive dispositions that are transduced by brain lateralization are malleable to socio-cultural formations, with which they dialectically interact.*²⁰ This result is, of course, of great interest for the philosophy of *praxis*: in line with Deacon’s results, it points towards one of the “fixed hinges” onto which “the door” of any human *praxis* is bound to “turn”, by highlighting how its ultimate inscription in the bodies of symbol users immediately situates it at the edge between the socio-cultural and biophysical realms.

In this subsection, I have sought to demonstrate that the effort to exhume some generic, nearly-invariant features of our common “human nature” can serve the purpose of a geo-social critique of forms of life. Developing a better comprehension of the anthropological traits that human beings typically activate as they engage in the creation and/or reproduction of determinate forms of life enables to specify further our understanding of how alienation concretely arises and gets manifested. Once the deep-seated inclination of human beings to produce idealized objectivations is recognized as constitutive, the task of critique precisely consists, for a given situation, in disentangling the variety of empirical mediations that a certain set of objectivations actually generates, and in assessing these mediations (as well as the broader context that comes out of their enmeshment) from a normative standpoint. Re-interpreted through this anthropological lens, the exercise of geo-social critique thus becomes a “hermeneutics of belonging”, by which concrete individuals collectively inquire into how their bodily participation to distinct social spheres (family, civil society, market, politics) actually articulates their relational inscription in the wider natural world. The case study on Total will precisely stress the decisive salience of capitalist relations of production in the process of ecological niche-making, and explore the practicability of such “hermeneutics of belonging” at the workplace in a transnational firm.²¹

20 Even if McGilchrist does not conceive of his historical study as a critique of capitalist social relations, it seems worth to underline that the empirical evidence he gathers corroborates the hypothesis that Lukács (1972) had defended in his Marxian-Weberian synthesis on reification. McGilchrist (2019) suggests indeed that the reification of the self and the reification of the world are dialectically entwined, and that this self-aggrandizing process is catalyzed by the triumph of the commodity form among other things: unlike Lukács, he does not go until claiming that all the manipulative, skewed interests of the left hemisphere are *exclusively* channelled and mediated through capital accumulation. My position seeks a middle-ground: I happily endorse the hypothesis that contemporary dynamics of reification are *mostly* propelled by capital accumulation.

21 Although this exercise in auto-description likens the one outlined by Latour (2020), I do not subscribe to a flattened, horizontal ontology: as shall become evident in the next chapters, the mediations that organize our collective relationships to nonhuman nature are powerfully shaped by (vertical) power relations.

6. Conclusion

In this chapter, I have sought to recast the concept of alienation on a firmer theoretical ground, by suggesting that its social and natural dimensions could be employed cooperatively. Re-articulated in such a way, the concept of alienation appears as normatively-bivalent: depending on the context of its use, alienation (or estrangement) can be “bad” or “good” – and as such can be used make different judgements depending on the situation. The concept can thus be harnessed as a survey instrument that could be compared to a “critical refractor” that alternatively uses different “theories, ideas and assumptions as “lenses” to assist in clarifying some situation or issue” (Hailwood 2015: 251). Its heuristic potential, I argue, must be continually re-tested through the description and evaluation of existing forms of life. Alienation’s internal heuristic bivalence prevents, I argue, a wholesale polemical use of the concept that would favour purely expressivist, romantic critiques of the capitalist economic system – while it is stripped-down, analytical critiques that are most needed. Thus from yet another angle, this heuristic bivalence renders our re-articulated concept of alienation an ideal candidate to become the normative yardstick of a principled, open-ended geo-social critique – one susceptible to pave the way to a renewed philosophy of praxis. As I have argued throughout this paper, the *raison d’être* of this critique consists in describing and evaluating the thick relational canvas into which human forms of life get consituted; in other words, it scrutinizes the extent to which these forms of life allow their partakers to realize themselves as free persons. However, at a time when the core bio-geo-physical processes of the Earth system are being disrupted, “realizing oneself as a free person” cannot be attended at the expense of nonhuman nature anymore: rather, it implies to engage in sustainable landscaping practices in the different spheres of social life (e.g., as a producer or as a consumer in the market sphere, or as a citizen in the polity). The shift from a social to a geo-social critique thus implies adding a new “passive” component (i.e., the need to recognize the givenness of our primordial anchoring in a nonhuman natural world) to the “active” component that has traditionally been the business of critique (i.e. the effort to unmask and undo entrenched patterns of domination): this shift from a social to a geo-social critique also demands a close understanding of what is at stake in such a shift; tensions in this transition – if well understood – can become points of dialogue and sources for future creativity.

In the chapters that follow, I seek to assess the relevance of the theoretical framework that I have just outlined. In this endeavor, I outline a multi-faceted, stylized empirical description of Total – one that sheds light on the historical trajectory and geographical deployment of the firm, and that identifies the social-cultural dynamics that have undergirded its economic development. I then harness the concept of alienation to critically evaluate the generic form of life articulated within the corporate realm, and discuss the possible orientations of a transformative *praxis* in such a problematic context.

CHAPTER 4

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The construction and sustainment of Total's corporate legitimacy in a carbon-constrained world

1. Introduction

This chapter and the three that follow seek to characterize Total's trajectory in the climate crisis. As suggested in the introduction, each one of them (particularly chapters 5, 6, 7) opens a specific perspective on the firm's empirical reality, and suggests that the different facets of its structuration in the corporate context can be clarified with the concept of alienation – provided that the latter is taken in a pluralistic sense, where its internal variations mutually dovetail rather than rule out each other. In this first empirical chapter, I articulate an analysis that retraces the ways through which Total instituted and sustained climate change as a matter of concern for the organization; by doing so, I seek to emphasize the cultural/cognitive dimension of alienation. For this endeavour, I analyse the circumstances under which a specific collective climate imaginary has gradually taken shape in the firm and then spread both within and outside it: for that matter, I mobilize the Foucauldian concept of apparatus, which allows me to characterize Total's construing of climate change as falling under the category of wilful blindness. A thorough examination of Total's business-as-usual activities suggests indeed that the elaboration of this corporate discourse has contributed towards framing their substantive outcome in a distorted, but vivid way: smart, selective communication bolsters corporate legitimacy while obscuring the massive material flows that extractive operations effectively generate. In making sense of this gap, I reveal some significant theoretical shortcomings in the Foucauldian framework, the relevancy and scope of which I assess critically: while it helps to diagnose key features of the process through which corporate discourse takes shape, the framing it induces stands in the way of working out other facets sufficiently.

At this point, I wish to clarify the position of this chapter in the general architecture of the book. In the pages that follow, I aim to depict the elaboration of a corporate discourse on climate change as being simultaneously a precondition *and* a correlate of a wider socio-economic phenomenon, namely the unshackling of 'constituted social powers' that get the upper hand over human beings in the making of history. I shall disentangle some of the specific features of this specific phenomenon in the next chapter, when I delve deeper into the analysis of Total's case and bring out findings that will retrospectively further elucidate those of this chapter. One of my core hypotheses is therefore

that the manufacture and maintenance of a corporate climate imaginary (hence, a cultural formation in search for cognitive consent¹) is coextensive to the deployment of such an ‘objective alienation’.

Before proceeding it is worth taking a step back to notice that only few publications have focused specifically on the oil and gas industry’s responses to climate change (Banerjee et al. 2015; Choquet 2019; Kolk and Levy 2001, 2002; Lovell 2009; Sæverud and Skjærseth 2007; Skjærseth and Skodvin 2001; Rajak 2020; Vormedal et al. 2020), and none has openly explored them from the firm-oriented perspective with which I engage (Gendron 2017 is an exception). The emergence of a consensus on carbon budgets (Allen et al. 2009; Meinshausen et al. 2009) aroused a renewed interest from external observers in the challenge the industry faces; activists (McKibben 2012), think-tank researchers (Caldecott et al. 2013; Leaton and Grant 2014), and academics (Castelo Branco et al. 2012; Griffin et al. 2015) have each contributed towards mapping out the delicate position of transnational firms in the controversy about unburnable carbon. However, as Caldecott and Rook (2015) acknowledge, “testing [for] the presence [of] biases, errors, and fallacies in [corporate] decision processes [is] difficult, if not impossible”; most diagnoses have thus remained external. Some other contributions focusing on the strategies that transnational oil and gas firms develop to address renewable energies and carbon-capture storage (CCS) (Chang and Yong 2007; Oberling et al. 2012; Penha 2011; Pinkse and Buuse 2012; Tjernshaugen 2012; Kern et al. 2016) provide an indirect insight into the topic by highlighting how firms tend to project themselves in segments that could be transformative. In addition, although the role of meta-organizations in the construction of corporate social responsibility (CSR) standards in the fossil fuel industry has been identified as crucial (Berkowitz et al. 2016), only little analysis has been conducted on the specific case of climate change (an exception is Bach 2019).

Building on empirical material from the field and on insights from the literature, I historicize Total’s careful efforts to portray itself as a legitimate actor of global climate governance, and demonstrate that the deployment of the corporate narrative on climate change has not been accompanied with an in-depth transformation of Total’s business model – the “depth” of its inscription in the organizational matrix remaining extremely insufficient. For this endeavour, I organize the chapter as follows. In the second section, I introduce the concept of apparatus and defend its analytical relevance to the present case study. To do so, I offer a brief genealogy of the concept, from its initial formulation by Foucault (1980) to its re-elaboration and application to the corporate context by Aggeri (2014), and I highlight the affinities it has with recent discussions on the corporate production of ignorance. On this basis, the third section consists of a historical reconstruction of the deployment of a sustainability apparatus at Total, with the focus on its multi-faceted response bolster corporate legitimacy in the face of climate change. In the fourth section, I contextualize the deployment of the sustainability apparatus, and show that it primarily occurs on an ideational level, in the sense that the imaginary it conveys seems significantly uncorrelated with the effective material entanglement of Total’s activities in the biophysical realm: this opens the way for a critical discussion of the Foucauldian theoretical framework.

2. On the corporate production of strategic ignorance

In this section, I give more details about Foucault’s concept of apparatus, and stress its relevance into the field of organizational studies – and more especially for the purpose of studying the strate-

1 The elaboration of an imaginary that bolsters corporate legitimacy requires the production of symbols that are sufficiently meaningful to arouse the enthusiasm and loyalty of employees and stakeholders. In other words, constituted social powers actively shape the cultural forms that enable their perpetuation by making them cognitively attractive.

gic production of ignorance. I argue that it is well adapted to retrace the complex process through which Total has addressed climate change in order to preempt and defuse a latent legitimacy crisis. The historical reconstruction of Total's approach to climate change suggests that it is best rendered through the concept of "wilful blindness" (Bovensiepen and Pelkmans 2020).

2.1. The Foucauldian apparatus

Foucault's legacy in the field of organization studies goes way beyond the concept of 'apparatus' with which we are concerned here. Although he only articulated it in his more recent *Histoire de la sexualité*, Foucault had already introduced critical theorists to important new perspectives through some of his earlier works (such as *Surveiller et punir* and *Naissance de la biopolitique*). In fact, by the end of the 1980s, organizational studies had already successfully imported many Foucauldian building blocks into their framework and, since then, it has put them to work to detect and decipher the unprecedented structural changes that the transition to a post-Fordist regime of accumulation caused. Pezet (2004) suggests that two nodal concepts – 'surveillance' and 'governmentality' – have structured the development of this vast scholarship. While contributions based on the former have emphasized the modalities of disciplinary (self-)control and their associated forms of subjectivation (Fox 1989; Miller and O'Leary 1987; Nicoli and Paltrinieri 2016), those based on the latter have aimed to conceptualize corporate power on the basis of Foucault's study of government techniques inherited from the dissolution of sovereignty (McKinlay et al. 2012; Miller and Rose 1990). By elaborating an interpretation of empirical data through the composite concept of 'apparatus', the demonstration that follows navigates between these two poles: however, it is worth emphasizing that it mobilizes the Foucauldian framework to retrace the constitution of an objectivity (that is, the corporate discourse) rather than to analyse the effects of the latter on subjectivities. These are, of course, two sides of the same coin and, while in this chapter I evoke some stylized aspects of this modelling of subjectivities, it is later (in chapter 7) that I flesh out their description. That said, I now turn to the definition of the concept.

In an interview given in 1977, Foucault (1980: 195) described the term apparatus as a

"thoroughly *heterogeneous ensemble* consisting of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions – in short, the said as much as the unsaid. Such are the elements of the apparatus. The apparatus itself is the *system of relations* that can be established between these elements." (emphasis added)

He is therefore proposing a non-stabilized definition of the apparatus as a web where relations (and their configuration) construe the terms they connect. Completing his own definition, he then goes on to insist that the apparatus is "essentially of a *strategic* nature, which means assuming that it is a matter of a certain manipulation of relations of forces, either developing them in a particular direction, blocking them, stabilizing them, [or] utilizing them" (*ibid.*). This precision is crucial, for it completes our understanding of the dynamic nature of the apparatus by unmasking the fact that it is inescapably purposive – even if, of course, the underlying forces that sustain it are potentially non-reflexive. This claim resonates with Taylor's (1984) remark that Foucault's historiography mainly consists of describing "strategies without project". I shall demonstrate that this double (relational cum strategic) dimension of the apparatus operates in the case study. Beyond this synchronic definition, Foucault suggests that an apparatus is characterized by a certain kind of genesis, marked by two important moments. He describes the first as a "process of *functional overdetermination*", where "each effect – positive or negative, intentional or unintentional – enters into resonance or contradiction with the others and thereby calls for a readjustment or a reworking of the heterogen-

eous elements that surface at various points” (Foucault 1980: 195), and the second as a “perpetual process of *strategic elaboration*”, which consists of an “immediate reutilization of [an] unintended, negative effect within a new strategy which came in some sense to occupy this empty space, or transform the negative into a positive” (*ibid.*).² As I shall show, it is possible to detect these intertwined and overlapping processes in the case study. Dumez and Jeunemaître (2010), and later Aggeri (2014), have explored the hypothesis that Foucault’s concept might be appropriate for marking out the contours of the dynamics that accompany the implementation of CSR programmes in the corporate realm. According to Aggeri, one can encapsulate the tension inherent in corporate strategic planning, which is simultaneously top-down (in that it bears an irreducible projective dimension) and bottom-up (in that concrete, unintended micro-interactions produce it), in the notion of apparatus, which offers a valuable point of balance. Building on Foucault’s sense that apparatuses constitute a response to an “urgent need” (Foucault 1980: 195), Aggeri argues that “sustainability apparatuses” have naturally flourished in a context of growing distrust towards corporate activities, and that they have served an eminently strategic purpose – namely, to reassure critics that their objections against the business-as-usual were unfounded.

2.2. From active obstruction to wilful blindness

In this subsection, I emphasize the affinities between the Foucauldian concept of apparatus and contemporary debates on the strategic production of ignorance. Perhaps more than any other thinker, Foucault has called attention to the fierce battles that have been led throughout the 18th century in order to establish dissymetries in access to knowledge: however, as McGoey (2007) argues, Foucault’s identification of the strategic use of regimes of truth by modern bureaucracies necessarily implied, in turn, that ignorance could be strategically used – a research avenue that he did not explore himself. It is Proctor, a historian with a science and technology studies (STS) background, who coined the term “agnotology” in order to designate the effort to emphasize “the historicity and artifactuality of non-knowing and the non-known” (Proctor 2008: 34-35): paralleling the efforts of epistemology (which delineates the conditions to the establishing of knowledge), agnotology has since then sought to shed light on the conditions to the production of ignorance. As such, it resembles a replicable, fluid research program rather than a discipline with fixed boundaries.

Throughout his works, Proctor has suggested that three main forms of “agnogenesis” could be identified: ignorance can indeed be prosaically diagnosed as a default native state – that is, as a place where (scientific) knowledge has not yet penetrated; it can also be the passive outcome of a selective choice, e.g. when human collectives get immersed in given epistemic cultures, which necessarily shape specific blindspots, hence leaving entire constellations of phenomena (relatively) unattended; and finally, ignorance can be actively produced through the deliberate organization of duplicity. This last form of “agnogenesis” has received the most attention in the literature. In recent years, Proctor’s (2006, 2012) and Conway’ and Oreskes’ (2015 [2010]) respective historical investigations on the tobacco and fossil fuel industry have both shed light on the ruthless methods employed by big firms in order to undermine attempts to regulate their businesses. Supplementary revelations (upon which I briefly come back later) by Banerjee et al. (2015) on the aggressive counter-

2 Foucault’s distinction between the two concepts of ‘functional overdetermination’ and ‘strategic elaboration’ remains unclear because he elaborated it spontaneously in an interview. I suggest that we understand ‘functional overdetermination’ as the path-dependency that the constant evolution of the apparatus spontaneously generates. In this embedding process, the progressive sedimentation of past decisions comes to stabilize an imaginary that will frame and channel further interactions. Correspondingly, I suggest that we understand ‘strategic elaboration’ as an embedded process, in which agents articulate specific responses, against background conditions that they generally take for granted.

science strategy followed by Exxon's top management in the 1980 have certainly given this specific case a paradigmatic value – where the manufacturing of ignorance ends up creating alternative realities (Latour 2015).

However, it is uncertain whether Total's response to climate change falls under the criteria of ignorance as strategic ploy: as I shall demonstrate in the next section, the company has indeed pleaded its deference to climate science since 1997 at least (and even more clearly so since 2006), and abstained from spreading doubt on the reality of climate change since then. As Rajak aptly remarks (2020), many non-American oil and gas companies have in recent years chosen to deal with climate change not (anymore) by *downplaying* its importance (eventually through the funding of counter-science) and turning away from it, but rather by engaging it proactively – which imply that they *overplay* their capacity to address it. In this new configuration, denial is not “about what is seen or understood, but about the capacity to act” (Rajak 2020): “active obstruction” gives way to “wilful blindness”. As Bovensiepen and Pelkmans (2020) indicate, “wilful blindness refers to ‘the deliberate avoidance of knowledge of the facts’; that is, a person [or a group] avoids gaining knowledge as a means of avoiding self-incrimination”. As such, it denotes a use of ignorance that is at once more creative, more subtle, and more context-receptive than in the somewhat brutal case of “active obstruction” – but it proves also more volatile. I suggest that this makes the Foucauldian framework particularly apt to render the intrinsic instability of wilful blindness, in the sense that it (at least partially) fulfills the need to pay attention

“not just to the ways in which the production of ignorance and knowledge intersect, but also to changing levels of intentionality in relation to ignorance, to the rhythms that allow it to ebb and flow, and to the emotive states that boost, maintain or undermine diverse forms of wilful blindness.” (Bovensiepen 2020)

The concept apparatus thus allows to do justice to the “graded nature of intentionality and perception, and the tensions between them” (Bovensiepen and Pelkmans 2020) that characterizes configurations of wilful blindness: its capacity to subsume a great variety of bureaucratic practices, regardless of whether they derive from explicit strategic intentions or unconscious motivations (or a mixture of both) (McGoey 2007) and to explore the ramifications of their intended and unintended consequences makes it a particularly suited analytical tool. By refusing to reduce intentionality to the expression of a pure volition by autonomous subjects, the Foucauldian framework allows to construe it as “processual, constituted in practical engagement with the world, and informed by affective and material contingencies” (Bovensiepen and Pelkmans 2020). As a result, its harnessing enables to develop a finely-grained analysis of the bundle of (more or less) tacit organizational pressures that have cumulatively led this complacent blindness to climate change to get hard-wired into Total's corporate structure.

All this being said, I can now turn to the in-depth analysis of Total's response to climate change.

3. Elaboration and implementation of the “sustainability apparatus” at Total

In this third section, I give a historical account of the process through which Total has articulated a sustainability apparatus in response to climate change in the last three decades. For this endeavour, I build on Aggeri's suggestion that the implementation of “sustainability apparatuses” can be disentangled in five successive phases. These are (1) the reflexive understanding of an emerging issue by the management, which leads to (2) the formulation of a strategic project and to the schematization of an early-stage apparatus (3) progressively constituted through the interconnection and articulation of diverse ‘theatres of operation’ linked to the issue; the intertwined challenges of (4) giv-

ing the ‘strategic apparatus’ a proper ‘scenography’, and (5) coherent ‘script-writing’ are the two last prerequisites for developing a clear communication strategy.

3.1. Emergence of the issue

Following Aggeri’s sequencing, I engage with the first phase he describes in which, as a collective, the firm formulates a reflexive understanding of climate change as a challenge it needs to address. To offer an accurate analysis of the genesis of the sustainability apparatus, I build on the concept of an imaginary, which Jessop (2010: 344) understood as

“a semiotic system that frames individual subjects’ lived experiences of an inordinately complex world and/or informs collective calculations about that world; [...] [it comprises] a specific configuration of genres, discourses and styles and thereby constitutes the semiotic moment of a network of social practices in a given social field, institutional order, or wider social formation.”

I suggest that providing an accurate description of the emergence of a proper “climate imaginary” (Levy and Spicer 2013) requires one to take a step back from the French context to analyse how the oil and gas giants from both sides of the Atlantic Ocean have understood this challenge in recent decades: the hypothesis of an anthropogenic origin for planetary climate change has indeed long been a source of tension for the oil and gas majors. The ongoing consolidation of observations that climate scientists have been delivering since the 1970s has constantly been accompanied by a commensurate sharpening of awareness that the criticality of climate change is threatening the legitimacy of these corporations. As a result, transnational oil and gas firms have been bound to articulate their own corporate ‘regimes of truth’ in an attempt to prove their credentials. In what follows, I demonstrate that these firms have not been neutral bystanders in the shaping of climate imaginaries in Western countries – in the sense that they have exerted strong ‘lateral pressures’ on shared imaginaries. This could seem obvious for the case of Exxon, which I shall discuss first, but this interdependency also applies to Total.

In recent years, revelations have highlighted important details about the sequence of events through which Exxon, after having been a pioneer in peer-reviewed climate science in the 1970s, had finally shifted towards climate denial in the early 1980s (Banerjee et al. 2015, Franta 2018). The authors report that at the end of the 1970s, some key managers were enthusiastic about the prospect of their company’s research unit becoming a prominent, leading actor in climate science; in 1979, the firm even fitted a super tanker with custom-made instruments with which to sample CO₂ in the air and ocean along a route from the Gulf of Mexico to the Persian Gulf (ibid.). That same year, the publication of a report by the National Research Council (NRC) (*Carbon dioxide and climate: a scientific assessment. Report of an Ad Hoc Study Group on Carbon Dioxide and Climate*) sounded like a confirmation for scientists and engineers at Exxon (Rich 2019). In 1982, the then head of firm’s research unit even publicly declared that “few people doubt that the world [has] entered an energy transition away from dependence upon fossil fuels and toward some mix of renewable resources that [would] not pose problems of CO₂ accumulation” (David 1982). Yet, from 1983 onwards, Exxon executives started to realize that the conclusions drawn from climate science were (rightly) becoming more and more incompatible with their business-as-usual imperatives; there was growing concern that regulations restricting the use of fossil fuels would damage their profitability. The firm slashed its research and development budgets dedicated to climate science and changed its strategy. In a context where the hypothesis of the anthropogenic origin was almost beyond doubt (for most of its in-house scientists, it flied in the face of evidence), it was nevertheless clear that giving formal empirical evidence of an anthropogenic effect statistically separable of the natural variability of the climate system (what the IPCC was set to do through its assessment re-

ports) would take time (Glaser 1982). Exxon would take advantage of this time interval to spread doubt on the “uncertainty” of climate models. In 1988, the establishment of the IPCC and the Congressional testimony of NASA scientist James Hansen propelled climate change onto the political landscape. Exxon and other American majors played a significant role in launching the Global Climate Coalition (GCC), a US-based international lobbyist group of businesses opposing regulation to reduce greenhouse gas emissions; this organization played an active role in obstructing UN-led climate negotiations, before finally closing in 2001 in the face of public criticism. That Exxon’s decisions played such a large part in shaping the circumstances that allowed climate change to emerge as a matter of concern in the United States resonates with Latour’s claim that “the powerful [had perfectly discerned] the prescriptive charge of brute facts” (2015) when, alongside other actors in the US oil and gas industry, they decided to become “merchants of doubt” (Oreskes and Conway 2011).

Understanding Total’s position on climate change requires looking beyond Exxon’s case. At that time, Total and Elf (still independent companies) were minor players in the industry and could not compete with their American counterparts in terms of research and development. Recent archival work by Bonneuil et al. (2021) has given evidence that the first reported mention of anthropogenic climate change at Elf dated back to 1971. Throughout the 1980s, the company’s key executives were well informed about Exxon’s climate research through their active involvement in the working groups of the International Petroleum Industry Environmental Conservation (IPIECA)³. The topic of climate change was put the agenda of an executive committee (and hence, formally brought to the attention of the CEO) in 1986. The briefing note by Elf’s then environmental director reads that

“the problems linked with the interactions between diverse pollutants in the upper atmosphere will be come severe in the next few years. The case of ozone is already well documented, but the accumulation of CO₂ and CH₄ in the atmosphere will generate a greenhouse effect that will inevitably modify our environment. All the models are unanimous in their prediction of a planetary warming; only the amplitude of the phenomenon remains undetermined. The first reactions have been, of course, to say that ‘fossil fuels should be taxed’; it is therefore evident that the oil industry will once again have to prepare its defence.”⁴

In the years that followed, Total and Elf thus willingly fell into step behind Exxon, with a handful of Elf executives taking part in the elaboration of an aggressive strategy coordinated at the industry level (mostly through IPIECA). Benefiting directly from the ruthless attacks launched by Exxon against climate science, the two French firms recurrently over-emphasized the “uncertainty” of the anthropogenic origin of global warming in their public communications, fighting at every level in order to avoid the implementation of ambitious regulation schemes: Elf’s executives got intensely involved in the battle against the introduction of an eco-tax that was planned at the European level, which threatened to “cost billions” to the oil and gas industry (Bonneuil et al. 2021). Around 1994, however, the two companies started to take more distance with Exxon’s hard line, and gradually shifted towards a less aggressive position. As the dawn of economic globalization intensified the demands put on transnational firms (now increasingly perceived as “global actors”), these were increasingly pressured to demonstrate their capacity for societal stewardship – and especially so in Europe (Pestre 2020).

In May 1997, shortly before Kyoto and a few months after deciding that BP would leave the GCC (which neither Total nor Elf ever joined), its then CEO, Lord John Browne, gave a speech at Stan-

3 The IPIECA was set up in 1974 to be the industry interface with the United Nations Environment Program. Bonneuil and Franta (2021) highlight that it is possible that the American subsidiaries of CFP-Total and PetroFina (which would later merge into Total) had been informed about early warnings on anthropogenic climate change through their membership to the American Petroleum Institute, which received such notifications in the early 1960s.

4 Cited in Bonneuil et al. (2021).

ford University in which he acknowledged the necessity for BP to “take precautionary action”, which would imply embarking on a new “journey” (Browne 1997). This speech accelerated the widening of an “Atlantic divide in Big Oil” (Kolk and Levy 2002; Lovell 2009). In the history of climate politics, opening this breach coincided with the transition from the phase of “carbon wars” (1990–1998) to that of “carbon compromise” (1998–2008) (Levy and Spicer 2013). The latter phase witnessed a rapid diffusion of the ecological modernization discourse (Mol and Spaargaren 2000) and its “techno-market imaginary” counterpart (Levy and Spicer 2013); the concomitant move by European oil and gas firms was undoubtedly endogenous to this broader dynamic. Among them, BP was a prime mover, and committed in 1998 to reducing its emissions by 10 per cent by 2010, while expecting its total output to grow by 50 per cent. It is in this context that two weeks before UN negotiations started in Kyoto (1997), Philippe Jaffré (then CEO of Elf) clarified the position of his group, recognizing that

“when we are confronted with an issue that raises fears [...] our attitude is rational: it is that of the ‘Cartesian doubt’. We turn to the scientific community in which we have confidence” (*Le Monde* 1996)

Uncertainty, he continued, was to be found (and rightly so) in the predictions of climate models, but not be waved against the anthropogenic origin of global warming, which according to the IPCC was beyond doubt. Finally, Jaffré explained that his group was willing to aim at “a reduction of 15 per cent of its CO₂ emissions by 2010” (*Le Monde* 1996). On the brink of the 21st century, Elf thus reacted to “convergent institutional pressures” (like most other European transnational oil and gas companies, see Kolk and Levy 2002), and significantly re-embedded its discursive response to climate change in the IPCC’s encompassing framework. This middleground position (i.e., endorsing the legitimacy of climate science) would be soon reasserted by the merged entity TotalFinaElf/Total.

3.2. Formulation of a strategic project as elaboration of an early-stage apparatus

In the preceding subsection, I have briefly reviewed how the emergence of climate change as a public issue was not entirely divorced from the doings of the oil and gas industry. I shall now outline how Total’s trial and error of the late 1990s / early 2000s gradually stabilized into a clear-cut strategic project – a phase which pivotal moment can be dated back to 2006, when the firm organized a public conference on climate change. While giving Total a landmark opportunity to publicly reassert its deference to climate science, this event marked the decisive rupture with Exxon’s hard line and catalyzed the discursive elaboration of climate change in the corporate realm.

In retrospect, Total’s position in the early 2000s looks highly paradoxical: in the wake of Jaffré’s announcements, the firm has improved its internal reporting on GHG emissions generated by operations (soon to be a prerequisite of the EU Emission Trading System – ETS), joined the Global Gas Flaring Reduction Public-Private Partnership launched by the World Bank in 2001, and launched a carbon capture storage (CCS) pilot study. Yet, at the same time, an in-depth scrutiny of its public documentation suggests that its deference to climate science is far from clear, and that Jaffré’s declarations have not precipitated “the end of history”. Until 2004 at least, the descriptions of global warming outlined in Total’s CSR reports (and in particular, the 2002, 2002, 2003, and 2004 editions) are indeed fraught with imprecision: if the anthropogenic origin of global warming is often evoked as the main research hypothesis of the scientific community, it is recurrently referred to as “uncertain” (Choquet 2021). At the time, public scrutiny on climate accountability was much less intense that it would soon be: in the absence of such pressure, the firm and its spokespersons could thus afford being vague and permissive in their descriptions of climate change. During this period, the (then slowly emerging) apparatus still appears quite openly as a “cluster of acts and ommis-

sions” (Lacey 2007): it is only later that its productive ambiguity would become increasingly concealed behind a carefully glossed narrative.

The 2006 conference undoubtedly constitutes a turning point in this respect. In the previous years, the institutionalization of French climate policies had intensified, hence leading to a normalization of debates about the practicalities of curbing GHG emissions. In late 2005, directors of the communication and of the environment departments both convince Thierry Desmarest (the successor of Jaffré as a CEO) that in such a fast-changing context, Total could bolster its climate legitimacy by organizing a high-profile conference on climate change: undertaking such a project would enable the firm to publicly demonstrate its full-blown endorsement of climate science, to reaffirm its clear-cut commitment to live up to its responsibilities in the public sphere, and to show its capacity for action (Bonneuil et al. 2021). The conference finally took place in June, right at the middle of a year marked by a re-emergence of climate change on the top of the global political agenda (important events in 2006 include the release of Al Gore’s documentary *An inconvenient truth* is released, the publication of Sir Nicholas Stern’s report, the wide circulation of the IPCC AR4 pre-conclusions, and the beginning of preparatory talks to the COP15 to be held in Copenhagen in 2009): by mobilizing top-rank speakers (and notably renowned French climate scientists, who at the time had already started to take sides against deniers, Foucart 2015), Total sought to dispel the ambiguities on its position on climate change. T. Desmarest thus unequivocally concluded that the creation in 1988 of the IPCC

“had contributed in a decisive way to the organization of discussions and to the progress of research in the scientific community [...]. [Since then,] the IPCC has perfectly fulfilled its unifying mission, and the seriousness of its reports is not disputed.” (Université Total 2006)

Pronouncing these words was a significant step : more than 280 carefully selected persons (Total managers, industry peers, researchers, journalists, etc.) were attending the conference, which in turn would benefit from extensive media coverage (Choquet 2021). In hindsight, it is clear that this event constituted a watershed; from 2006 onwards, Total would make it a point of honour to publicly recognize the legitimacy of the IPCC in its mission to outline a balanced picture of the changes occurring in the climate system.

The initiators of the 2006 conference certainly felt that a period of innocence was drawing to a close, and that their company would be put under increasing pressure in order to prove its climate credentials. The event thus aimed to catalyze the discursive elaboration of climate change in the corporate realm – and on this precise point, it certainly attained its goal. In what follows, I seek to analyze more precisely the specific features of this elaboration, and suggest that the discursive normalization of climate change as a matter of concern for Total coincided with the emergence of a rudimentary apparatus.

This awareness of interconnectedness between the process of linguistic elaboration and the emergence of an apparatus resonates with what Taylor coined the “expressive” dimension of language (that is when it is used in a performative, world-making fashion) – in contrast to its “designative” dimension (namely when used instrumentally to describe external relations between objects standing in the world) (Taylor 1985). In the late 1990s and early 2000s, the first public statements formalizing the group’s stance on climate change were meant to be formulated in a designative, disengaged tone. As the comment from Desmarest cited above suggests, the main aim of those statements was to offer a neutral description of the nature of the relationship between two objective entities (‘Total’ on one side, ‘climate change’ on the other). Yet, far from being purely designative, I suggest that the discursive elaboration that has prevailed since then has built on a continuous and meticu-

lous effort to channel and orient its expressive dimension. Put differently, I contend that the top managers in charge of defining Total's position have constantly shown a diffuse, non-reflexive awareness of the need to properly regulate and articulate the expressive power inherent in language, for a given strategic purpose. A closer look at the introductory remarks of Desmarest's 2006 keynote is insightful. The CEO of Total insisted indeed that

"The issue of climate change raise two types of debates that must be cautiously distinguished: 1/ The scientific debate, which seeks to circumscribe the reality of climate change, its order of magnitude, its temporality, its biological, chemical, physical interactions; and this is the realm of expertise. 2/ The debate on the social, economic, geopolitical and migratory consequences, and *in fine*, on the viability of our development model and the possibility to export our Western way of life to the rest of the planet. Once we discuss all these issues, we have left the relatively confidential sphere of scientific expertise [*la sphère assez fermée de l'expertise scientifique*] and entered the sphere of political debate, in which as many actors as possible must be included." (Université Total 2006)

This statement sheds light on the ambivalent character of Total's position. On the one hand, endorsing a clear-cut distinction between the "scientific" and the "political" debates enables indeed the firm to make it clear that it will not intervene in a field that it *de facto* declares as out of its scope of expertise – and thus, to frame its position as much more commendable than the one defended by its American counterparts. On the other hand, the maintaining of a scrupulous compartmentalization between science and politics allows the firm to insulate itself from the "prescriptive charge" (Latour 2015) of the facts delineated in IPCC reports.⁵ If Total virtuously abstains from intervening in the production of a disengaged description of the workings of the climate system, then why should the scientific community have something special to say about the politics of oil and gas extraction? Emphasizing the legitimacy of a strict division of labour thus enables the firm to legitimate the "realist" agenda it pursues by surreptitiously neutralizing the criticisms that could be directed against it "from the outside" – that is, by stakeholders reclaiming a more porous boundary between science and politics (and thus contesting the hegemony of a purely economicist framing of extraction).

The 2006 conference thus seems to crystallize the moment when Total's discursive position on climate gets streamlined: from then onwards, the firm will routinely wave its "deference to science" (now formally cleansed from its last ambiguous remainings) as a pretext for seriousness, before immediately defusing the potentially subversive implications that a cautious analysis of the IPCC findings might have in the political arena. From this viewpoint, the emergence of the sustainability apparatus at Total coincides with the crystallization of an organizational capacity to channel and domesticate the "expressive" power of two words that point towards an increasingly inconvenient truth: *climate change*.

Once this is said, an important question lies open: how does it come that Total's discourse on climate change could be so persuasive in the corporate realm? Although this point might seem obvious, it needs explanation. To build and sustain legitimacy, Total's executives had to mobilize arguments that would fit in with the worldview of managers and thereby turn them into enactors of the sustainability apparatus (Bansal and Kistruck 2006; Pérezts et al. 2011). In the early 1990s, the

5 In his book, Marshall's (2014) reports a conversation with John Houghton, the founding chair of the IPCC, who, Marshall writes, "sees no difference between the fossil fuels that are produced and the GHG they later become. 'Of course,' [Houghton] says, 'they are all part of the same thing.' The problem, he told me, is that 'talking about the source of fossil fuels would have moved us from the science arena into the policy arena. Because of the pressure we were under, we needed to be squeaky-clean, maybe too clean, but we needed it to be that way.'" (2014: 168–75) Perfectly symmetrical to the one later delineated by Total, this compartmentalization between science and politics thus subtly induced in a fateful compartmentalization between GHG emissions (which could be cool-headedly and rationally discussed in the UNFCCC process) and extraction (which remained a hot geostrategic issue, left to the goodwill of nation-state administrations, politicians, and grassroots activists).

definition of climate change as a top priority for the international community in the wake of the Rio conference (1992), and the increasing media coverage on the topic in Europe undoubtedly influenced Elf's decision to take its distance with Exxon's "hard line": since most executives and managers at Elf (and at Total) had both a strong scientific background and a social status to uphold, building a corporate discourse that discredited climate science could have turned out costly in the long run. In the wake of Jaffré's 1997 declaration and notwithstanding the many contradictions that persisted until the mid 2000s, the frequent reiteration of a commitment to "accept science" and a certain propensity to corporate self-congratulation were sufficient to reassure the employees and managers of their firm's "realist pragmatism" (BP's case is very much similar in this respect: see Hove et al. 2002; Matejek and Gössling 2013). Yet, to resonate fully with the corporate industrialist-productivist imaginary (Musso 2017; Audier 2019), it became necessary to flesh out further the substance of this commitment. If "rationality" and "deference to science" have been (and still are) core values of this imaginary, mobilizing them would have been insufficient to ensure a spontaneous appropriation of the discourse on climate change. During the fieldwork, an informed respondent noticed the

"weak understanding of epistemological issues [in] the group (i.e. among its managers) [...]; for them – the engineers I mean, it's hard to understand that in science, you can never say that an hypothesis is 'true'. [...] Getting this epistemological detail clear is not evident for persons who have an 'engineer' culture, which is mainly oriented towards operational things."

Building up the admissibility of corporate discourses on climate change thus involved appealing to other "orders of worth", a concept coined by Boltanski and Thévenot (cited in Wright and Nyberg 2013) for it to align with the knowledge interests of operational managers. During interviews, technology was most regularly invoked as a key equalizer, a *deus ex machina* (Rajak 2020) gifted with the capacity to elaborate a substantive compromise between apparently irreconcilable orders of worth (Wright and Nyberg 2013) – something perfectly reflected by this verbatim account from a top manager:

"I will say it in a quite blunt and provocative way: climate change has to become a business opportunity – we must make money from it."

Since very early on, the firm's appreciation of the plausibility that technology might (or might not) "translate" climate change into a business opportunity has largely conditioned its discursive position on climate change. Since the late 1990s (and even more so since 2006), Elf/Total's deference to science has thus come alongside with the identification of four priorities: investing heavily in natural gas, developing renewable energies, reinforcing energy efficiency, and supplying energy to the developing world have gradually become key mantras of CEO talk (Pouyanné 2015). This framing of climate change as a problem to fix betrays a form of "corporate omnipotence" (Wright and Nyberg 2014) that relies on the view that "corporate capitalism [offers] an inevitable and superior form of economic organization based upon rational and effective managerial tools and practices" (Wright and Nyberg 2014) by postulating a magical connection between market failures and appropriate technologies (Levy and Spicer 2013). I suggest that Total's constant attempt to mesh its discourse on climate change with a pre-existing corporate optimism about the demiurgic potential of technology (Chang and Yong 2007) has largely contributed to making it audible to managers – thus corroborating Hornborg's (2017) hypothesis that the banal functionings of the modern capitalist economy are in fact deeply permeated with subtle forms of magical thinking.

From all this, I argue that Total's discursive elaboration of climate change has been persuasive because it has consisted of a process through which the core values of Total's industrial-productivist

corporate imaginary (“deference to science”, “rationality”, “efficiency” and “technology”) have been mobilized and reassembled in a specific fashion, which resonates with what Levy and Spicer (2013) call a “techno-market climate imaginary”; this has ensured the production of a discourse that Total’s employees and managers would readily internalize and enact.

Beyond this attention to the *content* of the discourse, the diverse modalities of its *incarnations* have also played a key role in its widespread reception by non-specialist managers. The concrete substantiation of the “deference to science” position beyond a mere reference to the content of public statements. Strategic nominations and reorganizations are mainly responsible for the incarnation of this value: in 2006, the appointment of a scientific director who had previously held the highest scientific post at the French ‘Centre National de la Recherche Scientifique’ (CNRS) (*Les Echos*, 2006) and gained international recognition for his important work as an oceanographer marked a turning point; the mere presence of someone in the company with such a high profile effectively assured the managers and employees of the coherence of Total’s position on climate change. In an interview conducted in 2016, he recognized having been somewhat puzzled by the performative impact of his own words:

“The question I was asked [after having given a lecture on climate change around 2006/2007 to a large audience of managing directors] was: ‘so, will what you’ve told us become the position of the group [on climate change]?’ – and in fact it was, because the CEO had given me the mandate to talk about climate change as Total’s scientific director – and the simple fact that I was explaining all this at the ‘Management Convention’ implied that what I was expressing was becoming the position of the group.”

In this case, it seems that it is the very ostension of (i.e., the fact of exhibiting, or pointing out) the respondent’s indisputable notoriety that “effectuates” the credibility of Total’s position on climate change. This attempt to impregnate the climate reputation of the firm with the notoriety of widely respected public figures has been, of course, multi-faceted. In 2008, Total thus endowed a five-year chair of “sustainable development, energy and societal issues” at the prestigious *Collège de France*: Sir Nicholas Stern, who was the second recipient of the chair in 2009/2010, publically approved the funding; in 2015, P. Pouyanné (then freshly nominated as a CEO) made the decision to write an open letter to Christiana Figueres (then executive secretary of the UNFCCC) in order to call for the urgent need to put a price on carbon – and received a complimentary response in exchange (Figueres 2015). These various attempts to gain legitimacy clearly suggest that not content with giving its climate strategy a specific content, Total has also intensely sought to have it incarnated by respected spokespersons (inside the corporate realm), or mentioned by credible public figures (outside of it).

In this subsection, I have highlighted the primitive importance of discursive elaboration in the groping, multi-faceted process that has led to the emergence of what I have called the sustainability apparatus. Since I have insisted on its gradual emergence and rapid crystallization around the 2006 conference – and stressed the key role played by a handful of top managers, one could argue that my reconstruction conflicts with Foucault’s central thesis that “power in the substantive sense, ‘*le pouvoir*’, does not exist” (1980: 200). But if Foucault considered misguided the “the idea that there is either located at – or emanating from – a given point something that is a ‘power’”, he later clarified his position by declaring that “insofar as power relations are an unequal and relatively stable relation of forces [a condition, I contend, is verified in Total’s case], it is clear that this implies an above and a below, a difference of potentials. [...] [However,] for there to be a movement from above to below, there has to be a capillarity from below to above at the same time” (Foucault 1980:

200-201). I suggest that the intense mobilization of shared corporate values in the discursive elaboration of climate change is an illustration of this attempt to create the conditions for an effective “capillarity” that turns managers and employees into proper vectors of the apparatus.

Having analysed extensively the early elaboration of the apparatus, I now shift my focus to the heterogeneous practices that it has sought to interconnect.

3.3. Interconnection and articulation of corporate efforts

3.3.1. Salience of the ‘Strategy and Climate Division’

In this subsection, I examine the maturation phase of the sustainability apparatus, which roughly unfolds over the 2006-2015 period. I suggest that this temporal sequence both systematically structures the various initiatives already present in the group and impels new ones. In this endeavour, the newly-constituted corporate “climate imaginary” (see previous subsection) operates as a binder to create commensurability between practices that had until then remained unrelated but now come under a single banner that symbolically articulates a specific objective, namely to reduce Total’s carbon footprint. The Strategy and Climate Division (SCD), a small, informal department belonging to the corporate holding created in 2009, was mainly in charge of structuring the corporate response to climate change when I conducted my fieldwork at the headquarters in 2015/ 2016.

Before looking over the various initiatives that the SCD has assembled and sustained, I wish to draw attention to this department’s specific role as a catalyst in deploying the sustainability apparatus throughout the organization. Describing the circumstances under which he assumed his position as head of the SCD after a lengthy career in the upstream branch, the founder of the department recounts that

“There was a latent, but poorly-formulated demand in the group for such a department. My proposal [which was to initiate the creation of such a position] probably catalysed the opening of my position. Well, the issue was attracting more, but the need to create a position was not formulated as such.”

This verbatim account suggests that the creation of the SCD occurred when claims on climate change from external stakeholders were putting mounting pressure on the organization. The COP15 summit was then drawing to a close, and Friends of the Earth had published the previous year a highly-documented report on Total activities (Friends of the Earth 2008). To the best of my knowledge, it can be argued in hindsight, that this report has constituted one of the first attempts to produce a systematic description of the social and environmental impacts of Total’s activities, with a special problematizing of climate change as an overarching challenge for the industry. Right at the moment when the debate on carbon budget was gaining traction in the public sphere beyond the circle of climate scientists (Meinshausen 2009, Allen 2009; for the longer view, see Lahn 2020), civil society thus started to target extraction itself – and not simply the conditions under which it was realized. Consequently, the SCD’s small ad hoc team acted as a ‘precipitate’ of these underlying tensions, which would now find an appropriate ‘channel’ for their expression and management. As its director explained in 2015,

“The aim of the SCD is to make sure that the group makes all the adequate decisions in order to orientate the business positively, in a fast-evolving context; we have to understand what has happened in the past, what is going on now, and to have a vision of the future. We act as back-ups for the business segments, assisting them when they explore questions linked to climate issues; when you are at the corporate holding, there are never many troops [the SCD had only four employees] – you are above all involved in a work of coordination; you have to make sure that branches set up the most important actions.”

Rather than functioning as a centralized centre of command issuing top-down directives throughout the group, the SCD operated until 2015/2016 (end of the fieldwork) as the focal point of a reticular

feedback loop in which operational concerns related to climate change converge for the purposes of assessment, clarification and reworking before becoming reabsorbed into the organization (for example in the form of programmes to implement) or communicated to external stakeholders. This positioned the SCD as a key link in the constant reactivation of the two intertwined processes that Foucault mentioned in his description of the apparatus. I associate the first – “functional overtermination” – with an ongoing effort to standardize heterogeneous initiatives to make them fit the corporate official line. I define the second – “strategic elaboration” – as the never-ending endeavour to readjust the mutations that steadily reshape the theatre of operations. If these elements highlight the remarkable importance of the SCD in sustaining the apparatus, one should not, however, overestimate the real influence it retained. In fact, as its director himself explained,

“‘Strategy and Climate Division’, well, the name itself is both correct and misleading at the same time. The climate-energy policy is indeed shaped by the entire firm itself; it is also shaped by the president, and the executive committee.”

This last excerpt suggests that, far from being self-subsistent, the SCD rather functioned as a privileged locus for exhibiting the deeper power relations that structure the firm; for as Foucault notes, at the end of the day, “power must be analysed as something which circulates”, something which is “employed and exercised through a net-like organization” (Foucault 1980: 98). For this reason, it would be a mistake to consider that the SCD was, at the time of fieldwork, the unique point from which power emanated; rather, the mission of the few employees that were affiliated with it mostly consisted in readapting and enhancing the symbolic efficiency of the climate imaginary while it circulated in the corporate realm.

3.3.2. *Key projects articulated by the SCD*

Building on this analysis of the SCD’s prominent position in the organization, I now shift the focus to some of the key projects it articulated around 2015/2016. These were – and to a large extent, still are: (i) the “Zero Routine Flaring” initiative, which frames climate change as a challenge best handled through optimizing the production process; (ii) the testing of CCS technologies, which, alongside the firm’s other investments (like gas power and solar energy), suggests addressing climate change through investing more in disruptive business lines; and (iii) the structuration of a dedicated worldwide meta-organization in order to protect the legitimacy of the industry in the struggle against climate change. In this analysis, I do not strive for exhaustiveness; the sustainability apparatus has other constituents that I could have subjected to investigation – the internal fixation of a carbon shadow price in investment projects being a case in point. For reasons that I explain later, I will concentrate on CCS solutions instead of exploring solar energy and gas power in my investigation on (ii). All these considerations will help us disentangle the conscious and unconscious diversionary strategies through which wilful blindness is continually reproduced in the corporate realm.

(i) “Zero Routine Flaring”

One of Total’s early priorities for curbing emissions was, as I have already suggested, its attempt to reduce flaring. I suggest here that this particular initiative is an usual corporate response to external pressures in extractive industries; in the face of a threat to their social licence to operate (Parsons et al. 2014), firms need to demonstrate their commitment towards alleviating the footprint of their industrial processes. In this respect, flared gas is a genuine issue for the oil and gas industry. As a by-product of extractive processes, its impact on climate change is significant, for it generates approximately 400 million tons of CO₂ in annual emissions (World Bank 2020), which amount to ±1.0 per cent of worldwide emissions. Since 2001, Total (through the SCD) has constantly reaffirmed its commitment to act proactively on this issue – without giving sufficient information for

third parties to evaluate the relevance of the targets that the company sets for itself (Friends of the Earth 2008). During the fieldwork, several respondents identified the alleviation of gas flaring as the logical continuation of a dynamic initially adopted to promote industrial safety in the 1990s, but then extended to stakeholder management in the 2000s. However, like these earlier initiatives, reducing flaring implied undertaking a “systemic effort” (Bourg 2015) to bring about deep, substantial cultural change in the organization. As the verbatim account of a respondent engaged in coordinating the action on flaring shows:

“We have committed [ourselves] to reducing routine flaring, with the objective of suppressing it totally by 2030. And on this, we discussed a lot with the upstream division; we had to convince them, it was a real advocacy, an enormous amount of work [...] we had to make sure we could live up [to] such a commitment, and we had to defend this project with the executive committee. [...] And well, it is quite clear that pushing all these climate change issues in the organization requires a lot of energy.”

The upstream branch’s latent reluctance to take further constraints into account is illustrated by this somewhat nostalgic reaction from an older informant:

“The number of stakeholders [around operational sites] is now considerable, compared with the 1980s and 1990s; at that time, when we had an offshore licence, we had 100 per cent of the shares, and we could operate it peacefully, well, I mean, we could do our stuff; the state would tell us to do this or that, but it would not come and stick its nose in our business – but now, it’s all different; we are most often four or five companies on a single licence, and as soon as you want to do anything, you have to talk with the ministry of health, of the environment, of fisheries, to meet lawyers, to discuss [it] with NGOs, politicians.”

This last excerpt captures an irritation over the multiplication of expectations surrounding operations of extraction, which several operational managers (especially older ones) expressed over the course of the fieldwork. Being compliant thus implied first making a systemic effort, in that it required gradually changing the managers’ and employees’ mentalities, so as to ingrain an attitude (i.e., viewing flaring reduction positively, and not as a constraint) that would constitute one of the building blocks of the broader corporate discourse on climate change. As they strove to deliver on such systemic efforts, most managers found it difficult to accept that their company could be subject to other criticisms from stakeholders. A respondent highlighted the widespread conception that

“the firm [...] delivers an incredible, extremely complex service to society – it’s just hard to figure out what it does mean to spend months on a platform in the North Sea [...] when you haven’t gone through it! – and for this reason it’s not possible to criticize all these efforts!”

In the light of this, I want to insist that the “Zero Routine Flaring” initiative helped to construct climate change as an externality that could be reinternalized through the further expansion of a process of continuous improvement. As of 2015, a widespread perception among respondents is that expanding this dynamic (which had previously shown an ability to mitigate other externalities such as workplace accidents or environmental hazards) to include GHG emissions would be enough to secure a reinforced social licence to operate. This programme has come to constitute, I have said, a significant building block of the sustainability apparatus; its salience lies in the fact that it is intimately linked with business-as-usual activities. Many operational managers still get indeed their first tangible experience of the corporate response to climate change through the implementation of concrete measures designed to reduce flaring. This is not a neutral issue, for the programme implicitly frames climate change as an issue that Total can address through greater efficiency by optimizing the production process.

(ii) Transformative projects?

Another important building block that the apparatus articulated in 2015/2016 related precisely to being able to lower the carbon footprint of the business model. Here, I suggest that, while new industrial projects looked very appealing to managers and employees (during the fieldwork, most respondents spontaneously evoked Total's key position in the solar industry as a crucial component of the corporate response to climate change) and were largely praised for their technological disruptiveness, the idea that their development could entail a transformation of the organization itself was recurrently underplayed. As a top manager put it,

“there will be no swing, but a migration: you have to understand that achieving the transition from one business model to another takes time; we are trying to conduct it in a prudent and responsible manner.”

Rather than targeting a quick transformation of core business activities, which would imply an unprecedented reallocation of productive assets, the company itself then portrayed its interest and investment in innovative projects as a wise, pragmatic commitment towards optimizing the question of corporate exposure to carbon risk in the coming decades. This formulation aimed to give credence to shareholders while continuing to perpetuate a corporate climate imaginary based on the instrumental criterion of efficiency.

The case of CCS is an interesting example of Total's wait-and-see position. Although recent estimations have cast serious doubts on its viability to achieve the +2°C target (Hickel and Kallis 2019), CCS has been identified as the possibly only technology able to direct oil and gas firms into new businesses by securing their ability to redeploy their existing expertise in earth sciences and geology (Allen 2016; Haszeldine 2009; Lovell 2009). Although the firm had identified the industrial potential of CCS in the early 2000s at the latest, the episode that led Total to launch a pilot study certainly illustrates the firm's opportunist stance towards that technology. During interviews, a top manager related that

“Around 2005/2006, a minister had told Desmarests [then CEO]: ‘you, Total, earn too much money, I'll put a supertax on oil revenues.’ Desmarests answered: ‘no, my business is to invest, to invest in projects.’ And he gave pledges to the government that he would explore this new technology [CCS] by developing a project in Lacq [a drained gas field in southern France]; quite a mischievous outcome, isn't it? [...] but in the end, it cost more than the expected 50M€ (rather the double, actually!)”

This verbatim account reflects the group's defensive position and contrasts sharply with the emphatic tone of the dedicated corporate report produced at the time (Total 2007). Another highly positioned respondent expressed his scepticism about the transformative potential of CCS in 2015:

“[There is] no doubt that launching CCS would be absolutely transformative; in a few years, a whole new industry would have to be set up, and its infrastructure would be as massive as those that are used in the oil industry – all these pipes, factories, and so on. These are hundreds of billions of dollars' worth of investment. [...] I think that the availability of storage is a serious issue. There are surely some figures available here and there, some given by academics, but – and I would like to pick up a moderate word here – we can consider that all these evaluations are probably... fanciful. [...] The debate on CCS is an important one, even if I think it remains quite immature and childish.”

Apart from revealing a certain disdain on the respondent's part, the final words in this verbatim account indirectly show how the firm exerts its influence. Conducting pilot research projects on CCS obviously enhanced the legitimacy of the firm to take part to the public debate on the topic. As the experiments reached their term, the SCD monitored their provisional conclusions and in turn integrated them as building blocks into an enriched corporate climate imaginary. The latter then reinforced the persuasiveness of Total's position on climate change among managers, employees, and external stakeholders. CCS pilot projects have so far, however, had limited operational implications:

and as I shall later explain, if a few other experimentations have been launched since 2015/2016, Total's implication has remained strikingly limited in relative terms.

(iii) *Oil and Gas Climate Initiative (OGCI)*

Another significant SCD initiative consisted of setting up an international meta-organization with other transnational and national oil and gas firms to foster coordination and exchanges with peers over the complex, emergent issue of climate change. Before explaining how the OGCI operated as a catalyst for the sustainability apparatus at Total, I give some details about the salience of meta-organizations to constructing corporate legitimacy in the oil and gas industry. This sector, with its global scope, political influence, environmental imprint and technical complexity, has largely resorted to meta-organizations to comprehend claims from its external stakeholders and to build appropriate responses. According to the classification by Berkowitz et al. (2016), meta-organizations take different forms in the oil and gas industry. Some are *infra-sectoral* and work with organizations that specialize in specific parts of the value chain (such as the International Oil and Gas Producers, which exclusively brings together firms that are active in upstream operations). Others are *sectoral* and bring together firms of the oil and gas industry (such as the "Zero Routine Flaring" initiative, the OGCI). Yet others are *supra-sectoral* and assemble the organizations of related industries, such as oil, gas and mining (with one example here being the Extractive Industry Transparency Initiative); and yet others still are *cross-sectoral* in that they bring together the organizations of multiple, unrelated industries (for example, the United Nations Global Compact). Over the last few decades, the emergence of a wide variety of complex controversies has challenged the ability of oil and gas firms to secure social licences to operate. In this context, meta-organizations gradually have appeared as appropriate platforms from which collectively to elaborate and diffuse guiding principles, define modes of reporting, and enhance the capacities of firms through exchanges and best practices sharing (Berkowitz et al. 2016). The authors even suggest that meta-organizations could act as "tools for influential actors to 'impose' on others common principles and rules that serve their own purposes", without testing it further. I suggest that an analysis of the OGCI's recent history supports this argument. In fact, one can indeed interpret the impulsion of this initiative by Total's CEO at Davos in 2014 as an attempt by the firm to stabilize its nascent sustainability apparatus by projecting it beyond the corporate perimeter to the wider oil and gas industry. The crystallization of an international platform, which would itself facilitate connections with international institutions (like the UN and World Bank) would indeed secure robust external anchoring points to Total's strategy. A respondent affiliated with the SCD clarified Total's crucial role in the initiation of the OGCI:

"De Margerie [then CEO] launched the OGCI in Davos alongside Aramco and Eni. But clearly, we had not all the same resources and expertise to engage with the issue of climate change; Aramco lacked maturity, and they did not want to communicate on anything, and Eni had basically no resources to allocate on it. So, when I arrived, I spent quite a lot of time trying to define decision-making processes, governance frameworks, and so on. [...] Total was clearly doing the job, with the others lagging behind. [...] BG, Pemex, and Sinopec had indeed joined the initiative in the meantime, and the group was quite unbalanced."

As this verbatim account suggests, the SCD, in close dialogue with the CEO, was the instigator of this initiative. The SCD had embarked on an unremitting effort to foster the emergence of a shared vision, to smooth out divergences and disagreements, and to set a common operational agenda that would enhance the visibility of the industry's integrated commitment to take up the challenge of climate change. It also set up specific working groups towards achieving this objective:

"we have already set up working groups: one on natural gas, another one on energy efficiency, and a last one on renewable energies. It's going on pretty well, but this acceleration has somewhat disheartened Aramco; they are a bit more hands-off now."

The aim of the SCD's effort to coordinate a set of collective industry-level climate standards was to ensure that the meta-organization became a sounding board for legitimating Total's climate imaginary. This coherence-building strategy reached the pinnacle of its barely achieved success when ten CEOs of major oil and gas firms signed a joint commitment a few days before the Paris summit (OGCI 2015a) and called for the fixation of a "much stronger carbon price" (OGCI 2015b).

The earlier developments clearly suggest that Total's articulation of a discourse on climate change was concomitant with projecting this discourse beyond the corporate perimeter by creating a dedicated meta-organization composed of key actors: in this respect, our findings corroborate Bach's (2019) diagnosis that the OGCI "constitutes a *bona fide* attempt by the oil and gas industry to become engaged in climate governance, although on its own terms". By assuming the leadership role in this coalition, Total has helped to shape the wider institutional environment in which its own corporate discourse would be embedded; up to now, the OGCI has therefore "serve[d] both as [a] legitimating [and I would add, context-setting] institution, as well as [a] means of reducing uncertainties" (Berkowitz et al. 2016).

(iv) *Provisional conclusions*

In the previous paragraphs, I have analysed the heterogeneous dynamics inherent in the different building blocks that constituted the apparatus around 2015/2016, at the time of the fieldwork. The empirical description of their intertwined evolution is, I suggest, a concrete illustration of Foucault's observations on the complementary dynamics of "functional overdetermination" and "strategic elaboration" that characterize the apparatus. In a complex, fast-changing context, different effects, whether "positive or negative, intentional or unintentional" continuously alter the modalities of expression of the highly flexible rationality that drives the apparatus, with a constant process of readjustment therefore maintaining its overall coherence. I have also suggested that it was the synchronized deployment of these initiatives and the constant leveling of their potential interferences that actually achieved the continuous articulation of the apparatus. This does not mean that no "nodal points" can be identified in this diffuse space where "power circulates" (Foucault 1980: 98). In the next chapter, I demonstrate that the corporate realm is not flat but structured by powered relations reflected in the hierarchical chain of command: the enduring existence of which induces a "difference of potentials" (Foucault 1980: 200) that precludes any fluid circulation of power.

3.4. 'Scenography' and 'script-making'

In the previous subsection, I stressed that the constitution of the sustainability apparatus consisted of a process through which seemingly heterogeneous projects were continuously interconnected, thereby articulating a coherent internal rationality. I shall now highlight how in the post-Paris era (i.e., after I conducted the fieldwork) Total intensified its recourse to the sustainability apparatus, by perfecting its overall "scenography" and refining the "script-making" techniques associated with it, thus increasingly using it as an instrument to regulate the course of the climate controversy.

Three months after the conclusion of the COP21, P. Pouyanné presented his strategic plan "One Total 2035", setting quantified targets in order to lower the carbon intensity of the corporation energy mix for the next two decades – with the overall objective of turning Total from "an oil company into a multi-energy company" (thus re-activating a common motif in the industry; Gendron 2017; Rajak 2020). The elaboration of this plan inaugurates a new phasis, marked by the growing formalisation of debates about the +2°C compatibility of Total's industrial strategy. From 2016 onwards, the firm publishes a tailor-made climate report (named *Integrating climate into our strategy* until 2019, renamed *Towards carbon neutrality* in 2020), thereby endorsing the legitimacy of the

climate controversy – and showing its willingness to engage it rather than discard it. But the consequences of this repositioning are ambiguous: the in-depth exposition of the group's climate strategy (including different hypothesis and scenarios) facilitates indeed a fragmentation of 'the' climate controversy into a constellation of sub-controversies, which respective contextualisation requires manipulating highly-technical references (e.g., are the conclusions of the IPCC 2018 special report on the +1,5°C target properly taken into account? which references does the company mobilise in order to assess the much disputed carbon footprint of natural gas?, etc.). This labyrinthine complexity leads up to a point where it becomes nearly impossible to draw a synthetic view of the firm's actual engagement. In this specific case, the sudden influx of data induces an 'expertisation' of debates, which thus become 'colder', and less appealing to the general public: in other words, growing transparency paradoxically leads to an overall opacification of the controversy. By insistently keeping open a discursive space and playing the game of falsifiability, Total reserves the right to reply: either by highlighting the blindspots of its contradictors' objections, or by bringing complementary precisions – or even by modifying the framing of its own climate strategy (which then implies that the opposing party analyses the new version from scratch). This strategy thus appears eminently temporal: it allows indeed Total to create time intervals during which it can take advantage of an epistemic grey area in order to be one step ahead, and convince stakeholders that until proven otherwise, its climate strategy is worth crediting. The firm manages to saturate spaces of attention, thus ensuring that the bulk of its extractive activities unfold in the hidden abode of production.

In this respect, it can be said that Total somehow unintendedly (that is, below and beyond the explicit intentions of its top managers) succeeds in governing the climate controversy, by preempting its overall script and giving it its distinctive scenography. In this case, the coherence of the apparatus (and thus its credibility for external stakeholders) gets secured with the process of objectivation simultaneously configuring a process of subjectivation in which individuals actively cooperate in allowing the organization to set the pace and model their own worldviews (Foucault 1980; for a convergent Foucauldian analysis on the nuclear energy industry governing controversies, see Topçu 2013).

3.5. Provisional conclusions

In this subsection, I drew on Foucault's theoretical insights to describe the multi-faceted process through which Total developed a sustainability apparatus. I highlighted the variegated dimensions that constitute this "heterogeneous ensemble" (Foucault 1980), while insisting on their "co-constitution and co-evolution in wider ensembles of social relations" (Jessop 2010). In the remainder of this chapter, I draw attention to some shortcomings inherent in the Foucauldian theoretical framework and introduce some new perspectives to enrich the discussion.

4. Discussing the Foucauldian framework

In this section, I contextualize the deployment of the sustainability apparatus to demonstrate that it primarily occurs at an ideational level, in the sense that the corporate climate imaginary it shapes remains significantly disconnected from the massive material flows effectively channelled through the firm's extractive operations. As Bridge and Billon (2012) recall, at the end of the day, oil and gas firms are "global carbon conveyors", and their activities are of a sufficient scale to interfere with core biophysical planetary processes. On this basis, I argue that while the Foucauldian framework has proved insightful in retracing the construction of corporate legitimacy, it lacks critical resources to put this "schism of reality" into perspective. By mobilizing complementary scholarship, I identify and discuss some of the theoretical blindspots of the Foucauldian apparatus and conclude

that the corporate climate imaginary can be interpreted as buttressing the deployment of a deeper ‘objective alienation’, which I examine further in the next chapter.

4.1. The sustainability apparatus and the ‘schism of reality’

In this subsection, I give a brief account of the firm’s material, substantive inscription in the global carbon cycle (Bridge and Billon 2012) – notwithstanding the successful deployment of a persuasive climate imaginary. To do so, I analyse Total’s position through the lens of a concept forged by Aykut and Dahan who, in offering a diagnosis of the substantive outcomes of the UNFCCC process, suggested that the latter was subject to a “schism of reality”. By this expression, Aykut and Dahan (2015) mean to describe

“a growing gap between, on the one hand, a certain reality of the world – marked by a globalization of markets, an unrestrained exploitation of fossil fuel resources, a fierce economic competition between states clinging more than ever to their national sovereignty, and, on the other hand, a sphere of negotiations and of global governance that spreads the imaginary that there is an ‘enlightened central regulator’, in charge of designing emission rights and defining the modalities of their distribution – thereby becoming out of touch with this external reality.”⁶

I suggest that one can transfer this concept to the corporate context, particularly to the case of Total. Building on empirical data and drawing on the premise that any account of this schism is bound to remain fragmentary, I outline some perspectives that might give us a glimpse into the discursive nature of Total’s sustainability apparatus – when compared with the company’s actual capital expenditure.

4.1.1. *Oil domination: the uncertain prospect of hybridization*

A significant factor for consideration in assessing the ‘schism of reality’ hypothesis is the persistence of an entrenched ‘fossil’ corporate imaginary throughout Total’s hierarchical chain of command.

To elucidate Total’s official position on this critical issue, I have argued above that the 2006 conference and the subsequent emergence of the debate on carbon budgets had called for close collaboration between the newly-formed SCD and Total’s executive directors. Within a few years, top managers had become familiar with the corporate climate imaginary (of which they would be de facto front-line ambassadors), and had assimilated the main lines of the official corporate position on climate, now made explicit in dedicated reports. Yet, there is little evidence that the acquisition of these new elements of language altered their operational and financial decisions at the workplace.

During the fieldwork, climate change often remained an abstract (even potentially subversive) issue in the eyes of most operational managers and employees lower down in the hierarchy. An SCD manager described this distortion well:

“I am quite positive about the executive committee; I think they are getting it [climate change]. But when you go down in the hierarchy, for example with executive directors, it is much less clear. I would say that it depends on career track records, personal backgrounds; but it is true that there is a significant amount of advocacy that has to be done internally – it is a genuine challenge. For example, the director of a subsidiary who is incentivized by his ability to extract X thousands barrels per day is not very pleased when you come with a new constraint – for he is often already dealing with constraints on safety, environmental standards, etc. Talking about climate on the top of all this just superimposes new directives ‘from the headquarters’ that are badly perceived. [...] [It is] not easy to talk about climate change in such conditions. And if you go down again in the hierarchy, people are way too far from the issue.”

6 It is worth underlining that the final document of the Paris Conference formalizes the 2°C target without even mentioning the term “fossil fuels” (Aykut and Castro 2017).

This verbatim account suggests that, wherever extractive activities take place materially, there is a non-negligible decoupling between declarations on climate change emanating from top managers (and directed primarily to external stakeholders) and the spontaneous reproduction of a ‘fossil’ imaginary. A respondent ingenuously interprets the salience of oil in the formation of Total’s corporate culture:

“There is something like an ancestral trauma in the firm’s story. When Total was still called CFP [*Compagnie Française des Pétroles*], it had been nicknamed (in the 1960s and 1970s) ‘Cannot Find Petroleum’ – just because, at that time, Elf’s exploration had ramped up while Total was lagging behind in its turf (i.e. in the Gulf States and Indonesia).”

The hypothesis that such structuring forces are still shaping Total’s corporate culture oddly resonates with Castoriadis’s claim that “psychoanalysis sheds light on some aspects both of politics and of the difficulty eventually encountered in working and struggling for [a] collective project” (Castoriadis 2010: 230). This deep fossil imprint on the corporate imaginary has been (and undoubtedly continues to be) reinforced by the fascination that oil exerts over individuals because of its very lucrative nature. French semantic resources enabled a respondent to express this idea powerfully:

“when you drill and find oil, it’s very simple: you have to realize that it’s nothing but liquid money [*‘argent liquide’* means ‘cash’ in French] gushing out of a pipe.”

A sense of the sheer profitability of oil (which employees and managers directly involved in the cycle of production cannot help but experience) is likely to distort the thinking about alternative sources of energy. Regardless of its underlying truth, the following consideration (which surfaced recurrently in interviews) hints at this negative bias.

“It is necessary to rely on the fossil fuels base in order to prepare [for] future developments. [...] Renewables won’t pay the dividends [that] shareholders are expecting.”

An observation from another respondent further delineated this crowding out effect by suggesting that the historical priority placed on developing oil resources profoundly shaped Total’s organizational structure, *de facto* turning extraction-oriented activities into what I earlier called an exclusive legitimizing myth:

“One of my acquaintances had worked in the solar branch before joining the upstream one; but he really struggled to get his position and, despite what is usually said, it’s not so easy to move from one branch to another. Once in the upstream branch, he told me that it was incredible for him to realize how easy it was to mobilize resources, to develop new projects, etc. Everything was more fluid than when he was in the solar branch, where he had to justify everything and to struggle to get money, etc.”

This account epitomizes the deep encrustation of a fossil imaginary in the corporate realm and illustrates how it replicates itself through very concrete situations. It apparently shocked the person in the case reported above to notice, notwithstanding corporate commitments to boost renewable energies, how smoother his working environment had suddenly become once he had joined the upstream branch. Beyond this example (which is on a micro level), a more fundamental issue was being discussed around 2015: the perennity of Total’s implication in the solar industry. Total had then relatively recently acquired a majority stake in SunPower for \$1.37 billion and had thereby secured a leader position (*Wall Street Journal* 2011). Yet, as a highly-positioned respondent noted four years later, it was unclear whether this takeover had had an effect on corporate culture:

“Well, in my opinion there are relatively few synergies, for Total arrived above all as an investor. [...] It is a business that remains different from the historical core business of the company, and it will have to be

confirmed as constitutive of corporate identity [...] in between Total can always resell its stake tomorrow. We can't say there is something like a genuine, operational industrial complementarity. The fact that we [Total] are investors is denied by the management; they say and repeat that now we are an industrial actor in the PV sector, and not a simple investor, etc. But it remains open to discussion."

This type of account account re-emerged time and again in interviews. Another highly-positioned interviewee implicitly confirmed the pervasive authority of oil over other activities, and even broadened the extent of the interference, by suggesting that the oil culture itself was *also* a latent obstacle to the development of natural gas. Commenting on Total's most recent strategic announcements (early spring of 2016), he said:

"You have to realize that from a cultural point of view, even the transition to natural gas will be a challenge. [...] Here, the noble is oil. And it's truly ingrained! As he puts Total on track to shift towards a gas-based business model, Pouyanné will face tensions [...] but he knows this, and he knows it won't be easy."

It is important to emphasize here that while it already constituted a cultural challenge for Total to announce in 2016 it would shift from oil to natural gas, the legitimacy of gas as a bridge fuel in scenarios of energy transition was already hotly contested. There were (and there are still) well-founded presumptions that the sizable potential for coal-to-gas displacement could cause negative feedback and infrastructural lock-in (Vormedal et al 2020).

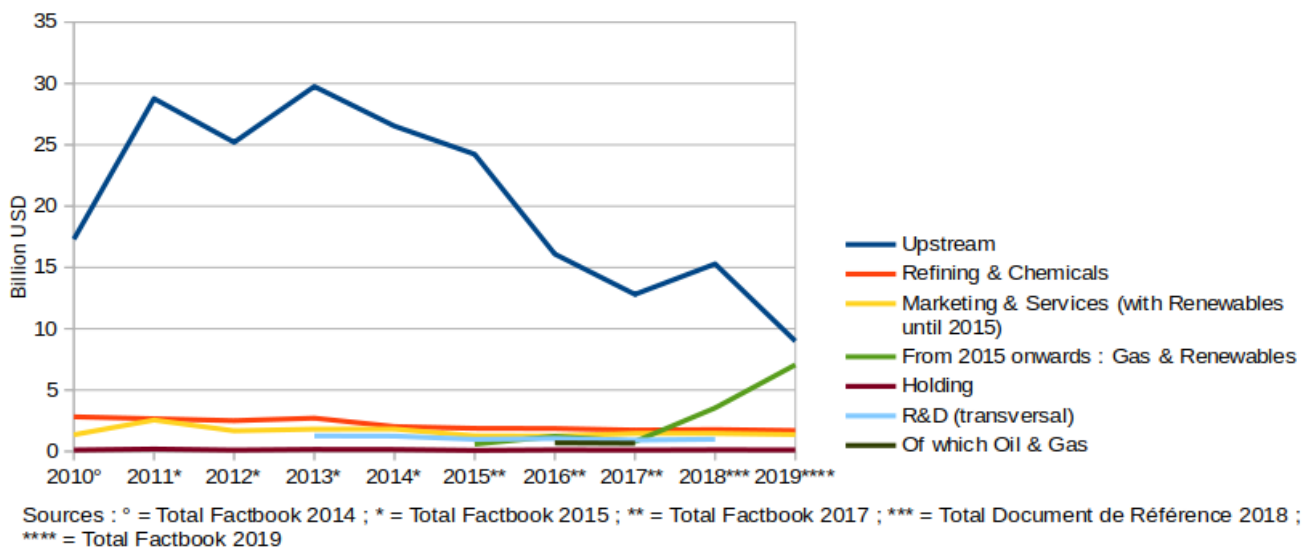
All these various elements back the hypothesis that Total's corporate imaginary identifies, privileges, and seeks to stabilize the extraction of fossil fuels as the activity that structures the group's identity.

4.1.2. *Distorted orders of magnitude*

Through their examination of the words, decisions and deeds of two highly visible US-based transnational oil and gas firms during a period of national debate on oil exploration in the Alaskan National Wildlife Refuge, Cho et al. (2015) demonstrate that "contradictory societal and institutional pressures, in essence, require organizations to engage in hypocrisy and develop façades, thereby severely limiting the prospects that sustainability reports will ever evolve into substantive disclosures".

In this subsection, I build on the available quantitative data (see Figure 1) to demonstrate the selective nature of Total's façade: by highlighting some figures while ignoring others, the firm produces a distorted image of the material flows it animates. Through institutional means or via the media, Total (or its CEO) regularly resorts to impressive lengths to highlight its corporate commitment on climate change. Public announcements by the CEO that Total would invest \$500 million annually in renewable energy (Bloomberg 2015), dedicate \$7.4 billion to research and development (R&D) spending between 2015 and 2019 (Total 2016b), assign \$100 million annually to R&D on CCS-related projects (Total 2019, 2018), or that the members of the OGCI would collectively allocate \$1 billion over the 2017-2027 decade (Total 2020) thus have a diverting effect, by propping up absolute values disconnected from their broader context – that is, the firm's global capital expenditure strategy. Evidence from Total's reference documents published between 2000 and 2009 thus indicate that during this period, the firm invested more than \$76 billion in the extraction of fossil fuels (upstream segment); this dynamics even intensified over the past decade, with \$205 billion over the last decade (Figure 1).

Figure 1: Total's Gross Investments, 2010-2019



The graph displayed in Figure 1 shows that between 2010 and 2014, the upstream segment, undoubtedly the most capital-intensive one, attracted a steadily increasing portion of the corporate investments, starting from 80.2 per cent in 2010, rising to 86.9 per cent in 2014 before declining slightly to 86.6 per cent in 2015. The new nomenclature produced in the 2017 Factbook makes it difficult to assess the effective share of non-fossil investments in the “Gas and Renewables” category. It is probable that the acquisitions of Engie’s liquefied natural gas (LNG) assets in 2018 (\$1.5 billion) and of Anadarko’s gas assets off the Mozambican coasts in 2019 (\$3.9 billion) are reflected in the green curve – which increase would thus rather signal the growth of LNG activities in Total’s business model than massive investments in decarbonized energy sources. By offering a privileged image of how the firm projects itself into the future (at least until the change in nomenclature complicate interpretations), this graph on capital expenditure presents compelling evidence of an enduring “schism” between the firm’s discursive response to climate change and its actual socio-material commitments. Recently, two studies on climate change speech of CEOs of European transnational oil and gas firms – Ferns et al. (2017) on BP, Shell and Total; and Gendron et al. (2017) on BP – have pointed to an exactly similar disconnection. Faced with the injunction of serving two masters, namely civil society and shareholders, CEOs are at the head of “paradoxant systems” (Pérezts et al. 2011) that they have to present as coherent. In such a context, the “organizational mythmaking” that Wright and Nyberg (2014) described earlier therefore appears as a highly efficient strategy for displacing sustainability tensions and limiting cognitive dissonance. In any case, the persistence of this schism confirms Rajak’s aforementioned remark that for best-in-class European transnational oil and gas firms, corporate denial is not “about what is seen or understood, but about the capacity to act” (Rajak 2020). It is properly speaking an “implicatory denial, whereby the facts [delineated by the IPCC] are acknowledged but the expected implications [organising an equitably-managed phase out from fossil fuels] are not” (Rajak 2020).

Of course, it would be naive to presume that Total’s managers either entirely ignore this rift between the discursive and socio-material realms (thus experiencing an integral false-consciousness, Marx) or on the contrary that they get a crystal-clear grasp of it (thus taking on a plain cynical reasoning, Sloterdijk). Rather, it is certainly more correct to say that they “know and not-know”, in a sort of epistemic flickering. And as Bovensiepen and Pelkmans (2020) recall, it is this unstable, blurred, re-

fracted, and banal moral configuration that the concept of wilful blindness precisely seeks to denote. The selective awareness that proceeds from Total's sustainability apparatus thus paves the way to the maintenance of wilful blindness, which in turn socially sanctions compartmentalized, distorted perceptions of reality.

4.1.3. *The performance of seriousness*

I shall now deepen the interpretation of the schism of reality I have just identified by importing Blühdorn's (2007, 2013) concept of "simulative politics" into the corporate realm. Since the late 1980s, he argues, "both the [authentic] ecologist critique of modernity and the ecologist belief in a comprehensively different society have become largely exhausted" (Blühdorn 2013) – an exhaustion notably precipitated by the normalization of discourses relative to the environmental crisis and their reframing in the market-compatible paradigm of ecological modernization. Yet, he stresses that "the urgency of a radical culture change and structural transformation of modern capitalist consumer society [...] has never been as widely accepted" (Blühdorn 2013). As a result, there is now a large consensus among political and corporate elites that "it is time to stop talking about things and take decisive action" (Blühdorn 2007). A top manager at Total clearly expressed this stance in 2015, by claiming that:

"With the arrival of the new CEO (Pouyanné), the main evolution of the last year, has been the fact that he has said: 'I believe climate change is a serious topic, we are part of the solution, we take clear commitments'... in a way, he places himself in the wake of the ex-CEO (de Margerie) who had said 'I believe in it' but he adds very clearly, that 'we are going to bring solutions'."

These words clearly reflect a clear castigation of *merely symbolic* politics. However, according to Blühdorn, this kind of positioning has become mainstream in the last decade. Such a paradoxical situation therefore calls for a meta-critique. Following Blühdorn, I suggest that one can interpret Total as the vector of a "simulative politics" in which "the 'symbolic performance of politics' [expressed by condemning *merely symbolic* politics and calling for action] serves the *performative regeneration* of legitimacy". As he puts it, simulative politics is a response "to the exhaustion of authentic politics and the symbolic emptiness of symbolic politics [by offering a] vital tool for sustaining the unsustainable" (Blühdorn 2007). In a context in which the environmentalist critique is brutally blunted, most stakeholders no longer expect oil and gas companies to engage in a transformative, substantial shift – and while they more or less grasp that these firms have neither the will nor the ability to get serious, they (potentially unconsciously) revise their expectations downwards by demanding that the firms perform (at least) symbolically, and demonstrate that "they are serious about climate change". In this context, demands for a "performance of seriousness" (Blühdorn 2007) thus supplant disillusioned hopes for substantive achievements (for an analysis of the UN-FCCC process through this prism, see Aykut 2020; of BP, Gendron 2017, of Shell, Andersson 2020).

On this basis, it is possible to interpret the fundamental ambiguity of Total's corporate discourse as the symptom of a wider cultural contradiction, itself inherent in the "post-ecological politics" of Western societies.

4.2. Beyond Foucault?

In this subsection, I propose to explain why the Foucauldian theoretical framework I have mobilized in the two first sections is insufficient for contextualizing further the "schism of reality" that I have just described: the main take of the argument is that the semiotics underlying Foucault's concept of apparatus owe a great deal to the modern tradition of rationalism. Consequently, it has blind spots that need elucidation.

As a prominent figure in French structuralism, it is important to note that Saussure's rationalist concept of the sign had a major influence on Foucault's work. According to Saussure, "the sign enters the real world as a unity of sound and sense, from which nothing can be removed: [...] [it is] theoretically if not practically, inaccessible to elements of the context" (Jappy 2013: 70). He thus conceived of language as "an underlying, 'subtle' system of units, each associating an acoustic image with a concept" (Jappy 2013: 59), in much the same way as Descartes theorized the mind as a system of classification enabling us to understand the extra-mental world (thus presupposing a clear-cut line between mind and world). In contrast to the rationalism implied by the Saussurean view (itself impregnated with Cartesian dualism), Peirce's semiotics offers an alternative background theory of the sign marked by both pragmatism and empiricism. As suggested earlier, resorting to the trichotomy he establishes between iconic, indexical and symbolic modes of reference allows to emphasise the "intrinsically hierarchical and emergent nature of the referential processes that underlie [human] mental processes" (Deacon 1997: 442). Said differently, Peirce's semiotics emphasises the embeddedness, contextuality of our symbolic capacity: far from being a miraculously free-standing, locked-out system (as Descartes' *cogito* might falsely suggest) language rather consists of a ragged aggregate constantly reshaped by composite sources that, to interact, need an existential medium. In this respect, one can interpret Blühdorn's diagnosis of "post-ecological politics" as a negation of this contextuality of language, and a ruthless manipulation of its mystifying potential: in particular, the case study of Total suggests that it developed its climate imaginary as a set of ideational projections largely decorrelated from the underlying socio-material reality of the corporation.

Bringing to light this background feature of the Foucauldian framework – its affinity with a structuralist rather than pragmatist semiotics – makes it easier to explain some of the criticisms made about the unclear implications of its ontological premises. Carolan (2005), for example, explains that

"the Foucauldian framework presents a picture of social life where discourse is analytically prior to, and a causal force upon, everything else, including the biophysical realm [...]; the body for Foucault is only accessible through an investigation of how the discourse of 'the body' emerges out of the (medical) sciences, thereby reducing it to effects of discourse and its corollary components of power/knowledge."

In the same critical realist vein, Turner (cited in Carolan 2005) argues that Foucault's analysis of the human body frames the latter as "a contingent effect of power rather than a fact of nature". Both remarks corroborate the hypothesis that the Foucauldian theoretical framework has in some way inherited the archetypal traits of modern idealism: the social ontology it implicitly mobilizes renews Cartesian intuitions by positing a relative antecedence of the ideal over the material realm, since one cannot give "an independent a priori causal force to the emergent regimes of power/knowledge" (Carolan 2005). This remark indirectly supports the conclusion of our previous findings. In the first two sections of this chapter, I have used the Foucauldian concept of apparatus to elucidate Total's response to climate change. Although this theoretical framework proved relevant for retracing the constitution of a corporate climate imaginary in the organization, it remains relatively ill-equipped to put its mainly ideational nature into perspective.

In this respect, the effort by Jessop (2004, 2010) and Jessop and Sum (2014) to lay the foundations of a "cultural political economy" (CPE) as a "distinctive post-disciplinary approach to capital social formations" (Jessop 2004) can constructively complement the Foucauldian approach, and fill the gap identified in the preceding subsections. Probably closer to the Peircean paradigm described above, Jessop's theoretical framework draws more explicitly on the premise that economic imagin-

aries are ragged aggregates. Anchoring cultural political economy in the Marxian tradition, Jessop argues that his framework is “not only concerned with how texts produce meaning and thereby help to generate social structure, but also how such production is constrained by emergent, non-semiotic features of social structure as well as by inherently semiotic factors” (Jessop 2004). This clearly suggests that we should interpret the reproduction of economic imaginaries as ontologically rooted in a “dialectic of discursivity and materiality” (Jessop 2004). In effect, Jessop’s insight into our reflection comes precisely from the enhanced status he accords to materiality, which we understand here as “the sensuous and phenomenal qualities of things and their implication in human social and cultural life” (Rogers 2012). Expanding a Gramscian intuition, he argues that economic (and by extension corporate) imaginaries are “organic”, namely that they emerge from a socio-material substratum, rather than being purely “arbitrary, rationalistic, and willed” (Jessop 2004, 2010). By offering specific affordances (Gibson 2014) to those who interact with them, “technologies [indeed] have a key role in the selection and retention of specific imaginaries” (Jessop 2010). Similarly, the crystallization of past labour in the built environment (for example in the form of an extractive infrastructure) creates “structurally-inscribed selectivities” (2010), the effectuation of which reinforces path dependency. This insistence on the material contingency of collective imaginaries echoes Mitchell’s (2013) demonstration, which highlights the spectacular articulation we have seen throughout the twentieth century between the progressive structuration of the fossil fuel industry and the advance (or regression) of democratic ideals. In a similar way, and drawing on Jessop, I suggest that the infrastructures (such as platforms or refineries) that constitute the milieu in which most Total employees work make no contribution towards framing imaginaries of energy transition: far from being contingent, the “fossil landscapes” (Carton 2016) that Total creates and maintains through its business-as-usual operations (backed by subcontractors) make a deep and long-lasting imprint on the ever ongoing formation of its corporate imaginary. The fact that cycles of investment/production have a very large span in the oil industry reinforces this effect: when climate change emerged as a public concern, the company was indeed already involved in such industrial cycles, and this ‘material antecedence’ was already framing and constraining the emerging contours of the ‘web of interlocation’ through which climate would be discursively constituted as a matter of concern.

In other words, the analytical scope that Jessop’s cultural political economy offers allows one to emphasize the mainly ideational nature of the climate imaginary, as well as its disconnection from the material flows that corporate activities effectively generate. Williams’ (2015) observation that “language encodes and enacts power relations” is worth considering here. Indeed, Jessop’s approach appears particularly acute when it comes to unveiling the plurality of power relations that gradually become encoded in Total’s language; these can either be ideational, or encrusted in social conventions and economic structures, or even crystallized in human-altered biophysical landscapes. As a result, any attempt to forge a corporate imaginary from scratch without considering the antecedence of these messy socio-material realities is bound to fail. Conversely, the use I have made of the Foucauldian framework has been more to highlight the latter’s potential to describe the diverse ways through which language enacts and reconfigures certain power relations than to decipher the power relations already encoded in it, for which Jessop’s framework offers better theoretical resources. In the next chapter, I further explore this issue of power relations (to which Foucault explicitly refers when he talks about the “purposiveness”, or “strategic nature” of the apparatus) by suggesting that the formation of the corporate climate imaginary is mainly fuelled by the wider socio-economic process of capital accumulation, on which it exerts a positive feedback by securing corporate legitimacy.

5. Conclusion

In the first sections of this chapter, I have reconstituted the multi-faceted process through which Total gradually elaborated its climate imaginary. In this endeavour, I have resorted to the Foucauldian concept of apparatus, which seemed conceptually appropriate for capturing the highly-productive ambiguity of Total's response to climate change: the growing organizational capacity of the firm to manufacture and reproduce wilful blindness through the apparatus has gradually become a *tool* for governing the course and setting the pace of the climate controversy, and an *asset* allowing to secure the firm's reputation on financial markets. By constricting the moral horizons of its managers and employees, Total's climate imaginary thus directly contributes to buttressing a power structure which dynamic trajectory is still largely shaped and incentivized by operations of extraction. In the next chapter, I engage with the task of delineating further this socio-economic dimension of objective alienation of which the cultural/cognitive alienation I have just described has been both a correlate and a prerequisite.