When Experimental Practice Comes First

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Abstract: This article hosts a vivid discussion on Papadopoulos' book *Experimental Practice. Technoscience, Alterontologies and More-Than-Social Movements* (Duke University Press, 2018). This is a speculative and politically engaged book. It crosses the boundaries of social theory, science and technology studies, feminist theory and autonomist thought. The following contributions explore and critically discuss an essential topic of the book: the role of movements and everyday practices in transforming eco-societies from below. Andrea Ghelfi situates the book in an historical contingency in which social transformation is primarily driven by material, ontological transformation. Luigi Pellizzoni offers an analysis of the ambivalences of experimentalism in a context marked by neoliberal governmentality. Roberta Raffaetà brings attention to three interrelated themes: practice, theory and the role of institutional power. Finally, Dimitris Papadopoulos' response focuses on the complicate relation between practice and politics in more-than-social movements.

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Introduction

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Experimental Practice. Technoscience, Alterontologies and More-Than-Social Movements is a book that explores the many links between technoscience and movements. The author, my friend and teacher Dimitris Papadopoulos, takes seriously the multitude of implications in thinking politics, or better a politics of justice, in a historical context marked by the deployment of technoscience. The first implication of this phenomenon is the decentring of the humanistic subject: Papadopoulos situates his book within the wider understanding of the human-nonhuman continuum that characterises the culture of the early twenty-first century. The continuous folding of everyday life, science and technology into each other – something that we learnt to call technoscience – here is seen as the main drive of the posthuman culture. But instead of mapping the multitude of theoretical approaches that in various academic fields are offering different versions of this 'more than human' turn, Papadopoulos accumulates in this precious book a significant series of concepts, ideas and practical examples for mapping and imagining radical politics within the posthuman condition.

Papadopoulos' work resonates strongly with Haraway's concept of technoscience. In her words in fact technoscience disarticulates the imaginary time called modernity, signifying a mutation in historical narrative, "similar to the mutations that mark the difference between the sense of time in European medieval chronicles and the secular, cumulative salvation histories of modernity."(Haraway 1997, 4). Technoscience exceeds the 'modern' distinctions between nature and society, subject and object, the natural and the artefactual. New configurations of knowledge and practices emerge in the midst of this implosion of boundaries, included new human-nonhuman assemblages grounded on the experimentation of alternative forms of life. Papadopoulos sees in the end of humanist culture and in the decentring of the human in relation to the material world, technologies and other species, a condition of possibility supported also by the desire of escaping humanity in favour of richer forms of sociomaterial composition and multispecies Earthly cohabitation.

In the Italian context we had a few occasions – I am thinking, amongst others, to Pellizzoni's book *The New Mastery of Nature. Ontological Politics in a Disposable World* and to the seminars organised by the group Politics Ontologies Ecologies in Pisa in the last three years – for discussing the multiple relations between technoscience, ontologies and politics. This book can offer a significant contribution to this discussion starting from three central ideas that crisscross it:

1. Technoscience regards practices as human-nonhuman activities that shape the material configuration of worlds and constitutes an his-

torical contingency in which social transformation is primarily driven by material, ontological transformation.

2. Alterontologies constitutes the key field of experimentation for organizing a political posthumanism.

3. Insurgent posthumanism configurates an intelligibility of movements irreducible to the categories of modern politics.

In the next sections I am going to highlight, albeit in a rough way, these three key hypotheses emerging from *Experimental Practice*.

Ontological Politics

A central thesis of the book consists in the idea that in our technoscientific era production has a double meaning: the construction of new ontologies and the insertion of them inside scales of value. The term 'biofinancialisation' here designates not only an economic strategy or a new regime of accumulation that emerged in the Global North after the crisis of Fordism, but also a culture of permanent valuation pervading society and the everyday life: any aspect of sociomaterial life and the environment enter into this indeterminate and unstable process of evaluation that feeds the movements of financial markets and financialised societies. The universalising matrix of financial value is a logic in which the future is universal and exploitable. Biofinancialisation is the financialisation of life and matter. Following Papadopoulos' argument, the characteristic core of biofinancial accumulation consists in the very fact that "biofinancialization becomes *molecularized* in flesh, in code, in matter. It alters the composition, the material infrastructure, of bodies and forms of life […] biofinancialization becomes the ecology of terraformed existence more so than just a system for accelerating accumulation" (2018, 41). In the global economy not only every resource and service provider will be counted, but as HSBC Bank analysts remember us "food chain and the supply chain will merge" (2018,42). We are witnessing at the becoming rent of Earth beings, animals, plants and ecosystems. A disposable world, saying it with Pellizzoni, is the outcome of a process of biofinancialisation that transforms the material tissues of everyday life since the ecobody of Earth is not separable from the current architecture of accumulation. The frontiers of productionism and the frontiers of matter merge in natureculture: here lies the actuality of ontological politics in technoscience. Ontological politics are the specific practices that perform the inclusion of new formations of matter into the accumulation regime of current economies. In a historical contingency in which technoscience and the processes of biofinancialisation are making worlds and rearticulating forms of living and dying in natureculture, politics becomes ontological politics. At the same time, as we will see, the ontological terrain constitutes for Papadopoulos the key field of experimentation of other ways of being and for organizing alternative possibilities of world making, alternative materialisations.

Ontological politics, or better alternative forms of ontological politics, doesn't require primary new forms of representative politics, but new practices of making; other forms of life bringing certains humans and certains non-humans together in more sustainable ways. Alternative materialisations, not alternative representations: on this terrain of intelligibility, it is possible rethinking a constituent politics in technoscience. But what does constituent mean in a present characterised by the proliferation of the sprawling net of natural-social-technical associations and by the implosion of the 'modern' chronotope? How can we think politics beyond the categories of modern political thought? And, what kind of intelligibility of politics emerges from the idea of 'alternative materialisations'? Papadopoulos proposes a reading of Marx's *Economic and Philosophical Manuscripts* based on a definition of political activism grounded in an understanding of materiality: all that exists is matter and each transformative activity is material. Which means that matter itself cannot be conceived as an outside or an object of human practice: matter is humanity's body too. Matter is a vital force and inorganic as well as organic life are movements of matter. In this context, activism and matter are conceived simultaneously and a collective activism is defined by its capacity to affect material change. If the several trajectories of technoscience create new ontologies, new worlds and new forms of life, a politics of alternative materialisation refers to the plurality of possible engagement in a specific socio-material arrangement. Following Papadopoulos 'politics here means that by performing only one of the existing options rather than any other we change the very constitution of being in a very specific direction' (2014, 71), materialising certain ontological possibilities rather than others, certain forms of life rather than others. In the middle of the current technoscientific transformations, Wittgenstein's maxim 'what has to be accepted, the given is – so one could say – forms of life' (1958) is, more than ever, useful for thinking the ontological consistence of a radical politics.

If a constituent politics refers, first of all, to the material capacity to affect material change, we can think, with Papadopoulos, a politics of worlding in technoscience as a capacity of crafting matter: a capacity to act that does not designate a 'substance', a 'human agency' or a 'universal wholeness', but a 'capacity to act with' (Haraway 2003) enacted from situated practices. In a politics of worlding in fact acting means always acting with. The concept of worlding comes from the work of Chris Connery and Rob Wilson (2005), where this term designates the making of social worlds that crisscross global space in variable and divergent trajectories. This notion has been created in order to put in question an abstract and universalistic reading of globalisation, valorising the plurality of tensions and routes that populated the global dimension. Their work constitutes an invitation for thinking the proliferation of differences in our contemporaneity and the notion of worlding suggests an attitude for opening our thinking and practices to other ways of being, ideas, everyday practices

and narrations. Papadopoulos extends the meaning of this term 'from society to matter'. As such: 'I want to think of worlding as an opening to material processes and practices and as a possibility for crafting – literally – common, alternative forms of life' (Papadopoulos 2018, 94). Along this perspective, a politics of worlding in technoscience is synonymous with a form of politics and a style of activism which engages directly with 'the materialisation of worlds': a politics immanent to the processes of relating and crafting that directly affects the materialisation of the forms of life that inhabit the world. What I am calling, with Papadopoulos, a politics of matter is, in fact, a way of thinking activism as a direct engagement with matter: it regards forms of human and non-human compositions, modalities of collective assembling and everyday experiences of making ecologies of living. Here politics, rather than designating an external and a sort of second temporality that impacts life and material existences from outside – as it is in representative politics and in policy – or a terrain of struggle around the big signifier of 'social power', is conceived as a constituent politics that refers directly to the conditions of possibility through which different modes of existence can live together in ecologies of living thick enough, rich enough and responsible enough for cultivating livable words and eco-social justice.

Insurgent Posthumanism

The book has two beginnings. I already mentioned the first one – the emergent material culture of posthumanism. The second beginning regards social movements, or better the political impasse of social movements in times of biofinancialisation. Following Papadopoulos, neoliberalism, the architecture of the financial system and the culture of valuation, imposes a significant impasse to strategies and tactics of social movements. Even post 2008 movements, such as the global cycle of struggles of 'Occupy' have not been capable of disarticulating the neoliberal governance. The condensation of segments of the state with specific private interests leading the current phase of neoliberal accumulation resisted to the impact of the socio-political consequences of the 2008 economic crisis. Even worst, the emersion of a global wave of regressive nationalism risks to redetermine the composition of these postliberal aggregates mixing up the ferocity of neoliberal regime with the resurgence of traditional conservative ideologies. We are in a political impasse in which the word Left is day by day an empty signifier and the capacity of movements to constitute a democratic counterpower – as it was for example in the Fordist phase – is getting weaker and weaker. This impasse demands a radical rethinking of the role of movements in eco-social transformation and what autonomy could mean in post-liberalism. From this perspective, Papadopoulos' book contributes to think the structural reasons of a crisis of democratic negotiation. At the same time, it instigates the exploration of new political intensities and fields of experimentation inside and

against the ontological configuration of politics. More than social move-
ment is the concept that Papadopoulos offers in order to start thinking
autonomy differently.

More than social movements are movements that are transforming the
ontological conditions of everyday existence by experimenting alternative
politics of matter. This is a form of activism that reclaims the creation of
new material modes of existence through collective practices. As we have
seen earlier, in this historical contingency production has a double sense:
the construction of new cosmograms and ontologies and the insertion of
these ontologies into scales of value. The imageries and the practices of
geo-engineering exhibit Earth as a disposable world (Pellizzoni 2015) and
the narrative of the Anthropocene reinforce the modern idea that the des-
tiny of Earth is in the hands of humanity. Contemporary the financialisa-
tion of the ecological limits (Leonardi 2017) inserts the ecological value
inside the financial measurement. The underlying logic of the culture of
valuation is that the worth of goods, things, activities, spaces, environ-
mental conditions and other species can be essentially translated into fi-
nancial evaluation. In times in which the pervasiveness of the technosci-
entific apparatuses has a direct ontological impact on ecosystems and the
extension of financialisation includes life and death of animals, plants and
ecosystems inside his multiple logics of economical valorisation, ontology
returns to politics. In these conditions the central strategy of movements
consists in something less and something more than simply contesting
and addressing existent institutions. Emergent socio-ecological move-
ments are reclaiming everyday materiality by actively recomposing and
rearticulating it. When ontology comes to politics autonomy is mainly
about crafting new everyday political ecologies: alterontologies.

One of the key issues of the tradition of class struggle and social
movements in general consists in thinking human society and nonhuman
world as two different and separated spheres. Politics, consequently, per-
tain to the sphere of society and the principal avenue for social transfor-
mation passes through seizing the centres of social and political power.
The many entanglements between politics and ontology are often erased,
and the state risks to become a sort of political universal to be contested,
conquered and transformed. Forms of life and modes of existence, so
what makes irrelevant every essential distinction between human society
and material world, are often erased from what matters as politics. I feel
that the necessity to think politics in more than human worlds emerging
from this book comes from a demand of life experimentation that is not
anymore disposed to separate justice from everyday life, nature from cul-
ture, human from nonhuman world and action from care. Papadopoulos
captures in his writing a political intensity of our times, an absolute veloc-
ity as Deleuze would say, an electric zone in which life and politics are
inseparable: an insurgent posthumanism as an active tension living inside
the constituent conatus of contemporary and noncontemporary move-
ments. The notion of insurgent posthumanism has multiple descriptions

and it designates in the book three strategic escape routes. The first one is about the transition from a highly regulated relation to the material, technological and biologic realms by making a multiplicity of experimental and self-organised common worlds, a plurality of ecological spaces. The second one consists in a move from representational politics to the rehabilitation of politics as an embodied everyday practice. The third one is a move toward a post-anthropocentric history, in which history is not only made by human subjects.

Justice and More-Than-Social Movements

The volume explores the practices and the imaginaries of a series of movements: amongst others autonomy of migration, permaculture and other practices of eco-commoning, hackers and makers material culture, indigenous resistance and AIDS activism. These movements are understood and described as more than social movements, movements that starting from situated practices, are constructing other ways of inhabiting our planet. In relation to the case of AIDS activism, Papadopoulos analyses a coagulation of practices that have been going on since the start of the epidemic in 1981 in the USA. AIDS activism became possible because of the everyday alterontological practices that allowed the community in the making to sustain itself and it is thanks to the diffusion of these practices of justice that the foundation of the AIDS Coalition to Unleash Power (ACT UP) has been possible in 1987. These practices include, amongst others, the development of alternative research, the creation of alternative service provision, an extensive experimenting with one's own body and (not officially approved) drugs, the development of new forms of affection, intimacy, and reciprocity, the construction of buyers' clubs of illegally manufactured or illegally imported drugs, the invention of new sexual practices and sexual expressions, the making of new community spaces and community organizations to engage with the new challenges of the crisis.

AIDS activism in not readable without taking into account the experimentation with alternative politics of matter: social change and movements cannot be thought independently from ontological change, in fact there is no social transformation without alterontological practice. In more than social movements the everyday and the ontological is one, because justice is in the ordinary and concrete making of justice. Following Papadopoulos, the question of justice comes with the emergence of the invisibilised and the imperceptible, of those who have no place within existing normalizing political institutions. Or better justice comes when those who have no part (Rancière 1998) change the material conditions of existence in a way that cannot be overheard or simply included in existing political institutions. Papadopoulos focuses on how actors create alternative ecologies of existence that become inhabited by these silenced and absent others, by those who have been rendered residual and invisible.

This is a politics of matter not because humans are in charge of matter but because certain groups of humans and nonhumans can continue to exist only to the extent that they develop alternative entanglements with matter. For this reason, in more than social movements justice is restored materially. And at the same time without ordinary justice there are no more than social movements. This is a mundane material and generative justice. The autonomous politics of more-than-social movements are relational, ontological struggles to create alternative material articulations, autonomous spaces and communities of justice.

Beyond the Book

A key feature of insurgent posthumanism consists in disconnecting experimental practices from a highly regulated and often alienated relation to the material world. Reading the book, I was wondering about the relation between biofinancialisation and the increasing securitisation of grassroots technoscience. As Dimitris knows, I am actually conducting a participatory research on farmers and peasants' movements in Italy. One focus is on agroecology, understood simultaneously as a science, a practice, an eco-social movement and a form of life. Food and agriculture are key vectors for experimenting alternative practices of ecological transition, and the everyday practice of agroecology implies a disconnection to the standards of food production and circulation, simply because these standards are thought in relation to the infrastructures of industrial production. Not surprisingly the movement of Genuino Clandestino, a movement in which agroecology is deeply connected with the reinvention of rural forms of life, took its first steps ten years ago with a campaign of civil disobedience reclaiming the legitimacy of a series of peasant practices, such as the exchange and distribution of genuine agricultural products, mutual work aid and the reproduction and exchange of seeds, among others. Moreover, in the last years peasants and farmers movements promoted a series of proposals and public discussions around the need to build a 'peasant right' in order to obtain a political recognition of these practices. If the autonomy of migrations teaches us to see movements before capital and mobility before control, something similar could be said in relation to grassroots technoscience: everyday material justice comes before capital and experimental practice comes before securitisation. Two issues stay in the background in this very valuable and rich book and it would be worth using this and other occasions to debate them: what kind of relationship there is between biofinancialisation and securitisation and which practical tactics can open political spaces within and against the law in postliberal times.

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Alterontologies and the Art of Being One Step Ahead

Luigi Pellizzoni

Once a highly effective political intervention, identity politics was recycled in the 1990s as advertising script for Benetton or MTV. None of this makes the political struggle for women's rights, class politics, queer politics, or struggles against racism obsolete, far from it; but it does suggest that we always need to be several steps ahead of the capitalist mulching machine, reinventing these struggles, devising new language, new political strategies, new ideas, new forms of activism (Smith 2005, 891).

Experimental Practice is one of those not-so-frequent books that are as rich and dense in content as they are smooth and engaging in reading. Papadopoulos manages to integrate in a consistent, effective narrative a number of issues and perspectives, not only from STS but also from anthropology, social movements studies, political and practice theory, feminist and postcolonial thinking, putting in conversation concepts and empirical evidence drawn from a range of fields, from AIDS activism to hacker communities.

As the author makes clear from the outset, the book sits at the cross-roads of two main concerns: on one side "the decentring of the human in its relations to other species, machines and the material world"; on the other "a feeling of urgency to grasp the incapacity of the extraordinary social mobilizations that took place in countries across the North Atlantic and beyond since 2006 to instil social change" (p. 1). The result is an inquiry into the connection "between the limited range of transformations that these movements have achieved and the displacement of the human and of human politics in posthuman culture" (p. 2). Key driver of reflection are the notions of ontology, understood as "the shared, durable, open material spaces – tangible and virtual – that can be inherited autonomously by communities", with special reference to those "drawn in the vortex of privatization and intense neoliberal disintegration" (p. 2), and of ontological politics, understood as "the simultaneous production of society and ontology", in the sense that "by performing ontology in a single concrete way rather than any other, we change the very constitution of being and its material organization in a specific direction" (p. 11). Ontological politics, thus, "conceives matter as a frontier" (p. 13). One can say, in this sense, that it is as old as humans' engagement with materiality in their struggle for survival and for structuring social life. Yet, Papadopoulos argues that in modernity – late modernity in particular – ontological politics takes a special relevance. Matter is "modernity's ultimate frontier" in an "epistemic territory that is constituted by its coloniality" (p. 15).

Readers familiar with the various manifestations of the "ontological turn" in the social sciences and humanities (Dolphijn and van der Tuin, 2012; Coole and Frost 2010) – STS playing a prominent role therein with authors like Bruno Latour, John Law, Annemarie Mol and Isabelle Stengers – will be easy in enrolling the book in this intellectual strand. Yet, there are significant differences in Papadopoulos's approach, compared with mainstream ones.

One is his genuine, concrete interest in emergent social movements, which "new materialist" standpoints often address in a sketchy, speculative way. As he notes, "from actor-network theory, object-oriented ontologies, neomaterialism, and neovitalism all preserve key theoretical tenets from activist materialism but drop in one way or another its activist dimension" (p. 93). On the contrary, readers familiar with literature on "prefigurative mobilizations" – broadly defined as a type of political action aimed at realizing the desired future in the here and now, through means "deemed to embody or 'mirror' the ends one strives to realise" (van de Sande 2013, 230) – will recognise in Papadopoulos's book well-known tropes, beginning with the claim that contentious politics should withdraw from traditional protest aimed at the state or other power holders, as political institutions have lost traction over global flows of capital and as the distinction between labour and life, production and reproduction, workplace and home, blurs in new arrangements of value extraction.

Resistance and opposition, so the case for prefigurative politics goes, should be based on, and can actually be found in, the doings and makings that people carry out individually and collectively all over the world. Doings and makings which, crucially, involve a close engagement with the materiality of things, a (re)consideration of the reciprocal affection and effection between humans and other-than-humans: from "alternative" forms of agriculture and energy production (community supported farming, open source seeds communities, participatory plant breeding, community energy initiatives, etc.) to self-organized healthcare, education and child-rearing, or occupation and self-management of factories, housing and other spaces.

Papadopoulos agrees with scholars who see in material engagements the distinctive trait providing prefigurative mobilizations with a major potential for change. The difference with comparable arguments, such as those developed by David Schlosberg (Schlosberg and Craven 2019) or John Meyer (2015), lies in his strong STS sensitivity to the role of technology as artefacts and processes. At the same time he is careful in avoiding the claims about the emancipatory force with which technology or materiality in general would be provided – if and when freed from the cage of Cartesian naturalism and humanist substantialism – that one meets in much new materialist literature (see e.g. Bennett 2010; Braidotti 2013). Namely, the postcolonial inflection of Papadopoulos's take on post-humanism, with the awareness of historicity and positionality that such inflection entails, makes him wary of an ontological monism committed to celebrating the liberating character of the acknowledgment of the (alleged) full contingency and fluidity of reality; a monism which, in his eyes, becomes a non-humanist version of traditional universalism, and which results in a "weak materialism" (p. 81), in the sense of being mortgaged by an epistemic, rather than practical, embodied, relation with the world. Making, Papadopoulos contends, "cannot be approached as an epistemological issue; it is a practical one. Making is a material movement; it is about ontological practice rather than about an abstract representation of a practice of material engagement. And as such this movement is embedded in other previously existing ontologies. Each of these ontologies involves different environments, materialities, digitalities, groups of people, and more-than-human actors. Marisol de la Cadena, Mario Blaser, Arturo Escobar, Walter Mignolo, and others refer to this multi-ontological organization of the world as a pluriverse" (p.175).

I am fully in tune with this statement and with the book's standpoint in general. What I say below, therefore, is not so much a critique aimed at pointing out weaknesses, as an indication of issues which, to my eyes and according to Papadopoulos's own argument, are of major relevance in the case for a new, effective, political activism, and which therefore call to further elaboration anyone committed to this case.

I put in the opening of this commentary an excerpt from the much missed Marxist geographer Neil Smith. Smith warns social critics – as

scholars and/or activists – to be careful about how they move on. They should not be like Walter Benjamin's Angel of history, whose gaze is turned backwards. Namely, they should not linger with critical categories forged on and effective against certain power relations and conditions of domination, failing to realize that such relations and conditions are of lessening relevance, and that power is applying their own categories to its own purposes. This warning is of course not only Smith's own. Boltanski and Chiapello (2005) and Autonomist Marxists (e.g. Virno 1996) have raised similar remarks concerning post-Fordist capitalism's capture of social movement and intellectual "libertarian" critique of Fordism and embedded liberalism, refashioned in terms of flexibility, lifelong learning and creative self-engagement (= job insecurity). A comparable sort of warning, concerning the more recent evolution of neoliberal rule, has recently gained momentum in the debate over "post-truth" and the alleged responsibilities of STS for its rise (see e.g. the debate in the 2017 issues of *Social Studies of Science*; see also Fuller 2018), the point being this time how the lesson of science deconstruction has been learned and is increasingly applied by "right-wing postmodernism" (McIntyre 2018) to undermine unwelcome scientific evidence (see e.g. Michaels 2006; Oreskes and Conway 2011). The issue of the perverse effects of science deconstruction had been famously raised by Latour (2004a) some years earlier, though, as usual with him, with no reference to capitalism or neoliberalism. I also have tried to work out a reflection over the limits of a scholarly and activist, theoretical and embodied, critique that dwells in the same problematization (to borrow Foucault's term: namely, the same ontology, the same sense-making of reality) of its target (Pellizzoni 2016). On this basis, I think that among the topics deserving attention in order to get critique "several steps" – or at least one – ahead of its subject matter there are the following: the issue of *scale*; the issue of *representation*; the issue of *experimentation*. I choose these because they are both cornerstones of Papadopoulos's argument and hot spots in the never-ending chase between power and its opponents; between subjection and emancipation.

Papadopoulos agrees with Anna Tsing that scale is a major issue for both scholarly analysis and oppositional practice. Indeed, a frequent objection against prefigurative mobilizations concerns their inability to scale up to a level comparable to the forces they are tackling. By no means new (anarchist predilection for direct action, self-organization, mutual aid and in general for behaving as if the state and other institutionalised powers did not exist anymore, has been traditionally challenged on this basis), the limited efficacy of prefigurative politics – up to becoming instrumental to the continuation of the rule from which it seeks to disentangle, by offering goods and services that the market and the state are unable or unwilling to provide (Bosi and Zamponi 2019) – is a typical workhorse of critics (see e.g. Mouffe 2013).

Papadopoulos acknowledges this objection, asking "how can alterontologies contribute to a decolonial politics of matter" (p. 22); how can

major infrastructural changes or large technoscientific projects be challenged by a politics of crafting from below and on the ground. His reply is again in tune with Tsing, namely, with her call for paying attention to the ideologies of scale as integral and crucial to capitalist projects, understood as "relatively coherent bundles of ideas and practices as realized in particular times and places" (Tsing 2000, 347). So, crafting alterontologies is also, and crucially, about scale-making, and more precisely about "rescaling the geographies of technoscience in ways that matter" (Papadapoulos, p. 22). Rescaling (mainly in terms of downscaling) is actually a core point of degrowth theory and activism, and a distinctive trait of new materialist mobilizations in general. Additionally, various scholars warn about the declining returns on energy and research investment, the former being related to the growing difficulty in extracting resources, the latter to a R&D scenario characterized by growing organizational complexity to get marginal gains in innovation (Fizaine and Court 2016; Tainter 2006). So, it may well be that ever-expanding technoscientific infrastructures are bound to collapse under their own weight and that surviving capacities will be downsized by necessity. This, however, confirms that scale is not just a matter of will.

Precisely because, as Papadopoulos claims, matter is not infinitely manipulable and plastic, getting certain outcomes by downscaled means may result impossible. True, to some extent scale-making and goal-seeking are implied in one another. Alterontological experiments do not pursue the same goals of the ruling interests. Participatory plant breeding or community energy initiatives have different aims to those of Big Pharma or oil companies. Additionally, one may argue that large-scale technologies and infrastructures address issues which they themselves have created. For example, by reversing the growing extension and intensification of farming one may expect that pandemics will be less likely to develop. Yet, can this lead to giving up research on vaccines or stockpiling medical equipment such as ventilators? Can this lead to saying goodbye to anything requiring complex organizations or to complex, high-tech devices? Should one just come to accept, in one's own redefinition of goals, that a shorter life than the one assured by this means for some decades in affluent countries (but increasingly also elsewhere) is in the order of the day? My feeling, in brief, is that the issue of scale has till now only been scratched, and that the idea of a frontal opposition between the ontological politics of global capitalism, with its big technoscientific programs and worldwide infrastructures, and downscaled, off the ground alterontologies is too schematic; and this not only for the proverbial risk of throwing the baby out with the bathwater, but because the very notion of alterontology, the way it is conceived and performed, is in itself an effect of globalization, being conceivable only against the backdrop of the latter's fuzzy universalism.

A crucial performance of alterontologies is, anyway, its capacity of resisting the politics of inclusion in the global capitalist system. Papadopou-

los – in my view rightly – emphasises that such politics offers a poisoned fruit, as its goal is not recognition and respect but control of alterity through its reduction to manageable formats. Inclusion is crucial to the universalising project of capitalist production, understood as both "the construction of new ontologies and the insertion of these ontologies into scales of value" (p. 28); a project that reaches a full-fledged expression in the financialization of everyday life – "biofinancialization" is the author's appropriate expression. Inclusion entails the provision of rights yet, he notes, "only through representation are rights possible" (p. 55), as rights are assigned to subjects defined according to given criteria. To be acknowledged, in other words, you need to fit a certain description, conform to a certain framework. More to the point, to be included you have to accept to be valued as capital. So, representation appears crucial to the universalizing design of biofinancialization. "When matter becomes a frontier, the attempt is to make it productive… [and] compatible with the existing mode of production" (p. 15); with the ruling accumulation regime. Alterontologies, in this sense, are those socio-material assemblages which resist representation, remaining irrepresentable, irreducible to manageable formats.

In this way Papadopoulos parts company with the politics of representation of the non-human that is key not only to capitalist politics but also to environmental theory and activism and new materialist thinking, having found in Latour the most accomplished and well-known STS advocate. On one hand, representing "nature's interests" has always been a weak point in the environmentalist case, for the shaky basis of any (self-)appointment – usually grounded on scientific expertise, less frequently on moral authority, aesthetic sensitivity, contextual acquaintance, and so on – as spokespersons of entities which cannot give their authorisation. On the other hand, Latour's (2004b) account of a more-than-human parliament composed of two powers of representation – of taking into account and of ordering and stabilizing – has met with a number of criticisms, including about his explicitly Hobbesian understanding of representation, as "a matter of assembling disparate individuals into a unified whole with a single will" (Brown 2017, 39). As already noted, universalising thrusts are a main concern for Papadopoulos, as quintessentially dominative. In his view, any politics of inclusion of matter, as its frontier moves on, turns out at best in an exercise in weak materialism, a failed attempt to grasp and describe alterity, to subsume the ontic into the epistemic; at worst in a neutralisation of any potential for change. Against this, Papadopoulos takes sides with the non-representative turn in political theory and the social sciences. "Post-foundational" (Marchart 2007) political and social theory, committed to questioning metaphysical figures of totality, universality, ground, essence, community, nature, has found a cornerstone in non-representative ontologies building on affect, emotion, desire, care, and the immediacy of embodied practices (Connolly 2002; Gibson-Graham 2006; Thrift 2007; Alaimo and Hekman 2008; Puig de la

Bellacasa 2017). Concerns, however, have been raised about the implications of withdrawing from an account of democracy as based on exchange of reasons (Barnett 2008). Indeed, how to give room to both rational and affective aspects of political life remains an open question. Yet, my point here is another: namely, that affect, emotion, desire and care not only are key to alterontologies but are the bread and butter of neoliberal governmentality (Rose 2007) and populism (in this case combined with tropes of identity, belonging and authenticity: see e.g. Caiani and Padoan 2020).

So, a non-representational politics is hardly per se provided with emancipatory import. By the same token, Adorno warns that one is to resist the lure of immediacy, of a "shortcut to practical action" (Adorno 2001, 2) which does without conceptual mediations. Against Deleuze and Guattari's (1987) claim that actual pluralism resides only in an accomplished monism, Adorno's monism is dialectical, in the sense that thought and thing, theory and practice, are enmeshed from the outset, reciprocally necessary and never reducible to one another, the emancipatory opening lying not in their blurring and coincidence (which for him correspond to identity-thinking, hence to domination), but precisely in their friction, the remainder of any attempt to match them. In accord with Adorno I think that a "weak materialism" is avoided only by acknowledging such friction. How to build on this is, again, an open question. However, for example, Mark Brown's notion of "representation by fiction" – the type of representation legal systems admit for organizations, children or deeply impaired people – may capture to some extent the spirit of Adorno's dialectical monism, as any such representation can never claim to express a full delegation or a consistent reporting, being always open to contestation "as an ongoing process in which citizen witnesses, as the audience of representation, imaginatively construct a relationship between representatives and those they represent" (Brown 2017, 44), including nonhumans such as animals, species, habitats, or ecosystems.

As anticipated, my last point concerns experimentation. Beginning with the title and throughout the book Papadopoulos stresses that alterontologies consist of experimental practices, as the only viable reply to a power that has increasingly taken the shape of a technocratic (attempt at) control of the entire reality, from individual everyday life to worldwide social and more-than-social processes. I subscribe to this standpoint but I think it important to acknowledge and address the ambivalence of experimental politics. I propose here two considerations. First, as plenty of research has documented, experimentalism is central to neoliberal governmentality. Since the early 1980s, building on the assumption that there are fundamental limits to prediction and planning faced with intricate social, technical, and ecological dynamics and interactions (an assumption supported by emergent theories of complexity, from chemistry to the life and computing sciences, and by an influential managerial literature), the ruling vision of uncertainty, insecurity, volatility, disorder and non-predictive decision-making has turned upside down, from limit to pur-

poseful action to enhancing condition of indeterminacy. Hence a growing celebration of foresight, flexibility, adaptability, resilience, "anti-fragility" (Taleb 2012), preparedness to surprise, and so on (see O'Malley, 2010; Walker and Cooper 2011; Pellizzoni 2020a). In the early 1970s Alvin Weinberg (1972) talked of "trans-science" to convey the idea of a science increasingly confronted with "unbounded" issues, engaged in experiments outside the lab, as in the case of the management of radioactive waste. Twenty years later, Krohn and Weyer (1994) comparably talked of "real life experiments", simultaneously physical and social and with outcomes often barely imaginable, while Funtowicz and Ravetz (1993) talked of "post-normal science" referring to the ever-more frequent situations where facts are uncertain, values in dispute, stakes high and decisions urgent. All these accounts depicted indeterminacy as problematic. Yet, for example, geoengineering (in both its two main variants: carbon capture and storage and solar radiation management) is today increasingly advocated as a solution to global warming, or at least as a way to buy time, which testifies to a burgeoning rationale whereby it is sound to let complexity unfold, even to "incite" it by adding further turbulence to unpredictable dynamics, the strategy being one of surfing the crest of the wave, reacting and adjusting on the spot to its swerves (Pellizzoni 2020a). Similarly, the way the insurgence or resurgence of pandemics is addressed, in academic and governmental quarters as well as in the media, is by taking for granted that this is bound to intensify, the only sensible option being to increase preparedness rather than trying to address its root causes (Lakoff 2017; Pellizzoni 2020b).

This leads to my second consideration about experimentalism. In the social sciences and humanities a growing concern can be registered for geological processes, understood as including not only climate but also biodiversity shifts and viral and bacterial dynamics, testifying to the prominence of an "inhuman" nature (Clark 2011), in the sense of a materiality overarching and indifferent to human issues. The change in focus from biopower to geopower (Grosz 2011) or "geological politics" (Clark and Yusoff 2017) has been accompanied by a marked change in attitude. Consider once more Latour. Twenty years after *Politics of Nature*, *Down to Earth* shows how he has given up any call to diplomacy and interest composition with the other-than-human world. The "intrusion of Gaia" in human affairs (Latour 2017; Stengers 2017) is described in the same terms once attributed to sovereign power and later to market forces – supreme, indifferent, unwarranted, unaccountable. Gaia represents "a form of sovereignty, […], a power that dominates the heads of state" (Latour 2018, 84). Faced with it, the only sensible way to go is – guess what – applying the neoliberal recipe: surfing the unpredictable, cultivating preparedness, resilience, flexibility and "ongoing creative experimentation" (Clark and Yusoff 2017, 18). So, in Latour's latest narrative, the unifying inclusiveness of a more-than-human diplomacy and interest composition is replaced by a differently but no less dominative approach: the

acknowledged necessity of bowing to an overarching entity, under the assumption that "there is no other politics than that of humans and to their own benefit", and there is no possibility of living "in harmony with so called 'natural agents'" (2018, 86-87). By any evidence we are here at the opposite of the case for the pluriverse as made by Papadopoulos and many others (see e.g. Blaser and de la Cadena 2018; Kothari et al. 2019).

In short, experimental politics, like scale-(re)making and representation, is a double-edged issue, in need of careful analysis and discrimination. Papadopoulos masterfully highlights its relevance for conceiving and pursuing possibilities of change grounded in the pluriversal practices of more-than-social movements. The anything but easy task for anyone who cares about such possibilities is to disentangle emancipatory, progressive ways of experimenting from dominative and reactionary ones.

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Have We ever Been Posthuman?

Roberta Raffaetà

'Experimental Practice' is not simply the intriguing title of this book: the book is in itself an experimental practice. Papadopoulos successfully connects through the lens of social movements a number of topics that are seemingly unrelated: health governance, transnational journeys of migrants and refugees, extractive practices of finance, and communities of craft and design. The book is an example of the generative potential of

working at the interfaces between sub-disciplines and themes. While it remains productive to conduct in-depth research within one specific sub-field, this book is an example of how working at the interfaces makes it easier to see the emergence of new socio-political phenomena.

This book therefore is not *about* science, even if it has a strong STS footprint. Technoscience is not its focus but "the stage of which its arguments are played out" (p. 1). This, according to the Author, is more a necessity than a choice, given that recent times are marked by a "continuous folding of science, technology, and the everyday into each other". Papadopoulos portrays technoscience as part of the everyday, something inescapable, something to work both within and against, thus contributing to the deprovincialization of STS. Technoscience is described not only as a more than human endeavour but also as more than scientific, giving emphasis to its entanglements with the public sector, the private sphere and the commons. It is clear, from reading this book, that neat and stark dichotomies such as the public/private sphere, humans/non-humans, emancipation/control, freedom/exploitation are not tenable anymore and that there is a need for a more nuanced understanding of what is happening across these extremes. The proposed contribution of the book is to bring specificity to these kinds of interactions and analyse how, in their unfolding, a new politics and new ontologies may emerge.

At the convergence between novel ontologies and politics Papadopoulos posits "alterontologies" and "compositional politics" that happen when "actors emerge in the political scene by changing the very constitution of being". These emerge by acting both against and within institutional powers, forging a relationship that is neither of mimesis nor of conflict. Compositional politics is needed, according to the Author, in order to be able to escape the "biofinanzialization" of life. Papadopoulos in Ch. 2 analyses the post-industrial assetization of the whole planet, made possible by the translation of everything into one logic of financial value. In this framework, every aspect of life – from human non-work time to human and nonhuman reproduction and matter – has become a financial asset. This process has been made possible by separating the product of work from the process of work and treating the embodied and emplaced dimension of value creation as external to social and material dimensions. Papadopoulos describes finance not as a discrete cultural phenomenon among many others, but as culture, a culture that has colonized all the other spheres of existence, and from which is therefore impossible to escape.

Starting from the recognition of the impossibility to escape the biofinanzialization of life – what seems to me a Foucaldian framework of control and exploitation brought to its extremes - the Author proposes to let go of impossible dreams of independence and autonomy. Rather, to search emancipation through the creative recombination and composition of matter. The subsequent chapters give examples of how this and theoretically explore compositional politics.

Ch. 3 narrates of a "World 2" that exists beyond -and overlaps with traditional politics and social movements. This other world is made by migration activists and migration movements that seek to realize their aspirations of transnational paths and life by ontologically (re)configuring their ways of being. Papadopoulos puts forward his best effort to illustrate how this can be possible despite and along all the legislative, political and social obstacles. Ch. 4 and Ch. 5 constitute the theoretical core of the book, those in which the Author shares with his readers his intellectual journey.

Ch. 4 is an historical-political narration of matter, proceeding from the rereading of the first Marx to Deleuze e Guattari, to finally advance a materialism *cum* activism. This position is developed in Ch. 5 by retracing first insurgent forms of posthumanism in communities of individuals escaping institutional power. But exactly in this historical emergence, Papadopoulos identifies the very beginning of the mutual relationship of both freedom and exploitation, emancipation and control. A dialectic that lays the ground for the current one between the individual and the State. The Author indeed shows how the condition of individual freedom enjoyed by those early communities offered energy to the nascent industrial state. The only antidotes to avoid remaining captured in the toxic aspects of this dialectic is, for the Author, pursuing – as in those early communities - an ethos of practice. The other is to leave behind universalizing and anthropocentric aspirations of humanism. The Authro's warns, however, that this approach should not take for granted the kinds of politics that grounds a postanthropocentric posture (see, for example Benadusi et al. 2016; Blaser & de la Cadena 2017). He rejects a simple "ecological egalitarianism that considers the value of all nonhuman beings as equal" (Puig de la Bellacasa in note 69, 235). I appreciate this disconnection from those uses of posthumanism more as a fashionable mode than a theoretical program toward posthumanist politics. Humans' entanglements with nonhumans are not free from conflicts and ambiguities, as any kind of relationality, as recently forcefully emphasized by Marylin Strathern (2014, 2020) to counter the mounting fetishization of the concept of 'relation' as a an inherently good thing. Relationality is not something positive by itself but a particular artefact of Euro-North-American knowledge-making which also implies cuts and breaks and cannot stand outside of analysis or critique. Papadopoulos is -I think appropriately - aware of this, concluding the chapter by affirming that "The aim is to politicize posthumanism and simultaneously to posthumanize politics by decolonizing both of them." (p. 114).

Ch. 6 and 7 explore how a compositional politics may realize in present times and which are the tensions and ambiguities, taking brain matter and AIDS activism as examples. Ch. 6 illustrates how neuroplasticity opens new horizons for emancipation but also for control, a plasticity that derives from a common brain while being fully privatized at the same time. Ch. 7 challenges the conventional ways in which politics has been

conceived in science and technology studies by comparing the politics sustaining AIDS activism. This one is a situated and compositional politics.

Ch.8 ends the volume by pulling the strings of the various insights through a reflection about ontology and technoscience. First of all, according to the Author, ontology is a movement rather than a structure. This move mitigates the excesses and determinism of certain materialist thinking (for this critique see Abrahamsson et al. 2015; Paxson & Helmreich 2014). This movement is described by the Author as deploying in a circular (indigenous) temporality rather than in a linear one, and this helps decolonize "the Western domination of our imaginaries of what will come". Within this multiplicity, however, Papadopoulos portrays a world made of multiple but at the same time connected and interdependent ontologies because all "they belong to the same shared earthly world". With this, I think, he saves us from the centrifugal and desegregating tendencies of certain extreme threads within the ontological turn (for some critiques see Heywood 2012; Laidlaw & Heywood 2013).

Secondly, in this multiple, but yet connected world, technoscience remains for Papadopoulos a tool of advocacy and emancipation. Against the conventionality of an asphyxiated and asphyxiating social sciences' critique of technoscience (see also Seaver 2017, 2018), he emphasizes how technoscience is indeed not only in the hands of projects of domination and control. According to the Author, this is only "the peak of an heterogenous movement" that uses technoscience creatively in ways that can emancipate them because the "possibility for uncomputability is always inherent in computation itself" (p. 179). Therefore, a compositional politics of the present is, for Papadopoulos, always and already digital and material at the same time. The Author takes social movements of hackers and crafters as his references, movements that attempt at "changing the conditions of knowledge production by changing the ontological fabric of life" (p. 206). Drawing from his participant observation in those movements, the Author delineates a possible ethics informing compositional politics. This is made of commensality, rather than exchange and relations, a concept that I found saves us from a superficial understanding of relationality as something valuable in itself, despite its grounding politics. Commensality also emphasizes the fact that invention is always something mediated and anticipated in a human and more-than-human collective, against conventional laws and understandings of intellectual property as bound to human individuals. Yet, commensality is not the same as indifference, there is an affective engagement in which 'care' remains the "ethopoietical compass" (p. 201).

As is clear from my comments above, I found this book particularly interesting and full of profound insights. Yet I am happy to share some further comments in the hope they may help to enhance engagements with matters with which we care. I will bring attention to three interrelated themes: practice, theory and the role of institutional power.

First, the book's title (Experimental Practice) leads attention toward the concept of 'practice'. The book indeed proposes an "ethos of practice", with practice itself as the means toward emancipation and the composition of alternative ontologies and politics. The idea is that practice is what may change things, much more than words can do. The prominence given to practice somehow strikes, I think, with the limited space given to its narration. In the book, 'practice' is dealt with mainly as a conceptual construct, but it is not particularly narrated as situated events, happenings, encounters, strategies, profiles, biographies, spatial-historical details and the likes. Doing so would have had enriched the book, I think. I would have liked to see more ethnography, more 'thick description' of how alterontologies may become politics.

And this is not to invoke ethnography for the sake of ethnography. The definition of ethnography is an open question, especially in recent years in which there is an intense debated about what ethnography is, is not or should be (e.g., Ingold 2017). I would like to leave these anxieties of purity behind for now, allowing space for the most varied and creative appropriations of what ethnography can be. I am also aware that every book has its own character and in the present case it seems to me that the impetus for the writing have originated more in the will to share some reflections sparked by long-term ethnographic experience in different fields, rather than from reconstructing one single history in depth. An example of the latter can be found, for example, in the book 'War on people' by anthropologist Jarret Zigon (2019). Zigon advances reflections similar to the one dealt with in this book but that work displays more ethnographic texture, focusing on one single case study, that of AIDS social movements. Papadopoulos, however, is immediately very clear about his approach, emphasizing that his is a "deeply speculative undertaking" and that one of the beginnings for his book is "an affect rather than a phenomenon" (p. 2.). This is all fine, because the Author's capacity to see within but also across and beyond specific case studies is one of the positive aspects of the book.

Yet, my plea for more ethnography is inspired precisely by the capacity of the Author to convince me that practices may change things and have a political role. In this light, to call for ethnography is to call for politics. Ethnography before being a genre has, for me, a political commitment to play in showing how alterontologies may compose themselves and change things, which are the constraints, the timelines, the opportunities. To know this would amplify other communities' awareness of the opportunities for alterontologies to exist and how to make them emerge within the particularities of their own context. The recognition of the emergence of new political actors who are able (in synergy with other humans and nonhumans) to change the very constitution of the contexts in which they live is so important that we all would benefit from a more fine-grained description.

My desire for more ethnography stems from a desire for more details

about the multiplicity of daily practices and interactions that enable a so-
cial actor "to emerge" within and against a *status quo.* These details
would be useful because it is not so simple nor automatic to apply the
ideas outlined in this volume. It is not easy to reverse the biofinanzializa-
tion of life, this gigantic hegemonic machine, by displacing it. It is not ba-
nal to compose a form of life able to constitute itself before recognition,
"a form of life that cannot be bypassed – not because it defines in a de-
terministic fashion the outcome of actions, but because it creates new on-
tologies that allow specific actors to become actors and to intervene and
interrupt or alter the constituted order of a region of objectivity." (p.
154). The world is full of "dispersed, everyday, imperceptible politics" (p.
157) but, from my experience as an anthropologist, many of them cannot
arrive to occupy a place in history or change any constituted order or re-
gion of objectivity. They remain dispersed and imperceptible because
cannot make of their diversity "a diversity that makes a difference"
(Bateson 1972, p.453). In other words, a difference that is accepted, visi-
ble and generative for many others. The issue, to me, is not just in being
'alter' but of being able to make this alterity something ontological not
only within small and marginal worlds but to enlarge this marginality to
broader worlds.

   Papadopoulos gives us hope about the fact that emancipation can
happen and in his book he reviews some examples but it remains unclear
to me how this transformation can happen for others, and I long for in-
structive details of how this happens on the everyday, micro interactions
within the resistances and cracks of institutional powers. I write in my po-
sition as anthropologist, who works together with communities and col-
lectives to whom I want to bring something useful to make our shared
world a better place, helping in fostering the link between a 'potential'
and a 'possible' (Zigon, 2019) world. Therefore, I am not claiming details
for the sake of details, nor I am attempting at policing a form of writing
(ethnography), requesting adherence to an imagined disciplinary canon.
Instead, my plea for more ethnography has been stimulated by the gener-
ous and thought-provoking content of the book, a plenitude that requests
for more of it to became real for the highest number of communities that
are trying to compose other worlds. I am aware that a receipt does not
exist, and I am not calling for scalable solutions in neoliberal terms (for
alternative meaning of scalability see Clark 2012; Olson 2018; Raffaetà
2020, p. 238-241), but telling detailed stories may help. I think the prob-
lem does lies not in scalability itself but in the capacity to allow different
scales to enter into dialogue without eliminating the indeterminacies and
diversity that happen at encounter of different scales (for this concern see
Tsing 2012, 2015). I think ethnography can help because its multiscale
sensibility enables people to "give meaning" and "inhabit" the "interfaces
among scales" (Bougleux 2015).

   The second point I would like to raise is specular to the first. The
space given in the book to theoretical speculation strikes with how little

theory is valued as a conceptual category and a means for emancipation. The Author gives primacy to practice and derives from it an ethos that he delineates as open-ended because practice "by definition is undecidable". But how then are decisions taken? Which ethics grounds an ethos of practice? Papadopoulos tells us that the ethos of practice is oriented by "maintaining a commitment to justice that addresses radical asymmetries" and by a culture of care (Puig de la Bellacasa 2011). I agree that care and ethics may be open-ended and are affective, embodied capacities. However, care and the capacity to recognize asymmetries are not something innate (even if embodied) or automatic but come "from a reflexivity that has to be trained", as observed by Laura Centemeri, one of the discussants of the book during the POE[1] symposia held on November 2020 (see also Centemeri, 2019). Care is linked to the "arts of noticing" (Tsing 2017, p.37) and this implies a pedagogy, an education to attention. Practice, alone, does not offer an entry point to understand reality: "praxis tout seul explique pas, est pas transparente" (Descola 2011, p. 73). The same practice can be observed and perceived in very different ways, depending from the positionality of the observer (see, for example the debate in anthropology between Sahlins e Obeyesekere in Borofsky, 1997).

With this, I certainly do not wish to reintroduce a dichotomy or a hierarchy between theory and practice, yet I am doubtful that obscuring the value of critical reflection in favour of practice may be generative. Hannah Arendt has clearly stated the importance of integrating *vita contemplativa* and *vita activa* because is not possible to know in passivity but only by experimenting (Arendt, 1998, 290). But when *vita activa* assimilates *vita contemplativa* in itself, it seems to me that the ethic-political dimension of practice remains silent and implicit. In this silence, practice as a means toward ethics risks being either something for a cultural elite or something ambiguous and prone to be recaptured within different projects, that may have very different political visions. For example, the crafters' motto 'Start even if you do not know how' (p. 185), taken by the Author as a model, expresses the inventive and emancipatory framework of crafters but resounds the too familiar Nike's 'Just do it'.

It is not always the case that practices are careful. Too much emphasis on 'practice' as epistemology may also, inadvertently, be in line with a certain productionist mode that values life and experience for what it can produce, for its tangible outcomes. What critical reflection can offer, I think, is qualitatively different to simple production, yet not without ontological consequences. In the anxiety to emancipate from the nature/culture dualism, we risk that shared representations, interpretations, common sense[2] and values get sacrificed. But these configure and are part

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[1] Politics, Ontology, Ecology is the name of a group of Italian scholars with different disciplinary background discussing at the intersection between the three themes, see http://www.poeweb.eu/

[2] For a heartfelt defence of 'common sense' as culture see Clifford Geertz (1975)

of affective dispositions, attitudes and affordances. Critical reflection is not a task opposed to practice, as ethnography – to link with my previous comment – is not a simple description but a theoretical practice (Raffaetà 2020b) or a "theoretically oriented practice" (Matera & Biscaldi 2020). Critical reflection is an embodied and affective practice that enables us "to think what we are doing" (Arendt, 1998) and this is especially vital in a technoscientific era, if we wish to keep our ability of being "acting men" (*sic*) and not simply "performing robots" (Arendt, 1998, 178-179). I see activism as the outcome of a theoretical practice, more than its premise. At times, reading the book, I wondered which was the Author's approach.

Finally, I pose a third comment about the book's main hypothesis. Papadopoulos in the opening of the book writes that "there is a connection between the limited range of transformations that these movements [*traditional social movements*] have achieved and the displacement of the human and of human politics in posthuman culture" (p.2) because "In posthuman conditions, traditional politics and the corresponding social movements can support us in this endeavour [*compositional politics*] only to a limited extent." (p.10). But the impression that is left to the reader – at least to me – is the classical problem of the chicken or the egg: what came first? The emergence of political actors seems to be possible because a certain human institutional power has supported that emergence (see also Dei 2017; Murphy 2017; Povinelli 2016) in a manner that exceeds "a limited extent". This may have happened intentionally (within its scope) or not (in the cracks of the system). For example, the migration activists and migration movements described in Ch. 3 can compose their alterontologies and 'emerge' as political actors in Calais also because – as explained by the Author - the State accepts migration as a temporal governance of labour. The Author seems to acknowledge at times the interdependencies and ambiguous tension with institutional powers (and this is one of the merits of the book), while at times it looks to me that these problematics are underestimated. Probably this derives from the Author's connection with the posthumanist debate. To creatively experiment ways of composing new ontological configurations with nonhumans (e.g., Hayward 2010; Hustak & Meyers 2012; Meyers 2017) may been healthy, enlightening and generative. But to translate these alternative ways of social-political coordination in the politics of social movements seems to me a too brave step, at least for the time being. Anyway, some bravery is needed to bring change; more ethnographic details would help to realize how this may be possible.

To assign an essentially 'alter', posthuman ontological dimension to some social actors, different to that of traditional politics that let them emerge, may risk being a gesture with more harmful than emancipating consequences, such as constraining the potential for change and dialogue, uncritically reproducing the system, or allowing people to be caught prey of the capture in other frameworks. For example, in the book, communi-

ty technoscience is often opposed to institutional technoscience. In my own experience (Raffaetà 2020a), institutional technoscience (if analysed ethnographically) may be as much as creative, dissenting, iconoclastic and activist as community technoscience. That's why I emphasize the importance of not considering human institutional powers as being at the margins of a posthuman compositional politics: if we'll be attentive listeners and observers, and critical allies, the potential for collective ontological reconfiguring will be greatly enhanced.

To conclude, I have greatly appreciated the political, ethical and activist tone of the book, able to maintain - at the same time - the capacity to not fell prey of many of the shortcomings that are very common in the current posthuman/ontological debate. And I have also appreciated the associated posthuman aspiration. The title of my contribution is of course provocative: yes, we have been, and we are, posthuman because our being human is based on more than human worlds. I feel totally aligned and I am grateful to generous attempts, as that of Papadopoulos, that try to advance ways of being in the world that are caring for other humans and nonhumans, and I share the Author's genuine and profound desire to help compose more just ontologies. At the same time, I think that to underestimate how much human we still are - how much we need to share stories, reflect about them and about our constitutive entanglement with human institutional powers - at times may risk being not careful enough.

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Rewilding Practice

Dimitris Papadopoulos

Practice is one of these concepts that has endured the regular change of theoretical fashions in the history of Western social thought primarily because of its mellow nature, its pragmatic disposition and its remarkable adaptability. Practice complicates the dichotomy between structuralist views of social organisation and micro-social views of individual action. Many of these complications have been nurtured by the work of people such as—not an exhaustive list, of course, and in no particular order— Dorothy Smith, Michel de Certeau, Sherry Ortner, Pierre Bourdieu, Tim Ingold, Elizabeth Shove, Anthony Giddens, Sylvia Scribner, Theodore Schatzki, Ian Hacking, Ludwig Wittgenstein, Marilyn Strathern, Martin Heidegger, Jean Lave, Michel Foucault, Michel Polanyi and many others. Practice has been also a catalyst in the make-up of my intentional academic community, Science and Technology Studies (STS), where *Experimental Practice* is primarily and unorthodoxly located: see for example the works of Karin Knorr Cetina, Isabelle Stengers, Susan Leigh Star, Thomas Kuhn, Andrew Pickering, Joseph Rouse, Sharon Traweek, Sal Restivo, Karen Barad, Harry Collins, Bruno Latour, Michel Callon, Margaret Lock, Michel Lynch—practice travels and transcends, connects and differentiates.

But practice complicates another established binarism, this of the human and the nonhuman. Practice is embodied, material, a-subjective, it is often indifferent, engaging, uneventful, it is always present, and it is often imperceptible. Practice is an ordinary concept. And this is important for me. The accompanying anecdote is that *Experimental Practice*'s original work in progress title was *Experimental Politics*. While writing the book, especially the later parts, politics seemed a bit too heavy for depicting all these extraordinary everyday …well *practices* of so many humans and nonhumans that populate the baroque, polyphonic, eclectic, and, admittedly, not-so-ethnographic ethnographies of the book. I felt that that politics was a reductive word for what *Experimental Practice* was trying to

do: there is a lot of politics in practice, but practice is not only about politics.

Practice or Politics?

I am grateful to Andrea Ghelfi, Luigi Pellizzoni, and Roberta Raffaetà for their generous and thought-provoking comments on *Experimental Practice*. They raise many important questions, and I can only address a few within the limited space of this short essay. All three of them in some way or another touch upon the relation between practice and politics: Why is practice political? Can practice, especially experimental practice, offer alternatives? And to what extent can practice give birth to some politics of empowerment? What drives practice? As much as practice is crucial for the project of the book, my aim nonetheless is not to defend the concept as such. There is always so much that you can project onto a concept. My aim is not to defend (or challenge) concepts but to interrogate ways of life that are associated or even entangled with these concepts. And, precisely, practice is connected with ways of life that allow me to explore possible escape routes from the current spell of environmental doom and "capitalocentric" gloom, and the sense that "nothing *really* changes."

So, how much practice do we need to change things? If there would be millions of people experimenting with practices such as those described in *Experimental Practice* and in so many other books that laid the foundations for understanding alternative forms of material social transformation and social movements, the world would look very different now. Pellizzoni raises this critical issue and points towards possible limitations of practice: what if all this wealth of practices never coalesces to change the world? Even worse, what if the concept of practice is already appropriated in the value production systems of contemporary Global North "I-do-not-know-how-to-call-them" societies (and I do not know because they are not postmodern and they are not late modern and neoliberal and they are not postindustrial and postnational and it is not platform or cognitive or affective capitalism and they are not financialised and they are not postliberal …phew societies, but they, of course, blend many aspects that constitute these descriptors)? So, what if practice is already co-opted and captured? *Experimental Practice* describes many instances that would support this argument: creativity, which is the engine of many different practices in contemporary Global North societies, has also become the driving force of current forms of production in "I-do-not-know-how-to-call-them" societies. Creativity, which in the 1960s and 1970s looked like a force of liberation against the oppressive nature of labour, has become today the dominant form of subjectivation in Global North societies. For example, situationists, and in particular Raoul Vaneigem, have promoted an emancipatory vision of creativity. They argued that creativity—and not labour—is the driving force of human his-

tory in order to find that we are today under the spell of the imperative to be creative, to innovate and invent. Instead of being the *only* force that can "rid us of work", creativity has become the heart of contemporary value creation in the Global North.

However, the conclusion that *Experimental Practice* draws from the fact that practice drives value creation, and even becomes an asset in itself, is not that practice is co-opted but rather that practice implicates. Practice implicates us because it is never just one thing but transversally positioned across power divides, social asymmetries, political injustices, ecological imbalances, and material conflicts. And it is not only practice that implicates us but even more so experimental practice. There is a lot of important scholarship, including the work of Pellizzoni, that has shown the entanglement not only of practice but also of experimentalism with neoliberal governmentality through capitalising on uncertainty, insecurity, volatility by compelling us to become inventive and experimental. However, as much as experimental practice is the engine of the productive regime of contemporary Global North societies, it is also the source of an excess that cannot be easily channelled and organised within the pressures of current forms of value creation.

What *Experimental Practice* argues for is that practice cannot be easily separated to good practice which is liberating and damaging practice which is enclosing. Liberating and damaging practice are concurrent, they are inextricable; every practice incorporates both sides. Practice implicates us and we need to keep redoing it in order to escape it. In a sense the antidote to practice is practice itself. Again, the antidote to damaging and enclosing practice is not liberating practice—this is a false dichotomy; we are implicated, we do good and we cause damage. Practice is relentless and unyielding in "I-do-not-know-how-to-call-them" societies. In order to repair the damaging practice, one cannot just bet on its other side only, one needs to change practice, to experiment with it, to rewild it. Experimentalism in *Experimental Practice* is not about uncertainly, flexibility, risk, unpredictability, preparedness. It is about searching for minor resources in the material make up of our worlds that allow us to rewild practice and to activate novel practices in motion. Practice is always material and technoscientific (as it is social of course) but it is experimentalism that allows practice to reconceive itself and to recreate itself. Until of course it is captured again. There is no ultimate form of liberating practice.

The Scale of Practice

So again, what is then practice that is emancipatory, liberating, transformative? Or perhaps the right way to ask the question is how much practice do we need to change things? What is the scale of practice? What scale of practice do we need if practice always implicates us? Practice always evokes scale and scale is about modifying practice to become

transformational across large parts of "I-do-not-know-how-to-call-them-societies." This is a topic that is raised by Pellizzoni and Raffaetà: "How can major infrastructural changes or large technoscientific projects be challenged by the [practice] of crafting from below and on the ground?" How can we scale up alternative and community technoscience? How can we radically democratise technoscience? The problem with scale is that it is an ambivalent concept, we need scale to encounter the depth and width of socio-ecological destruction and simultaneously we know that scale is the engine of productionism and productionism is the tool of growth which is a major cause of ecological destruction. In a shortcut, scale is linked to destruction. And yet, there is something plausible about scale: we feel that without scale there is very limited scope for meaningful ecological change. Scale is an ordinary concept as it speaks to our sense of planetary belonging. Different humans are situated in many different niches that make them ontologically diverse, but diversity coincides with the everyday sense of belonging to the ground I stand on and for many, increasingly, this is Earth. We need a significant change of scale to reduce carbon emissions, reverse biodiversity loss, eliminate pollution and toxicity, and instigate transformative societal programmes. Scale is not only tightly connected to environmental destruction but is also a plausible affective ingredient that many humans feel is necessary for avoiding catastrophic futures.

It is this ambivalence of scale that makes it so valuable for political strategists of every kind and taste: those who use scale as a proxy to revolution, overcoming capitalist productionism; those ultra-neoliberals who use scale to intensify and invent new modes of value creation; those statists who need scale to preserve the elitist make-up of liberal Global North societies (in a moment of turbulent decline); and those autocrats who use scale to consolidate and expand their power. The ambivalence of scale is easily compatible with so divergent approaches: the revolutionaries, the neoliberals, the liberals, the autocrats. In *Experimental Practice* the immediate feeling that without scale there is no viable way to encounter ecological destruction is a strong motivation for opening up technoscience to other constituencies, communities and social groups. Simultaneously, *Experimental Practice* recognises that scale is often deployed for something else as it is just attached to political strategies, perpetuating the problem that scale would ideally try to overcome. The problem with scale is that you need it but when you have it, it undermines transformational socio-ecological change.

Experimental Practice is inspired by the practices of many different social movements with, within and occasionally against technoscience in engaging with the double bind of scale: for many of these movements scale is not about replicating the same type of action in order to create change. Rather, it is about engaging with the direct conditions and developing alternative ontological conditions of existence, alterontologies, on the terrain on which each one of these movements and communities live.

Rather than copying and repeating the same practice to scale it and attach it to one or another of the political strategies described above, alterontologies proliferate in intensive ways on the everyday life of communities. Experimentalism is not about replication (something already discussed extensively in STS, see for example, the work of Harry Collins, Trevor Pinch, Karin Knorr Cetina, Ian Hacking, Thomas Gieryn and others). This because, in order for replication to create the scale, another process is underway: delocalization. Operationalise, purify and leave behind many of the actual conditions that made the experiment possible. Scale generates the one model that dominates many locales.

Experimental Practice promotes an alternative approach to scale: different experiments emerge in different communities and many of these, despite their significant differences, align with each other to create alternatives on the ground (and there are many historical as well as contemporary examples mentioned in *Experimental Practice* that I do not have the space to discuss here). Are these alterontological practices enough to create sweeping societal change? Perhaps at some point, but possibly not. They are enough though to defend and maintain the life of communities facing social-ecological conflict and destruction. Alterontologies are not prefigurative politics. They do not point towards some short of other global politics of transformation to come. There is no "post" in alterontological politics. Their intensive material engagements is all there is. But a proliferation of such radical transformative practices through community specificity, material singularity and practical concreteness is what creates change: many alterontological practices. Many immediate involvements in creating alternative ways of existence. Rather than replication we have many intensive and concrete involvements. The political significance of alterontological practice is not emanating from an alignment with the politics of revolutionaries, neoliberals, state liberals or autocrats; their political significance emerges from the immediate fact that they engage technoscience and other traditional forms of knowledge to secure communal life in midst of socio-ecological conflict. They create alternatives on the ground. Perhaps, as Ghelfi says in his commentary we can learn from the autonomy of migration thesis which teaches us to see movements before the order of capital production and mobility before the imposition of control. In a similar trajectory, we can say that experimental practice comes before value production and alterontologies before the securitisation and enclosure of technoscientific knowledge.

The Songlines of Justice

Therefore, if there is no overarching politics, then what drives experimental practice? Which ethics does the ethos of experimental practice entail? *Experimental Practice* argues that the ethos of practice rests on a sense of justice. There is no experimental alterontological practice without such sense of justice. Of course, there is then the question where this

sense of justice is grounded. This is something that in different ways seems to be a concern in all three comments, in particular about the grounding of the ethos of practice in a sense of immediate justice without the mediation of a larger political project or a normative framework for justice. All comments ask, and rightly so, where does this sense of justice come from. They also highlight that an ethos of practice can be easily appropriated by mainstream political projects. It is of course true, as discussed earlier, that alterontological practices are often appropriated in the accumulation regime of Global North "I-do-not-know-how-to-call-them-societies" especially when they are "offering goods and services that the market and the state are unable or unwilling to provide" as Pellizzoni emphasizes. Even more so as many alterontological experimental practices come later to become the engine of the economy and to become fully embedded (although it is also important to mention here that many do remain autonomous). But what is crucial for *Experimental Practice* is not whether alterontologies eventually are appropriated or not but, whether while they are enacted, they maintain the life of communities which are under threat through social and ecological conflict. It is a form of ethopoiesis and care ethics as Maria Puig de la Bellacasa has developed it. Alterontologies are driven by an ethos of practice and a sense of justice that are grounded in moving communal experience.

The justice in practice comes in tracks that are handed over from movement to movement, from generation to generation, from community to community (be it actual or virtual communities) rather in a universal code of practice; it comes in transversal paths and imperceptible routes rather in the monolingual political ideologies and visions. Inspired by oral traditional knowledges, the Aboriginal people's songlines and everyday storytelling, one could say that justice comes in practical tales and in songlines rather than in normative scripts. Songline is the mode of (practical) justice. A moral economy in E.P. Thompson's sense that is experienced and enacted and is given in the actual practices of doing and making. The songlines of justice involve place and are recorded in matter. Every community, every movement, every alterontological experimental practice relies on such songlines to exist. This is their moral compass. No movement, no community, no experimental practice operates in vacuum. We are used to think that practice is not grounded on an ethics and politics if this does not revert to normative and contractual principles or to large ideological political projects (as those mentioned earlier). But most of practice, especially experimental alterontological practice, is grounded on an ethos that is given from previous movements and communities, an ethos that travels through experience. As songlines criss-cross each other, their meeting points produce singular forms of practice and experience enacted within the concrete conditions of existence of each experimental community. Practice operates in a densely populated terrain where the experience of one community or movement becomes *continuous* with the experience of others (an idea the Niamh Stephenson and I have devel-

oped in a previous book on *Analysing Everyday Experience*).

I am here interested in rewilding practice by approaching it through the experiences of movements and communities. Rewilding as an ecological practice in conservation biology requires scale in order to counteract species extinction and the loss of habitats and diversity in ecologies. Without scale rewilding is not possible, as animals travel long distances and material flows cross over isolated locales to other ecologies. The rhythms and cycles of animal and material movements, in ecological rewilding, is more than a metaphor or an inspiration for practice. Rewilding, as a conservation method, is not only about helping declining ecosystems to regenerate: it is also about redefining the position of humans in these ecologies. Practice (that is experimental and alterontological practice) exists in scale, but on a scale of many intensive singular experimentations across different movements and communities. Such experimental practices materialise long path of justice given through previous movements and communal organisation. The songlines of justice exist and are handed over as they are enacted through experimental practices, that are all held in common. Songlines need to be nurtured, cared for, and practised. "Omnia sunt communia." Rather than taming practice as representation of a normative form of justice, or as an activity that aims to materialise some dominant political ideology, the experimental practice of alterontologies is linked to songlines sustained by the experiences of previous social movements and struggling communities. These long experiential tracks of social empowerment and ecological care revive and rewild practice again and again.