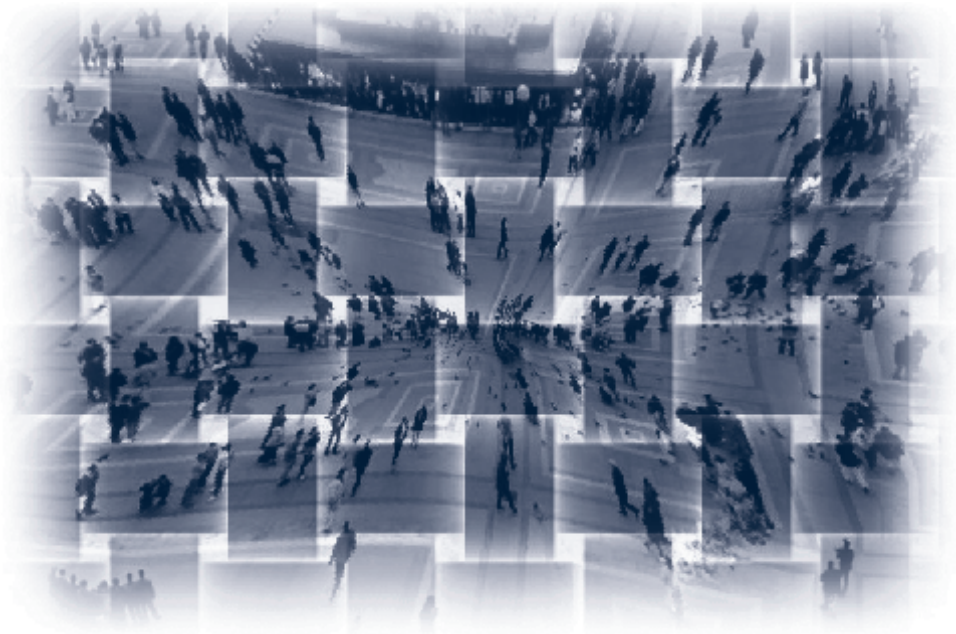




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***ASSESSING NATURE: BETWEEN ZONES OF EXPLOITATION
AND PROTECTION***

Special Issue. Guest Editors: Ágota Ábrán and Iulia Hurducaş

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Special Issue

***ASSESSING NATURE: BETWEEN ZONES OF
EXPLOITATION AND PROTECTION***

Guest Editors: Ágota Ábrán and Iulia Hurducaş

ASSESSING NATURE: BETWEEN ZONES OF EXPLOITATION AND PROTECTION

Guest Editors' Foreword

ÁGOTA ÁBRÁN¹ and IULIA HURDUCAŞ²

Nature is a domain where the scientific, the capital, and the political meet, in constant negotiation and making of Nature. By Nature with a capital 'N' we mean an abstract concept of Nature as one external and in contrast to Society with a capital 'S'. While these concepts are abstracts, they are at the same time very real in that they have to be made, maintained, and are acted upon, thus shaping reality (see Latour, 2004; Moore, 2015). The result of this making of Nature is by no way fixed and is often contested as claims on the protection and exploitation of Nature are made. We understand the exploitation of Nature as embedded in a neoliberal agenda of both resource extraction and touristic attraction, while nature's protection oscillates between ascribing degrees of intervention and the exclusion of humans from other than human environments, such as what is proclaimed as wilderness. Yet on the ground, human and other than human interaction is a practice of assessment, judgement, and selection, where questions of right, of emotional attachments, and the survival and reproduction of species - human and non-human - are put to the test. While Nature often appears as a bound more than human entity, specific entities like trees, flowers, animals, mushrooms, and microbes are often invisible and uninteresting groups. They leave categories of indifference only when they become potential resources (or threats) to human lives. When not material resources, they are moralising comparisons to human socialities as mere metaphors rather than entities in their own right (Tsing, 2005: 172; see also Lorimer, 2007). We direct our interest towards those modes of assessment that happen in space and time, 'on the ground', where entities are sorted in a bid to make Nature.

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Starting from a concern about the ways Nature is negotiated, translated, and transformed across the scientific, economic, and political domains, and about the specific ways it is sorted on the ground, the current issue of *Studia Sociologia* presents three articles that look at these processes from three distinct points of view. Sergiu Novac focuses on the negotiation of Nature-concepts as they enter political agendas while shaping nature on the ground. As such, he evokes the Dutch Pavilion built in Hannover for the 2000 World Exhibition, that became a mere ruin in danger of demolition. He accounts for the parallel processes by which an economic vision of society based on Keynesian and socialist-communist values was dismantled, while another one based on the neoliberalization of the market and the individuality of man was created. In this process, sustainability was attached to this discursive rationality as a mode of recreating Nature in the aftermath of the 1992 Rio Earth Summit. The gaze of Iulia Hurducaș, meanwhile, is that of an urbanist investigating a politically, economically, and scientifically imagined as well as a grounded territory brought within urban control, on the Vasser Valley in Maramureș, northern Romania. Through her geographical outlook, she analysis the legal and scientific control over the forest body and the tensions that this control brings about as it is placed upon the fluid and shifting forest landscape. Subjected to the practice of forestry engineering, a practice that manipulates nature, the forest landscape emerges in between the political, economic, and scientific negotiations of control, and the practical dealings with nature as a form of life on the ground. Thus, what is seen as artificial or natural, virtual and actual all shape the forest. The focus of Agota Abran is two minute strands in the extraction of plant raw materials for the medicinal plant industry. From these strands, she analysis the tension between plants coming from Nature as opposed to Society and plants coming from the spontaneous flora, as often used in the industry. While Nature is sold on shelves, the concept of spontaneous flora allows for the ‘appropriation’ (Moore, 2017) or the ‘salvage’ (Tsing, 2015) of plants from spaces which are not only outside of capitalist control but where plants grow *in spite of it*.

Several themes transcend the selected articles, through which we propose a joint reading of them. The diverse forms of negotiations that create different forms of natural capital allow for things to travel through the various modes of Nature’s existence. A travelling of this sort brings into question the concepts used to recreate Nature while subtracting natural resources (political capital, timber, medicinal plants) for diverse agendas. These concepts are most often shown to be inherently problematic, as Hayden’s (2003) analysis of bioprospecting in Mexico demonstrates. Based on an idea of biodiversity as a distinctive kind of natural capital, her account brings forth a distinctive mode

of Nature's existence in the concept of biodiversity more open to practices of industrial and economic management. The 'haunting' images of exploitation that such an enlargement raises, that stand aside the goals of ecological wealth and need for sustainability, promoted by the same industries that would exploit this wealth (2003: 52) are daunting, but they are equally a fruitful ground for debate on ethics and politics.

Questioning the ethics of the capitalist accumulation process, the three articles highlight the spaces of negotiation and erasure, where things are appropriated as they are made movable. Thus, in Iulia Hurducaş' account, the difference between the abstraction of the plan and the manipulations on the ground emerges as the space where the forest travels from Nature to capital. Within this space, an ever more specific organization of the forest according to environmental conditions is juxtaposed on an economic organization of the forest as a space of extraction. In Novac's story, sustainability emerges as the discursive space where the shift in economic visions happens, resulting in the collapse of the East German economy. Here, what appears as an economic vision grounded on a new mode of organization of Nature in the form of sustainability, does not even touch nature on the ground, but it merely 'stages' it in the discursive layer. Moreover, what becomes apparent, is that when used to justify a new economic vision, sustainability almost erases the existence of Nature on the ground, as it constructs it anew. In Abran's account, the concept of spontaneous flora emerges as the space where the by-products' of the unplanned and unregulated spaces where plants grow at will, are commodified. From a spatial point of view, the emergence of these plants in the leftover spaces of urbanization can lead to a conception of them as 'subnatural' (Gissen, 2009). However, the focus on the plants themselves, for whom the social categorization of space is indifferent, as they emerge where the proper conditions for life are met, both in 'natural' spaces and in urbanized space, calls for a different categorization, transcending the spatial division into natural and urban. As plants travel from 'the environment' into 'the economy', the moral organization of nature into weeds and useful plants is overwritten by the concept of spontaneous flora.

Through the reading together of these three articles, we can begin to recompose the intricate processes by which Nature is made a subject of debate in its multiple existences within the scientific, the economic, and the political domains, and how they relate to nature on the ground. In the top-down political push towards a new capitalisation of Nature 'staged' as a sustainable use of natural resources, as in Novac's article, nature on the ground is invisible. Its negotiation on the ground, however, as Hurducaş shows, is a matter of manipulation and sorting of a natural territory. Here, the tension between its

sustainable use, upon which its capitalisation rests, even though it denies it, and its protection as a natural environment, manifests itself not only in the discursive but also in the affective layer, as forestry engineers become the negotiators of this tension. Starting from the ground, Abran illustrates how the by-products of this tension are appropriated by capitalist production processes through scavenging spontaneous life. Throughout these processes, the inherent ambiguity in Nature (Cronon, 1992: xvii) with a capital 'N' becomes apparent. As Nature emerges already distinct from Society in Marxist and Hegelian thought, as an entity outside the human, to be appropriated by processes of capitalist exploitation (Cronon, 1992: xvii), nature on the ground, where humans become the collectors, the negotiators, and the protectors, becomes a hybrid mix of the natural and the artificial, of the controlled and the uncontrolled.

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STAGING SUSTAINABILITY AT EXPO 2000: GERMANY'S PANACEA FOR THE CRISES OF CAPITALISM

SERGIU NOVAC¹

ABSTRACT. This article explores how sustainability was staged in the context of EXPO 2000, the first and only world exhibition organized by Germany. The notion seemed to gain ground around the turn of the millennium in global political and policy circles, especially through such documents as the 'Agenda 21' and the 'Millennium Development Goals'. These were also the main source of inspiration while organizing EXPO 2000, which, under the motto 'Humankind, Nature, Technology' claimed to put forward a radically different vision for the 21st century. However, throughout the paper I argue that sustainability ended up performing a quite different ideological function. In Germany, the staging of sustainability took place as an activation of expertize, meant to fix a crisis of the economy and to open up new grounds for capitalism's search for profit, ultimately deepening the environmental crisis that it was meant to alleviate in the first place.

Keywords: sustainability, Agenda 21, EXPO 2000, Germany, Birgit Breuel

Today, the Dutch pavilion is one of Hannover's few remaining landmarks of EXPO 2000. The open, four-story, concrete building is a ruin. Wild weeds have taken over, turning it into a statement for the passage of time. If intended, this abandonment would have been very fitting to the initial theme of EXPO 2000, which set out to envision new forms of interaction between humans and nature for the future. As if being a project of the French landscape architect Gilles Clement, the Dutch pavilion would have stood as a reminder of the resilience of 'nature' and the contradictions of culture, understood as work performed by humans on nature².

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² Clement, through his 'Manifesto for the Third Landscape' (2015), makes a claim for non-interventionist urban rewilding of interstitial places, which are considered as not important by humans. His paradigmatic project exemplifying this idea is the Matisse Park in Lille. Another project that experiments with this idea is the High Line in New York. For more details, see Matthew Gandy's paper (2013) on the topic.

The first and only World Exhibition hosted by Germany in the city of Hannover, the capital of the state of Lower Saxony, tackled the topic of sustainability. It attempted to bring nature into the field of technological development and resolve the contradictions between the two through novel approaches.

However, the abandonment of the Dutch pavilion was unintended. An article in the main local newspaper from Hannover drew attention in 2016 upon the state of the buildings left behind by the world exhibition, being particularly concerned about the Dutch pavilion. It deemed it as a 'rotten' risk to public safety and argued for it being demolished as soon as possible (von Meding, 2016). Furthermore, the initial concept behind the Dutch pavilion did not have anything in common with Clement's ideas. Under the motto 'Holland creates space' the project engaged with the continuous struggle of a country with limited space *against* nature. The website of the planning office that designed the pavilion described it as 'six stacked Dutch landscapes, which form an independent eco-system, communicating cultural sustainability: progressive thinking and contemporary culture are combined with traditional values'³. The visitor would encounter windmills, forests and tulips on different floors, each encased in thick layers of concrete. The Dutch pavilion was considered one of the most successful exhibits of EXPO 2000 and received one of the largest numbers of visitors among all pavilions (See Fig. 1).

The questions that I will be concerned with throughout this paper is what kind of sustainability was staged at EXPO 2000 in Germany and to what effect? A first hint towards answering the first question can be found in the story of the Dutch pavilion: EXPO staged sustainability as a complex of highly engineered monocultures, encased in thick layers of concrete. However, there is more to it. In this article, I argue that sustainability had an important role in addressing the 1970s crisis, but in doing so it rather obscured the real reasons for the crisis and enabled - at least at discursive level - an important shift towards reform at the level of German high politics. In other words, by staging sustainability in a particular way, after the year 2000 Germany was able to activate both environmental reforms and the most far reaching labour market reforms since the Second World War. I argue that these two go hand in hand and are the consequence of a particular understanding of fixing the *longue durée* crisis of the 1970s.

³ ("MVRDV - EXPO 2000" 2017).

Figure 1.



Left: Dutch Pavilion during the EXPO (Source: Juergen G., 2000, Wikipedia, CC License); Right: Dutch Pavilion after the EXPO (Source: Axel Hindemith 2008, Wikipedia, CC License).

In the first part of this paper, called 'Crisis 2.0', I explore the context of organizing the EXPO 2000 and the intellectual inspirations that were brought in for staging it. My argument is that Germany used to opportunity of EXPO 2000 to take up a leading role in fixing the problems of the environment. The interesting question is how this happened and what exactly sustainability ended up meaning in this context. By closely analysing the political context around EXPO and the specific intellectual traditions that were employed in justifying sustainability, I argue that sustainability operated as a discursive device deployed by a set of carefully selected experts in order to open up new terrains for capitalisms ever-expanding ambitions.

The second part, called 'Crisis 1.0' then goes back to the 1970s and does a political biography of the general manager of EXPO 2000, Birgit Breuel, in order to trace the becoming of this specific market oriented vision of sustainability.

The story that is being told here is very particular to the German context and oscillates between state level - Lower Saxony - and federal level. However, the trajectory of the notion of sustainability, understood as a millennial catch-all fix for the deepening crisis between capitalism and nature, will show clear resemblances with other cases from around the world, cases about which this article hopes to trigger a future conversation.

Crisis 2.0: Sustainability at the EXPO 2000

Under the motto 'Humankind, Nature, Technology – A New World Arising', the featured projects of EXPO 2000 tried to imagine a future articulated along the principles of 'Agenda 21', the working paper developed at the Rio Summit in 1992 for the 21st century. Next to the standard format of projects exhibited on site in Hannover, for the duration of EXPO several other exhibits were organized around Germany and internationally. They were supposed to function as real-life laboratories, examples of already ongoing attempts of shifting towards more sustainable ways of living. Birgit Breuel, the general commissioner and manager of the EXPO, underlined the importance of the connection between the EXPO and the Agenda 21 tirelessly in all the official documents that were produced in the context of the event.

It has taken Germany 150 years to organize the world exposition for the first time. This is something we can be proud of (...). What motivates the EXPO 2000, as far as content is concerned, is Agenda 21, a campaign for the 21st century voted in at the first Environmental Summit held in Rio de Janeiro in 1992. The 179 signatory states undertook to commit themselves to the principle of sustainable development, combining economic capacity, social responsibility and resource-preserving behavior. (EXPO 2000 2000, 15)

The bid for the EXPO 2000 was won by Hannover in the late 1980s. At that time the ruling party at the level of the state of Lower Saxony was the CDU⁴. They had been in power at the state level since 1978. But soon after the bid was won the party would be voted out of power and a new coalition between the SPD⁵ and the Green Party would take over⁶. The new coalition took it upon itself to find a topic for the EXPO 2000, which would break completely with the tradition of progress that previous world exhibitions staged. EXPO 2000 was supposed to be a platform for ideas that would solve the problems of the 21st century, beyond established Cold War binaries. While promoting the future

⁴ The Christian Democratic Union of Germany.

⁵ The Social Democratic Party of Germany.

⁶ At federal level the CDU would remain in power under Helmut Kohl until 1998.

EXPO to local actors in the Hannover region in 1991, the at that time new prime minister of Lower Saxony, Gerhard Schröder, took stock of former world exhibitions and expressed clearly what Hannover should not do: 'There is a common underlying notion of all world exhibitions: the taken for granted connection between technical progress and a future painted in bright colors' (Schröder, 1992: 5). A world exhibition is a commercial endeavour and Schröder was trying to persuade the otherwise rather sceptical local actors from the city and region of Hannover to become involved in organizing the EXPO. But in doing so he appealed to a set of arguments that expressed the importance of Germany having the chance to organize the turn-of-millennium world exhibition. In words that could have been taken out of Adorno's and Horkheimer's (1973) classic of critical theory, Schröder referred to the 'exceptionality' of Germany in dealing with history and to the lessons that it could bring into a new vision of the future, having this particular historical consciousness.

Man's emergence from his self-imposed non-age through the jump into Enlightenment seemed unbroken for a period of several decades. Yet, at least since the catastrophic experience of the two world wars of this century and the systematic mass destruction by fascism, optimistic progress has become impossible. Enlightenment today has a different meaning. A world exhibition at the end of this century has to face the past. Without a balance sheet of modernity – by this I refer to the past 200 years since the French Revolution – the future is unthinkable. (Schröder, 1992: 5–6)

This is not Kant speaking, nor is it Adorno, but Gerhard Schröder, a trained politician presenting himself at his best, both pleasing his Green Party coalition partners by posing as a reformed social democrat concerned with environmental issues, and by impressing his audience by referring to the exceptionality of Germany with regard to the memory of the Second World War. In the same speech from 1991, he went on and asked for a 'World Exhibition of a completely new kind' (Schröder 1992, 12) which, on one hand, would embrace a critical distance towards past exhibitions, by having a more pronounced historical reflexivity and, on the other hand, would give space for conflict and critical dialogue:

A World Exhibition which wants to be faithful to the situation of the world at the end of the 20th century has to represent social, ecological and cultural needs of people, has to be a forum for discussions coming from different directions, but also has to be tolerant enough in order to put contradictions alongside each other. (Schröder, 1992: 13)

Conflict and critical debate would be possible only under the prerequisites of a basic conviction: 'The utopian hope for a global community, which works in solidarity towards solving its problems and conflicts' (Schröder, 1992: 18). On the very same page, Schröder managed to speak against Kant by revealing the internal contradictions of the Enlightenment project, while finally returning to the Kantian notion of a 'global community' as a platform where these contradictions should be discussed and solved.

Schröder, the up and coming politician, was at his best here. The dilemma of finding a proper theme for the EXPO 2000, beyond the mentioned contradictions, was real. If we were to read these speeches in another light, the question that was posed was to find a theme of global relevance at a time when conservative global intellectuals were celebrating the end of 'big themes'. While the prime minister was giving his speeches, the 'end of history' (Fukuyama, 1992) was arriving, the Soviet Union was in full collapse and capitalism was finally triumphant. Lyotard's (1992) prediction about the end of grand narratives seemed to have fulfilled itself. In this confusing and rapidly changing context, finding a theme of global relevance for the EXPO 2000 was indeed a challenge. Especially for a party coalition from the centre-left which tried to go against the mainstream conservative atmosphere of the time, but also against the CDU, which was still in power, under Helmut Kohl, at the federal level.

One year after Schröder's speech an event of global importance offered the opportunity for a theme of such relevance. The 1992 United Nations Conference on Environment and Development held in Rio de Janeiro, otherwise called the Earth Summit, made sustainability a priority for policy-making on a global level. The most important document that emerged from the conference, the Agenda 21, started out by stating:

Humanity stands at a defining moment in history. We are confronted with a perpetuation of disparities between and within nations, a worsening of poverty, hunger, ill health and illiteracy, and the continuing deterioration of the ecosystems on which we depend for our well-being. However, integration of environment and development concerns and greater attention to them will lead to the fulfilment of basic needs, improved living standards for all, better protected and managed ecosystems and a safer, more prosperous future. No nation can achieve this on its own; but together we can - in a global partnership for sustainable development.

The Agenda 21 acknowledged the growing global disparities and the challenges faced for development. The grand narrative that was proposed in order to alleviate this problem, the fix for the internal contradictions that Schröder was talking about, should be sustainability. The arrival of a global

agenda for the 21st century presented a unique opportunity for the organizers of the EXPO 2000 and the Agenda 21 became the blueprint around which the entire world exhibition was organized. After having dealt with the German reunification throughout the 1990s, Germany wanted to show that it was now ready to take up a leading role on the global policy agenda.

I will now turn to some of the main intellectual inspirations around which the notion of sustainability was articulated in the context of world exhibition. In the year before EXPO a series of books were published by the organizers at the prestigious German academic publishing house Campus, each tackling one specific sub-topic of the exhibition. They were edited and written by world renowned experts in their specific fields, in order to give them additional weight. The first, edited by Birgit Breuel, the general manager of the EXPO, had the name 'Agenda 21. Vision: Sustainable Development' (Breuel, 1999). In it, she traced the intellectual roots of the agenda and the turn towards sustainability in a very specific moment of crisis:

The technological progress displayed by world exhibitions and the corresponding development of societies in western nations were mainly dependent since 1851 on the ever-accelerating exploitation of Earth's limited resources. (...) The report of the Club of Rome from the year 1972 about 'The Limits to Growth' tackled for the first time for a broader audience the fact that this pattern of resource use will reach clear limits and that development can't go on as it did before (...) However, the basic argument of this first report for the Club of Rome about the 'Limits to Growth' stands until today: The natural resources of the Earth are limited and the cumulated global consumption became so high that we can't even afford the mid-term continuation of this path. These thoughts were picked up in a different manner by the UN Conference for Environment and Development in Rio in the year 1992 and the concept 'sustainability' was added to future development. Practically all nations of the world undersigned the 'Agenda 21', which was decided at this conference. (Breuel, 1999: 9)

Crisis was therefore pinpointed in a specific historical moment, in the context of the publication of the book 'The Limits to Growth' (1972). Starting from this moment, Breuel argued, a signal was given to think about the relationship between human development, technology and nature in a different manner: 'Agenda 21 is often also called the "Environmental Paper". However, "sustainable development" involves much more than just careful use of natural resources. It involves also the living and acting together of humans.' (Breuel, 1999: 9). Along with the book edited by Breuel, an entire set of books on the separate topics of the EXPO were published, on topics such as climate change, health, global food supply, labour or energy.

Take, for example, the book on energy written by Amory Lovins in collaboration with Peter Hennicke for the EXPO. Under the title 'Full of Energy: The global factor four strategy for climate protection and nuclear exit' (1999) the two authors set out to present a new energetic future for the 21st century. Peter Hennicke was at the time the head of the Wuppertal Institute for Climate, Environment and Energy, the most prestigious German institute in the field. Lovins was by that time a world famous public figure. He had been advocating since the 1970s, through the Rocky Mountain Institute in the US, for a soft path transition towards renewable energy sources. The 'factor four' strategy which they proposed in their book is one in which it is argued that economic growth does not necessarily have to be coupled with growth in energy use. Therefore, it is possible to halve the energy use, all the while doubling the productivity of the economy. The underlying principle follows a strong belief in technological fixes, that would enable this strategy. In the first part of the book, Lovins and Hennicke set out to show why fossil energy sources do not have a future. The main reason they pinpoint at here follows in the footsteps of the Club of Rome report, arguing that they are finite resources and that their continued exploitation harms the environment. Then they move on to explain why nuclear energy is not an alternative to fossil fuels and should not be considered as an alternative. Here they underline mainly the risks of nuclear energy and the environmental and health impacts of the waste produced. Finally, they turn to possible future scenarios, modelled until the year 2050, showing that their 'factor four' alternative is the most feasible. With such examples as a shift towards regional smart grids, solar and wind energy production facilities, electric cars and passive houses, the authors try to convince the reader that a total reshaping of the global energy landscape is possible, without having to change anything in lifestyle. They also explain that 'climate protection' is, firstly, an opportunity for more profit, and should be approached accordingly by involved actors in the energy sector:

Put simply, most methods for preventing climate change are better from many perspectives: they are profitable, not against the equilibrium of the planet, but, quite the contrary, of crucial importance – they serve development, well-being and safety. Additionally, they do not depend on top down interventions, but are based on the intelligent use of market forces. The result of climate protection is not suffering, deprivation and sacrifice, but profit, enterprise spirit, innovation and advantage through increased competitiveness. (Lovins and Hennicke, 1999: 102)

Lovins and Hennicke expose here a strong belief in the fact that market forces not only provide the only solution to climate change, but that they also will promote business interests and bring profit to all market actors involved.

However, surprisingly, they also claim that this view runs contrary to the one expressed by neoclassical economics.

Today we begin to step over the traps that neoclassical economic theory has laid ahead of us. It started from the premise that it is expensive to economize on or replace certain resources – and that it becomes more and more expensive, the more one wants to give up on them for the sake of the environment. However, the ‘new growth theory’ describes the previously unthinkable possibility to transform thinking into rising profits – based on exponentially growing knowledge about the interactions in a system. (Lovins and Hennicke, 1999: 104)

The only problem is that it is not at all clear what the ‘new growth theory’ should be about, and in what way exactly it is different than neoclassical economics. Not having laid out a critique to neo-classical economics, the ‘factor four’ strategy presented here seems to be rather a fix to the intrinsic problems of economics, and not a radical alternative. It is important to remember why, in the context of this article, the choice of giving voice at EXPO 2000 to an expert like Amory Lovins was relevant. Lovins’ engagement with the energy crisis was not singular in the 1970s – he represented one faction of experts in a highly dynamic and controversial field of debates surrounding the future of the earth’s resources and the possibilities of alternative modes of conviviality. Other thinkers that engaged with the topic at that time had a very different approach to the topic. For Ivan Illich, to take just one famous example, technological development was just another illusion that deepens the relations of slavery among people and between people and their environment. For Illich, ‘high quanta of energy degrade social relations just as they destroy the physical milieu.’ (1974: 15) But in the context of the EXPO, such a critique was too radical and a solution which advocated for technological fixes, while at the same time favouring profit maximization was more preferable. The view of innovative, enterprise oriented actors on the market, all struggling to maximize their profit, while at the same time protecting the planet, was only one from a longer series of absences. Another one, equally important, was the complete absence of labour from the discussion.

The EXPO 2000 book series had another book, fully dedicated to labour. Unfortunately, there was no connection between the two. The author of the second, German sociologist Ulrich Beck, chose to entitle it ‘The Brave New World of Work’ (Beck, 1999). The reference to Huxley’s famous dystopian novel wanted to be ironic, warning the reader from the outset that this is not a topic with easy solutions. Beck chooses to start his intervention with a peculiar and rather unfortunate description of the state of the world, by deploring the ‘brazilianization’ of the West. His claim is that Western societies, which have

been the 'bastions' of full employment for decades, are increasingly shifting towards a model of partial employment, just like it is in the norm in the Global South. Not only is this a strange argument to make in a book that is part of a World Exhibition, celebrating new ways of working together between nations, but it also obscures decades of interventions by international, 'western' global financial institutions in the economies of the countries of the Global South.

Starting from this unfortunate term, Beck embarks on an otherwise necessary discussion, which was completely absent in the context of the EXPO. It involves what he calls 'the end of work society': the way neoliberalism unfolded an explicit attack on labour in the past decades. Continuing his ideas from previous books, Beck argues that the demise of work society also signals the entrance into a new era, that of the 'risk society', defined by a 'political economy of insecurity', in which nation states and localized labour find it hard to adapt to the rapid flexibility of global capital and such notions as labour flexibility and market deregulation become the norm (Beck, 1999: 7–11). These phenomena are the trademarks of a 'reflexive modernization'.

The term 'reflexive modernization', then, refers to the transition away from a first modernity locked within the national state, and towards a second, open, risk-filled modernity characterized by general insecurity. This transition takes place, as it were, within a continuity of 'capitalist modernization', which is now in the process of removing the fetters of the national and the welfare state. (Beck 1999, 24)

But this is just as far as Beck goes in his analysis. He remains at the level of intuitive descriptions, criticizing Thatcher for the open attack on 'society' and foreseeing a classless society in the 'risk society'. He then describes nine possible scenarios of how the 'risk society' will actually look like. Most are bleak, with descriptions such as 'global apartheid' or 'individualization of work – disintegration of society' (41). Not surprisingly, Beck does not include any form of socialist organization of society in his 'future scenarios', not even in the category of negative possible outcomes, all the while quoting extensively authors like Andre Gorz and Ivan Illich in his book and arguing for the possibility of a world where paid work is not a necessity. His two future scenarios that are of a 'radical optimism', as he claims, involve the future of Europe and the future of the world. For Europe, he claims that starting with the collapse of state socialism the world does not operate in bipolar terms anymore and there is finally a free exchange of ideas. This is facilitated by a form of capitalism which has a multitude of forms, facilitating 'multiple, coexisting modernities', which can nurture a rich exchange of ideas (123). Specifically, Beck imagines the future of Europe as a future based

on a model of 'civil labour', which would exist in tandem with paid, unsatisfactory labour and would compensate on the needs of social cohesion and self-worth of a 'society of citizens' (128). And for the world, Beck argues that the best option in the 'risk society' would be a 'post-national civil society', which would be the harbinger of new forms of solidarity and a new consciousness for global problems such as climate change (151). Just as Schröder had concluded his speech for promoting the EXPO in 1991, Beck ends his long expose with the enthusiastic claim: 'Cosmopolitans of the world, unite!'

The work society is drawing to a close, as people are more and more replaced by smart technologies. Must this all lead to catastrophe? No, on the contrary: only when all passive toil at machines has been successfully done away with, will human creativity be free to answer in detail the great questions of the second modernity. Whether it will be done successfully or not, no one can say. So why should we only be either pessimistic or optimistic, and not both at once? For the question of whether a European cosmopolitan movement is capable of becoming reality can find an answer only where it belongs – in the practical space of politics. This would then realize one of the main ideas of Kant's Perpetual Peace: 'To consider oneself, according to internal civil right, as an associate member of a cosmopolitan society is the most sublime idea anyone can have of their destination. One cannot think of it without enthusiasm.' (Beck 183) ⁷

The EXPO 2000 therefore pinpointed a real, urgent global problem. I do not intend to argue here that the problem was not of serious concern – quite the contrary! Rather, the way it was represented and the solutions offered to solve it were, at best, superficial. None of the pavilions of EXPO or the intellectuals recruited to give weight to its main theme engaged with capitalism as a possible problem of the environmental crisis. Naturally, none about to imagine a world beyond capitalism where the relation between humans, nature and technology could be different. Quite the contrary, in the short period from the signing of the Agenda 21 and EXPO 2000 a set of global experts were mobilized to transform sustainability into a catch-all market fix that would cure the crisis of the global economy. However, the underlying reasons for the crisis were largely left undisputed and the same people that had been active in creating it, were now active in supposedly fixing it through sustainability. It does not come as a surprise that the outcome of this gigantic representational spectacle, which culminated in EXPO 2000, ended up being just a very temporary fix.

⁷ Interestingly enough, in the English translation of the book Beck quotes Kant, while in the original German version he chooses to end the article with a quote from Nietzsche (Beck, 2000).

However, at least in the German case, organizing this spectacle proved to be a smart political move. By the time that the EXPO 2000 was organized, Gerhard Schröder and his SPD/Green Party coalition had moved from governing the state of Lower Saxony to governing the entire German Federation⁸. The EXPO 2000 turned into the blueprint of this new government.

Crisis 1.0: Privatization, flexibilization and German re-unification

Thus far I have shown how both the Agenda 21 and the organizers of the EXPO pinpointed the emergence of an unfolding crisis somewhere in the 1970s and explained it through a mismanagement of the Earth's resources. However, the crisis unfolding in the 1970s had a broader significance, and resource exploitation was just one part of it. The post-war economic boom period was coming to an end and it was threatening to destabilize the political consensus of the Western, developed nations. The formation of OPEC, decolonization, rising oil prices and the decoupling of the dollar from the gold standard marked the end of the Bretton-Woods agreement. Simultaneously with the unfolding economic crisis, Keynesian economics started to be heavily disputed in elite universities – especially in the US. By the late 1970s a major tectonic shift had happened in the elite policy circles of the West. The conservatives were coming back to power, but this time with a new ideological agenda. Reagan in the US and Thatcher in the UK provided the political support for a shift in the ideological disposition of the most important control mechanisms of the global economy, such as the IMF and the World Bank. This move involved deregulating trade and finance, rolling back public spending and weakening organized labour.

Germany was fully immersed in this process. As the 'contradictions of the welfare state' (Offe, 1984) were unfolding, the 'social market economy', a fundamental notion of the German post-war welfare pact between the two big parties, was coming under threat. After a very long hold on power at federal level by the social democrats (1969 - 1982), the conservative party moved in and attempted the same kind of reforms as those being implemented in the UK by Thatcher or in the US by Reagan. Heated debates started inside the CDU around this topic and a new faction of conservatives, with a strong liberal, pro-market economic ideology, was emerging. A key figure in this faction was none other than Birgit Breuel, whom we have already encountered as the general manager of the EXPO 2000.

⁸ Schröder's government took office in 1998. This was also the first and only period that the Green Party was in power at federal level, between 1998 and 2005.

In order to be able to explain what sustainability activated in the context of Germany, we will have to return back in time, to this specific moment of crisis. This is of course a very dense story and it is impossible to narrate the history of German politics in the last fifty years in the context of this paper. I will therefore stick to the figure of Birgit Breuel, and read the history of staging sustainability through her own political career. Although relatively unknown outside of Germany, Breuel is important to the story of sustainability because she has played the role of a crisis fixer repeatedly and has tirelessly advocated for a very specific type of reform articulated around the mantra of privatization, flexibilization and de-bureaucratization. In this last part of the article, I will show why this mantra was particularly fitting to the vision of sustainability outlined in the context of EXPO 2000.

The appointment as general commissioner of the EXPO 2000 was Breuel's last important publicly held position. But by that time she had already established a long-standing career as one of the most important CDU politicians of the country. Breuel came from a rich, conservative family of bankers from Hamburg, with her father, grandfather and great-grandfather being in the parliament of the city-state. She entered politics in 1971 as a member of the Hamburg parliament, becoming the speaker of the CDU in the economic committee of parliament. She was the first woman in the family to go into politics. In 1978 she moved to the state of Lower Saxony, becoming Minister for Economy and Transportation in the newly appointed CDU government of Ernst Albrecht. It was because of her that the feminine form of the word minister (*Ministerin*) was officially used for the first time in German politics. She held this position between 1978 and 1986 and in the last mandate of Ernst Albrecht she held the office of Minister of Finance (1986 - 1990).

Next to her activity as a politician, Breuel also became an active writer. She published several books during this period, in which she exposed her political views. Already before becoming a minister in Lower Saxony, Breuel published a book with the title 'There is no buttered bread for free'⁹ (1976), in which she exposed her ideas about the unfolding global economic crisis and the chances of the German economy in this context. It is important to note that, at this point, Breuel and her party were still in the opposition at federal level. What she argued for was therefore also directed against the politics of the ruling SPD. The underlying idea of this first book, an idea which she would develop in the following years, was that the state intruded all areas of life, crunching entrepreneurialism in the private sphere, blocking competitiveness in the economic sector and hindering innovation. The solution to the unfolding crisis,

⁹ 'Es gibt kein Butterbrot umsonst' (Breuel, 1976)

which she compared to the great depression of the 1930s, was to gradually shrink the state, in order to promote efficiency and competitiveness: 'This means, concretely, that political forces must work together, with small steps, towards a greater participation of private individuals and towards greater preparedness for risk' (Breuel, 1976: 120).

Her second book (Breuel, 1979) follows on the same path and is an open attack towards bureaucracy, understood here as a 'fungus' that encroaches on all spheres of life, especially on the market, blocking its proper functioning. The book is split into two parts, the first being a critical assessment of the present situation, the second being a proposition for an alternative future. The situation that Breuel describes is one dominated by suffocating bureaucracy, while the solution for an alternative, better future is a society that promotes the private initiative of individuals. In Breuel's own words: 'Social means in the first place the chance of freely unfolding the self. It should not be reduced to social aid.' (1979: 83)

The following year (Habermann and Deimer, 1980) she was part of an editorial group for another book called 'Anti-bureaucracy: More citizen than slave'. Together with a group of economists promoting a similar line of thinking, in this book the state was deemed as the 'Leviathan', which had to be properly dealt with in order to get Germany going again.

The book is a warning for everyone to think whether they do not ask for more state care through their behaviour and whether they would like it, if state structures are available with their services around the clock (...) Put differently: We are all producers of bureaucracy and it would be catastrophic if we would forget this and look for the reason for more state in another, anonymous sphere (...) I transitioned during the writing of this book from the Hamburg Parliament to a ministerial office in the Lower Saxony government. Immediately after I took up office in the Ministry for Economy and Transport, I set up a new bureau which is exclusively concerned with the issue of *privatization*.¹⁰ (12)

Starting with the moment of transitioning to power, together with the CDU, in Lower Saxony, a new topic figures high on the agenda: privatization. Simultaneously, on federal level, the CDU moves into power and Helmut Kohl becomes the chancellor of Germany. The position from which Breuel expresses her ideas from now on is that of the ruling party, both at federal level and at the level of the state of Lower Saxony.

In 1983 she published a book called 'Perspectives for Awakening: Learning from Mistakes'. Here Breuel expands her case for a free market economy against state interventionism, pointing out four key sites on which work

¹⁰ My own indent.

had to be done: the strengthening of market elements, more private initiative coupled with more private responsibility (flexibilization), privatization and de-bureaucratization. She ends the book with the quote from Seneca, 'life means struggle' (1983: 203), suggesting that there is no other way for creativity and freedom to develop than through deregulated market competition.

Breuel seemed to be constantly up to date with the most recent debates in the German public sphere of the time, never failing to engage them in her writings. In 1985 she declared that the world was entering a post-industrial age and declared that she was fully committed politically to embracing the structural changes of society, including the painful consequences of losing some of the old, established industries (Breuel, 1985). Furthermore, she actively engaged social scientists and explained how they also have to participate in this process of shaping new kinds of political subjectivities. In the opening speech that she gave to the Annual Congress of the Association of Market and Social Researchers (1986), Breuel pointed out the unfortunate lack of communication between technological and social research. She argued that this lack of communication had to be overcome in order to properly address Germany's future:

The core question of Germany's future is how can we connect progress in technological fields with that of social and human progress? *How can we adapt technological developments and their implementation in companies also for developing social structures?*¹¹

Breuel seemed unaware of the taylorist undertones that her statement had and went even further, describing how such a move might be possible. One aspect she identified was that of education and professional formation, where she argued for an early education towards flexibility on the labour market and lifelong learning strategies. When addressing work and free time, she discussed social innovations that would be required in order to make individuals adapt to technological progress. She then engaged with a series of sociologists - Dahrendorf, von Nell-Breuning and Peccei - and showed that even they complained about the fact that 'official wage labour' is the only form of recognized labour (Breuel, 1986: 16-19). In this context, she referred to a series of types of work that are done by women. And yet, it would be a mistake to think that Breuel was making an argument for introducing wages also in the domain of unpaid, mostly care work done by women. Quite the contrary, she summoned sociologists to find ways to raise the social worth of this type of work, without it being paid: 'We must consider ways through which we can raise the social prestige of unpaid work, in order to guide the transformation process of our society to our advantage.' (1986: 19).

¹¹ My indent.

It comes as no surprise that Breuel had been often compared to Margaret Thatcher during those years. Thatcher's 'there is no such thing as society; there are only individual men and women. And there are families', resonates very much with the type of politics Birgit Breuel was putting forward. However, the implementation of the envisioned reforms worked out in a very different way in the UK and in Germany. Although the agenda was there, in Germany the reforms could not be implemented. Or, at least, not during the 1980s. There are several reasons for this, but I will engage just two. One of them, important both at the level of the state of Lower Saxony, as well as at Federal level, was the coagulation of a strong opposition in the form of the Green Party, constituted out of factions from the autonomist leftist movement, the Peace Movement and the environmentalists. The CDU in Lower Saxony, under the rule of Ernst Albrecht, practised a strange form of environmental politics, whereby it would heavily criticize the subsidizing of the coal industry on the one hand, but heavily support the nuclear industry on the other hand. Lower Saxony was - and still is - one of the key sites of struggle of the German anti-nuclear movement, since it is in this state that several final waste repositories and a nuclear fuel reprocessing plant were planned and some even built¹². This triggered a heavy opposition towards the CDU government. And then, there was always the social democratic party, the SPD, which was lurking in the background, waiting to take back power¹³.

In 1990 the CDU was voted out of power in Lower Saxony and the new government was formed by a coalition between the social democrats and the Green Party. The Green Party, until then always called the 'protest party' was in power at state level in the new cabinet of the reformed social democrat Gerhard Schroeder. Birgit Breuel lost her job as minister of the state. But at the federal

¹² Lower Saxony is the site of the final nuclear waste repositories Asse, Gorleben and Konrad. Asse, a salt mine, has been filled with nuclear waste during the time of Ernst Albrecht. Later it turned out that the water and salt infiltrated the barrels and made them leak. Now the waste has to be taken out again. Gorleben was planned to be the high radioactive waste repository of Germany. The plans started also during the CDU rule. After heavy protests it was given up as an idea and now Germany is looking for a new site. Konrad will be the low and medium radioactive waste repository and is currently under construction. It is supposed to be finished by 2022.

¹³ There is also another reason for the failure of the CDU to implement the pro-market reforms, which can be addressed here only briefly. The speed and intensity of the reforms was not shared by all leading members of the party at federal level. Besides, as Prasad (2006) argues, the structure of the party was in such a way that certain factions could actually veto decisions of the leading party members. The workers' faction of the CDU used this institutional arrangement of the party in order to block more far-reaching market reforms that were coming from the top during the 1980s.

level things stood differently. The CDU was still in power, with Helmut Kohl embarking on the most important project of his political career: The German Reunification. This was also the moment when Birgit Breuel was appointed to the most important position of her career. Immediately after being voted out of office in Lower Saxony, she moved to the *Treuhandanstalt*¹⁴ in 1990, the public holding company that took over all the assets of the German Democratic Republic. After the previous manager of the *Treuhandanstalt*, Detlev Rohwedder, was assassinated in 1991, Breuel took over the position, overseeing the fate of all the state-owned assets of the former GDR. There could have been no better place than the *Treuhand* to really experiment with the ideas that she was supporting for two decades and was not able to implement in West Germany.

In order to comprehend the magnitude of this 'laboratory East' that the *Treuhand* was, one has to realize that at the time of its formation in 1990 it was 'having taken up nearly an entire national economy, was by far the largest holding company in the world, equivalent in terms of the number of its constituent firms and their employees to the twenty-five biggest corporations listed on the New York stock exchange (Dale, 2002: 112). While in the first phase the purpose of the *Treuhand* was to restructure the economy through a variety of ownership forms, very rapidly and with intense pressure from the federal government the agenda turned into one favouring 'shock therapy' style privatization by all means. The companies that did not survive the privatization process were considered not to be viable on the market and were shut down. The *Treuhand* was directly responsible for more than 10,000 companies, 25,000 real estates, several thousand vacation homes, 1,500 shops and pharmacies, 2,000 cinemas and 50% of the entire agricultural area of the former GDR. The motto of the *Treuhand* was 'fast privatization, decided restructuring, cautious shutting-down' (Breuel, 1991:9). Breuel even went further and declared publicly that the *Treuhand* represents an opportunity for experimenting with new private ownership forms in the former GDR, such as in the field of water management, something that was a complete taboo even in West Germany, where water management was traditionally in the hands of the communes (Breuel, 1994).

By 1994, when Breuel ended her appointment as manager of the *Treuhand*, this process of privatization was almost complete, leaving the East German economy in full collapse. Taking stock of her experience as *Treuhand* manager, in a 2005 book, Breuel seemed very satisfied with the results.

¹⁴ Which means the 'Trusting Hand Agency'.

Despite all the known difficulties and mistakes, the introduction of the market economy in the former GDR stands as the central success of the transformation. It is exemplary in world history. Despite all the concerns about the speed and costs of the privatization of Eastern Germany, it is without a doubt, that it enabled a decisive move towards the market economy. The central responsibility for this process was carried by the *Treuhandanstalt*. It accomplished the privatization of Eastern Germany so rapidly and consequently, that there was not much time left for introspection (...) (Breuel, 2005: 13)

Ironically, however, the very same privatization process created the need for a sustained subvention of the 'new federal states', something that does not fit into this reform framework at all.

We have arrived back to where we started, at EXPO 2000. Two years after leaving her job as manager of the *Treuhand*, in 1996, Birgit Breuel became the manager of the world exhibition. She was appointed to the position because she had already established herself the image of a person that can get things done. But she also brought with her the ideas that she had been promoting throughout her entire political career.

Conclusion: The future ruins of sustainability

Breuel turned to sustainability before exiting public life, but following the same aggressive pro-market agenda that she had been promoting throughout her entire career. A new generation of politicians and experts came into the limelight after her exit from public life in Germany. The new coalition between the SPD and the Green Party, that came to power at federal level in Germany in 1998, would end up succeeding at what the conservatives had failed to in their long stay in power. Schröder was an exemplary case of a 'third way social democrat', taking over the aggressive pro-market agenda of his conservative predecessors and taking it much further. Soon after EXPO, together with the energy transition reform and the nuclear exit, another reform took place under Schröder: the labour reform. But this path was smoothed out by a shift in the image of SPD party politics towards a more humane, consensual approach. And, most importantly, a supposedly more environmentally friendly approach. The work for this smoothing of the path had been done by public figures such as Amory Lovins and Ulrich Beck, who gave the perfect soft agenda for such a cosmopolitan, 'civil society' image of politics, purged of any real conflict of interests. Even more so, the initially radical agenda of the grassroots Greens was completely eviscerated from their party politics by the time they entered the federal government in 1998, creating the prerequisite for a government that was completely pro-market and anti-labour, but with the novel addition that this market now included a soft version of environmentalism called sustainability.

In other words, the new government of Gerhard Schröder activated a specific understanding of sustainability, by which the capacity for protest of a large segment of the German middle classes was tamed. Simultaneously, Schröder went on a direct attack against the working class, especially those segments that were the traditional voter segment of the social democrats, and pushed through with his labour reforms (see Dörre & Rosa & Lessenich 2009). Gerhard Schröder, the reformed social democrat, went much further than his conservative opponents in implementing liberal market reforms in Germany. And sustainability, as it was staged in the Agenda 21 and EXPO 2000, was the ideal facilitating tool for implementing these reforms.

This article was only able to scratch the surface of a political shift that is much more complex and nuanced. It chose to focus on the discursive level of high politics in this story à la Boltanski and Chiapello (2005), where fringe matters of concern are taken up by experts and adapted for their own purposes in the dynamic process of capitalist transformation. As such, the article did not engage with the direct material and infrastructural entanglements of this transformation, which are just as interesting. But it hopes to trigger a conversation about the place that environmental concerns have, especially in a context when, globally, conservative politics seem stronger than ever. Ultimately, one provocative question that remains relates to the role that this mismanagement of sustainability by reformed social democratic governments had in this recent resurgence of right-wing politics. Related to this question is the connection between the alienation of the working classes from environmental issues – for instance through climate denial – and the double activation of sustainability and deregulation performed in the last few decades in the West by social democrats such as Gerhard Schröder.

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THE FOREST AS A TERRITORY FOR THE OPERATIONS OF PLANETARY URBANISATION: SORTING FOREST AREAS ON THE VASSER VALLEY IN ROMANIA

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ABSTRACT. Lefebvre's 1970 prophecy of the total urbanisation of society has come true with the expansion of the urban into natural and rural territories. For Lefebvre, the question of nature is closed by its 'steady, violent death' (Lefebvre, 2003) and its replacement by a 'second nature' (Schmid, 2014; Smith, 2008). This closure accounts at an epistemic level, for the dominance of the urban (Krause, 2013; Brenner and Schmid, 2014). Far from being closed, *the question of nature* is renewed within the present conditions of planetary urbanisation, as the interiorised non-urban is 'operationalised' to sustain urban growth, thus making the non-city 'an essential terrain of capitalist urbanisation' (Brenner, 2016). In what follows, I present how the Romanian forest is operationalised as a territory of planetary urbanisation through forest management practices. Looking into the negotiations and manipulations on the ground provides a way to 'pay attention' (Stengers, 2010) to those practices that sort and select natural areas. In the face of the recorded disappearance of the forest, the effort of making visible the rationality of planning, and the challenges that are posed upon it inscribes itself within an 'ethics of visibility' (Roberts, 2012; Topalovic, 2016).

Keywords: planetary urbanism, scientific forestry, territory, sorting

Planetary urbanisation and the question of nature²

In 1970, Lefebvre voiced a prophecy - of the total urbanisation of society. What Lefebvre first voiced as a hypothesis of total urbanisation through the implosion of industrial production within the cities, and the explosion of the

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urban without of the cities, is a phenomenon of spatial distribution. To him, the phenomenon of urbanisation transcends the rural/urban dichotomy, as well as the capitalist/socialist modes of social organisation. As Neil Smith argues in the introduction to Lefebvre's *Urban Revolution*, though Lefebvre does touch upon the question of nature, in a time when nature was just emerging as a subject of debate, he does not see in it a ground for political change (Smith, 2003: xv). For Lefebvre, the question of nature is closed by its 'steady, violent death' (Lefebvre, 2003: xx) and its replacement by a 'second nature' (Schmid, 2014; Smith, 2008). What is at stake for Lefebvre is the extension of a form of life that gained priority over rural life. In his 1968 commentary on the Law of Territorial Organisation in Romania, Henri H. Stahl presents a theoretical model of *urbanisation as the extension of a form of life*, as a key question of infrastructure extension and spatial distribution of resources. Almost in accordance with Lefebvre, Stahl announces the death of the rural in an undated article for the Royal Foundations Magazine. With the dissolution of village organisational forms, the village as a phenomenon no longer existed. According to Stahl, it died its many deaths in the beginning of the 20th century when capitalist interests entered village life. As it appears in his commentaries, the territorial organisation initiated by the 1968 Law in Romania aimed at instituting an urban society, where the village resources were called to sustain urban growth.

The death of nature announced by Lefebvre, and the death of the village announced by Stahl in the 1970s contributed to 'the dominance of the urban' (Krause, 2013; Brenner and Schmid, 2014). The urban dominates as it becomes the only space of relevance for questions of infrastructure, natural disaster and social justice (Krause, 2013), and as the prevalent space where questions of growth are posed merely in population number (Brenner and Schmid, 2014). As Brenner and Schmid (2015) argue, the urban attains its dominance by non-representing the other spaces that sustain urban life, particularly the rural and the spaces of production that have been relocated at the 'geopolitical margins' (Roberts, 2012; Princen and Topalovic, 2014).

Countering the dominance of the urban, Brenner and Schmid (2012) propose the thesis of planetary urbanisation. According to them, urbanisation is a dual issue of resource flows and landscape transformation. Far from being closed, the question of nature is renewed within the present conditions of planetary urbanisation, as the interiorised non-urban is 'operationalised' to sustain urban growth, thus making the non-city 'an essential terrain of capitalist urbanisation' (Brenner and Schmid, 2015). As an epistemic shift, the thesis of planetary urbanisation invites to bring forth those spaces that are concealed by its operations. There is a dual question of visibility inscribed in it, addressing both scientific visibility of a non-represented space and public visibility of the

lacking images of labour and labour spaces (Roberts, 2012; Steyerl 2012; Princen and Topalovic, 2014), those images that are not represented in ‘the official image of the community’ (Bourriaud, 2007: 52). As Roberts (2012) argues ‘visibility and visual access are doubly at issue where the subject is as vast, unmappable and volatile as global capital’.

But what are the operations of planetary urbanisation? What does it mean to operationalise a landscape? And what is concealed as nature is denied its epistemic existence? Thinking at a territorial scale, to operationalise a landscape is to inscribe it with a bio-political rationality akin to the city, to make it a solid territorial form through legal inscription, to plan it, and to introduce a new order within it. Solidity is achieved through legal instruments and inscription of borders (Boerie, 2002), that make even a liquid territory, such as the sea, capable of organising urban life around it (Topalovic in Yabuka, 2014). But to make a territory, even as liquid as the sea into a zone around which urban life is organised, to make it navigable, or to securitise it by dividing it into zones with different degrees of access, means to plan it like you would plan an urbanised land. It is a practice that as Scott (1999) points out, aims to bring *legibility* into an unknown territory, whose inherent fluidity or solidity as a property of its shifting ‘natural’ borders, becomes less important, as a new rationality is inscribed upon it into the realm of planning. Its borders, and the quality of the transformations within them are at stake when resource territories are made ‘liquid’ to the point of disappearance by the operations of planetary urbanisation. From a solid territorial form, inscribed in territorial borders, sand is made ‘liquid’, as its import for the construction of new land forms in sea territories displaces existing land forms, as for example occurs in Malaysia (Comaroff, 2014; Topalovic in Yabuka, 2014). As Comaroff (2014) suggests, the flow of ‘liquid’ sand not only overcomes territorially imposed boundaries, but it also alters them. ‘Worker-palms’, palm trees destined for industrial production, replace ‘natural’ palm forests in Indonesia (Topalovic in Yabuka, 2014), while operations of deforestation are ongoing in the Amazonian forest (Sun, 2013).

In between its solid territorial form and the liquid disappearance of timber, the problematic of the forest stretches across the scientific and public domains. In the Romanian territory, the disappearance of the forest is felt as the anxiety of not being able to control the flow of timber. As environmental activists have estimated, 50% of all timber logged in Romania is illegally sourced.³ The Forest Certification Association in Romania has mapped the areas of high-risk for illegal logging across the territory. Along the Vișeu valley,

³ Environmental Investigation Agency 2015 Report. Stealing the Last Forest: Austria’s Largest Timber Company, Land Rights and Corruption in Romania.

in northern Romania, there are two areas marked as high-risk⁴, however, the present inquiry rests upon a managed forest that is not included within this category, situated on the Vasser Valley, an affluent of the Vișeu river. Access to those high-risk areas was not possible within the confines of the research project, and was also not the focus of the study. As studies on deforestation (Sun, 2013; Andronache et al, 2016; Pintilii et al, 2016; Draghici et al, 2016) converge on the need to strengthen forest management practices, the effort of making visible the rationality of planning that makes the forest a solid territorial form, and the challenges that are posed upon it inscribes itself within an ‘ethics of visibility’ (Roberts, 2012; Princen and Topalovic, 2014).

Methodology and methods

The paper builds on a one and a half months fieldwork in the spring of 2017 and a two weeks period in the autumn of 2017, during which I was registered as an intern at the Maramureș Mountains Natural Park. During this time I accompanied the rangers at the Natural Park in their daily routine patrolling and monitoring the territory of the Natural Park. Participant observation and walking interviews intertwined as practices of the field. The organisational structure of the Natural Park has forestry engineers among its employees, and quite often during their daily routine they were accompanied by the forestry engineers responsible for the particular area that was patrolled. The initial brief of the research project aimed at covering the whole forested territory adjacent to the Vișeu valley that constitutes the territory of the Natural Park. As a methodological choice, the valley is a reference for the forest in as much as water indexes the territory of the forest. While in the first month and a half I followed the routine at the Natural Park, during the two autumn weeks I entered with confidence in the office of the head of the Vișeu Forestry Yard, and was granted access to the planning documents that bind the practice of forestry engineering. As will be argued below, planning transforms the forest into a fractal object, making each part resemble the whole. The mathematical fractal is defined by a ‘law’ of replication of the parts. To a certain extent, forest management represents the ‘law’ of the forest, a man-made law applied throughout the whole forested territory, not only of the Vișeu Valley, but of the whole Romanian territory. From this point of view, the part can speak for the whole.

Negotiating the field was an issue of being curious, taking risks, gaining trust, and feeling safe at the multiple boundaries described by the territories of researcher and ‘interviewee’, male and woman, urbanism and forestry. As a

⁴ http://certificareforestiera.ro/pag/harta_risc_cont.php.

woman, an urbanist, and a researcher, the field of forest management proved to be opaque, hierarchical, and male-dominated. Access to it came through the men that trusted me walking into their territory, and were open and proud to show me their forest. That is to say that I could only speak to whom my curiosity made them curious towards me. As a woman, I was walked-through, and shown the forest territory, as I asked questions on management practices, and on what had happened to the particular areas we were walking through. During the walks, I was constantly reminded of the laws that bind forestry practices. Most of my questions directed at a particular situation observed within the forest were answered with an inscribed legal reference. What became apparent is that on the one hand, the law is an instrument of manipulation, of which everybody is aware of, and on the other hand, the ground offers a space of manipulation where things are fitted into the law.

As bound to the abstract rationality of law and planning, forest management can be deciphered using Isabelle Stengers' concept of the 'psychosocial constraints' between which scientists negotiate their artificial creations. To Stengers, the 'psychosocial constraints' that bind a scientific practice are the obligations addressed towards the scientific community and the requirements directed towards phenomena (Stengers, 2010: 51) In the case of forestry practices, the obligations of the forestry engineers are those inscribed in laws, both at local level, as the Forestry Management Plan is, and at national level. The Forest Management Plan is done with a regularity of 10 years and comprises three parts: a text book, a list of tables, and the forestry maps. The text book describes the existing and the forecasted state of the forest. The Forestry Plan is made in the form of a table where the forecasted and achieved works on the forest are introduced according to forest plots and cubic meters of logged timber or works conducted on existing trees. The Forestry Maps detail in the geographical representation of territory the state described in the text book and the Forestry Plans. The main legal framework governing forestry practice is the Forestry Code, the latest of which was adopted in 2016. Though forest management practices existed prior to 1948, the present inquiry rests upon the 1948, 1978, and 2008 Forestry management Plans done for the Vasser Valley. As the current Forestry Plan was in the phase of planning, away from the ground, in the forestry planners' offices, while I was on the field, it rests outside of this inquiry. As they concern state-owned forests, all of the planning documents are public documents. However, while they exist in multiple sites, in the planners' records, in the regional forest management departments, in the ministerial records, and at the local forest management structures, access to them was only made possible at ground level, from the local forest management structure. Throughout the research process, the planner that I talked to, as well

as the representative of the regional forest management department directed me to the local forest management structures. The distribution of power into the hierarchy inscribed in the field of forest management, from the level of the state, through the regional, and local, attest to the fact that power over the forest is at ground level. The fragmentation of the forest territory at ground level, however, made it difficult to obtain the plans for the whole valley, so I restricted the enquiry of forest management to the Vasser Valley. The reading of the Forestry Management Plan and of the Forestry Code that I perform is that of looking for the *obligations* that they institute on behalf of management structures and the *requirements* that they set on the forest. Within such a reading, the information collected from the field serves to show the territory of negotiation inherent into a practice of the ground. Looking into the negotiations and manipulations on the ground provides a way to ‘pay attention’ (Stengers, 2010) to those practices that sort and select between what is really possible on the ground, and what is hypothetically possible in abstraction, but does not need to happen. In other words, on the ground, the limits of the practice become apparent.

The following sections discuss the rationalisation of the forest territory as an essential operation of planetary urbanisation aiming to transform it into a solid territorial form through its legal and scientific inscription. The analysis of the Forestry Plans brings forth the requirements and obligations that are inscribed within them.

The solid forest. Legal inscription

The Romanian forest planning system developed as a mix between the Prussian and the French systems, from where it draws part of its vocabulary. The long history of forestry has incorporated in the current practice ecological, geological, hydrological and biological concepts, as well as advanced mathematical calculation methods. It is very far from what Scott (1999: 14) describes as the crude bureaucratic rationality that the cameral sciences introduced in the Prussian and Saxon forested territories between 1765 and 1800. What Scott makes appear as ‘the logic of commercial exploitation’ (1999: 15) is an operation of abstraction, through which the forest was first extracted onto papers, in tables classifying trees by age. This abstraction was then to be inscribe into the actual forest with the aim of producing a structure of evenly aged forest patches that could be logged one by one each year. As it appears from Scott’s description, scientific forestry’s aim is to transform the forested territory into a ‘cartesian landscape’ (Princen and Topalovic, 2014).

The forest emerges as solid through its legal inscription. As such, it is a legal fiction and a scientific artefact, existing on paper, defined as a surface of at least 25 ha covered with forest vegetation (Art. 2, Law 46/2008). This is its legal

definition inscribed in the Forestry Code - Law 46/2008 - that also prescribes all actions that are allowed/not-allowed on its physical body. Though forestry and forest management practices have developed throughout time, the solidity of the Romanian forest as a territorial form dates back to 1947, when Law 204 first defined the forest as a surface of land to be subjected to planning. The solid forest of today is the result of all territorial organisation, territorial construction, and boundary retracing to which the forest was subjected prior to and since 1947.

The rationally planned forest. Scientific inscription

Rationalisation, in the form of geometric abstraction and mathematical indexing according to age are inscribed in scientific forestry with the aim of making the forest *legible* (Scott, 1999). Practice, however, distinguishes between the rationally planned forest that is a *scientific artefact*, and the forest on the ground whose transformation is at stake. While the rationalisation of the forest transforms it into a geometric abstraction, the forest on the ground does not achieve cartesian precision. We can say that the model of the forest does not fully match the reality of the forest on the ground. The model however, the rational forest, serves a management purpose, an operation that itself has a dual purpose - to account for both the flow of timber and the permanence of the forest. As a scientifically inscribed principle, the purpose of all actions done on the *body* of the forest are to assure the permanence of the forest on the ground, and to obtain high quality *arboretum* (Art. 28 (2) of the 2016 Forestry Code). They represent the *requirements* set on the forest by forest management practices. An *arboretum* is not yet timber, it is the trees out of which timber may be logged. As such, it precedes the fluid state of a flow of resources, while it is tied to the ground that provides it with life support.

As it appears in forest planning documents, the rationally planned forest becomes a fractal structure, a pure object of thought, upon which mathematical calculations are done. Fractal geometry developed as a method to approximate the shape of natural 'forms' such as clouds, seacoasts, and forests (Sun, 2013). But as Benoit Mandelbrot, whose engagement with it makes him a figure of reference for any of its applications, intended it, fractals have a power of 'organisation, explanation, and prediction' that exceed the field of mathematics (Mandelbrot, 1983: 49). It is in their virtue as an organising principle that they can be used as a reference for the rationalisation of the forest. As such, fractal structures are structures that scale up, as they are given 'statistical self-similarity' (Mandelbrot, 1967). In other words, they are structures made out of parts that resemble the whole (Sun, 2013). Fractal geometry is nowadays used to study deforestation patterns (see Sun et al, 2013; Andronache

et al, 2016; Drăghici et al, 2016; Pintilii et al 2016). However, as the 'law' of the forest, forest management transforms the forest into an object upon which calculations and predictions can be made. This object that the forest becomes I consider to be akin to a fractal object, in as much as it is scaled up to serve for calculation and prediction purposes. The individual plots of land are grouped together into *bodies of forest*, as they are called in planning documents (*trupuri de pădure* in Romanian). The bodies of forest are grouped into production units, and they are then grouped into forestry yards (*ocoale silvice* in Romanian). Planning is done at the level of forestry yards, and production units. The principle that guides planning is that of achieving the optimum age structure for the entire territorial unit, so that hypothetically each 10 years, half of an age class, considered at 20 years, can be logged. If the optimum age structure is achieved in each territorial unit, then the whole forest has an optimum age structure. Equilibrium is achieved. The part resembles the whole according to the optimum principle, for it has the same structure at the level of territorial units. The optimum forest is a fractal structure. But this does not mean that the forest on the ground is transformed accordingly. Rather, the individual plots of land preserve their inherent qualities.

The forest on the ground. Disturbance and Optimisation

As Georgescu-Roegen (1970: 20) notes, the concept of the optimum only has 'artificial value'. As a 'statistical artefact' (Brenner and Schmid, 2015), the optimum is never achieved on the ground, and the 60 years of records inscribed in the Forestry Plans of the Vișeu forestry yard attest to this. Nevertheless, as a concept it is used in qualifying disturbed and optimisation areas within the forest.

The 2008 Forestry Plan is indicative of the way the concept of optimum is applied in forestry practice. The Plan registers the areas affected by 'disturbing factors' as following: areas vulnerable to strong winds to the point of all the trees being felled down, to pest attack, to fire, to drying of the trees, to heavy snow falls, damages produced during logging, damages produced by the wind, landslides, sloughing, soil erosion, rocky soil, unhealthy trunks. While the mathematic of calculations accounts for each individual 'disturbing factor' and amounts to a total of 88,5% of the whole forest territory, on the ground, individual forests are affected by a couple or more of these factors, as they overlap (2008 Forestry Plan: 270). The numbers here are irrelevant in their quantitative aspect, but relevant in their qualitative aspect - of showing that the conditions on the ground are not ideal. The qualities of the non-ideal ground are to be taken into account when interventions within the forest body are

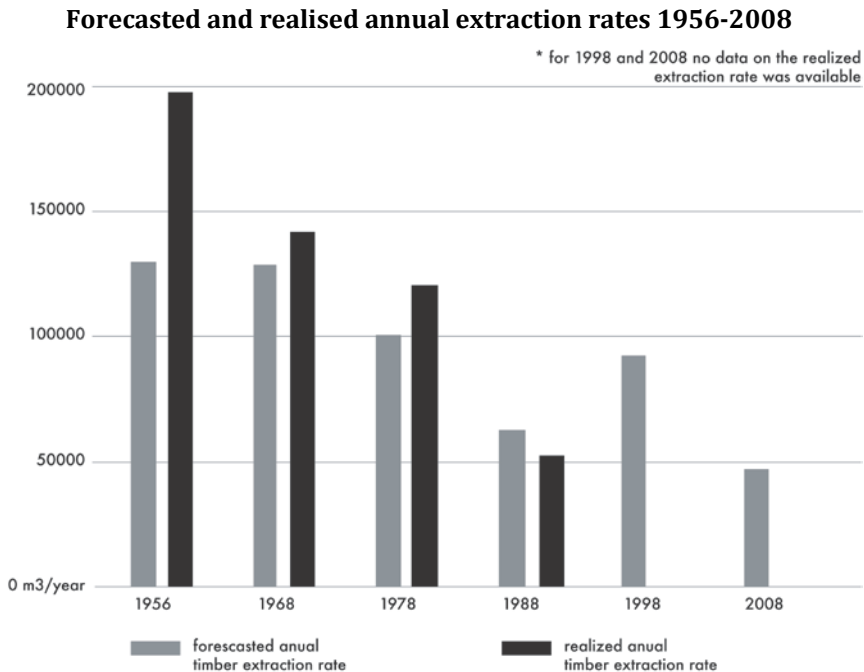
taken. Interventions in this case account to another kind of ‘disturbance’ - the replacement of a naturally grown forest with a human planted forest - or the ‘artificialisation’ of the forest, as is referred to in scientific terms. As is inscribed in the 2008 Plan, the extension of artificial forests in the forested territory of the Vasser valley, prior to, and post 1948, has, through clear-cutting and selective logging, disturbed the hardwood-softwood balance of the forest by replacing accessible and logged forests, with spruce monocultures. Spruce was preferred even though theoretical and practical knowledge existed on other softwood species. The consequences of this policy of ‘excessive’ and ‘forced’ spruce introduction particularly in areas where strong winds would manifest with a cyclical periodicity, made the newly introduced evenly aged forests particularly vulnerable to strong wind blows (2008 Forestry Plan: 183-4).

One of these moments, of a wind strong enough to fell down areas of trees, I’ve witnessed myself during fieldwork in September 2017. To the forestry engineers that I accompanied on the field to evaluate the damage produced, the felled timber was to be removed, the surfaces cleared, and the resulting timber quantity fitted into the predictions calculated by the Forestry Plan. During the walk however, the issue of how to make the forest more resilient to these kinds of events emerged as a correlative to the issue of the ‘free’ timber given by nature. While the straightforward answer is the planting of new trees, as directed towards the optimisation of the forest, forestry practice will aim ‘to create intermediary structures that would gradually lead the forest in the area towards a new structure with respect to the specific natural fundamental forest types existing in the area’ (2008 Forestry Plan: 184). It can thus be said that to the forestry engineers the forest on the ground is a disturbed forest, be it by natural or human hand, a forest that they will aim to optimise, even though the optimum will be never achieved.

Territorial construction. Indexing the forest

The Forestry Plan and the Forestry Maps that accompany it institute forms of *indexing* the forest according to age class for the purpose of logging (Scott, 1999), according to water courses that provide accessibility, to zones of protection and extraction. They attain the ‘permanence of a device’ (Secchi, 2013) of territorial control and security. The Forestry Plan makes use of the fractal model of the forest to calculate the possible amount of timber that can be extracted from a forest. Extraction, according to scientific principles is a matter of abstract possibility. As it emerges out of the 60 years of records of the Viçeu Forestry Yard, the possibility is not cast in stone. There is considerable variation between what was planned and what was achieved. Table 1 illustrates

this variation. As can be seen, the annual forest extraction rate gradually decreased from 1956 to 2008 to approximately 1/3 of the 1956 forecasted rate, even though the total forest surface of the administered forest only decreased between 1998 and 2008 as a result of reconstitution of property rights claims, an issue that will be discussed in the following section. At the same time, the difference between what was planned and what was achieved varied greatly. Though there was no available data for the 1998 and 2008 Forestry Plans, judging on the tendency, it can be assumed that the achievements were near to the forecasts, or even lower. This variation can be ascribed to socio-economic and political factors, and indeed during the 1950s and 1960s, Romania was still paying its war debts in round wood (Nicoară, 2001: 90). They are however, external factors to the science of forestry. Looking into the internal obligations of the practice and the requirements set on the forest this variation can be attributed to the internal zoning of the forest, its *sorting* into accessible and non-accessible, extractable and non-extractable areas, and the various manipulations of the ground.

Table 1.

Source: Realised based on data available in the 2008 Forestry Plan, pp. 358-361.

As an instrument of practice, the possibility does not oblige. It rather provides the basis for making judgements in specific situations. What is possible in the abstract space of planning is not necessary to happen on the ground. Furthermore, what is legible from the Forestry Maps is that extraction is a matter of zoning, as the scientific principles inscribed in laws *oblige* the forestry engineers to sort extraction areas, tending areas, limited or no-intervention areas, seed reserve areas, different types of protection areas, thus placing different *requirements* on differentiated forest bodies. Cuts within the body of the forest are performed, that account for the varying topographical, geological, hydrological conditions on the ground, and the economic objectives set for the forest.

To begin with, the 1948 Forestry Plan did not predict any amount of extractable timber. While the lack of calculating the possible amount of timber to be extracted was judged to be 'unscientific' by the planners that wrote the 2008 Forestry Plan, it can be argued that the objective of the 1948 plan was first of all to organise a productive territory according to the organisation principle of 'the natural flow of timber products' (1948 Forestry Plan: 19). This 'natural flow' institutes a geographical principle of organisation of the forest with respect to the valleys of rivers and springs that allowed the forested mountains to be accessible and timber to be transportable. The territory ascribed to the Great Forestry Production Unit Viçeu, as it was named in 1948, was comprised of 10 'series' - 10 bodies of forest cut out of the whole forest according to the valleys that cut the mountainous landscape. If the forest is indexed by *age classes* as Scott (1999: 14) remarks, the territory of the forest is indexed by *water courses*.

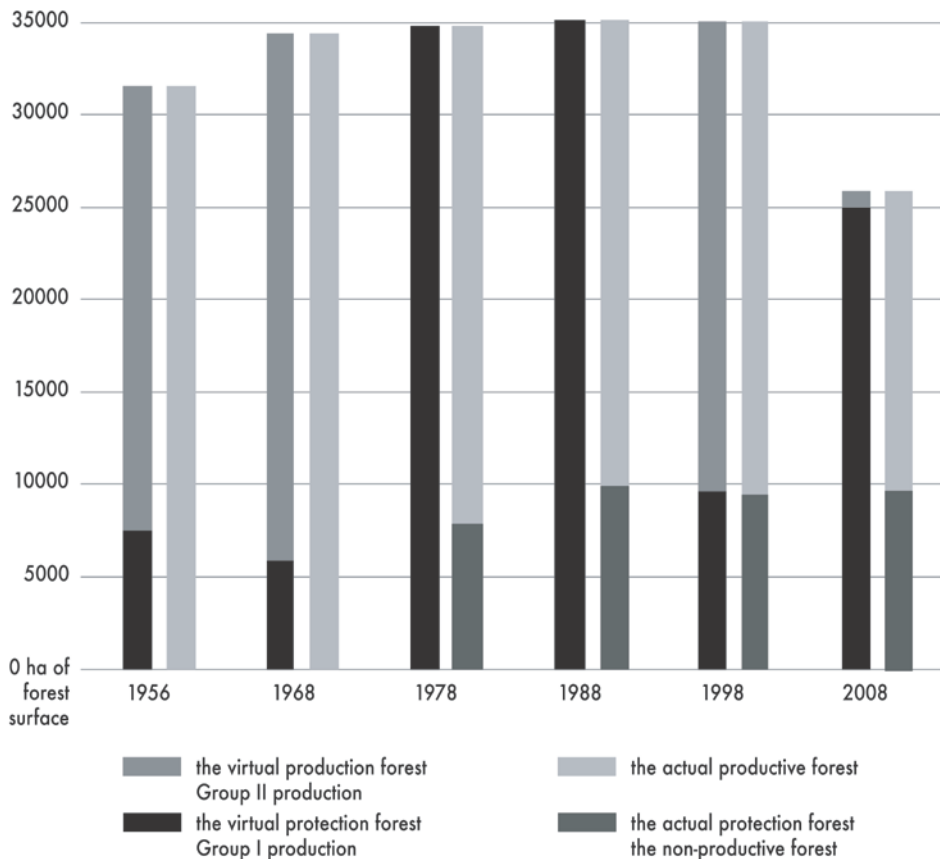
The 60 years of operations of territorial construction on the Vasser Valley sorted within the territory of the Viçeu Forestry Yard different other territorial bodies. Interior boundaries arose as the forest was divided into plots of land, upon which different requirements were set. These requirements effectively sorted the forest territory into a productive and a protected forest. However, the specific indexing placed on forest bodies by the science of forestry engineering produce a virtual productive and a virtual protected forest, as well as an actual productive and an actual protected forest. Table 2 is a comparison between these *virtual and actual forests*.

Scientific forestry indexes the forest territory according to function. Production and protection are the two functions of the forest. However, they coalesce within the same forest, while in practice, one is privileged over the other. Attached to the principle of assuring the permanence of the forest, the protection of the forest is implied with respect to practices of forest regeneration either through 'natural' regeneration or artificial plantation. In the language of scientific forestry, the forest is indexed according to production group. Group I is where protection is privileged over production, and Group II where

production is privileged over protection. These categories are what I have called the virtual protected forest and the virtual productive forest. At the same time, through the specification of these Groups according to the conditions of the ground, the actual protected forest and the actual productive forest emerge. I call *the actual productive forest* the forest where extraction is regulated according to the protection and production requirements, while *the actual protected forest* is the forest where extraction is not regulated according to the same requirements. The following discussion specifies how the differentiation between production and protection in the virtual and in the actual was made throughout these 60 years, and what requirements were placed on differentiated forest bodies.

Table 2.

Virtual and actual production and protection forest 1956-2008.



Source: Realised based on data available in the 2008 Forestry Plan, pp. 358-361.

The 1948, 1956, and 1968 Forestry Plans though they categorized a virtual protected forest that corresponded to the protection of alpine pastures, avalanche gutters and special areas where the protection of the soil was privileged, this remained in the virtual, as all forest was thought to be the actual productive forest. What this means is that there was no forest that was thought to be a non-productive forest. Actual protection areas were only instituted with the 1978 Forestry Plan, as it extended the virtual protected forest over the whole forested territory. With this Plan, the economic purpose of obtaining high quality timber for extraction came second to the economic objective of assuring a 'balanced hydrological regime of the entire region', that came with the initiative to plan and build two storage lakes on the Vasser and its affluent, the Novăț river. They were never constructed on the ground, but the requirements they set on the whole forest territory regulated production only in certain conditions, as the protection of water sources was more important. With the 1978 Plan, the non-productive forests emerged as the sum of forest belts around alpine pastures, avalanche gutters, special areas where the protection of the soil was privileged, and seed reserves. After two decades, the indexing of the forest was changed with the 1998 Plan that gave up the hydropower dream, and regulated production for most of the forest territory. Consequently, only 27% of the forest area was indexed as protection forest, categorised as Group I. This corresponded in the virtual as well as in the actual. The forest areas that were fitted in this category were, to the most part, the ones corresponding to implicit economic objectives - where logging would be detrimental to other activities in nearby territories - forests situated on high slopes and/or rocky soil (*grohotişuri* in Romanian), forests along roads and railways situated on areas with high slopes and land slide risk, the forest belts around alpine voids, forests situated on sloughing lands, forests situated at high altitudes where regeneration happens under extreme conditions, forest belts situated next to mining residues deposits, forests within and around city perimeters, and forests designated for seed harvesting and for the preservation of genetic material. The legal inscription of the Maramureş Mountains Natural Park in 2004 that incorporated the Vişeu Forestry Yard changed the indexing of the forest according to protection and production as inscribed in the 2008 Forestry Plan. Through this plan, the virtual protection extended over most of the forest area, as 97% of it was indexed as Group I. This includes the following: forests situated on high slopes and/or rocky soils (16%) forests along roads and railways situated on areas with high slopes and land slide risk, the forest belts around alpine voids (2%), plantations of degraded soils, forests on sloughing lands, forests situated at high altitudes where regeneration happens under extreme condition, forest belts situated next to mining residues deposits (1%) forests situated within and

around the city of Vișeu, natural reserves of varying surfaces of land and water, constituted by law for the purpose of the conservation of genetic material and of the environment⁵ (8%), seed harvesting and genetic material conservation forests (1%) secular forests, as they are referred to in scientific forestry, or virgin and quasi-virgin forests, as they are referred to in legal texts and public discourse, of an non-estimated value inscribed in the plan and approved by Ministerial order (91,7 ha) forests constituted as buffer zones of the natural reserves constituted by law (69%). The remaining 3% is divided between Group II, production forests - 1% - and land without forest function - 2% (2008 Forestry Plan: 12-13). Through this Forestry Plan, the difference between the virtual production forests and the actual production forests is constituted by what is categorised the buffer zones of the natural reserves, the 67% of the whole forests that is virtually protected, but is actually a productive forest.

Making the plan operational

While the previous sections discussed the obligations and requirements of the Forestry Plans, that instituted forms of indexing a forest territory thought of as a fractal structure, the next section will present the manipulations and negotiations going on at ground level.

On the ground, making the plan operational is a matter of *spatially distributing* logging surfaces so that the *dual purpose of assuring the permanence of the forest and accounting for the flow of timber* is achieved. There is no obligation to push the plan to its limit - to log the abstract possibility calculated on the basis of the fractal model of the forest. Rather, operationalising the plan implies making adjustments, and manipulating the forest so that the things that happen on the ground fit into the plan. Manipulating the forest implies the manipulation of individual plots of land, of technologies of extraction and treatments applied to the body of the forest, and intervention in case of unpredictable events. As the forest is indexed also by property, the manipulation of properties is key to achieving the solidity of the forest as a territory to be governed. The solidity of the forest territory was, to a certain extent, 'forced' with the legislation pushed between 1947 and 1959 by the communist regime. As forest properties were all joined together, and the forest was legally inscribed as a 'common good', this erased previously existing properties. Erasure took place within the legal domain and only partially on the ground. On the ground, forest properties were re-inscribed within the body of the forest, as

⁵ Authors' translation. The exact scientific text from the 2008 Forestry Plan in Romanian is: *păduri destinate conservării unor medii de viață, a genofondului și ecofondului forestier în România.*

their manipulation was ascribed to the newly created production units. That is to say that while the law aimed at erasing property boundaries, for purpose of territorial managements, those boundaries either remained in place or were re-traced. The subsequent 1991 and 2000 laws concerning property right reconstitution dissolved this 'forced' solidity as the previous manipulations of forest properties were considered abusive even in the 2016 Forestry Code.

While the diminishing of the territory of the Vişeu Forestry Yard between 1988 and 1998 with around 600 ha, and the subsequent diminishing with around 9,000 ha by 2008 was a direct consequence of these laws, the question that arises is what happens with the dismembered forest bodies that passed from state into private hands. Do they preserve their solidity or become 'liquid' timber? With Andrea Branzi's (2006) conceptualisation of a 'weak modernity', we can think that the solidity inscribed in law is of a weaker type than the 'forced' kind of solidity that constructed the forest territory between 1947 and 1990. The principle of territoriality inscribed in the 2016 Forestry Code allows, but does not oblige. Forestry Yards can include other surfaces not directly ascribed to them into their management system, but only at request. Forestry Plans are obligatory for forests larger than 100 ha in surface, while forests that are smaller than 30 ha can be adjoined to these larger territorial bodies (Art. 97 of the Forestry Code). In between these two numbers, and within the gap left by the principle of territoriality that allows but does not oblige, vulnerable forest surfaces arise. Forests that are left outside of management structures, and lose their solidity, enter into a state of '*liquid*' disappearance. Liquidity here results out of the lifting of the obligations to securitise a territory, that are ascribed to forest management structures. My guides through the forest territory of the Vişeu valley often referred to them as 'self-service forests'. The drop in employees in the forest services in the Maramureş County after 2007 (Drăghici et al, 2016) can also be attributed to the manipulation of forest properties through the reconstitution of rights claims and the lifting of the security regime. The forestry engineers that accompanied me within the forest often decried the fact that in case of theft from an unprotected forest you can only count the leftover sectioned tree trunks (*cioatele* in Romanian). As they told me, inscribed in forest management is a direct accountability towards every managed tree. In case of theft, they are directly accountable for the volume of timber stolen, as the equivalent amount of money is retracted from their salary.

This attests to a dual purpose of indexing the forest according to age that accounts for the volume of the tree trunks. The mathematical calculations of the volume of timber to be logged serve not only the economic purpose of predicting the flow of timber, but also the purpose of assuring the permanence of the forest, as they become grounds for holding responsibility over the disappearance of

individual trees counted one by one. On the ground, the leftover sectioned tree trunks become evidence. Manipulating the areas of extraction, the technologies of extraction and the ‘treatments’ applied to the body of the forest are so many decisions that rest in the hands of forestry engineers. From walking the Vasser valley in the company of forestry engineers, I could only see that in some places the forest was present, in some it was not, and that it had different ages. But as the forestry engineers themselves referred me to Google maps images (see Fig. 1), the spatial distribution of logging became apparent in the way they distributed and extended the extraction areas. From down below, as Certeau (1984: 92) also acknowledges, things are hidden to sight, there is a threshold at which ‘scientific’ visibility begins. The ground, and the Google images reflect the legal restriction to clear-cut logging, that binds forestry practice to the principle of assuring the permanence of the forest by allowing the forest to regenerate itself through a ‘natural’ process of seedling spreading, without the need for plantations.

Manipulating the technologies of extraction appears as a practice of paying attention to the ground. From what I’ve been told by forestry engineers, ‘traditional’ practices of dragging timber with a horse co-exist with modern practices of using industrial machinery as the ground allows for only partial accessibility of forestry roads, and attention to the herbaceous layer, the most fragile strata of the life supporting system of the arboretum is given. Dragging felled trees with a horse, in a ‘traditional’ way is considered by forestry engineers to produce less damage to the soil and the herbaceous layer than other ‘modern’ extraction technologies.

Manipulating the forest to obtain high quality timber, that to forestry engineers corresponds to the age class 5, 80 to 100 years old trees, implies manipulating different ‘treatments’ applied to the body of the forest. Though these treatments are inscribed in the forestry plans, my walks through the forest in the company of forestry engineers disclosed to me the value they place on them, and that is to guide the forest to grow beautifully, a beauty that can then be experienced from within it. Qualified by scientific practice as ‘hygienic works’, these treatments correspond to selective removal of young trees and tree branches. While practice obliges to these works, they are seldom of value to the timber industry, thus forestry engineers ponder between the decision not to prescribe them or to attach them to a logging contract in a neighbouring area. The 1948 Forestry Plan prescribed, for example, hygienic works to be undertaken in the protected forest belts surrounding alpine pastures only if logging was done in neighbouring forest bodies. During the 1980s and 1990s, the Forestry Plans record a lack of fulfilling this obligation. As the forestry engineers from the Vișeu Forestry Yard told me, they couple logging areas with areas in need of treatments and auction them together for logging companies to bid.

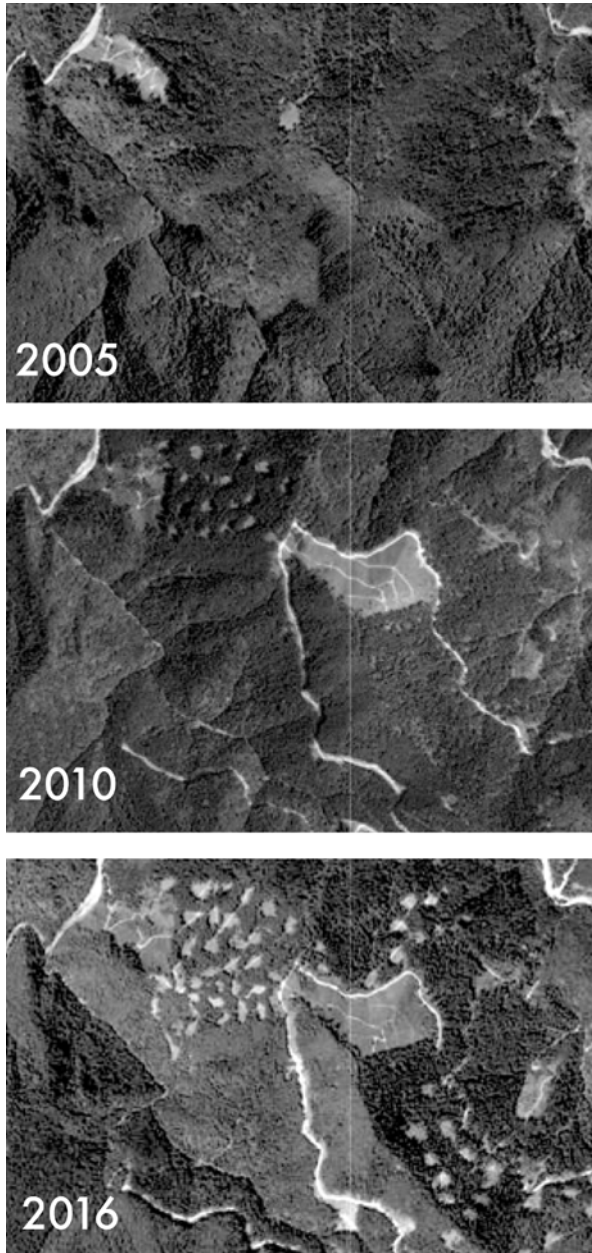


Figure 1. Spatially distributed logging surfaces within the legal constraint of not clear cutting more than 3ha

Source: Google maps

Manipulating the unpredictable accounts in the Forestry Plans for 'natural causes' like strong winds, pest attacks, avalanches, flooding, fires. While flooding, fires, and avalanches, that affected also nearby communities, not only the forest territory, were mentioned in conversations as moments that gathered all the people with a vested interest in the forest, strong winds and pest attacks were often grounds for disputes, suspicions, and mistrust. They particularly regarded the way an individual tree is seen in relation to the forest for the forestry engineer, and the environmental engineer. To the environmental engineer, a tree is part of the environment that the forest is in as much as it provides a home to other species, and from this respect a felled tree is first of all a home to insects and is integrated into the cycle of life of the forest. To the forestry engineer, a tree is part of the managed forest that serves the purpose of timber sourcing, and from this respect a felled tree is integrated into the cycle of production of the forest. While most fallen trees are seen as timber, ground conditions will decide whether the particular tree is engaged into the reproduction of the forest, and constitutes a life-bearing environment for seedlings. To relate to field experience, it was my impression that the experience gained within the forest gives forestry engineering the skill to identify with a glance of the eye the trees that are valuable for reproductive purposes with their neighbouring environment, and the trees that are valuable as timber as they belong to those monocultural groups that are seen as vulnerable to strong winds and have been felled by one such strong wind. Furthermore, the Forestry Plans record cyclical occurrences of strong winds, an information from the 'field' that is then integrated into the calculations of the fractal model of the forest.

Engaging with the Vișeu Forestry Yard the hierarchical structure of forestry engineering became apparent. Through the hierarchy, not only power is distributed, but most importantly trust. There is a huge amount of trust that goes in *operationalising* the forestry plan, as it becomes an act of entrusting faith to the people that know the forest on the ground in its details, the foresters and forestry engineers. Their skill resides in making the ground resonate with the plan and all legal requirements. At stake in their practice is negotiating the equilibrium on the ground, to which the equilibrium of the fractal model of the forest only serves as a guidance. Though the complicity of management structures (Herța, 2014) is necessary with regard to any illegal logging done in a managed forest, placing trust seems to be the most difficult thing to do in the current climate of anxiety generated by the recorded disappearance of the forest.

Conclusions

Throughout the paper I have shown how the forest is operationalised as an essential territory for planetary urbanisation through the inscription of a scientific rationality within a natural landscape. Using Isabelle Stengers' concept of the 'psychosocial constraints' attached to any scientific practice to analyse forestry engineering practices, both the practice of forestry engineers and the forest as a scientific object are made visible.

Forestry engineering emerges as a practice of manipulating the artificial and the 'natural' where the ground counts in its most intimate socio-natural aspects. The forest of the forestry engineers is already a disturbed forest, be it by 'natural' or human hand, far from the planned ideal optimum that nevertheless serves as a guiding principle. The manipulation of the forest through a scientific practice appears as a matter of responding to ground conditions. Questions of location, accessibility, attention to the life-bearing strata of the herbaceous layer, are aspects between which forestry engineers negotiate on a daily basis, in between the requirements set on the forest and the obligations inscribed in practice.

The forest emerges as a hybrid territory, inscribed with a bio-political rationality (Viganò, 2014) through the juxtaposing of different indexing according to property, to the accessibility of water courses, and to the differentiated functions placed on differentiated forest bodies. As it emerges, the matter of the protection of forested landscapes is a matter of ever greater specification of a territory that was constructed as it was mapped according to scientific requirements. Throughout the history of this construction, protection and production coalesce in the scientific imaginary, while they specify virtual and actual zones of protection and zones of production. Most important through this history, the emergence of non-productive forests with the 1978 Forestry Plan is made visible.

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UNWRAPPING THE SPONTANEOUS FLORA: ON THE APPROPRIATION OF WEED LABOUR

ÁGOTA ÁBRÁN¹

ABSTRACT. Part of the raw material accumulation for the medicinal plant industry in Romania is reliant on gathering plants from the so-called spontaneous flora. The imagery of medicinal plants played upon by medicinal plant product manufacturers is often abundant in visions of either wilderness or traditional peasant landscapes such as pastures. This article aims to present instead two different spaces where medicinal plants come from: wild pansy from within an oil seed rape cultivation, and elderflowers and nettles from the ruins of a former socialist orchard. These spaces of spontaneous flora highlight the process of capital's appropriation or salvage of the 'free' reproductive labour (spontaneous growth) of weeds often at odds and against other capitalist processes. Moreover, salvaging or scrounging is done through the cheap labour of a family whose livelihood depends on work both inside and outside of this capitalist process. These places, therefore, highlight the tension between the spontaneous flora and scroungers on the ground and Nature with its ancestral peasants on the supermarket and nature shop shelves.

Keywords: spontaneous flora, capital accumulation, salvage, weed labour, medicinal plant industry

Nature and the spontaneous flora

What do people see when walking down the medicinal plant aisle of a supermarket or browse their way through the many nature shops that have in the past decade multiplied in cities across Romania? What is there on show on the websites and the many promotional materials and magazines of the Romanian medicinal plant product making companies? Some products and companies are advertised through clean lines and minimalist design, closely resembling pharmaceuticals and conjuring visions of white hygienic laboratories and

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production facilities. Most, however, opted for an imagery filled with flowers and aesthetically arranged leaves, evoking pastures, mountains, forests, sometimes lush cultivations with neat little villages in the background. A small mini film series from Dacia Plant, for instance, entitled *Plant Encyclopaedia* showcases the ‘Dacian’ man, featuring in many of their promotional materials, dressed in seemingly traditional Dacian clothes on the back of a white horse walking through forests and teaching the viewer about the benefits of plants and their use by Dacians and Tracians, preparing cures in traditional ways (*Enciclopedia Plantelor - Introducere*, 2013). The same man introduces the project ‘Discover Nature’ (*Descoperă Natura*), supported by Dacia Plant, teaching kids to leave their computers and go to the school of Nature (*Descopera Natura*, 2013). While discovering Nature might thus seem to call for one to walk into a forest or at least a pasture, it is in supermarket isles and nature shops that one can buy *natural* teas, *natural* antibiotics, or *natural* vitamins and perhaps can toy with the idea that this way he or she can heal through being part of Nature just the way Dacians, peasants, or (in the case of some products) monks and nuns used to be.²

Between April 2014 and September 2015, for 18 months I have spent most of my time as an anthropologist within the diverse actors of the Romanian, mostly Transylvanian, medicinal plant industry. From collectors and cultivators, through collection centres to small and larger producers, I mapped out the movements and translations³ of plants into commodities. In this network of people, plants, and companies, Nature was often given a prominent role. Among scientists working in the medicinal plant industry such as agricultural engineers, chemists, and pharmacologists and other Romanian medicinal plant product company representatives, Nature often figured unquestioned and undefined as something one should strive to. They talked about how natural remedies are better for human bodies because they are natural, how we should spend more time in nature, how the chemicals in plants should be kept in their complexity as they are natural – sometimes even mentioning nature as that which was given by God – how Romania is abundant in natural resources, or how our ancestors knew how to use nature. Nature in these narratives is one with a capital N, an abstract form of that something outside of humans, or at least outside of some humans, that could be harnessed for human healing.⁴

² For an analysis of the link between traditional imagery and advertisement in Romania see Dumitrescu (2015).

³ I used translation as the concept used by Latour, in that the negotiation of meanings, claims, and interests *transform* one thing into another (1987; 2005).

⁴ For a more detailed analysis of the duality of Nature and Society, their historical emergence and critique, see Haraway (2008), Latour (2004), and Moore (2015).

It is to this kind of Nature – as something undefined that we do not have, are not part of but should strive to – that abstract and romantic images of Dacian shamans, Hungarian *táltos*⁵, Sekler or Romanian peasants, and Roma plant collectors were attached to. Nature, thus, was outside of only some humans, because in these narratives our ancestors, Roma, and peasants, alternatingly became part of Nature as the authentic, often ‘primitive’ Others.⁶ In these stories natural product company scientists or workers such as drivers⁷ would describe villagers as peasants who are similar to plants, as they cannot be rushed and are hardy and healthy; or Roma collectors as those who are home in Nature and thus – although uncivilised and could not work a 9 to 5 hour job – are the best to find plants. Contrary to these, the ‘target group’ of the medicinal plant industry – usually those who could be described as middle-class urbanites – were seen as those who had to be saved from Society, from stressful jobs, quickened space of life, toxic food and pharmaceuticals.⁸ The healthy, hardy, and relaxed peasants and Roma as part of Nature were contrasted to the civilised albeit unhealthy and stressed urbanites who needed to be told to ‘Discover Nature’.⁹

This kind of abstract Nature and abstract images of peasants and Roma, figured prominently when scientists and company representatives generally described the industry or their theories of health and human bodies to me, or when, at conferences, they argued against the use of pharmaceuticals. Similarly, the use of ethnobotanical knowledge, as the traditional plant lore of peasants was played upon by companies, although in recipe making this was always used alongside chemical research on plant compounds. As chemical compounds and traditional usage legitimised each other, information of traditional and ancient medicine was almost always attached to medicinal plants and played upon by companies. It was the idea of traditional and ancient plant lore that was capitalised on, rather than an actual gathered peasant knowledge (although sometimes this also happened). Together with such traditional peasant

⁵ A kind of shaman; more on the resurfacing of *táltos* practices and neo-shamanism see Kürti (2005), Lázár (2006), and Povedák (2014).

⁶ For diverse analyses of the Roma Other as romanticised people tied to wilderness and/or nature and a critique of how others see Roma in Europe see Bogdal (2011), Kocze and Trehan (2009), Kovács (2009), and Tong (1998). For an analysis and critique of the romantic view of the Romanian peasant see Mihăilescu (2015) and Cosma (2017).

⁷ Drivers would pick up plant raw materials from cultivators and collectors.

⁸ Most of these stories were voiced at conferences that brought together the product making industry, chemists, doctors, and naturopaths.

⁹ I am emphasising here that these are ways of talking about an abstract peasant and Roma because in actual interactions with villagers, Roma or not, such romanticism disappeared leaving often space to contempt. For such a dichotomy in how peasants are seen in Romania see also Mihăilescu (2013: 150).

knowledge, monastic plant lore (see also publications from Bojor and Dumitru, 2007; Borloveanu, 2014; Chirilă and Valică, 2009) was marketed and commercialised as well.

It was these images and narratives that were present on supermarket and nature shop shelves in the forms of packaging with traditional flower designs, pictures of peasant landscapes, or abstract flower and leaf designs invoking Nature. Their labels then highlighted at every step that here you could buy *natural* products, opposing them in promotional materials to artificial ones such as artificial aspirin or vitamins.¹⁰ However, when scientists and company workers started to describe actual practices of working with plants, abstract concepts were replaced by ones they could work with. While Nature or what natural means in practice was taking apart into several working concepts – for instance, ecological cultivations or biodiversity rich pastures – in this article I want to focus on the concept of the spontaneous flora.

In practice, or even when describing the actual practice of plant collection, plants were never collected from an abstract Nature, rather, scientists and company workers alike would use the term spontaneous flora. I liked the term because it seemed to me that it cleverly bypassed both images of wilderness¹¹ and rural idyll and it fitted well with the often-voiced concern of medicinal plant promoters and collectors alike, that people see collected medicinal plants as weeds. Indeed, plants that were *spontaneously* growing in ditches, on farms, in-between cultivations, among ruins, but even on pastures and forests, while for some were weeds, for others became medicinal plants or plants that were financially and/or medicinally valuable. Weeds seemed to be those hardy plants that would *spontaneously* grow anywhere and therefore collecting from the spontaneous flora made more sense than collecting from Nature. Within this then lies my fascination with the term spontaneous flora: it highlights, even acknowledges, the process of capital's appropriation or salvage of the 'free'

¹⁰ While, not the topic of this article, there can be a whole unpacking of what natural vs. artificial means in the case of these products. For instance, commercial vitamin C is usually, roughly explained, produced through the bacterial fermentation of glucose that makes ascorbic acid (C₆H₈O₆), whereas most natural vitamin C products produced by Romanian companies are a mix of actual plant parts that while high in vitamin C, as in ascorbic acid, contain a multitude of other chemical components as well. At the same time, in order to create ascorbic acid, plant bodies themselves transform glucose. For more on the complex interrelatedness of what is seen as natural as opposed to artificial in chemistry, see Bensaude-Vincent (2007), Hedley Brooke (2007), Bensaude-Vincent and Stengers (1996).

¹¹ For an anthropological critique of the term wilderness and how it perpetuates the distinction between Nature and Society see Cassidy (2007). For ethnographies analysing how landscapes labelled as 'wild' are spaces of complex human and nonhuman influences see Lorimer (2015), Tsing (2005), Cassidy and Mullin (2007).

reproductive labour (spontaneous growth) of weeds often at odds and against other capitalist processes. It is this that I will show in the following through two small examples of collecting from the spontaneous flora, not to generalise places or processes of collections, instead to catch a glimpse of how processes of accumulation make use of that which is outside of their own control.

The cheap labour of spontaneous plant growth

Before moving forward to spaces of spontaneous growth, I will introduce the idea of plant labour as part of the production of medicinal plants as commodities. Marder (2011) analyses European philosophical thinking about plants and argues that philosophers have been devaluing vegetable life in an attempt to categorise stages of life. In these 'philosophical-taxonomies' (from Plato, to Hegel, Nietzsche, and Heidegger) plants were often classified as closer to 'inanimate things' than 'other living beings' and thus transformed 'into raw materials for animal and human consumption, a "standing reserve" - in Heideggerian vernacular - on which we unreflectingly draw in order to satisfy our needs' (2011: 86). This 'ensuing instrumental approach', he argues, is what allows for such rationales as both 'deforestation and the defence of forests as "the lungs of the planet," seeing that both arguments fail to take into account vegetative life as life, aside from the external ends it might be called to serve' (2011: 88). Therefore, 'the philosophical denegation of vegetative life, ignorant of its vivacity, has had real and palpable effects on the human approach to the natural environment, so that the woods are treated as nothing more than wood, a mass of lumber "produced" in the gigantic factory of planetary proportions' (2011: 91). However, the concept of spontaneous growth brings forth the struggle of plant life to live, to grow among its surrounding environment. On the ground, it is this struggle of life and growth, not an inanimate plant, that is appropriated for production. According to Marx, in the capitalist mode of production, the exchange of commodities presupposes that they are comparable via a value that is produced by socially necessary labour time. The socially necessary labour time is an abstracted labour time that flattens out and makes all kinds of labour comparable. It shows that in the underlying process of capitalist production all labour becomes comparable through commodities being exchanged. At the same time this value does not equal the exchange value of commodities (the price they are actually sold for), nor does it equal the use-value of commodities (what it is used for) but the three exist in relation to and within each other (Marx, 1990, I: 125-62; Harvey, 2010: 15-37). This value, as the socially necessary labour time, has a 'phantom-like' property within

commodities, in 'the fact that the commodity reflects the social characteristics of men's own labour as objective characteristics of the products of labour themselves, as the socio-natural properties of these things' (Marx, 1990, I: 164–65). In other words, when we look at commodities, we only see the thing itself, and we assume that by buying and using such commodities we enter into social relationships with the commodities, as things. However, what really happens unbeknown to us, argues Marx, is that we enter into social relations with the labourers who produced the commodity. The concept of fetishism is used because commodities appear to have a magic like property to materialise on shelves. Process is easily forgotten. While labour is hidden from sight in commodities and supermarket shelves, it is this human labour, argues Marx, that produces use-value from 'the material provided by nature' (1990, I: 133), thus labour is what mediates 'between human existence and nature' (Harvey, 2010: 27) to produce 'the physical bodies of commodities' (Marx, 1990, I: 133).

In *Being Alive*, Tim Ingold criticises Marx for imagining production as a process whose outcome has already been imagined by people. He argues that this image is called forth by consumption. Marx, as a materialist, had to argue for production taking precedence over the creation of its image, Ingold shows. Whereas Sahlins, also criticising Marx, as a symbolic representationist argued for the symbolic images preceding production. Ingold, on the other hand, demonstrates how both arguments fall into the dilemma of a circle of no escape between production and consumption: 'so long as we assume that there is no more to production than converting images into objects, and no more to consumption than turning objects back into images, there appears to be no escape from the circle' (Ingold, 2011: 5). But, continues Ingold, Marx himself hinted at there being more to production. That is, people as they labour not only work on the materials but transform themselves. Thus, there is something else to production in the 'attunement and responsiveness to the task as it unfolds'. This means that the ongoing *process* of production itself creates and changes lives. That is, the primacy of production is in its process, in life itself, 'of the processes of hoping, growing and dwelling over the forms that are conceived and realised within them'. However, if we understand production 'in its capacity literally to *pro-duce*, to draw out or bring forth potentials in the person of the producer and in the surrounding world', then production cannot be restricted to human beings alone. Hence, 'both human and non-human, do not so much transform the world, impressing their preconceived designs upon the material substrate of nature, as play their part from within in the world's transformation of itself' (Ingold, 2011: 6). Both humans and non-humans then produce themselves, one another, and the environment through life.

Donna Haraway, similarly, critiques Marx and 'hyper-productionism' by arguing that it is a dangerous strategy to see the 'witty agency' only in humans (2004: 66), and 'insists on including nonhuman actors in what would be an otherwise relentlessly human category of that-which-labours' (Wark, 2015: 136). It is a crucial change of point of view and maybe even mind set, to see things not just as products of human labour, but as assemblages of all sorts of labours, other things, and lives. Even human bodies are the labouring and assemblage of others, for instance, microbial life, meshed with the life of our companion species – our dogs for instance (Haraway, 2008: 3–44). Thus, things and bodies are amalgams of the living and non-living, even the technological; and their labour: 'chimerical objects, those mash ups of flesh-tech' (Wark, 2015: 136), 'cyborgs, of couplings between organism and machine' (Haraway, 1991: 150). What Haraway does, according to Wark, is take apart the commodity to display not just the human labour – '[t]here is a fetishism of labor itself' as the 'man-with-hammer' – but the 'relations of production that the fetish of the commodity obscures' (Wark, 2015: 136–37). As commodities fall apart, under the gaze of the inquirer, to reveal their 'relations of productions', however, so do bodies that first appear as one and autonomous, a 'corporeal fetish' (Haraway, 1997: 142), fall apart to reveal their productions through many lives.

Both commodity and corporeal fetishism make things and life ownable and exchangeable, as we are blinded to their becoming through many processes, labours, and assemblages. Things and bodies seem as standing on their own. For instance, our bodies and the bodies of cereals seem autonomous, yet, Tsing argues, we became what we are today, partially, by labouring on each other's bodies (Tsing, 2012). As we step over the distinction made by Marx between nature, as that which gives the matter, and labour, as that which transforms the matter, Tsing questions the places and ways matter, or nature's raw material, comes into being. Raw materials cannot be taken-for-granted resources for capitalist production; they come into being. Yet they come into being outside of capitalist control, which then takes possession of them (Tsing, 2009, 2015b, 2015a): 'Capitalism makes use of animal digestion and plant photosynthesis without having any clue how to shape these processes, despite the sophisticated engineering of plants and animals. In agribusiness, milk and grain created in these non-capitalist processes are translated into capitalist value' (Tsing, 2015b). The question, then, that Tsing poses is how and where do non-capitalist forms of value enter capitalist forms of production (2015b, 2015a)? She calls these sites at the 'edges of capitalism' 'pericapitalist' sites as they are both in and outside capitalist processes. It is at these sites that "'salvage", that is, taking advantage of value produced without capitalist control' happens. These '[s]ites for salvage are simultaneously inside and outside capitalism': 'All kinds of goods and services produced by pericapitalist activities, human and nonhuman, are salvaged for capitalist accumulation' (Tsing, 2015a: 63).

Furthering the idea of capitalism taking possession of human and nonhuman activities, Moore argues that we cannot think of capitalism as external to nature, or to the ‘web of life’, which ‘is nature as a whole: *nature* with an emphatically lowercase *n*’ (2015: 2, emphasis in the original). Therefore, capitalism itself is ‘already co-produced by manifold species, extending even our planet’s geological shifts, relations, and cycles’ (2015: 3). Nature here, with a lowercase *n*, includes humans, as co-produced natures between themselves, microbes, bacteria, plants and animals they eat and probably much more. The survival of capitalism, demonstrates Moore, then happens not by destroying nature, but rather by putting life ‘to work harder and harder – for free, or at a very low cost’. There is a double movement in this process, first ‘new life activity is continually brought into the orbit of capital and capitalist power’, second ‘human-initiated projects and processes influence and shape the web of life’ (2015: 13). This means that while capitalism is ‘co-produced by human and extra-human natures in the web of life’ the “law of value” is, in fact, the “law” of Cheap Nature’ or the ‘ongoing, radically expansive, and relentlessly innovative quest to torn the work/energy of the biosphere into capital (value-in-motion)’. What is, therefore, transformed into value, ‘as socially necessary labour-time (abstract social labor) is the “capacity to do work” – by human and extra-human natures’ (2015: 14). What Tsing calls ‘salvage’, the creation of surplus value from life that is produced outside of capitalist control, Moore calls appropriation, as ‘those extra-economic processes that identify, secure, and channel unpaid work outside the commodity system into the circuit of capital’ (2015: 16).

The following two examples are spaces where the unpaid labour of plant life or spontaneous growth is salvaged or appropriated in order to enter commodity chains. Moreover, these sites are not necessarily outside of capitalist control: the first site is a controlled mono-crop cultivation, where weeds grow *through even opposed to* capitalist control, yet still enter capital accumulation; the second site is a socialist industrial ruin of capitalist changes, a cynical marker of how life is appropriated for capital accumulation from spaces destroyed by these same processes. While here I focus on the appropriation of the labour of weeds that grow through and in spite of hybrid mono-crops, herbicides, and ruins, it is worth highlighting that plant life is salvaged in the medicinal plant industry not just in its growth as a physical occupation of space, but also through the production of secondary metabolites that create the chemicals that heal¹².

¹² In phytochemical terms, the primary metabolites of plants are the compounds that are directly responsible for the plant’s normal growth, development, and reproduction, whereas secondary metabolites are those compounds that are not involved in these activities, but have other functions. Etkin argues that early phytochemists saw the compounds produced as secondary metabolites as ‘artefacts of metabolism without biological function’ (2007: 5). This view,

Spontaneous growth in cultivations

‘They’re not weeds, they are medicinal plants’, explained to me Nea Spânzu, the head of the family, while showing me some of the species of plants they were collecting. When the medicinal plant company came to the village they lived in, in the early 2000s, they were some of the first to start collecting plants for them. They were often shunned by other villagers for going after weeds, thus they enjoyed stressing the importance of medicinal plants *not being* weeds. The Spânzu family lived in several small cottages in one compound house. As Nea Spânzu’s children married, he built them a new house attached to the previous house’s side. They had a horse, cows, pigs, and chicken, they were selling milk and cheese products from house to house, and were thinking about building a polytunnel in the back garden to dry their own plants and thus selling them for more profit. Nea Spânzu was 76 and his wife, Doamna Spânzu, 72 years old. Nea Spânzu used to be a shepherd in a neighbouring county, but during the collectivisation period he handed his sheep over to the C.A.P., the collective farms. He became the shepherd and cheese maker of the C.A.P. in the village while his wife worked on the collective’s cultivations. After the fall of the socialist regime, life became harder for the family, until they found work in the newly established medicinal plant production company, working on their field and then collecting medicinal plants from the spontaneous flora. I went plant-picking several times with them during the spring of 2015, either on foot or in their cart drawn by a horse, with one of their sons or grandsons, depending on who was available.

On one sunny day, we walked to the huge oil seed rape cultivation next to the village. As we turned down a road at the edge of the village, we had to walk alongside a large chicken farm, where chickens were reared inside long hangars, separated from the rest of the world by barbed wire fences. Opposite the chicken farm stretched the yellow flowers of the oil seed rape. When we bent down, we could see how in patches among the oil seed rape grew the *trei frați pătați* (literally “three spotted brothers”, commonly known in English as wild pansy, *Viola tricolor*). In 2014 Romania cultivated 406,000 ha of oil seed rape (*Brassica napus*), producing a total of 1,059,000 tons of seeds, 90% (989,167 tons) of which was sold abroad for biodiesel (M.A.D.R., 2017). While cultivated since the beginning of the 20th century, after joining the EU the cultivation and production of oil seed rape has been growing, as well as the number of farmers who used hybrid seeds from big international companies such as Pioneer, KWS, Bayer,

however, she argues, ‘misunderstands the complexity of adaptations that require simultaneous or serial preparedness to compete with a variety of other plants, attract pollinators, and deter herbivores’ (2007: 6). Plant labour and life, then again just like human labour and life, is a complex co-production and co-living with other forms of life and their labours.

Syngenta, Monsanto, together with herbicides, insecticides, and fungicides. Therefore, farmers could shop from an array of herbicides designed specifically to kill of unwanted weeds, among others *Viola tricolor* (Redacția Sănătatea Plantelor, 2017; DuPont® România 2017), together with specific oil seed rape hybrids that were tolerant to such herbicides (Gazeta de Agricultură, 2012). Whether the farmer of this particular oil seed rape was not diligent in spreading herbicides or the *Viola tricolor* survived it, the Spânzu family recognised them not as weeds to be killed but as medicinal plants that were valuable as resources for human use.

Collecting medicinal plants or weeds from different cultivations was indeed a common story within the medicinal plant industry. A medicinal plant company owner told me that his people once gathered 80 tonnes of horsetail from within different corn cultivations. The horsetail could not be killed off by any herbicide, so the corn farmers were thankful for the weeding. Other collectors have, for instance, explained how the most beautiful and luscious dandelions grew among the lucerne fields of the villagers. Thus, while for some the spontaneously growing plants within cultivations were weeds they needed to get rid of, others recognised the companionship between human sown plants and weeds and remembered that dandelion grows lush among lucerne. It is not Nature that is able to grow within sprayed fields of mono-crops but spontaneous flora, which then is collected to enter other processes of capital accumulation.

Spontaneous growth in ruins

When I first got on the horse drawn carriage of the Spânzu family, we took a tight, concrete road towards a nearby city in order to gather elderflowers. We talked about how the family used to take the cart to forage a lot more often, even camping for several days sometimes, but these days, with so many cars, it is a suicide mission to go too far away. Doamna Spânzu was also keenly attentive to the plants growing at the side of the road, checking both what plants have started to flower, but also looking for good gathering areas, where plants grew in thick, easily harvestable patches. We went to the ruins of an old socialist orchard and flower growing facility. At the edge of the county capital, the ruins of the huge concrete buildings were overgrown by vegetation, and we had to be careful not to step on the broken glass, leftovers of greenhouses. We went to harvest elderflowers from the unkempt bushes that grew unaffected by the slow destruction of the buildings around them. Among the elder and the sparse wild rose bushes, we also found thick patches of lavishly growing stinging nettles (*Urtica dioica*), to be remembered, argued Nea Spânzu, to come back with a scythe, because it is easily cut. Within the ruined buildings I could hear other people perhaps looking for plants and scrap metal, while we had to be careful not to be seen or caught by the guard. We were trespassing.

Industrial ruins can be seen, especially in Eastern Europe, as the result of ingrained corruption or failed economic practices (Iatridis and Hopps, 1998; Thirkell, Petkov, and Vickerstaff, 1998; Kirk, 2003), however, they are just as much part of economic growth, seen as the leftover footprints of the chase of ever more profitable capital accumulation (Edensor, 2005). Edensor argues against a view of industrial ruins as wastelands where nothing happens and nothing is made, through showcasing the positive roles they take on. Industrial ruins, he demonstrates, not only highlight the failure of an idea of endless prosperity and growth, but become playgrounds, stage sets, shelters for humans, sanctuary for animals, and they also embody memory.¹³ Here, in this abandoned orchard, nevertheless, there was something more cynical happening. As '[a]bandoned buildings tend to be rapidly stripped of valuable assets' (Edensor, 2005: 5), this socialist ruin of capitalism became re-appropriated for capital accumulation as scrap metal, planted elder bushes, and spontaneously growing nettles were re-inserted into commodity supply-chains. As mushrooms in the 'ruined industrial city and abandoned or partially abandoned site of modern agribusiness or industrial forestry', weeds became commodities too through the 'scrounging economy' that looks for treasures in ruins (Tsing, 2014: 89–90).

Scrounging

While the appropriation of plant labour depended on the Spânză family as scroungers, their role within the accumulation process was ambiguous. The engineer working at the collection centre for whom the Spânză family harvested told me that Nea Spânză and his wife were indispensable when it came to roaming the pastures, hills, and mountains for plants because they knew the landscape so well. They would also not be able to sit in an 8-hour job. 'They say they are not Gypsies', he explained, 'but they have a brown complexion and that need of freedom that makes them unable to sit 8 hours in a place'. While the pair did enjoy and love the movement in and the attentiveness to the landscape needed to find the plants, they used to work on cultivations as well, a job they agreed was less enjoyable because even though they worked really hard, they were never appreciated.¹⁴ They also lived on the street some of the company employees called the 'Gypsy Lane'. Through 'brownness' and freedom, *the gaze* 'recognised' the two Spânză elders as 'Gypsies'. This *gaze* means that people, and researchers alike, *recognise* some people as Roma because of the categories we

¹³ For more on the importance of ruins as sites of memory in Romania, see Pusca (2010).

¹⁴ Picking in forests as a form of freedom was familiar to the matsutake pickers Anna Tsing worked with: 'He went on to say that he prefers mushroom picking to a steady job with a good income – he was a welder – because of the freedom' (Tsing, 2015a: 94).

attach to Roma-ness, a gaze that follows Roma people all their lives and often becomes internalised (Kovács, 2009: 37). Nea Spânzu, on the other hand, enjoyed the occasional scornful remarks on account of one of his sons in law, ‘a Gypsy boy, but hardworking’.

Emigh, Fodor, and Szelényi (2001) argue that the racialisation of poverty became the outcome of a classificatory struggle in Eastern Europe after the revolution. Poverty as a social phenomenon became ‘presented as if it were racial, not social, and therefore, as if it were genetically and biologically determined’. Racialisation then, they argue, was ‘a strategy used by the positively privileged ethnic group to keep themselves out of the category “poor” and/or to blame the poor for their own poverty’ (2001: 5). Kinds of labours, therefore, were not devoid of association with social class. Foraging was seen by many employees in different companies to whom I talked to as done by Roma, whether foragers thought about themselves as Roma or not. A desire for ‘freedom’ together with a seemingly ‘irresponsible’ attitude towards life were often mentioned as particularities of foragers and the Roma. In the same breath that Roma foragers were admired for knowing more plants and more foraging places than anyone else, they would be reprimanded for not being careful enough when harvesting, by snatching plants with roots, or leaving plants in sacks for too long, in explanations given to me about how foraging works. This mixture of racialized and romanticised images played out in the day to day realities of the people labouring at the edges of capitalist salvage.

Race (and gender and nationality) differences are, therefore, in the medicinal plant industry part of ‘figurations of labour’ and ‘are needed to tell effective stories about contemporary capitalism’ (Tsing, 2009: 154). Indeed, I internalised the disapproving narratives of how foragers rip (*smulg* in Romanian) plants with their roots – narratives that were often retold with disdain whether or not the ripping of the plant affected its reproduction – so well during my fieldwork that I caught myself judging my companions for ripping the *Viola tricolor* out in the middle of an intensive oil rape cultivation. Indeed, the Spânzu family did often rip plants with roots or pull, for instance, common hawthorn flowers (*Crataegus monogyna*), with one rip off their branches. Collection for them was a job that needed to be done quickly to be lucrative, constantly monitoring the fullness and number of the sacks and the time left until the end of the day.

Scrounging, scavenging, or foraging are activities that find things and beings to be inserted into capitalist accumulation. As opposed to cultivators who have to know plants through *how* to grow them, foragers had to know them through where they grew: ‘Where an orientation to farming encourages us to imagine a one-to-one relationship between humans and our food crops, wild

mushrooms [or spontaneously growing plants] press us into multispecies ecologies in which control may be impossible' (Tsing, 2014: 90). While foragers cannot control where plants grow, they can be attentive to the multispecies ecologies that they grew in. Thus, they were attentive to plants growing on roadsides, dandelions growing fat amongst the lucerne, wild pansy among the large rape fields, or thick patches of nettles weeding over ruins. In turn, then, capitalist accumulation appropriates the 'cheap' attentiveness of those scrounging, an activity 'especially appealing to those without other resources' (Tsing, 2014: 94), like those who lost their work in the C.A.P. after the fall of socialism and could not find other means of subsistence. For scroungers there is no difference then between 'pristine nature' or "'trashed" landscape' (Bonta, 2010: 143), rather as their survival depended on selling, thus gathering quickly and embracing the multispecies ecology of life in its 'spontaneity' as it was, they had to salvage plants from where they could find them. It is through the energy and work-for-survival of the scroungers that the energy and work-for-survival of weeds became appropriated for capitalist projects.

Nature and the spontaneous flora again

While plants from the spontaneous flora end up on supermarket and nature shop shelves as natural products, within the scientific practice of plant chemistry, the chasing of Nature continues. In laboratories, spontaneous flora is not devoid of ambiguity, moreover, its naturalness itself is often questioned. Chemists and pharmacologists working for medicinal plant product companies at conferences sometimes criticised plants being gathered and cultivated in conditions that were not ecological, and therefore, they argued, not natural conditions. Indeed, they explained, only those products and/or ingredients that were labelled as ecological were truly 'natural', because other plants could be affected by pesticides, fertilisers, or had added aromas and colourants. 'Ecological' then became synonymous with 'natural' as the foundations for health claims. Gathering ecological plants not only involved proving that their gathering did not affect the environment and the ecosystem in a negative way, but they had to come from well-defined, certified areas regularly checked and authorised by a variety of institutions such as the Romanian Academy (Ecoinspect, 2015).

Some companies even waged war against ingredients coming from the spontaneous flora, as they could not be controlled properly. At one conference, the representatives of a company promoted the importance of the soil and environment that medicinal plants come from, advocating their ecological cultivations. They opposed gathering from the spontaneous flora and quoted an experiment they conducted with plants 'polluted' by dog urine, and how terribly

that altered the plants' chemical composition. Similarly, they argued, one could not control the number of reagents (artificial fertilisers and pesticides) that could affect plants gathered from the uncontrolled and un-ecological spontaneous flora, especially when plants were gathered from next to or even within large agricultural cultivations. Whether any pesticides, herbicides, fertilisers, or dog urine changed the chemical composition of the plants I mentioned here, I do not know. Nevertheless, some producers argued that it was of utmost importance to control the whole process of growing and harvesting in order to have good quality plants. 'Natural' as healthy for humans did not mean untouched by humans in these cases, rather the opposite, it became associated with the rigorous control of the plants' origins and their chemical compounds.

While in some laboratories the spontaneous flora was deemed not-natural, because it was not seen as healing for human bodies, the spontaneous flora entered capitalist processes as natural products on shelves. As weeds grow in cultivations and break up the concrete pavement of abandoned orchards, nature, as life, literally works through the zones of capitalism. As they become inserted into capitalist production, they shape human bodies in intimate ways as they become ingested through teas, pills, tinctures, or syrups. Yet somewhere along the process, the not always so Natural lifeworlds of plants are severed. Moore argues that capitalism, through symbolically severing the relation between humanity and its species-environment relation, creates from the term 'natural' a 'crucible of legitimation' (2015: 11). Marx refers to things as alienable from man, meaning that they 'are in themselves external to man' (Marx, 1990, I:182) and thus freely exchangeable. As they stop having use-value for those who sell them, they become comparable to any other commodity. Tsing argues, that in a capitalist logic of commodification the process of alienation means that 'things are torn from their lifeworlds to become objects of exchange', alienation, 'which becomes a potential attribute of nonhumans as well as humans' (2015a: 121): 'This history has inspired investors to imbue both people and things with alienation, that is, the ability to stand alone, as if the entanglements of living did not matter', they become 'mobile assets' (2015a: 5). Humans and nonhumans have then their properties stripped to be comparable and therefore exchangeable with any other thing on the market. For medicinal plants, this means that the wild pansy coming from its multispecies relation with the hybrid oil seed rape and the nettle that cracked through the pavement of the ruined orchard, on the shelves, stripped by their lifeworlds, become synonymous with Nature, that abstract concept that legitimises natural products.

On shelves and in promotional materials medicinal plants then became attached to abstract images of the traditional plant lore of ancestors or peasants rather than the image of the Spânzu family as they put together their livelihoods from plant picking, owning their own animals, selling milk and home-made

cheese, and planning to build facilities to help them dry their own plants and thus acquiring a larger profit by selling dried plants rather than fresh ones. Similarly, Narotzky summarises the peasant debates between the 1960s and the 1980s that challenged classical Marxist theories of the proletarianization as a concrete historical development and instead of describing a ‘universal (“natural”) peasant logic seeking simple reproduction’, ‘the debate explored the complex forms of surplus extraction that have been historically present in societies dominated by powerful actors of capital accumulation’ (2016: 311). This means that peasants never did simply seek a simple reproduction of value (producing only as much as the household needs) as opposed to the capitalists who were looking for expanding accumulation. Rather, it means that throughout history as well as today, peasants had to negotiate the complexities of both reproductive labour and market accumulation. The production of things for the household was negotiated together with wage labour and entrepreneurial activities (2016: 310), as the Spânzu family has done. This recalls Tsing’s call to pay attention to the ‘flawed protagonists’ of supply chain capitalism, the ‘politically ambiguous, liminal figures, caught within the contradictions between varied forms of hierarchy and exclusion’ (2009: 154).

Through the two spaces of collecting from the spontaneous flora of the oil seed rape cultivation and the ruined socialist orchard with the Spânzu family, I wanted to highlight the tension between the spontaneous flora and scroungers on the ground and Nature with its ancestral peasants on the supermarket and nature shop shelves. I found that the term spontaneous flora brings to the forefront the appropriation of the reproductive labour of weeds that grow either outside or even against human control. Thus, the labour of growth through and against capital accumulation becomes part of other capitalist processes through the work of those who are themselves partially outside of these processes. Capital is, therefore, accumulated through the cheap labour of plants and people sustained by processes outside of capitalist production such as the photosynthesis of plants or the household work that is part of maintaining the livelihoods of the Spânzu family.

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Romanian Sociology Today

Editorial Note:

***This is a special section dedicated to research articles
from the field of Romanian sociology.***

MUTUAL INFLUENCES BETWEEN MOTHERHOOD AND EDUCATIONAL ATTAINMENT IN SELECTED EASTERN EUROPEAN COUNTRIES

CORNELIA MUREȘAN¹

ABSTRACT. Women are spending an ever longer part of their lives enrolled in education programs. A crucial question in this context is how motherhood can be reconciled and correlated with continued investment in human capital. A related question concerns the role the socioeconomic context plays in the education/ family life balance. In the present study we account for the finding that a pregnancy resulting in a first birth usually triggers the termination of formal education, and, conversely, that the completion of education is often followed by a first birth. We use a simultaneous-hazard two-equation model, controlling for common potential but unobserved determinants. Relative to work already done on these matters, our study extends previous investigations to Eastern European countries which have not been adequately researched so far. To strengthen comparison, we have additionally included two Western European countries. This allowed us to assess the importance of political context. The results show that despite efforts to offer women the possibility of choosing both motherhood and being enrolled in education, the educational policies which were introduced in some Eastern European countries after the fall of communist political regimes could not counteract the negative effects of the transition to a market economy. In these formerly communist countries, the continuation of studies in parallel with childbearing and family formation has become more difficult.

Keywords: educational attainment, first birth, simultaneous processes, mutual endogeneity, Eastern Europe, Generations and Gender Surveys

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Background²

The massive educational expansion of recent decades is one of the most fundamental social changes in Europe in modern times. Not only has the number of students grown steadily, but the number of years that a student spends in higher education has also increased considerably (OECD, 2013). As women who study and graduate from higher education programs enter motherhood later in life than other women, if they enter at all (Beaujouan, Brzozowska and Zeman, 2016), the extended education is usually seen as an important factor in the postponement of a first birth.

The correlation between the steady increase in the duration of studies and the postponement of motherhood in Europe is easy to notice. According to Eurostat data, the mean age of women at first birth has gone up in all former communist countries from about 23-24 years in 1998, to about 25-27 years in 2010 (Figure 1), approaching the higher mean age at transition to motherhood in Western Europe. The same development can be observed in the dynamic of the duration of studies. During the calendar interval 1998 - 2010 the number of years expected to be spent in tertiary education (Figure 2) increased dramatically in Eastern Europe. In some Eastern European countries this envisioned study duration became even higher than in Norway or in France. Before the political turnover in the former communist countries, tertiary education was fully subsidized by a relatively poor welfare state which drastically limited the number of available places in tertiary education, correlated this number with the needs of the national economy, and guaranteed employment for all graduates. Thus, a small proportion of the young population could occupy the few places offered by the universities. This situation changed after the political turnover, when the number of places in universities skyrocketed, a process paralleled by the demise of guaranteed jobs at the completion of education (graduation). The Eastern countries are, in this respect, quite different from their wealthier Western counterparts, in which being enrolled in tertiary studies and, consequently, having a high level of education, became mainstream by the beginning of the 1990s.

² I am grateful to Francesco Billari for pointing out the need to study concomitantly the mutual impact between education and fertility. My gratitude goes also toward Jan M. Hoem, Gerda Neyer, Gunnar Andersson, and the anonymous reviewers for their suggestions concerning new literature related to the topic and necessary improvements to increase the pertinence of this study. This work was supported by a grant of the Romanian National Authority for Scientific Research, CNCS-UEFISCDI, project number PN-II-ID-2011-3-0145.

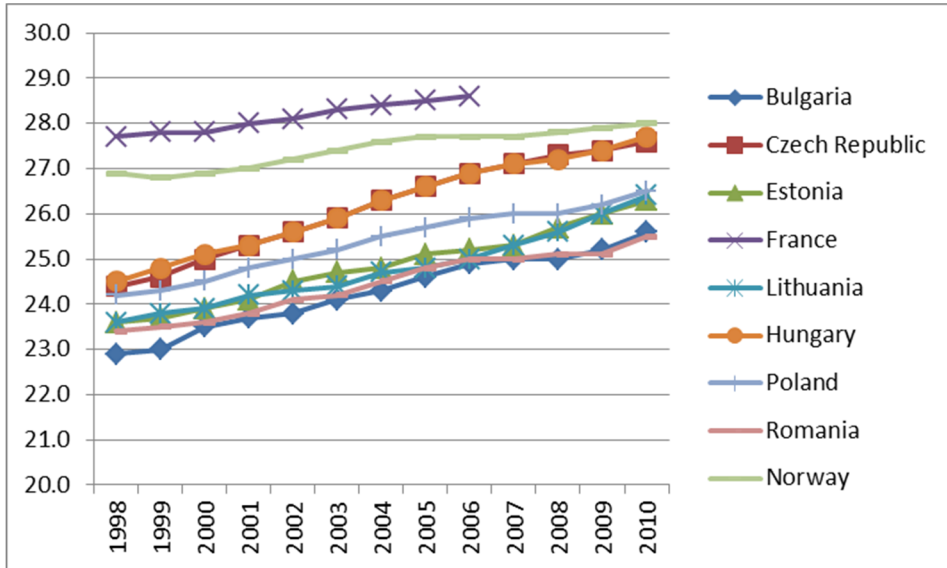


Figure 1. Mean age of women at birth of first child, 1998-2010, selected European countries
Source: Eurostat (2018). Author's graph.

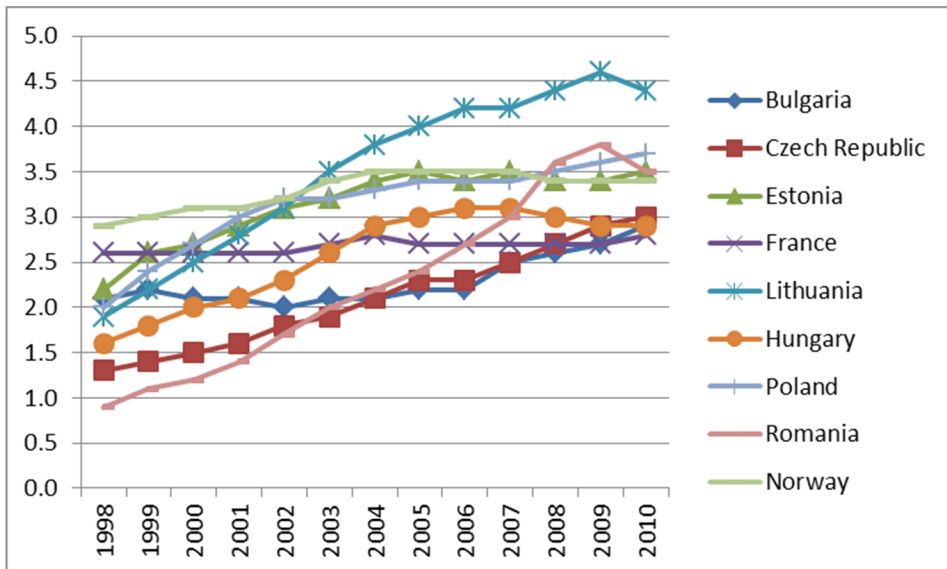


Figure 2. Expected years of tertiary education (ISCED 5-6), 1998-2010, selected European countries
Source: Eurostat (2018). Author's graph.

With the development of these two processes, and the extended overlap in age span at enrolment in higher education and family formation, it becomes clear that research into how motherhood can (or cannot) be reconciled with continued investment in human capital is more important than ever, as are investigations of the role the socioeconomic context plays in the education/family balance. The present paper contributes to this growing body of literature.

Theoretical considerations

The general tenor in the relevant scientific literature is that very early motherhood usually has negative consequences for a woman's later life, particularly when she gives birth to her first child while she is still enrolled in education. For a young woman, a birth increases the risk of terminating education because of the pressing need to care for child and family. This basic observation is well documented in the literature, for example in an early study conducted by Lillard et al. (1994). These authors simultaneously studied several events of family formation and educational career and found that 'women who became pregnant in their "current" schooling decision window were much less likely to go on the next grade level' (Lillard et al., 1994: 42). This was found true also for women attending college.

Macro-level circumstances can attenuate or even reverse these negative consequences. Notably, the flexibility of the educational system (Hoem et al., 2006), cultural factors of family solidarity (Dalla Zuanna, 2001; Billari, 2004; Billari and Philipov, 2004a), and social policies designed to facilitate the combination of student and parental roles (Rindfuss, 1991; Hoem, 1993; Esping-Andersen, 1999; McDonald, 2000; Gauthier, 2002; Thalberg, 2013) may modulate the impact of pregnancy and motherhood on educational enrolment. Our broad choice of countries for investigation has the purpose of capturing a wide range of such possibilities. We are particularly interested in Eastern Europe, because in this region the educational system suffered numerous changes and reform attempts (Eurydice, 2015; PERFAR, 2014). These transformations accompanied the political and socio-economic transition from communist regimes to democracy and market economy. Starting with the 1990s, many new fields of study were introduced, the number of state funded places in public universities increased, numerous private universities were created in which students paid for their education, etc. The result was that the proportion of young people continuing their studies in higher education increased tremendously. Around the turn of the millennium, new forms of education like open & distance learning and reduced frequency tertiary education began to emerge everywhere in the former communist countries (Rădulescu, 2006; Sławiński and Dębowski, 2013), allowing the continuation or resuming of studies for those who wanted to combine university enrolment with family life and professional activity.

The major inconvenient in the study of the effect of childbearing on educational attainment is that the direction of causation is not clear. The literature has shown that in most populations a first birth usually triggers the end of education and, conversely, that the birth of a first child is triggered by the completion of education. An investigation of the causal effect of either of these two processes on the other generally needs a study of both processes simultaneously because of their mutual endogeneity. Therefore several authors have modelled together educational enrolment and childbearing in various manners. For example, Gerster et al. (2013) used Danish register data to show that the relationship between education and *completed* fertility is the result of a dynamic interplay between the two processes. Similarly, Tesching (2012) dealt with the interrelationship between women's educational level, educational field, and first and higher order births, while Thalberg (2013) handled students' enrolment and childbearing. Both of the latter studies used Swedish longitudinal register data and took into consideration not only the interplay between the two processes, but also the impact of common unobserved factors on educational trajectories and fertility decisions. Martin-Garcia and Baizan (2006) studied the impact of educational enrolment and the type of education on first births using Spanish Family and Fertility Survey data by jointly considering the end of education and the entry into parenthood, again controlling for common unmeasured heterogeneity. The importance of the mutual influence of educational enrolment and first birth, the relative weight of common factors, and the role of welfare regimes have all been assessed for eleven Western European countries by Billari and Philipov (2004a) on the basis of 1990s data in the Family and Fertility Survey, and by Brand and Davis (2011) with data from the U.S. National Longitudinal Survey of Youth from 1979. Billari and Philipov have found important international differences in micro-level relationships: the mutual influence and the importance of common factors for both processes are weaker where welfare regimes, and in particular social policies that allow role combination, are stronger. Disaggregating the effects of college by propensity score strata, Brand and Davis have found that the fertility-decreasing college effect is concentrated among women from comparatively disadvantaged social backgrounds and low levels of early achievement. The effects of college on fertility attenuate as we observe women from backgrounds that are more predictive of college attendance and completion.

Our purpose is to extend such investigations to Eastern Europe, using as far as possible individual-level dynamics of the processes involved, as reflected in the latest Generation and Gender Surveys data sets that cover any former communist country. We aim to investigate whether it has been easier to combine studies with childbearing in some countries in this region than in

others, how similar the former communist countries have been to each other in these respects, and how they differ from two of West European countries (France and Norway). We also want to explore whether the combination of educational enrolment with childbearing has become easier over time, since one of the aims of social policies in many European countries is to help people attain their various life goals related to different domains of their life course.

We formulate two research hypotheses, as follows:

H1. Conception and birth during studies increase women's risk of terminating education. The impact is stronger at times when and in societies where welfare regimes provide less support to a role combination or to a postponement of the end of education.

The latter means that we expect a stronger negative impact of childbearing on completing education in market economy times than during communist regimes in Eastern Europe, since the developments of educational systems toward making possible the combination between education, family and work, are more recent than the functioning of market economy rules, which more often force individuals to choose between education, work and family. It also means that we should see a stronger impact in general in Eastern Europe than in the two Western countries, where the integrative educational policies have a longer history.

H2. In more family-oriented welfare regimes (e.g. in Romania) and in societies with a more pronounced de-standardization of the life course (e.g. in Norway), the correlation between unobserved factors that affect both the length of education and the time to motherhood is lower.

Personal values, preferences, perceptions about role incompatibility, sense of personal efficacy, egalitarian gender role attitudes are all considered, in our study, as unobserved factors affecting both the length of education and the time to motherhood. Thus, career-oriented women could use higher education for professional gain and consequently limit fertility, while family-oriented women with lower labour market prospects deem motherhood their means to personal fulfilment. Our assumption is that the correlation between propensity for motherhood and for educational attainment is lower in societies where the compatibility between these two parallel processes finds more support either by the families or by the welfare policies.

Data and methods

For any empirical study of the interaction between educational attainment and fertility, the two factors need to be well defined, i.e. they have to be made more precise than in the general reasoning above, and they need to be related to the data at hand. Gerster and her collaborators (2013) represented fertility by the number of children ultimately born by a respondent in their register data, and they defined educational attainment in terms of five educational levels for which the individual had a record of completing the needed examination or degree. Most other authors have used some continuous representation of the individual childbearing histories instead, and have applied a simpler version of time-varying educational histories. We have chosen yet another (original) strategy, in accordance with our data capabilities.

For each of our own country-specific analyses we have selected information from the first-round national Generations and Gender survey (GGS) and have used a simultaneous-hazard two-equation analysis, controlling for unobserved heterogeneity. Because of our particular interest in Eastern Europe, we have used GGS data from seven former-communist countries in that region (Bulgaria, Czech Republic, Estonia, Hungary, Lithuania, Poland, and Romania), and for comparison we have also selected GGS data for two countries in Western Europe (France and Norway). To our knowledge, the GGS data for the East European countries have never been studied systematically in this manner before.

For each national data set we have followed enrolled and childless female respondents from age 17 to 35, between January 1st 1980 and the date of the interview. Details about national sample sizes, interview dates, and numbers and shares of events are shown in Table 1.

As it is well known, major political changes took place in Eastern Europe in 1989-1990, with important consequences for the welfare regimes in the region. In our analyses we have therefore distinguished three periods: the 1980s (the last years of the communist authoritarian regimes), the first eight years of transition (1990-1997), and the last seven to fourteen available years (1998-2004/11, varying between countries), representing the consolidated capitalist regime.

For the two West European countries, both with stable socio-political regimes, the comparative analysis by period reveals the dynamics of the mutual relationship between the transition to motherhood and the end of studies, and it could highlight, should it be the case, the differences with Eastern Europe, a region which so far has received less attention than it deserves.

Table 1.

Interview dates, sample sizes, numbers of events, and share of first conceptions/births before the end of education

	Interview date	Sample size	End of education	Conceptions before end of education	Birth before end of education	Total first birth	Conception before end of education, %	Birth before end of education, %
<i>Former communist countries</i>								
Bulgaria	Oct.-Dec. 2004	3426	2760	718	602	2223	21	18
Czech R.	Feb.2004-Nov.2005	2228	1667	254	188	1196	11	8
Estonia	Sep.2004-Dec.2005	2011	1622	526	420	1418	26	21
Hungary	Nov.2004-May 2005	2558	2569	330	275	1467	13	11
Lithuania	Apr.-Dec. 2006	2082	1439	511	436	1269	25	21
Romania	Nov.-Dec. 2005	1761	1449	259	225	1194	15	13
Poland	Jan.2010-Dec.2011	5081	3852	1103	923	3369	22	18
<i>Democratic countries</i>								
France	Sep.2004-Dec.2005	2356	1812	218	194	1210	9	8
Norway	Jan.2007-Oct.2008	3863	2843	919	855	1210	24	22

Source: Author's synthesis based on the *Gender and Generations Survey* (GGS).

Notes: National samples of childless women who were enrolled at least one month during age interval 17 – 35. The period of investigation starts from the beginning of 1980 until the interview date.

Analytic strategy

Following the approach outlined by Lillard (1993), we have used a simultaneous-hazard two-equation model to assess the reciprocal impact of the first conception (leading to birth) and the end of educational enrolment, controlling for potentially common determinants through unobserved heterogeneity. This heterogeneity incorporates the effect of individual characteristics, values and norms that remain largely unchanged until the first birth or the end of education, whichever comes later. One should note that, like most survey data, the GGSs do not contain continuous information about values and norms at the time

when a woman is exposed to the risks of pregnancy or at completion of education, so we must use an indirect methodology. Since value orientations usually do change to some extent during an individual's life, we did not want to use the only information concerning values that the GGS collected, namely attitudes and opinions manifested at the time of the interview. Initially we also included two easily available common control variables to represent a woman's *observed* characteristics, namely her number of siblings and her type of region of residence at age 15, but we ended up dropping these variables when they turned out not to give much further insight.

To spell this out, we have proceeded as follows: We have modelled the intensity $h_E(t)$ of the transition to the successful end of education and the intensity $h_B(t)$ of the transition to motherhood (actually 7 months before the time of first birth), using a system of two hazard equations. For both intensities, we have let process time start at age 17, which is when enrolled people usually are close to completing high school and to deciding whether to continue or not with tertiary education. We have preferred not to start at younger ages (say, at age 15 as it is usual for assessing risks of a first birth, or at age 10 as it is usual for assessing the end of education) in order to avoid as much as possible the mismatch between completing or dropping out of education on the one hand, and to make sure we dealt with a more deliberate decision of young women to choose between family formation and continuing studies on the other. The two situations may be influenced very differently by the factors under study. We censor all life histories at age 35. The calendar months of the two defining events were recorded in the GGS data. (In the Norwegian data, educational attainment was collected from register data.)

We have used the following model:

Model 1

$$\begin{aligned}\ln h_E(t) &= y_E(t) + C(a(0)-1980+t) + \alpha_1 M(t) + \alpha_2 U(t) + \tau_1, \\ \ln h_B(t) &= y_B(t) + C(a(0)-1980+t) + \beta_1 E(t) + \beta_2 U(t) + \tau_2.\end{aligned}$$

As an alternative, we have sometimes used the following model instead:

Model 2

$$\begin{aligned}\ln h_E(t) &= y_E(t) + \alpha_1 M(t) * P(t) + \alpha_2 U(t) + \tau_1, \\ \ln h_B(t) &= y_B(t) + \beta_1 E(t) * P(t) + \beta_2 U(t) + \tau_2.\end{aligned}$$

The functions included in the models are as follows:

$y_E(t)$ and $y_B(t)$ denote the baseline effects of age t from 17 to 35 years, represented by the logarithm of a linear duration spline with knots every two years for the intensity of end of education, and at ages 20, 25, and 30 for the intensity of first birth. These apply when the other functions have the value 0.

$C(a(0)-1980+t)$ is a second duration spline which captures the effect of calendar time. It is expressed relative to the year 1980. The argument $a(0)$ is the calendar year when individual i starts to be exposed to risk, i.e. the year when the person reaches age 17. It is a duration spline with two knots, located at January 1st 1990, and January 1st 1998. This term appears only in Model 1.

$P(t)$ is a time-varying variable denoting the calendar period, specified as 1 for the 1980s, 2 for 1990 - 1997, and 3 for the period from 1998 to the date of interview, as already noted. It is used in Model 2 where it is interacted with other terms.

$M(t)$ is a time-varying variable denoting current maternal status, with three possibilities: 'childless so far (i.e., at age t)', 'childless and pregnant', and 'mother'.

$U(t)$ is a dichotomous time-varying variable indicating first-union formation (counting either marriage or non-marital cohabitation).

$E(t)$ is also a time-varying variable denoting educational attainment, with three statuses: 'in education', 'out of education, middle level of education or less attained' and 'out of education, high level of education attained'.

In Model 2 we have included interactions between the maternal status variable and period, and between educational attainment and period, in order to shed light on the way the reciprocal effect of motherhood and education changes between periods.

The items τ_1 and τ_2 are normally distributed unobserved characteristics of the individual with variance equal to 1 and a correlation of ρ between the unobserved characteristics. The parameter ρ is estimated in each national data set. We have fixed the variances of the unobserved heterogeneity items τ_1 and τ_2 to 1, forced by the fact that for some countries the iterative estimation process with unknown variances did not converge in our data. Other authors, like Tesching (2012), Baizan et al. (2003), and Martin-Garcia and Baizan (2006), have allowed the heterogeneity factors to have general variances which they have estimated, but they found that it does not much matter for their results (in their Swedish and Spanish data, respectively) whether the variances were set to 1 or were estimated. The effects of observed covariates were essentially the same in both cases. Other authors, like Billari and Philipov (2004b), argue that variances *must* be fixed to 1 when events are not repeatable, as in our case, where we study first births only. Their standpoint is likely coloured by the need to have identifiable heterogeneity items.

For the estimation of the hazard models we have used the aML software, Version 2.09 (Lillard and Panis 2003).

For each specification of our model elements, we fit a pair of hazards to the data for nine countries, which meant that we operated with eighteen regressions each time we fit the models. To limit the amount of work, we focused on first births alone. We kept the multiplicity of possibilities in check by 'only' operating with first unions in the specification of the union covariate $U(t)$ and by 'only' using the specification of the motherhood covariate $M(t)$ where we censor educational histories at age 35. As we shall see when we present our results below, these restrictions did not prevent us from arriving at extensive new findings about (first) childbearing in Eastern Europe.

Note that in all our various specifications, the two processes (completion of education and first birth) appear in an asymmetric manner in our analysis. While the intensity $h_B(t)$ of first birth operates on each female respondent only as long as the first birth has not yet occurred, her intensity $h_E(t)$ of successful termination of educational enrolment continues to act after the first birth and until censoring.

Results

Trends of first births intensities

Before we assess the influence of the transition to motherhood on the completion of education, and conversely the effect of leaving education on childbearing, let us look at the development of the two phenomena over time separately (Figures 3 and 4).

After an increase between 1980 and 1990 in most countries, first-births risks decreased in all countries, reaching a value 20-80% lower at the interview dates relative to that at the beginning of 1980 (Figure 1). The decrease was rather steep and started in most countries after 1990. In Romania, childbearing postponement started ten years earlier, in the 1980s (see also Mureşan et al., 2008; Mureşan and Hoem, 2010). A key contribution to the lower first birth hazard in 1990 as compared to 1980 in Romania is the effect of abrogation of the 1966 decree on the prohibition of contraceptives and abortion. France is the mirror image of the Romanian case - at least regarding trends observed after the 1980s -, postponement started ten years *later* than in the rest of the countries we cover. We cannot see any pattern substantially separating the Eastern European countries from the selected Western countries.

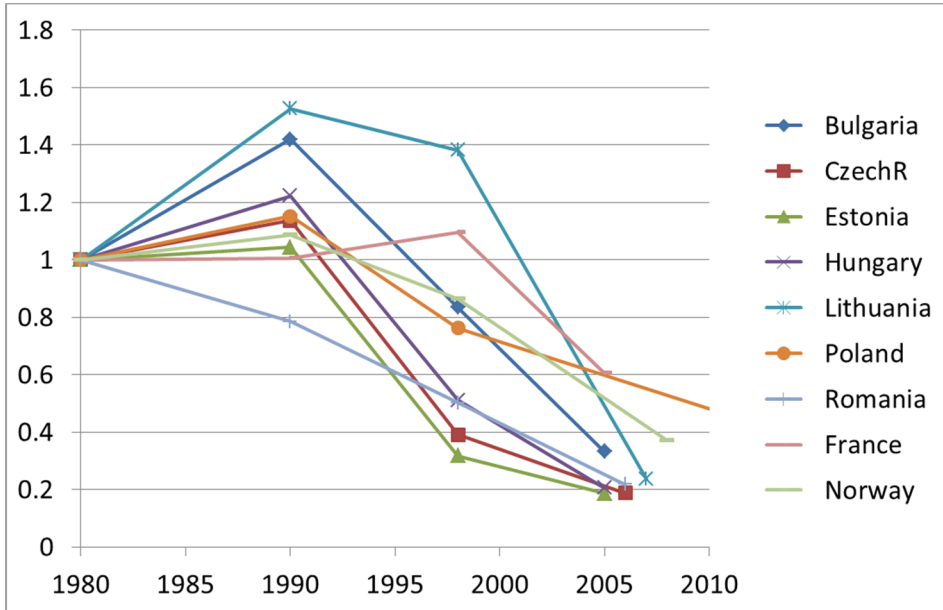


Figure 3. Trends in country-specific hazards of first birth (relative to 1980). Childless women who were enrolled at least one month during age interval 17 - 35. Duration splines by calendar year

Source: Author's calculations and graph based on the GGS dataset.

Trends in completion of education

In what regards the transition to the end of education, the general trend (Figure 4) shows decreasing intensities (and thus longer study durations) during the 1990s, and essentially much smaller changes after 1998.

Here, the true exception is Norway, where one can see a persistently increasing intensity of completion of education. The exceptional case of Norway was also noted by Cohen, Kravdal, and Keilman (2011) in a sophisticated analysis showing that the direction of causation between educational attainment and *final family size* is from fertility to education. However, this particular finding cannot be extended to other countries. For example, Ni Bhrolchain and Beaujouan (2012) argue that fertility postponement is largely due to rising educational enrolment, at least in France and Britain, the two countries they studied. This would mean that causation goes from education to fertility. We have been able to show, as will be presented in the following, that the direction of causation between *first birth* and completion of education in more recent times in Eastern Europe is also from education to fertility.

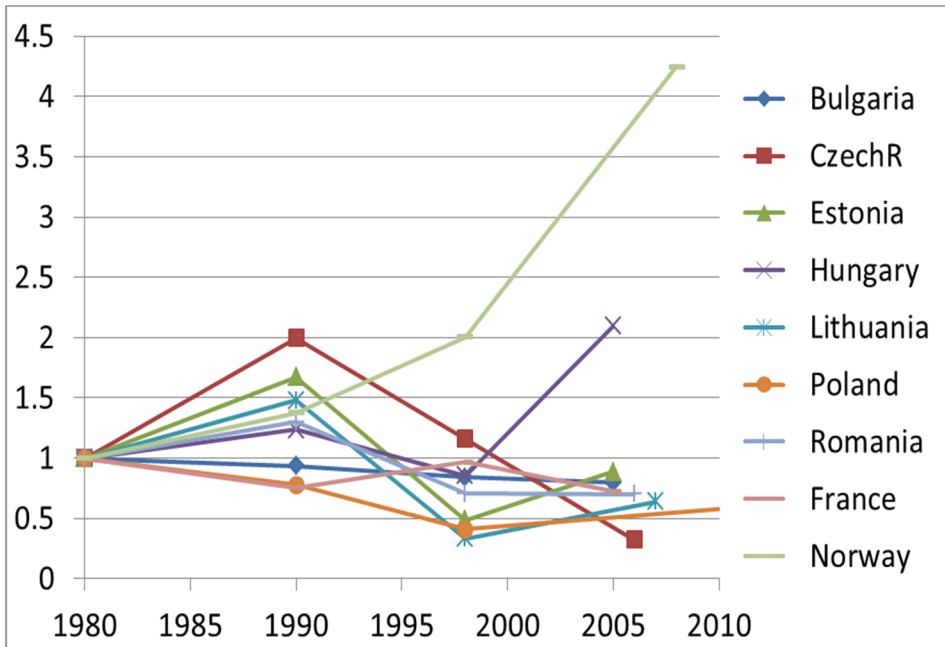


Figure 4. Trends in hazards of completion of education (relative to 1980). Childless women who were enrolled at least one month during age interval 17 - 35. Duration splines by calendar year

Source: Author's calculations and graph based on the GGS dataset.

Overall mutual influences

Table 2 displays the results of fitting Model 1: relative risks of transition to the end of education, and relative risks of transition to a first birth, for the overall period and controlling for unobserved heterogeneity. The first two lines of the table, which contain the results of the effects of first conception and of first birth on the duration of studies (enrolled women), are given a visual representation in Figure 5.

Figure 5 shows that that a pregnancy (ending in a live birth) significantly increased the risk of terminating education in only two East European countries (Estonia and Poland). A birth during studies reduced significantly the risk of terminating education in all countries, as it is natural that these women returned to the educational system after the end of their parental leave. A stronger impact is found in three former communist countries (Bulgaria, Czech Republic, and Hungary), but also in France and Norway. It seems that in this respect Eastern Europe presents no distinct pattern compared to Western Europe.

Table 2.

Results of country-specific simultaneous-hazard models of transition to the end of education and of transition to a first birth (relative risks from Model 1). Censoring seven months before any second birth or at age 35

	BG	CZ	EE	HU	LT	RO	PL	FR	NO
Transition to end of education									
<i>Maternal status (no children so far=1)</i>									
<i>Pregnant (1=childless)</i>	1.03	0.93	1.74	1.07	1.15	1.29	1.36	0.73	0.86
<i>Mother (1=childless)</i>	0.46	0.49	0.67	0.46	0.63	0.65	0.58	0.41	0.43
<i>First union (no=1)</i>									
<i>yes</i>	1.82	1.17	1.17	1.14	1.36	1.25	1.40	1.43	1.25
Transition to first birth									
<i>Educational status (in education=1)</i>									
<i>lo/mid. level, out of ed.</i>	1.15	2.43	2.15	1.54	1.84	1.83	1.95	1.43	2.12
<i>hi level, out of ed.</i>	1.16	2.13	1.57	1.46	1.57	1.03	1.41	1.06	1.92
<i>First union (no=1)</i>									
<i>yes</i>	33.90	7.59	19.72	11.74	21.71	25.15	14.85	17.29	10.60
<i>p</i>	0.40	<i>0.18</i>	<i>0.04</i>	0.42	<i>-0.02</i>	<i>-0.02</i>	0.25	0.53	<i>0.01</i>

Note. Significant values are given in boldface.

Source: Author’s calculations based on the GSS dataset.

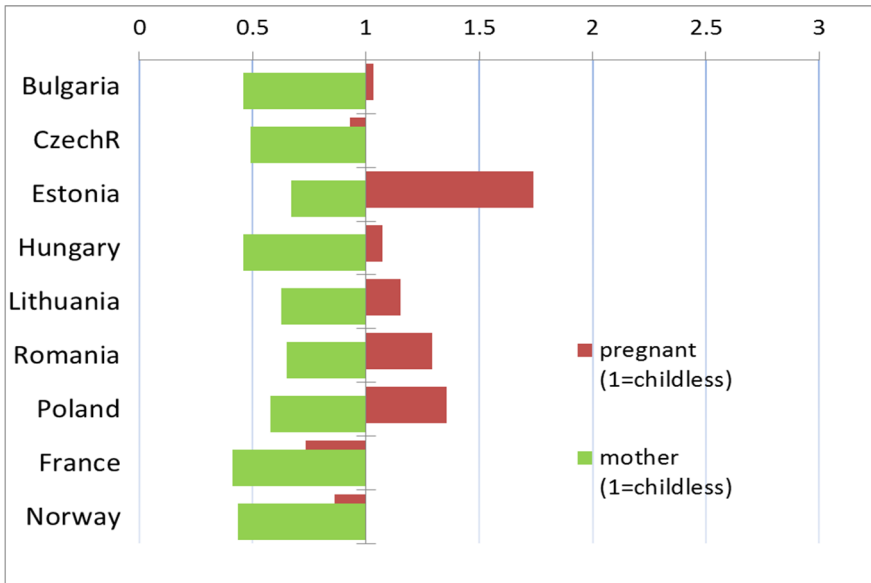


Figure 5. Relative risks of ending education by maternal status.

Source: Author’s calculations and graph based on the GGS dataset.

Entering a first union significantly increased the risk of terminating education in most of our countries. The increase was about one quarter in Estonia, Romania, and Norway; it was between 40-80% in Bulgaria, Lithuania, Poland, and France (see Table 2, last line in the upper half). For Hungary and Estonia, the results are not statistically significant. In all countries, the role of first union formation in the transition to motherhood was much stronger, first birth risk being higher by 8 to 34 times (from Czech Republic to Bulgaria) than for those not yet in any union (see the last line in the bottom half of Table 2).

Beside the evidence of the role of union formation, our estimates in the model of transition to first birth (bottom half of Table 2) show another almost universal impact, namely a significantly lower childbearing risk among enrolled women, especially when compared with women with a completed middle level of education or less. Only in Bulgaria it seems that the educational attainment had no significant impact on first birth risk, but in this case the influence of entering a first union was the biggest and potentially overwhelmed the effect of education. As many authors have noted (Billari and Philipov, 2004a; Blossfeld and Huinink, 1991; Kravdal, 1994; Hoem, 1986; Hoem and Hoem, 1989, Rindfuss et al., 1980), the *level* of education does not play a major role in childbearing when we control for enrolment. This is the case for five out of nine countries from our study. However, in the other half, namely in the case with women in Estonia, Romania³, Poland, and France⁴, the situation is not the same, and more recent studies show that the level of education has a key role in childbearing (Mureşan and Hoem, 2010; Ní Bhrolcháin and Beaujouan, 2012). In these four countries, a tertiary education sensibly reduced the risk of a first birth when compared to a middle level of education; and in Romania and France the risks were as low as those of women who are still enrolled.

³ More details about the Romanian negative educational gradient in parity-specific fertility are reported by Mureşan and Hoem (2010).

⁴ Ní Bhrolcháin and Beaujouan (2012) found that in France, first birth postponement is mainly 'attributable to the rise in educational participation, but the additional lengthening of the time to first birth not explained by rising educational enrolment is related to educational level, with the best educated women postponing their births for longer following the end of education than other groups'.

Common effects of personal characteristics and value orientation on educational trajectories and the timing of motherhood

Estimated correlation coefficients⁵ of unobserved heterogeneity are positive and statistically significant for Bulgaria, Hungary, and Poland, three of the former communist countries, as well as in the case of France which has a conservative welfare regime (last line of Table 2). In the Czech Republic the coefficient is also positive, but not statistically significant. In each case this indicates the prevalence of unobserved common factors that affected both processes in the same direction, i.e. an unobserved orientation towards a career prolonged both the length of education and delayed transition to motherhood.

The fact that the correlation coefficients are close to zero in the remaining countries may indicate that personal characteristics and value orientations matter less for the combination of investments in education with family life and motherhood. This is the case for Romania and the countries from the former Soviet bloc (Estonia and Lithuania), three countries with pronounced family-oriented regime, but also for Norway, a country where the social-democratic welfare regime has induced a de-standardization of the life-course. In the latter mentioned countries the personal values, preferences, perceptions about role incompatibility, sense of personal efficacy, egalitarian gender role attitudes are less correlated either because of strong family support (in the Eastern European countries), or because of efficient welfare policies (in Norway). Note that a consideration of the national correlation coefficients does not result after all in a clustering of the Eastern European countries; they do not form a distinct region.

Changes in the effects of motherhood on education

Results of applying Model 2 (Figure 6) show how the impact of pregnancy and motherhood on educational enrolment changes over time.

For the 1980s, we found significantly *higher* risks of terminating education among pregnant women only for Estonia. In contrast to the Estonian case, in Poland, France and Norway pregnancy decreased these risks and prolonged the duration of studies. Meanwhile the risk of leaving education among enrolled mothers was significantly *lower* in 5 out of the 9 countries in our set: Bulgaria, Hungary, Poland, among the Eastern countries, and also France and Norway, the two Western countries we studied.

⁵ We have also fitted similar models for the two transitions without terms for unobserved heterogeneity. The results (not shown in Table 2) indicate in general higher mutual effects in countries with significant positive correlations between the two unobserved factors, and lower effects for the other countries.

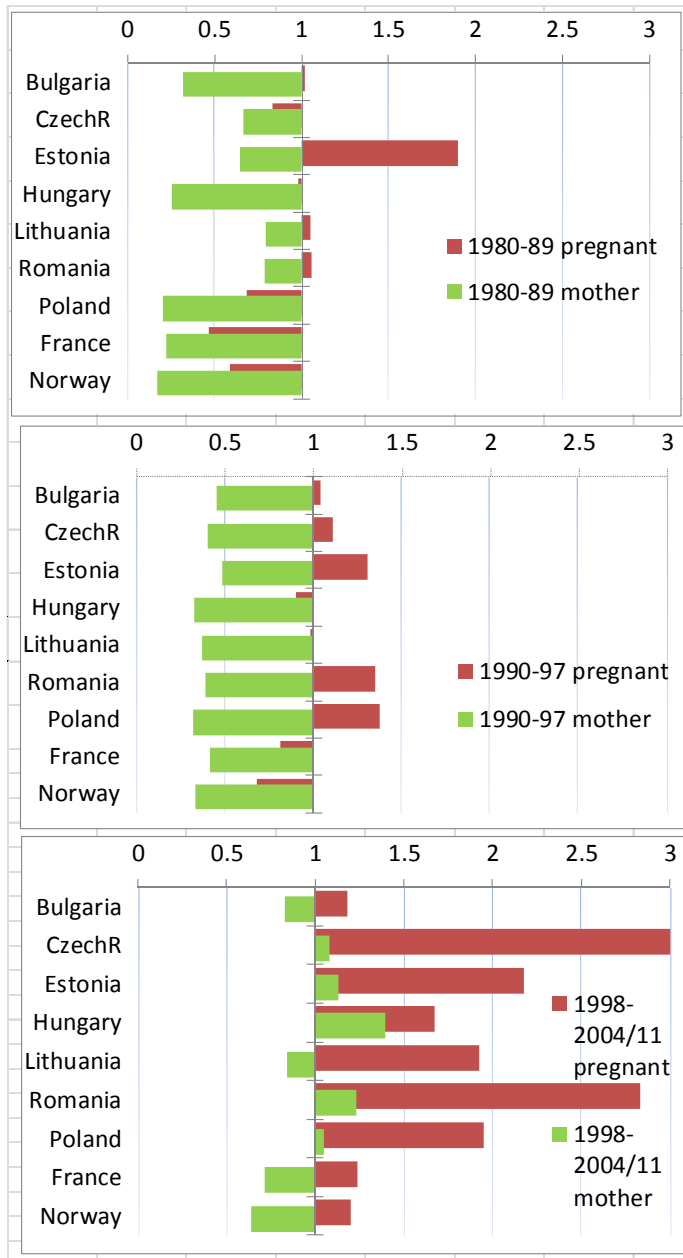


Figure 6. Relative risks of end of education by maternal status and period (versus no children so far). Model 2.

Source: Author's calculations and graph based on the GGS dataset.

In the early 1990s, pregnancy had no effect on the duration of education, but motherhood definitely increased the duration of studies in all the countries we investigated. It seems that everywhere it was easier to combine education and family formation between 1990-1997 than before or after this period.

The opposite may be observed in Eastern Europe for the years around 2000. Motherhood did not induce prolonged studies anymore; moreover, in this period a pregnancy determined to a large extent the end of education almost everywhere (the sole exception being Bulgaria). In the two Western European countries we used as benchmark, the positive influence of motherhood on duration of education persisted over time⁶. This is the only systematic difference we found between the behaviour of women in Eastern and Western Europe.

Changes in the effects of education on motherhood

In what regards the change over time in the effects of educational attainment on the transition to motherhood, the results from the analysis we performed using Model 2 (Figure 7) show that a first birth is triggered uniformly by the completion of education. This effect is generally stronger when the level of education attained is below tertiary education. There are very few exceptions – i.e. some countries, in specific periods, where there are no significant differences concerning first birth risks between students and women with a completed education. Such examples are Bulgaria and France in the 1980s, and Bulgaria, France and Hungary in the 1990s.

In all the countries we covered, in the years around 2000, the already higher risks of transition to motherhood for women who had completed their education (compared to enrolled women) further increased by 2-4 times. Thus, the main pattern in more recent times is that both in Eastern and Western Europe the reduction in birth intensities is due mainly to increased educational enrolment. The level of education introduces further differences in half of the countries we covered: some of the Eastern European set (Estonia, Lithuania, Poland, and Romania) and one of the Western pair (France).

⁶ Note that the formerly positive effect of pregnancy loses its significance and even becomes negative.

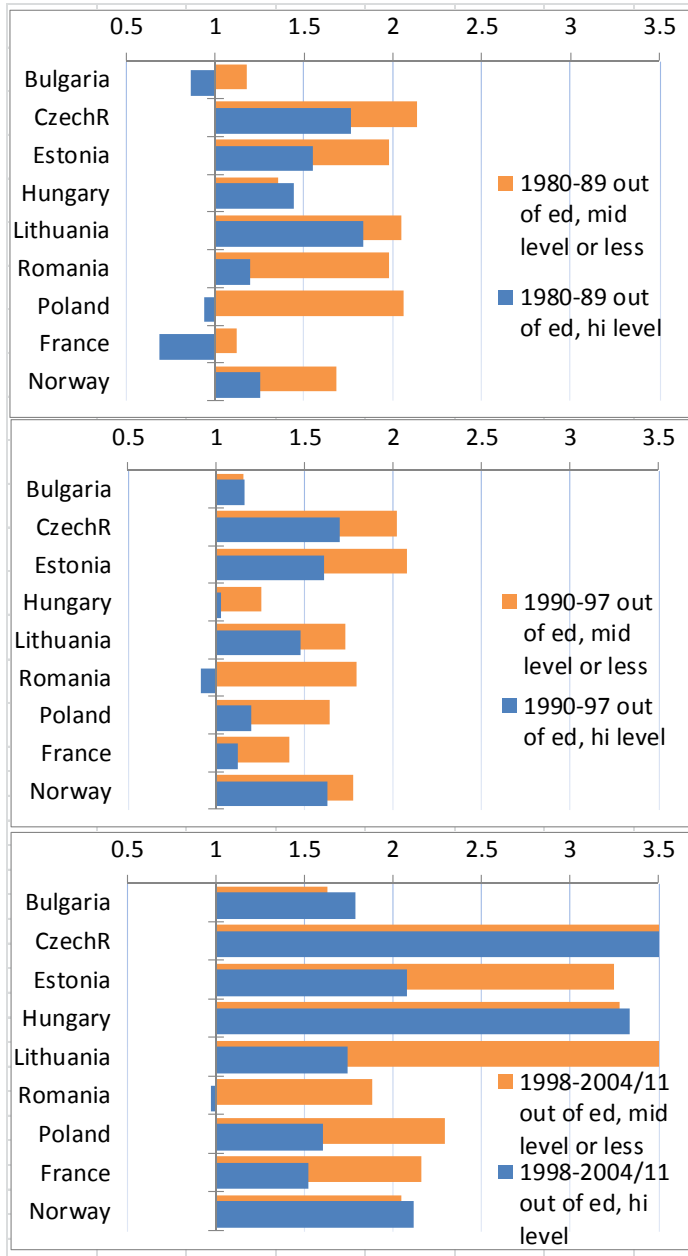


Figure 7. Relative risks of first birth by educational status and period (versus still in education). Model 2.

Source: Author's calculations and graph based on the GGS dataset.

Conclusions

We started this paper by indicating a number of research questions and hypotheses. In what regards the question of *where* it was easier to combine enrolment in education with childbearing, we have seen that *in general* a pregnancy could be combined with enrolment in both Eastern Europe and Western Europe (with Estonia as the only exception). Moreover, once a birth occurred before the completion of studies, a woman tended to prolong her studies. *Overall*, between 1980 and 2004/11, Eastern Europe does not manifest a pattern distinct from that of Western Europe: pregnancy during studies had no effect on the duration of education, motherhood before the end of education prolonged the duration of studies, enrolment strongly reduced the risk of transition to motherhood, while the effect of attained level of education on post-schooling fertility was smaller.

However, the situation changed around the year 2000. In East European countries reconciling motherhood and education became much more difficult. This was not the case in the two Western European countries. Our initial expectation that the combination of educational enrolment with childbearing became easier over time is thus not supported by the available evidence. In fact, the contrary seems to be true: In the former communist countries, pregnancy during studies began to trigger the termination of education, while motherhood during studies lost its influence on prolonging the duration of studies. The Western European countries instead maintained their privileged situation: they were friendlier when it came to combining motherhood and studies, even if a pregnancy did not lead to prolonged studies to the same extent as it had done before. Note however that everywhere, in all countries (former-communist or not), enrolment remained hardly compatible with motherhood, and most first births occurred after the completion of education.

It seems that the 2000s were more demanding in terms of combining educational investments, professional career, and family life; this was especially true in Eastern European countries. Despite educational policies designed to facilitate the return to studies – e.g. distance learning tertiary education programs were introduced in most Eastern European countries at the end of the 1990s – pregnant women tended to decide to end their studies, while mothers generally failed to restart education. Another explanation could be that women learned to plan better their time of transition to motherhood and linked it to the time of finishing education: they planned births very close to the moment when they completed the studies or they planned conceptions soon after completion of studies. Thus, it seems that the recent fertility postponement was due mainly to rising educational enrolment, both in Eastern

and in Western Europe. In the post-communist countries however motherhood postponement was also due to the lack of efficient family and educational policies to facilitate combining motherhood and education – i.e. policies able to counteract the negative effects of the transition to a market economy. In these cases, the continuation of studies in parallel with childbearing and family formation became much more difficult.

Our first hypothesis, which claimed that conception and birth during studies increase the risk of terminating education, has not been entirely confirmed for all countries and all periods. It is true for pregnancy in Estonia and Poland, but for the other Eastern European countries it is true only in more recent times. Unlike in Eastern Europe, in the two Western European countries investigated, pregnancy did not have any influence on terminating studies. This can be contrasted with the effect of motherhood. Motherhood before completing education did not increase the risk of terminating studies anywhere. On the contrary, it prolonged studies everywhere and for all periods we investigated.

Our second research hypothesis is, on the other hand, entirely confirmed. Unobserved personal orientation toward a career – a factor that both prolongs the length of education and delays the transition to motherhood –, respectively personal orientation toward family – a factor that both triggers motherhood and shorten the length of education - played a significant role in four of the nine countries in our set: three East European (Bulgaria, Hungary, and Poland) and one West European (France). In the other former-communist countries (Estonia, Lithuania, and Romania; perhaps also in Czech Republic), the correlation between unobserved factors that affect both the length of education and the time to motherhood was less important, maybe because in these countries family solidarity was stronger, and permitted young mothers to continue their studies while grandparents usually took care of their grandchildren. Note however that a personal value orientation toward family and education did not show any correlation in Norway either, perhaps because its social-democratic welfare regime facilitated the compatibility between motherhood and education, and thus permitted a de-standardization of the life-course.

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INDUSTRIAL YOUTH, HOUSING AND SOCIALIST EXPERTISE IN LATE SOCIALIST ROMANIA

MARA MĂRGINEAN¹

ABSTRACT. This article examines the part played by foreign academic literature translated into Romanian during the 1970s. Dwelling on the activity of the Centre for the Study of Youth Problems (CSYP), it aims to highlight the national authorities' efforts to mobilize youth for a new industrialization wave as part of an encompassing global trend of making the youth into an object of professionalized knowledge and policy. To this end, it analyses how the internationalization of expertise by transnational production and circulation of knowledge changed the Romanian scientific practices and recalibrated the experts' visibility within the state's decision-making processes. My contribution explores the shifting relationship between public housing and industrial growth as a foundation for socialist labour politics, the transnational emergence of a 'rule of experts', and the political interests around research on youths and their living conditions.

Keywords: youth, housing, Romania, knowledge production

At the end of the 1960s, the growing European and global expertise on youth, labour, and housing emerged as a central field of intellectual and political interest for the Romanian socialist state. While transfers of knowledge and professional interactions in various political and institutional settings have recently become essential dimensions of a renewed interest in late socialist attempts to 'go global' (Bockman, 2011) little is known about how East-European states employed this emerging expertise to tackle domestic social and economic shifts, and even less in the intertwined domains of youth, labour, and housing policies. This article aims to take the first step in filling this gap. It examines the part played by foreign academic literature translated into Romanian during the 1970s in the national authorities' efforts to mobilize young workers for a new industrialization wave as part of an encompassing global trend of making the 'youth' into an object of professionalized knowledge

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and policy. To this end, dwelling on the activity of the Centre for the Study of Youth Problems (CSYP), I look at a body of Western social science productions about labour, mobility, material culture and housing, and flesh out how the internationalization of expertise by transnational production and circulation of knowledge changed the Romanian scientific practices and recalibrated the experts' visibility within the state's decision-making processes. My contribution explores the shifting relationship between public housing and industrial growth as a foundation for socialist labour politics, the transnational emergence of a 'rule of experts' (Mitchell, 2002), and the political interests around research on youths and their living conditions. More concretely, it will address two questions: First, how did a new political imaginary of socialist youth and its investigation in various micro-scientific contexts help the Romanian state rearticulate its politics of urban development in conjunction with its economic and cultural policy? Second, how was this political imaginary linked to the emergence of 'youth' as an issue of knowledge, policy, and expertise at broader European and global level after 1968?

This intellectual path is particularly relevant in the context of the late 1960s Romania's economic policies. As the opening up of the national markets to the global economy since the 1960s drove East-European countries into reconsidering their public spending, increasing debt, and stimulating consumption, Romania took a surprising turn: it initiated a new program of extensive industrialization. While strengthening regional and national economies had been an ordinary reaction to global changes, what is particular about Romania is the pairing of the massive heavy industrial growth with the reconsideration of the idea of socialist youth. The Romanian authorities appointed economists, sociologists, architects and urban planners to assess how a better comprehension of youth's practices on the shop floor and beyond the factory gates would raise industrial output. Building on conceptual frameworks informed by post-Fordist categories, experts considered how young workers' motivation, career expectations, family ties, and life plans were adjusted by labour experiences. These investigations unveiled the Romanian approach to industrial work as very much grounded in a transnational, to a large extent Western, intellectual tradition.

I hypothesize that, on the one hand, by 1968 the regime enjoyed the highest political legitimacy, but the adoption of the concept of 'multilaterally developed socialist society' at the 1969 Communist Party Congress called for a renewed social contract between the country's leadership and the people. As the state expanded the industrialization program, gaining a better comprehension of young workers would be central to resource redistribution and to national infrastructure's modernization. On the other hand, similar to

other states of the socialist bloc, the young Romanians became more concerned with their own social status, which inevitably led not only to shaping counter/sub-cultures on the generational basis (Bren and Neuburger, 2012), but also to deepening social inequalities based on age, gender and class (Koleva, 2008; Archer, 2017). This encounter would foster the emergence of a hybrid language that once put into practice generated hybrid experiences among the policy-makers, experts and the youth.

As scholars have recently pointed out, the youth's emancipation in the 1960s led a decade later to social upheavals, system crises, and multiple transmutations worldwide. Whilst fuelled by different causes (college educations, racial and women's emancipation, inflation, unemployment), they were to some extent a token of an impending 'crisis of industrial society', as industrialization, according to some Western Marxists, would have produced similar effects everywhere regardless of the ideological context (Burawoy, 2003). Moreover, the 'simultaneity of like responses across disparate geographical contexts suggests interlocking causes' (Klimke and Nolan, 2018: 4) – that is a generational shift occurred within post-war urban and industrial order. Analysing the 1970s Romania from this angle is important because it can highlight the nuances of a complicated process during which Romanian specialists have adapted, integrated or assimilated Marxism-Leninism with ideas taken from international flow of scientific production. More concretely, it can highlight how foreign knowledge produced effects locally as a result of adaptations, re-articulations or rejections of a scientific literature already adjusted under a myriad of ideological and economic factors. Paying a particular attention to social science literature - the main professional national journals, foreign books translated into Romanian and reviews of Western publications – the paper will highlight how these translations have mediated the relationship between social scientists and political power. In this way, my contribution uncovers the generationally specific life courses that tie the rising of a socialist consumption culture to professional status and advances the state of the art by offering a fresh reading of industrial youth's voice from a generational stand view. Extracting the approach to youth housing from the confined national boundaries of policy-making and approaching it within a methodological path recently set up by the 'socialism goes global' trend, this article advances our knowledge on how youth, as a product of a particular social context, was reimagined as a social category with a specific lifestyle. To this end, working youth and housing can be seen as encounters of flows of knowledge and models of territoriality, a reading that made its way onto the political and scientific agenda of the 1970s on both sides of the Iron Curtain.

Institutional Context

One cannot part the emergence of youth studies in Romania from the mid-1960s re-institutionalization of sociology. Then, after a two-decades-long academic marginalization, sociology departments had been established within the most important national universities. Widely discussed by the scholarship from both political and biographical stand view (Bosomitu, 2015; Petrovici and Poenaru, 2017), the growing production of sociological knowledge in late socialism was quite pragmatic in scope. Recent social and economic shifts caused by industrialization and urbanization raised numerous concerns among decision-making factors about labour mobility, professional behaviour, social emancipation, leisure, aspirations, or everyday practices. As a result, the state needed solutions that would have generated productive communities and would have created a versatile workforce. To this end, based on the countless studies, surveys, local analyses, and prognosis funded by the Romanian state, experts were expected to make a case for forms of economic reorganization that would have subordinated social policies on young labour force (housing, or educational and health infrastructure) to the needs of flexibilization of the labour market and the constraints of international economic dynamic (Amin, 1994).

Under these circumstances, social research grew increasingly interdisciplinary. The findings of economists, architects and psychologists soon became instrumental for sociologists in their aims to assess ‘the defining features of local social life.’ This was the case of several newly established sociology departments at the universities of Bucharest and Cluj; additional research would have to be carried out by institutes affiliated to the Romanian Academy of Sciences. However, the growing number of specialized departments across the national academia, and the subsequent flourishing of scientific output had little contribution to a better comprehension of youth and of their worlds. The task of assessing generational and gender implications of the shifting relationship between work, knowledge, and infrastructure lied elsewhere. In 1968, the leadership of the Communist Party decided to set up the Centre for the Study of Youth Problems (CSYP), a large research structure that would have functioned under the direct control of the Central Committee’s Union of the Communist Youth. Somehow surprisingly, this political subordination proved profitable on the long run. Unlike other sociology departments that were shut down by the Romanian government in the late 1970s, CSYP’s activity ran uninterrupted until 1990; throughout this long period, the institution benefitted from many state-funded projects, as well as from official support for international professional collaborations and publication of research works.

The scientific quality of CSYP's research is rather heterogeneous. Several investigations conducted in the late 1960s and early 1970s under Ovidiu Bădina's coordination unveiled a consistent and valuable body of information about time budgets, family integration, work practices and career expectations. Other studies remained unpublished, still locked away in an institutional archive currently under-researched. Mostly empirical and lacking theoretical sophistication, these works can, nevertheless, flesh out many facets of a complicated process of transnational production and circulation of knowledge and the way such productions acted as vectors of negotiation of knowledge within the socialist state. For instance, the institutional collaboration between CSYP and the Romanian Institute for Cultural Relations with Foreign Countries was instrumental in the gradual re-engagement of the national scholarship with Western intellectual debates. From the late 1960s onwards, many CSYP researchers travelled abroad to attend conferences and training programs. The institution also invited foreign specialists to Romania to deliver lectures and consolidate contacts. Translations and reprints of foreign scientific literature followed naturally.

When assessing the central part played by party-affiliated structures in the making of a scientific agenda about youth one should take a step back from the dominant scholarship that ties post-1968 Romanian social policies to Nicolae Ceaușescu's personal agenda. Furthermore, researchers should position themselves critically towards a glorified historiographic narrative that fosters Romania's scientific opening to the West as manifest of an opposition from the interior, namely 'an alternative to the pressures of the socialist countries so that Romania would regularly get involved in the common research actions of the socialist states' (Zamfir, 2015: 90). Instead, by expanding the analytical space and by considering the involvement of actors, I argue that Romanian authorities' upward interest in youth was located at the crossing of two paths: a growing awareness about the medium and long-term repercussions of generational shifts worldwide and the emerging political relevance of social sciences in domestic affairs. On the one hand, I build on the idea that Romanian realities cannot be separated from events occurred internationally. Similarly to the research centres on youth established in Bulgaria and Yugoslavia about the same time, CSYP scientific approach was very much framed by a general European reconsideration of youth's ideals and politics after 1968 (Gildea et al., 2013), which became central in making essential planning for forms that considered the knowable differences in the young population around the world (Glaeser, 2010; Solovey and Cravens, 2014). On the other hand, I bear in mind that the everyday practices of working youth-oriented both the experts' research agenda and the state's medium and long-term strategies of territorializing

industrial production and its social infrastructure and reshaped the power relations between an emerging specialist field and Bucharest-based as well as local politicians. Moreover, as Irving Horowitz has put in an article published in *Viitorul social* [The Social Future], in the 1970s the dominant organizing principle seems policymaking [...] There are many indications that the next few years will see an increasing institutionalization of research and expertise conducted by social science as part of the process of policymaking [...] In a sense, we are at a turning point: the main problem in a time of affirmation of social science is not their scientific status, but the political and social usefulness that one gives to these sciences (Cernea, 1972a: 660).

Looking West

By the late 1960s, the emerging interest in young workers led to many inquiries about research methodologies, experts' agency, and the political relevance of this knowledge on both sides of the Iron Curtain. Such paths, however, did not evolve isolated from each other. Unlike the early post-war years when the East-West divide was openly acknowledged as a barrier against professional interactions, the increased permeability of the Curtain since the 1960s facilitated many trans-national conversations, which shaped Romanian youth studies as entanglements of policies, models, knowledge, and practices that had not only a national but also a local and transnational life.

A large number of foreign scientific texts reprinted in Romania illustrate this trend. One excellent example is *Revista de referate, recenzii și sinteze* [Journal of essays, reviews and summaries], a monthly periodical of the Centre for Information and Documentation in Social and Political Sciences. It brought together reviews, conference reports, interviews with international scholars about new transnational trends in social research. It also provided national experts with a good opportunity to publish personal interpretations of various theoretical worldwide debates. In many respects, this collection of texts is remarkable because it fleshes out the amount and type of theoretical sophistication available in Romania at the time and it contextualizes CSYP's research activity within broader frameworks of knowledge exchanges. These productions also unveil how the making of a new approach to Romanian socialist youth was complicated by the rigidity of the dominant national scientific language and its doctrinaire limitations. For instance, for a quite long period of time, the review published articles that built on long-established statements about irreconcilable differences between socialist and capitalist systems. A number of sociologists, thus, voiced their scepticism about the emerging tendency to question working youth from a generational stand view and argued

instead that priority should be given to class analysis. However, as the frequency of transnational contacts increased and the number of scientific translations grew exponentially a new reading made its way into the professional discourse, one that made a case for placing youth's integration, motivation, performance, and expectations at the core of social scientists' practice. Starting with the late 1960s, socialist experts afforded more time to assess the heterogeneity of various bloc social categories, like the working class, and came up with additional methodologies to investigate groups and how they were shaped by the technological progress (Draguț, 1973).

This shift came to life either by mobilizing older pre-WWII traditions or by constructing new bridges of scientific collaboration both within and beyond the socialist bloc (Calsat, 1972: 51). To a certain degree, East European scientific production continued to be translated into Romanian. The consolidation of several professional networks within the socialist bloc has developed along the lines quite clearly outlined by a transnational agenda about youth. Priority was given to Polish and Hungarian research, while Soviet knowledge became increasingly marginalized parallel with the deepening of political tensions between the two countries. Beyond the Iron Curtain, the circulation of scientific knowledge about industrial dynamic illustrates many of the moment's uncertainties. In spite of Romania's century-long traditional cultural contacts with France, few scientific productions of French experts about factory work made their way into Bucharest professional environment at the time. This happened because France was particularly interested in rural changes and paid little interest in industrial sociology methodologies. In return, Romanian experts turned towards Anglo-Saxon knowledge.

What was the relevance of such knowledge in a socialist country like Romania? The short answer to this question would be the future. A more complex answer would problematize the ways in which the growing concern for industrial development made imperative for forms that accounted the medium and long-term implications of the increasing social and political visibility of the working youth and the rising protest cultures throughout the world. From this perspective, ideological disparities were less important. As a Polish sociologist has put it: 'Keeping a backup to the theoretical and methodological concepts of the Western sociology of labour, dictated by specific social conditions, is not to reject all ideas, hypotheses, and laws. Some scientists have rightly pointed out that certain categories of the Anglo-Saxon sociology of labour and industry if properly adjusted, could be applied with better results in Poland than in their home country' (Markiewicz, 1972: 223). To this end, knowledge production and transfers would tellingly sketch the reactions of a semi-peripheral socialist state to a set of problems related to impending changes in the cultural model of the industrial societies (Ban, 2014).

A large body of scholarship translated into Romanian afforded ample room to highlight how the critical reading of functionalist sociology in North America shook the foundations of the Western social research. Moreover, students of 1968 complained that sociology failed to address the needs of the many and made a case for major methodological changes (Cernea, 1972b: 901-936). To this end, a new type of social research meant systematic analyses of various facets of society and a closer look at the heterogeneous everyday experiences of various groups and social categories. Labour played an important part here. Many texts covered issues related to industrial sociology, a field of investigation that 'was born from a radical critique of the errors emerged from the scientific organization of production and from the systematic exploration of what it was unable to perceive' (Mottez, 1972: 243). More concretely, it became increasingly evident that unlike Taylorism that tied productivity to wage level, the new labour reality from the mid-1960s onwards made necessary for a better comprehension of other work-related aspects like job satisfaction, hierarchical interactions, or career perspectives. Accordingly, such scientific knowledge translated into Romanian would be central in the experts' attempts to trace new interconnections between technology, youth's professional status, and social change (Bădina, 1973).

Grappling with concepts

Integrating this knowledge into the national practice called for methodological adjustments. The first research on working youth was completed in 1968. Focusing on rural areas, the investigation looked at various facets of young workers' living and working conditions. In spite of an ambitious research agenda, the results were formulated rather propagandistically (Bădina, 1970). Over the following years, however, CSYP researchers conducted several campaigns in factories and in urban and rural settings, which aimed to overcome past methodological shortcomings and come up with a more refined reading of the 1960s social shifts (Bădina, 1972a; Bădina, 1972b; Bădina and Mamali, 1973).

To this end, researchers joined their efforts to articulate a scientific practice that would meet at least two mandatory conditions. First, it had to stress the militant character of sociology. A central thesis in Romania during the interwar, the idea that social research should actively contribute to the general well-being and to the emancipation of the many re-emerged within the professional field by the late 1960s. More likely, the experts' growing exposure to a body of scientific literature that critically engaged with the political and economic transformations of the moment boosted further interrogations about the reforming capacity of sociological works. Second, it had to enhance the

relationship between scientists and their subjects by bringing in young workers' self-representations and their particular solutions to systemic shortcomings. By the early 1970s, sociologists became increasingly preoccupied to adjust their research questions so that investigation topics would also address young workers' agenda.

In 1972, Cătălin Mamali elaborated a new methodological framework called: *tehnica situațiilor simetrice* [the technique of symmetrical situations]. In a number of publications on industrial youth, he argued that social scientists were not only responsible about how to apply and use the results of their knowledge, but also about the workings of the process of knowledge production. The research conducted in several industrial settings around the country aggregated sufficient data to show how social reality would have transformed itself under the researcher's practices. Unintentional and, sometimes, uncontrollable adjustments of the object under investigation - the young workers' image about themselves and about the world (including the researcher's methods, techniques, and purpose of his activity) - played an important part in altering the value of collected data. To secure an improved accuracy of their results, therefore, social scientists were expected to join their efforts with decision-making factors and representatives of the youth (Bădina and Mamali, 1973: 127-141).

To a certain extent, this principle was successfully applied by the mid-1970s Romania. As a result of a better cooperation between researchers and decision-making factors, reports and syntheses were sent to the central and local authorities, while industrial bosses, political leaders and representatives of the Romanian government met several times to assess the long-term implications of these investigations. Furthermore, an important number of publications disseminated their findings. However, bringing youth's subjectivities into the investigation unveiled a number of problems related to time budgets and everyday experiences on the shop floor and beyond the factory gates. Although CSYP paid a particular attention to work-related aspects - integration, professional expectations and hierarchies, mobility, and employment status - youth's accounts pointed out towards an interconnection between work performance and their living conditions, which carried major implications in terms of industrial territorialisation and labour force mobility.

Translations at work

In the West, this sociological literature about shop floor interactions and industrial youth served as an excellent means to re-use data collected by the welfare state programs during the previous decades and plan for the future. The development of socio-psychology and the advancement of cybernetics led to an

increased political visibility of social scientists; it further enhanced power positions among industrial bosses and various decision-making factors. Focusing on issues like integration, community building, and social deviance, the new official social agenda revolved around how to design public projects that would best address the changing needs of the workers. An immediate outcome was, for instance, a new type of urban planning. Moreover, housing began to be addressed as part of regional development programs where various types of industries would provide employment for an increasingly flexible, skilled and mobile labour force. Transportation networks would provide the infrastructure for a growing number of commutes, while the quality of life would depend on the comfort of accommodation and the proximity of family.

In Romania, such knowledge brought forward a rather complicated situation. The national decision-making factors aimed to trace how changing patterns of labor within factories, especially as a result of technologization of production lines, adjusted the recruitment policies. However, this body of concepts widely debated upon on both sides of the Iron Curtain, which summed up a decades-long blend of social science models and practices into the public programs financed and conducted by the state, was given conflicting interpretations. More concretely, at the time, two intellectual views on housing as an agent of social transformation of the industrial youth have emerged: one belonged to the sociologists, and the other to the architects.

Sociologists took the first step and launched an investigation about industrial youth's living conditions and everyday experiences beyond factory gates. They set their research field in several residential estates of studios and one bedroom apartments. The quality of housing was evaluated in terms of comfort, consumption practices, material culture, availability of radio or television sets, ownership of home appliances, and socializing opportunities. However, the scientific effort uncovered much more information about life in these ad-hoc industrial communities than was initially expected. Contrary to an official rhetoric claiming that the experience of industrial labour would have forged social cohesion and new forms of solidarity, youth's tendency towards individualization and social polarization became increasingly visible as Romania turned more urbanized and modernized. Moreover, differentiations in the payment level coupled with diverse cultural and educational backgrounds led to further social gaps amongst youth and complicated their adaptation to the demands of the new workplaces. Experts were quick to emphasize that such data were only partially relevant. Most of the time, the integration of newcomers into the urban communities proved a lengthy and complicated process. But these findings were strong enough to raise additional questions about the potential impact of young workers' living conditions upon labour productivity.

To this end, sociologists expanded the analytical space and diversified their methodology by bringing in consistent social-psychology models. Moreover, researchers stressed that to assess the long-term social implications of industrialization and to plan housing efficiently one should consider youth's professional aspirations, namely their 'concrete conditions of work and life, their concerns and interests' (Grigorescu, 1972: 428). Further investigations conducted on the shop floor looked at the relationship between work and the rewards system. The results, however, were somewhat puzzling. For example, when asked to prioritize potential job benefits, most young employees referred to a friendly working environment, material gains, or the opportunity to get involved into the decision-making processes of the company, a so-called 'economic democracy'. Housing, however, weighted less than other incentives, something confined to a 'professional context.' Moreover, for many young workers securing an apartment as part of a job contract became important only insofar as it ensured independence from family (Weintraub, 1973: 103).

This data, however, raised questions about the type of lodging suitable for youth. What was their housing needs and how would these evolve in the long run? What meant quality lodging? Where should youth be accommodated? Who and with what resources should build residential units for the young employees? When asking such questions sociologists considered both financial aspects and youth's comfort. More concretely, they were concerned about the profitability of public spending in state-owned apartment urban buildings, particularly since statistical data about labor turnover revealed that youth switched at least three jobs before turning 35 years old. Furthermore, as investigations conducted on industrial youth revealed, many young workers found difficult to adapt to the new working environment and saw in the separation from family an additional source of pressure. Solutions were hard to reach. Research carried out in several Romanian industrial communities showed that as long as there was a well-developed railway network building urban residential estates and encouraging rural-urban migration was rather costly and inadequate for long-term planning. In fact, sociologists claimed, more than 42% of commuters would not have moved into the city even if they were given adequate housing (Chelcea, 1973: 399). This was the context in which experts began to talk more and more about the social benefits of daily commuting. By discouraging rural-urban migration, regional systematization projects would have provided alternative solutions to housing needs.

A critique of the sociologists' solution came from another profession. 'Practitioners' (Chepes, 1972: 677) rather than social planners, architects, too, nuanced a Western-oriented corpus of knowledge about population policies, demographic dynamics and medium and long-term daily comfort. However, they

argued that urban housing was part of a modern approach to industrial labour and made a case for massive spending in building state-owned urban dwellings. Architects saw in the authorities' agenda about housing for young workers an excellent opportunity to test some recent ideas about urban growth. Based on numerous Western publications, including studies by professors at Harvard University, Gheorghe Sebestyen argued that 'the evolution of working youth's social requirements' could not be separated from an urban living. From the architects' stand view, therefore, urban and modernity were two intertwined notions. Gh. Sebestyen and M. Caffè, among others, stressed the negative implications of daily commuting upon the young employees. They were concerned that public transport and the distance between work and home, would adversely affect the management of time budgets. In fact, according to Sebestyen, sociological research conducted both in the USSR and in Switzerland pointed out that the increase in industrial labor productivity was proportional to the size of the city (Sebestyen, 1973: 916-926).

Conclusion

This article builds on the idea of an interconnection between shaping a professional agenda on youth through transnational production and circulation of expert knowledge, articulation of a medium and long-term project of state development, and institutional reconstruction of sociology. Moving away from readings that favour political history and state-centred perspectives, this paper de-centres the Cold War, widely defined in terms of a binary opposition between East and West, and argues instead for looking at the youth policies as entanglements of policies, models, knowledge, and practices. In this respect, my paper argued that housing policies for young workers best illustrate local manifestation of a number of processes and shifts: Romania's increasing exposure to the worldwide economic transmutations of the 1970s, a growing visibility of behavioural and social sciences in political decision-making worldwide, and national and regional ideological adjustments that redraw the socialist bloc's political hierarchies. To this end, the article relied on the research activity of the Centre for the Study of Youth Problems to unfold the socialist state's industrialization program beyond the frameworks of top-down central planning. It employed this ample trans-national conceptualization of industrial youth after 1968 to reinterpret various managerial domestic cultures. Such analysis lays the ground for future investigations on how geographical mobility influenced class (trans)formation and social reproduction of labour and opens up new research paths that can critically analyse N. Ceaușescu's project of constructing a distinctive nationhood (Merl, 2011). Furthermore, as the

relationship between economy and its territory changed by the late 1960s worldwide (Amin, 1994), this angle of investigation would assess how national and local policies on youth were negotiated and socially constructed to generate productive communities and to create a versatile workforce.

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THE MAKING OF PUPILS: INSTITUTIONALIZED EDUCATION IN ROMANIAN HIGH SCHOOLS

MARIA MARTELLI¹

ABSTRACT. This article aims to explore the ways in which power structures the learning experience in high school, detailing what kind of cultures it creates and what practices it fosters. By interviewing students (currently enrolled in the Faculty of Sociology and Social Work, Cluj-Napoca) recalling their high school years, I can tap into their reflexivity regarding the experiences of being taught to and of learning, focusing especially on how these have become legitimated and have formed the subject. Drawing on Paulo Freire's theory of the banking model and using a post-structuralist framework, the research intends to make visible a current account of institutionalization of learning. Finally, the research shows how pupils become subjects to be categorized according to their compliance to the programme's requirements and how they might internalize legitimized forms of learning (such as memorizing for further testing) in detriment of others.

Keywords: institutionalized learning, education, high schools, power, ethnography

Introduction: institutionalized learning in Romanian high schools

How do public educational institutions shape pupils' relationship with learning and knowledge? This article aims to describe experiences of high school in Romania by looking at what is not usually made visible: the use of power and the learning that slips past the institution's control. The main argument is made in regard to institutional power, which has the legitimacy to set the standards of acceptable and desirable knowledge. Therefore, the creation of an institutionalized learner takes place within given power structures: a self that is built upon by educational practices and that is best known and accounted for by the system. Theoretically, the research draws its roots from critical pedagogy, inquiring into whether, and how, Paulo Freire's (2000) banking model is still used in high schools. The method of research has been qualitative, as this

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is appropriate when looking to unveil personal experiences of encountering knowledge and of processing truths. From the interviews, as empirical data was being collected, ethnographic details of the construction of pupils and knowledge was overflowing. This process was strongly influenced by the dynamics of power, both over processes of learning and their labels. It is thus by going towards Michel Foucault's (1995) analysis of disciplinary discourse that much of what happens in classrooms can be understood. Institutional order as a site for power to be manifested is exposed, with its capacity not only to organize, but to define and 'make' pupils.

Framing high school learning: theories for the classroom context

Detailing classroom experiences of learning in Romanian high schools is one step towards better understanding their inner workings. This article aims to provide such descriptions (e.g. of how teaching is perceived, of choices of examination, of teacher-student relationships), along with a theoretical framing that is particularly attentive to the micro-dynamics of power, but does not ignore the macro-dynamics, such as the socio-economic context.

To begin with, power appears to strongly shape the space into which education happens. This paper explores how power is used upon a pupil depending on the kind of high school he/she is enrolled in (well performing or underperforming according to national standards). It also looks at how discipline is internalized, both of body and of mind. It is often that in Romanian high schools, teachers expect a mind that listens, pays attention, writes carefully, remembers. Institutionalization starts since primary school, where the pupil encounters the 'setting' of desks, one behind the other, with the teacher in front. A parallel is to be made with Foucault's (1995) description of how soldiers' bodies are disciplined: there is an act of enclosure within the classroom as well and there is often a particular place ascribed for a particular pupil. The site is made to be functional, easy to supervise and control, rank is less visible, but exists in the tacit knowledge of who is 'good' as a pupil and who isn't. This 'made the educational space function like a learning machine, but also as a machine for supervising, hierarchizing, rewarding' (Foucault 1995: 147). Time is subjected to power, by subscribing to a pre-determined time table and, within each class, a pre-determined programme of teaching. Duration is divided and a succession of simple elements, as bits of knowledge partitioned in lessons, is given. An examination is to conclude these operations, which 'will have the triple function of showing whether the subject has reached the level required, of guaranteeing that each subject undergoes the same apprenticeship and of differentiating the abilities of each individual' (Foucault 1995: 158). In such a climate, profound

learning becomes a difficult aim to attain. The national exam at the end of high school, (the *baccalaureate*) is an optimal example: learning is perfectly distributed in bits, of which the most important part often is understanding what is asked, what exactly the problem is, and how it is required to solve it. It is constructed as an exam of spectacular importance, thus becoming quite stressful, although research (Vogel & Schwabe, 2016) has shown that stress impairs learning, making it rigid, habit-like behaviour (as opposed to flexible learning, which enables memories to easily adapt to new information). Possibly related, pupils seem to become less and less content with school as they grow and get closer to 12th grade. Bălăţescu (2009) shows this in his research on school satisfaction in Romania. Apparently, contentment is highly influenced by the social atmosphere inside the high school. Pupils seem most dissatisfied with school (from a series of other variables such as family life, friendships, etc.), and within it, with their own results and their relationship with the teachers. As my research makes note of those as well, the best part of school seems to be being friends with your classmates.

Post-socialist Romanian schools are sites onto which many pressures are being put: locally, from the main actors involved in the educational setting (teachers, pupils and parents), and nationally, from a neoliberal tide of discourses and practices in an Eastern European context. The overall transition from a communist political regime has brought about many changes, including over what is a desirable life course, and what norms and values are to be practiced in an institution. Stanculescu (2002: 31) looks at how values are being negotiated, from the individual ones to the institutional and how norms of 'saving face' are put in front of institutional needs. In this transition, teachers are put in political positions they become flexible towards, out of need of preserving their job and status (2002: 153). Grasping and maintaining the power they do have becomes thus quite important. An approach that looks directly at the flows of power between pupils and teachers/institutions is rarely encountered in the scientific literature on education in Romania, which tends to be more about understanding macro-structures or very specific discipline related phenomena. However, a national study (Iosifescu et al, 2013) on cultures of quality applied the Hofstede model, which might bring some insight. The model looks at organisational culture in four dimensions, distance from power, individualism/collectivism, femininity/masculinity and uncertainty avoidance. Even if at least part of the study is problematic (for example the assumption of a feminine/masculine dimension), the first and the last dimensions are of particular relevance. The results show that there is a general acceptance of authority and its legitimacy, especially among pupils and parents. The same study, when undertaken in 2002, concluded that parents educated their children to be docile and that children were used to being

told what to do and to waiting for instructions from the ‘wise’ teachers. Hofstede’s dimension of uncertainty avoidance shows that there is a need for well-defined rules and a preference for dealing with fixed problems. This predilection tends to leave little to no freedom to the pupils.

Each individual’s position in the social field affects his/her educational experience in multiple ways. The concept of *habitus* is relevant, as it refers to embodied social structure: each individual has internalized certain practices that are made visible by how one moves, talks and conceives the world around him/her. Because ‘individuals do not move about in social space in a random way’, there is a ‘field of the possibilities objectively offered to a given agent’ (Bourdieu, 1984: 110). *Habitus* is embodied into the individual, it becomes part of him/herself and of his/her life trajectory, and thus enables the reproduction of the same social position through generations. A particular example of how social reproduction happens through education is given by Jean Anyon’s research (1980) of high schools of different types. It shows how schools themselves structure their teaching styles according to pupils’ social class, categorized based on parents’ occupations. Working class schools invest energy in discipline and controlling children’s movements, teaching itself being an inventory of rules to follow. Middle class schools require pupils to answer factual questions and ‘store facts up in your head like cold storage’ (respondent from the paper by Anyon, 1980: 79). Affluent professional schools (where parents’ occupations are lawyers, executives, cardiologists) ask for independent and creative thinking, with control based on negotiation rather than giving orders, and elite schools (where fathers are top executives) demand the development of analytical thinking and reasoning through problems. Anyon’s research helps shed light on school differences in Romania as well, as the instructive practices of teachers are, at times, similar, and pupil’s aspirations are fitting to their standing in the given fields.

Succeeding, or doing well, in high school, often requires playing a particular part that one has to learn. A pupil may be taken by the act, or become cynical of it: he/she might believe in the purpose and usefulness of schooling in that particular manner, or might see how it fails, and look for ways of coping. More of an act is required of pupils that are considered ‘good’, as they must always appear prepared, both having worked hard and being at ease. This is most interestingly explored in Gaztambide-Fernández’s (2011) ethnography of an elite high school. He writes about how pupils tend to ‘bullshit’, namely ‘find what the teacher likes, even though you don’t like it yourself, and just to get that better grade. That’s the name of the game’ (respondent from the paper by Gaztambide-Fernández, 2011: 583). In this study, learning ‘how to talk’ and ‘how to talk your way out’ are closely related, and, one understands that, in the context of

demanding education, learning goes hand in hand with learning what exactly the institution wants from you, and how to give it. From a cultural anthropological point of view, this can be interpreted as a cultural event, classroom learning being procedural display: 'a set of interactional procedures which themselves count as doing a lesson' (Bloome, Puro & Theodorou, 1989). Doing school is thus a sort of mechanical play on the common understanding of what accepted practices are, for both teacher and pupil, and the community at large. Pupils learn how to enact learning. This becomes transparent both when listening to live classroom practices (as Bloome et al. did), and when paying attention to how they recall past learning experiences (as explored in this article). Sometimes knowingly, other times without realizing, teachers often engage in what Paulo Freire calls 'banking education' (2000). The subject-authority of knowledge is the teacher and pupils are listening objects, ready to be filled with words and concepts. Reality appears motionless and neatly compartmentalised. Education becomes 'an act of depositing'. In Henri Giroux's terms, who expands on Freire's work, this 'type of pedagogy celebrates rote learning, memorization, and high-stakes testing' (Giroux, 2011: 18). It is though knowledge that one can have a better grasp over one's own self and place in society, but by being educated in a banking model way, this power is not given to pupils.

Structuring high-school experiences of learning

Two major dimensions of my research are the flows of power and the wide array of factors that influence learning beyond the institutionalized curriculum (what I call 'the human dimension'). By 'flows of power', I mean the way the power to define the educational setting is held and acted through, most often, but not always, by teachers. This power 'flows' towards higher authorities or even towards students themselves, because it resides inside discourse and school structure. By 'human dimension', I mean both psychological and social factors, including life events that happen to impact learning. The basic design of the study consists of analysing primary qualitative data, respectively, in-depth interviews with ten students and four instructors from the Department of Sociology, Faculty of Sociology and Social Work, at Babeş-Bolyai University, Cluj-Napoca. The interviews are semi-structured, following an interview guide that breaks down high school experiences into understandable chunks. Thus, my aim is to explore and describe educational experiences by looking at multiple variables: time, teaching and learning styles, motivation, cultural capital, institutional practices, life circumstances and, most importantly, power flows between pupil and teacher/institution. These factors become part of the pupils' ways of learning, transforming the kind of engagement they have with knowledge

and the educational provider. I insist on dividing the concept of learning from knowledge and the institution, making space for examples of it that fall outside of institutional management. Therefore, I consider events outside of school life into my analysis, in order to enlarge the images of acceptable learning experiences.

Flows of power: teacher's discourses, structuring of curricular content and categorization of pupils

It seems to be that most high schools have a similar mantra: learning is memorization, the teacher must give out information and the pupils must write it down and record it diligently in their brains. This fits well with the banking model Paulo Freire wrote about: knowledge is understood as something to be neatly packed and transmitted as intact by the knowledge-holders to the ignorant. The educational institution is in charge of determining what is to be known, how, when, and who is capable of delivering it. This is a power structure so obvious and legitimate that it goes hardly discussed anymore. However, it holds in itself various assumptions, one of which is that the pupil is not competent enough to determine his own learning practices: the pupil cannot choose the subject, the method of learning, nor the examination. He/she must submit to the decisions of institutions, come towards learning as it is shaped by it, and become a learner, have a 'learning self' that is directed by powers outside him/herself.

Had I realized earlier that what I thought about learning isn't like this, that learning isn't an obligation, that it must be a pleasure... I had come with the idea that you have to learn because you have to and it has to be hard because this means you are good. (DS., 3rd year student)

Learning is the 'job' of the pupil. Most of them have this discourse: they learnt because they had to, what else were they supposed to do? Whether they engaged with it seriously or less so was a different matter, but very few came to think they could build their own learning path in high school. The urgent discussion to be touched upon here is the large differences between high schools. Most of the interviewees spoke of having attended 'good high schools', sometimes, 'the best' in the region, however, this varies greatly. For one, what they thought of as a good high school was not always so by official standards (such as marks in the admittance or final exams). Secondly, and more importantly, 'best' high schools in one region can be of no comparison to 'best' high schools in a different region. Thus, disparities can be seen in the way these pupils relate to their high schools, in their narrative about learning, values and in their learning practices. In elite high schools, power operates through different

means than in average, working-class high schools. The most obvious variation is in the need for discipline: elite high schools do not need to quiet their pupils - they are already quiet, attentive, ready to prove themselves -, while on the other side of the continuum, much of the teacher's authority is consumed in trying to control the pupil's behaviour. An illustrative example is this quote from a pupil in a village high school:

...if you are not interested in what I am teaching, at least don't make noise, take your phone, eat, but quietly, so we can talk to the interested people (MM., 2nd year student),

put next to a quote from a pupil in an elite, big city high school

everybody was asking a lot anyway, it was known you were at a good high school and you had to give your best... A class is good if it has great results, because everybody already had good marks, but they asked for more, to choose a topic and have achievements (DS., 3rd year student).

The elite high schools treat pupils much more often as rational actors that will act in their best interest, and push them to the limits because that is understood as their best interests. Other high schools tend to have a more explicitly paternalistic view, asking pupils to learn because that is their job (both the pupil's and the teacher's) and nudging them authoritatively (if they can) because pupils are not seen as capable of managing themselves. Furthermore, it is not unusual to have an equalizing sign between the pupil's educational practices and the pupil's private self, these two being, at times, judged upon explicitly:

The teacher was very aggressive, she would get angry and reprehend you, ... she would reproach you personal stuff, why haven't you learnt, look how you haven't been a good pupil (MF., 2nd year student). The teachers, at maths, they always told us that we would never get anywhere, that we won't be able to do anything, we won't even pass our exams (BA., 1st year student).

It is not only inside the classroom that the movement and behaviour of pupils is being controlled, but also outside of it: the school gate can be closed and carefully guarded by a doorman who keeps an eye on who comes late or leaves early. Some schools endorse uniforms, marking their status. By some, a proper display of power is seen as a civilizing action, meant to teach young pupils how society works - there are hierarchies, there are social contracts, this is how the world is. This view seems to be also in line with a model of age-related behaviour:

children act childishly, they should learn to act as adults. Once adulthood is reached (at least legally), it is time to ask of them to act as we have taught them. But is this really the case, when high school learning promotes compliance more often than not, while adulthood, whether as students or employees, requires the capacity to analyse a situation by yourself, define it and act upon it? When asked if they enjoyed high school, many of the interviewees said they didn't. The reasons were a combination of social inputs and educational disappointment. The ones who said they enjoyed it, usually enjoyed hanging out with their classmates, very few liked it for academic reasons. Not to say that they didn't like it at all, but, retrospectively, few argued that they really felt it has helped them substantially (in preparing for university, for the job market, or for a better self): 'If someone would ask me if I'd go back to high school, I'd say no.' (MF., 2nd year student)

Motivation is a driving force in learning, it can accelerate it to high speeds or slow it beyond the desirable limit. While it is not possible to determine what causes it exactly, one can follow its trail and see to what it is related. During high school, prevailingly, the motivation to learn is external: 'because one has to'. Learning is the pupil's job, his/her position in society, often compared to how the adult's job is 'to work'. The legitimate learning is the one provided by the institution, and other forms of it are alternatives to be put on second place (volunteering, learning a musical instrument, etc.). Pupils do take pleasure in learning during high school, but only at the subjects that they enjoy. Some disengage completely from other subjects, being interested in passing the exams only:

At the subjects I liked, I was motivated by the fact that they interested me. At tests, I wasn't very motivated, I learnt just to take a 5, 6 or 7. My mother, (she would gloss over it), but I accustomed her to it since 7th grade. Before I only had 10s and I realized, what were they for? They were just marks (TS., 2nd year student),

but most of them dedicate a comparable amount of time to the subjects they dislike. Motivation, in high school, can also be internal, about finding and becoming oneself. Thus, pupils look for affirmation, trying to attain the status of 'being a good pupil':

...To prove myself I wasn't a bad pupil, I wasn't what people thought I was. I know some pupils make themselves visible and stay so, although they aren't always good, I also wanted to be visible, to be seen.... in 9th and 10th grade I avoided all that, they knew I learned ok, but although I did, I wasn't actively participating, for the teachers to know my name (MF., 2nd year student).

There is common sense knowledge that pupils learn to have good marks. Insidiously, this has become absolutely normal, although marks were supposed to serve the function of telling how much a pupil has advanced, not be a target themselves. This can be most clearly seen when dealing with the baccalaureate, the final exam of high school, which is often a big part of the mark for entering university – and considered ‘the maturity exam’ socially, with a big emotional importance:

... I only learnt at the subjects I liked, English and Romanian. At the others I wasn't motivated, but at the end I was motivated by the BAC, the BAC was coming, so I learnt, not to fail it, but not aiming for a good mark ... I passed with 8,8 something. For me, everything under 9 is not a high mark... (I didn't care for the high mark) because I knew I wouldn't go to university (LF., 2nd year student).

The rat race seems to continue: after learning for achieving a high mark at the BAC, one has to convert it into a valuable higher educational experience. The value of the high mark transforms into the possibility of entering a good university without paying, or, even better, with a scholarship. Thus, the act of learning continues to be monopolized by institutions that tame, structure and bend it, making it quantifiable and giving it an economic value. If one is in luck, a great teacher or a good choice of university can mend some of this:

He was one of the teacher that motivated you to learn, but not for the marks. He was an exception, the rest were more distant. (...) I still have this idea that I must (learn), a legacy from high school, but in general I really like the subjects we do here... In high school I learnt many things I didn't care about, because I had to, and I never questioned that I have to learn, that if I don't like it, I could not learn (DS., 3rd year student).

A key element of how institutionalized education happens is the aprioric, standardized structuring of the learning material. For once, it is neatly packaged and given to teachers for instruction. From there, each teacher transforms it according to his/her own self, being influenced by many variables, such as their own psychology and habitus, the school's policies and educational culture, what they believe to be good values and good knowledge, etc. The teacher is not a passive agent, but rather a maker of information, having the power to shape it in understandable bits or crippling it into boring, confusing, shattered pieces. This is why there are at least two levels in the transmission of knowledge from the institution to the pupil: first, pupils have to understand (or accept, without understanding) the logic of the programme as a whole, and second, pupils have to understand (or learn and accept, without understanding) the logic of the

teaching act. While my analysis doesn't properly account for social class, it plays a very important role in the positions the pupil can take regarding school. Everyone has heard the meritocratic, social mobility discourse: if you learn well, you will do well, you will have access to better jobs, and live better (than your parents). However, at times, the amount of energy pupils put into high school, and, later on, into university, seems to be influenced by the horizon of possible future choices they can envision for themselves. If one knows his/her parents cannot support him/her through six years of architecture or medicine, then it is quite useless to even try to get in. The practicality of high school knowledge is thus questioned - if it doesn't teach you anything that makes you employable, why bother? '... I think this is how they thought, why learn this, what will it be useful for? I want to have money, to work - and it is understandable, given where they came from.', (TS., 2nd year student). For some pupils, there is an urgency to consider practical economic matters and thus find a job fast, while others, having more economic stability, can afford to find learning non-marketable knowledge acceptable (or even worthwhile). Pupils' positioning to the functionality of learning and the purposes of knowledge begins early, although not always consciously. Understanding the logic of teaching in daily classroom practice is thus of great importance. It takes a good teacher to make his own structures clear and easy to follow, as it is much easier to be incoherent: 'this teacher had a craze to dictate to us continuously, you couldn't understand, he kept jumping from one idea to the other ... it wasn't related, it was hard to keep up with him.' (BA., 1st year student). It's not a common teaching practice to share the plan of the lesson with the pupils, let alone ask for their input. Thus, making transparent the internal structure of teaching, ideally composed of the ordering of information in a logical manner, with a visible path in sight, and a reason for which to walk upon it, is not a frequent practice, according to my interviews. Not understanding the general reason of why any of the subjects are important makes them obsolete.

Until now I have disentangled how pupils position themselves in public education by navigating power flows that permeate their understanding of why they learn, their motivation and the structuring of the material. Furthermore, I want to touch upon how a hierarchical marking system can transform learning into a struggle for 'being better than the other'. While the amount of competition varies greatly in all my interviewee's high schools, when competitiveness is present, pupils begin to give more weight to the marks they receive, as they feel more defined by them. The belief in marks as true denominators of learning seems to create feud in the classroom ('...if someone took a higher mark, there was a kind of hate, what has he/she done?' MF., 2nd year student) and to feed the idea that learning is a block of things that can be counted and that one can have more of it than another ('I never considered myself good at school, it was weird,

we were always comparing each other' MM., 2nd year student). At times, this means that there is a limited amount of space that can be occupied by good learners, as if knowledge itself is a gigantic turnip that we all take pieces from (some, smaller than others) instead of collaborating to get it out for all of us:

In middle school I started learning, after I stopped having problems at home, but also after the very good people left, and I stayed, I was level two, but I had a chance to be good, to be recognized (DS., 3rd year student).

If the high school was generally underperforming according to national standards, being capable of working with the system was not seen as desirable by fellow classmates: 'if you were just a bit smarter and interested you'd scandalize the lousy ones and conflicts would start ... the competition was stiff' (MT., 3rd year student). This labelling can go further and create separate factions in a class, even if teachers only passively consider it truthful. It is not unknown, however, for teachers to thrust into designing their teaching according to it: '...they would divide us, if you were good you'd stay on one side and they'd give you stuff to do, if you were stupid you'd stay on the other side and didn't do much.' (BA., 1st year student). This model goes hand in hand with learning as simply memorizing.

This is not to say that competition cannot co-exist with deep learning, but rather to point out how the system functions: you learn to have good marks, which validate that you have learnt, and the way you have to learn for these high marks, most often in my interviewee's answers, is by following the script given by the teacher, which very rarely includes, for example, critical thinking. When not in elite high schools, the pupils who have engaged in an analysis of informational content were either out of school, acting on their own or with some parental advice, or under the guidance of one of the two or three exceptional teachers they knew. When asked how they learned in high school, they would say 'everything was to cram. To stay and read and repeat the information in your mind, and if you entered another context, you would forget it' (MF., 2nd year student).

A system that aims to label and categorize pupils also creates a new kind of knowledge about them, it sets up a place for them and it influences their self. Pupils have varying degrees of engagement with the institution's and teacher's discourses on their own position, and the belief in their truthfulness decreases often as they exit high school. In working class high schools, even good ones, teachers have more power over pupils and their subjectivity, while in elite high schools, parents tend to have a higher standing. An illustrative example is this quote:

In high school I met the most authoritarian teachers. If you left classes they'd call your parents. One day I didn't come to school and they called mother and told her I didn't come, and she said she knew, so they started reprehending mother, for letting me not come to school (LS., 2nd year student).

Ivan Illich (2000) points this out very well in his writings: some teachers assume the role of a preacher or a therapist. For one pupil, this meant that at times the classroom would be a kind of confessional, where children could talk about their problems, especially after hours. For another, it meant always feeling spied upon and judged by teachers who, for example, would openly criticize certain pupils' romantic choices. In so called good high schools, moralizing is hidden behind a meritocratic discourse, and no one is openly called stupid, only made to feel that way. In high schools that do not have such a good standing, pupils are blatantly scolded, told they won't get anywhere if they keep it up like this, and told they are incapable. Teachers' understanding of pupils thus can engulf not only their educational lives, but their whole selves. Therefore, it is not surprising when this power to know more about someone than they know themselves is acted upon in a legitimate setting:

She has the impression that this one student doesn't know history, and she really didn't know so well because she was working, so she gave her a test and she passed it, but the teacher took it and said, you don't deserve to pass, so she gave her another test, in the same day, just for her, the first and the second, because she wanted to fail her. She didn't manage to fail her, so she'd examine her all the time, at the blackboard, but she said she was doing it to motivate her to learn for the BAC, to have a high mark' (DS., 3rd year student).

What this teacher knew so well regarding this particular pupil was even beyond tests of her own design, it seemed to be an instinct, a secret insight given by her position.

In high school, one of the major dimensions that keeps the distance between pupil and teacher is age-related categorisation. It feels simple and straightforward to put pupils in class by age, but when you start looking at it more carefully, there is little to say for how exactly one can determine all fifteen year olds have the same learning capacity just because of how long they have been alive. This age construct - adolescence - is both thought of as easily divisible and as very compact. For as long as you are in high school, even as you turn 18, teachers will still behave toward you with a protective, paternalist stance: '... there was always a hint of authority. During the breaks, there was this thing where they tried to be friendly, but to a limit, if you passed it, they would turn

back to their class teacher self.’ (MF., 2nd year student). Often, pupils are somehow considered both responsible and not competent enough to make the right choices. At this point, it makes sense that, when looking at good high schools where they are convinced learning is something to be taken very seriously, pupils themselves start to be keepers of this high standard. The exact practice here is ‘marking the teacher’. The power flows in reverse, from the students who deem the teacher not competent enough. Students don’t give real marks to teachers, however they label them very harshly according to how well they perform. While it doesn’t happen often, it shows how power truly is something that doesn’t reside in one person, but rather in institutional roles and the discourses about them. When the narrative of expertise is strong, and the idea of expertise is clear, whoever is not abiding to it, pupil or teacher, is bound to be admonished in one way or another:

We had a very unfit teacher, she wasn’t prepared at all in English, and we were at the bilingual profile, advanced, and she would always give us B2 exercises, so we did an alternative protest, it was nasty ... she kept making mistakes and there were students who noted them and put them on the notice board (DS., 3rd year student).

As DS. quite clearly says, ‘if a teacher was incompetent, he/she was dismissed very quickly. If he was very good, he was very respected.’ DS. also speaks of the small, annoying, daily displays of unfair use of power some teachers acted through, such as asking for more than they had taught or reprimanding them for not being good enough of a class, although they had many students participating in national contests. This power struggle was not, however, creating unanimous solidarity within students. What is deemed as acceptable differs even in an environment with strong discourses on proficiency:

... not everyone agreed, there was this girl who rebelled against the math teacher, and half of the class was vexed, how can you talk to a teacher like that, [...] She told him she didn’t think it was right to call students at the blackboard and make them feel anxious, because they cannot answer under that pressure. The teacher got mad, but the point is that she took a position and some agreed with her, some didn’t (DS., 3rd year student).

Summing up, I would stress that in many Romanian high schools, there is a ‘grab’ on defining the pupil. Within this structure of power, what they have to learn, how and when, is determined outwardly. The definition of their role is given by others – they need to do what is asked (learn) and how it is asked (in time, for class, for tests). A specific kind of learning self is shaped: an obedient

one, that is motivated externally, often treated paternalistically (or as a rational actor having already agreed with the given terms), and kept under control in both physical movement (during school time) and behavioural norms. The pupil is set into place in the learning institution by internalizing his hierarchy in class (both through marks and through the discourses teachers have about him/her). Furthermore, teachers sometimes act upon a special knowledge of the pupil, as when they choose the correct mark for him/her (just a bit bigger or lower than what standard calculations might bring) according to their previous convictions. To conclude, the learner is hardly free to define himself/herself as a learner by choice, and the way this category is conceived is often outside of his/her powers.

Doing well, performing well: playing the role of the pupil

It starts to become apparent that teaching can be done with the class, or against the class. In practice, that would mean either listening to what students might want, or pushing the official agenda very sternly, with no flexibility. As one interviewee says, 'if you have a student that wants to learn, let him learn!' (TS., 2nd year student). This can only become a piece of advice if it is a practice that teachers, through their actions, sometimes make it harder to learn, instead of easier. More accurately, this usually happens when knowing and respecting norms becomes more important than learning itself. Even further, respecting particular norms becomes learning, when dealing with certain tests, such as the BAC. 'Being a good pupil' is something that is played and learnt as a role in itself. The discourse on fairness is quite rare in high school, as most of them accept it as a given that certain pupils are just good, while others aren't. Sometimes this is signalled by high marks, other times by presence and activity in the classroom. Either way, there is a know-how of how to get into this special guild, one that some pupils never acquire, and once in there, your standing is secure, even if you still make mistakes:

'The teachers had a model of good learners and they wouldn't come out of it.... I felt it wasn't fair, if I did the same mistake as the 10 pupils, he was forgiven, but I would be reprehended, it wasn't fair and I felt it very strongly' (MF., 2nd year student), and 'she has a thing for pupils who weren't good enough, but with me she didn't, once I took an 8,3 and she marked it as 8,5, because I was a good student having a bad day' (DS., 3rd year student).

Knowing the good pupils from the others is another expression of the defining powers the teacher has. The teachers both believe in their tests and marks, and don't, because what is truly important is performativity. MF. and DS. bring poignant examples of that, with exposing that 'I had the impression I was a

good student because I was answering and I was involved, active' and that, although one of them had learnt with the same preoccupation during all years of high school, she realized that to become a good student she would have to be 'active' and engaged during class.

Insight in how the educational system works in practice, in one's own high school, is necessary for passing through it successfully as a pupil. However, the kind of insight pupils acquire is of a certain type: it is about knowing how and when to show what they have learnt. As mentioned above, they learn certain norms of how to behave and how to perform, and they also learn how their own learning is judged upon, partly by marks, partly by teachers' observations. They rarely have an awareness of what exactly they will learn, although they are given the impression they have chosen it. In high school, and then in university, one chooses a profile, such as philology or maths. Most of them are convinced that they have signed a kind of social contract whilst knowing the terms, although this never happens (even if they look at the educational programme, it is impossible to guess exactly what third year courses will mean when you're not even in the first year, and, more importantly, you have no knowledge regarding how you will be taught). This appearance of choice can make them feel rather resigned about their learning paths, seeing them as already decided:

I wasn't so interested in the subjects of my first high school, but in my head, I had this idea, if I chose that profile, now stay there and learn what you are given. It's not like, I don't like physics, I don't go, I have to go, because I chose it, I had no reason to complain. I was a bit unhappy, but, well... (MM., 2nd year student).

What is, ultimately, very important for pupils to know, is how to handle being examined. This is another kind of inside knowledge of norms that happens gradually, without being pursued openly. One way to do this is to predict when you will be tested, as surprise tests are not common, and blackboard questioning has a pattern: 'you wouldn't learn for every class, you'd know when it was your turn, if you didn't have a mark, you'd suspect' (LF., 2nd year student). Testing is used, mostly, for categorizing purposes, and has little to no value otherwise. This can become disheartening, putting so much effort into something that is only meant to label you, with no other purpose whatsoever: 'We had three or four (projects) ... it was interesting, but at the end your work was thrown away, we constructed scale models, they costed money...' (MT., 3rd year student). Another practice that seems to spring up is marking from downwards, by signalling how much one doesn't know: 'if she saw you couldn't handle it, she asked you to read more, give your homework, and she'd give you a grade, if you handled it, she'd let you go' (MF., 2nd year student). These kinds of pressures can have the impact of transforming learning into something that is done under stress and supervision, out of fear of failing.

There are three most obvious ways of coping with the pressures of such an educational system. The first way is disengagement, as much as it is acceptable. This means skipping classes when possible and not paying attention when in class, either chatting with friends, playing on the phone, reading something else, or 'sleeping, eating ... if I was sleeping I would only stand up to signal my attendance' (TS., 2nd year student). The second is copying or finding shortcuts, such as knowing very well how the teacher works, when to answer and how to get acceptable grades: 'we learnt before the tests, they would tell us when ...' (LF., 2nd year student). Copying, in particular, seems to be a way to manage doing well in a system in which you're not actually doing well at all. The third, and most ingenious, is hacking the boring material, picking at it until it becomes something that one can swallow or even enjoy: 'they were the books from schools, the ones we had to read. I was starting to see their good side, because everyone said they were boring, but I tried to see and get what I could from them.' (MM., 2nd year student).

The endpoint, what has even become, at times, the whole purpose of high school, is passing the bacalaureate. This exam, which the media loves to call 'the maturity exam', is actually a series of three exams and usually a language certificate. These depend on the profile of the high school, thus, most of my interviewees took it in Romanian, History and usually Geography. When approaching the time of the BAC, for short, teacher's behaviour change, everything becomes more serious, and preparations ensue. What has been taught in high school until then that has been marked with the words 'this will be part of the BAC' is suddenly recalled. Almost from the beginning of the last semester of 12th grade, most learning is reorganized, so as to have everyone's attention and energy preparing for this national exam, exactly the same for each and every pupil in the country:

With the Romanian language teacher, everything we did, even electives, we did Romanian language class... All the teachers' attention was towards this learning for the BAC, we had to pass it well so the high school would look good (MM., 2nd year student).

It so happens at times that, this bacalaureate supposed to fairly evaluate the knowledge accumulated throughout high school becomes the main reason to learn and shapes what has to be known: 'we had classes with him in 9th grade, it was easy, but now in 12th grade he was much harsher ... only then I really started to learn' (BA., 1st year student). How does the learning occur, more exactly? First, it varies greatly from pupil to pupil. There are some that truly only have to recall what they have already learnt and read, and thus do not need to dedicate it much

time, although the general stressful atmosphere makes it seem like they should. There are others that plan to start early, such as in the summer before 12th grade, or in the winter before the last semester, but few stick to it. Most learning happens in the last few months, when teachers cram lots of exercises, repeating the exact form of the BAC's examinations with the pupils many times over. Some of the characteristics of the banking model of education make themselves apparent in BAC narratives, as pupils have internalized certain learning practices, such as the habit of being pressured and the need for competitiveness.

Finally, it is insight into how the system has to be 'played' that shows pupils how to do well. Given particular rules, roles and norms, pupils smartly pick them up and act accordingly: learning for the test is common, knowing when to put your hand up in class and when to expect examination. To cope with a system that asks too often for performance (as in playing a role), pupils might engage in (a) trying to ignore most of the tasks and simply skip as many as they can, (b) copying from others and finding other ingenious ways to pretend they have the desired knowledge, (c) picking at the learning material and rules until they convince themselves they can go through it, even the things they dislike. The subject that emerges from this kind of structure has a learning self that is shaped by waiting to be defined (not to self-define) and by looking for a way to play out what is asked of him/her.

Learning and living: social relationships and hobbies

School is a life-seizer, and it influences young people to shape themselves according to its programme. While some build a self that accepts education as a constitutive part of their personality, others put much more energy into other things, such as social or family aspects. In the following part I will explore some of the elements that have a high impact on learning, although institutionalized public education gives them little to no attention.

One crucial dimension of learning in schools is the social. The actors that meet in the educational setting, teachers and pupils, are humans with an important psychological and emotional social aspect. The fact that they practice education together with other people is hugely important and mostly unaccounted for in official discourse. In the interviewee's narratives, teachers are usually deposits of knowledge and technique, and the fact that pupils are not alone listening to its transmission is to be ignored, not benefited from. Group projects are rare and almost no one enjoys them anyway, because they usually tend to have work distributed unequally inside the team. The model is sometimes simple, akin to the mechanical model of communication, with a clear message to be received, sometimes more complicated, with improved teaching techniques

(such as questioning and discussion). By design, there is little said regarding pupil-teacher relationships or pupil-pupil relationships, as if these were not essential features of the educational environment. Listening to interviewee's stories, however, it is clear that these play an important part in whatever learning takes place. Only one student mentioned that she didn't feel influenced at all by the teacher's personality or method, while the rest had memories of good or bad teachers that drove them towards or away from a certain subject. Some students stressed how studying in disorderly classrooms has been difficult, while others tell of how school has been so much fun exactly because of their mates.

There are a lot of pressures being put onto teachers. They have to know, perform and have a model behaviour. Incredible emotional and psychological stability and strength is asked of them just to do well, and a lot of creativity and passion to do really well. It is no wonder that not many are up for the task, and, when finding themselves with the power and responsibility of their position in hand, they slip or misuse it. Stories of abuse of power are very common and range from mild to severe misconduct. One small example would be to give spontaneous tests when the teacher is angry or for some other reasons doesn't want to deal with the pupils (one interviewee mentioned that they would usually get tests when the teacher's favourite football team lost). A more serious example would be targeting certain pupils, whether one does not like them personally (doesn't agree with their opinions, values, look) or one feels they must be pressured continuously to properly learn. One interviewee has an account of physical violence (being slapped for smoking in the school's bathroom), while another has a story of being methodically given smaller marks because of being generally disliked by the teacher ('he gave me three marks of three in three minutes because I didn't have the notebook with me, I even went out so he'd put an absence, and when I entered, during break, he gave them, because I had three subjects with him that year', TS., 2nd year student).

Much of the learning that happens in the years of adolescence goes unnoticed by the institution. It is not only a period of self-discovery and self-making, but also one of exploration, both for the social and the intellectual lives. The 'hobbies' that many pupils have are not seen as proper knowledge, even though it can happen that they become very good at those, and voluntary work is a side thing, even though it can teach citizenship and solidarity (while schools rarely even mention it). The legitimate institution should always be put first ('I did a lot of volunteering...my mother felt I didn't invest enough in high school, although I had good grades, just based on this difference, but then she came to school and saw that it was OK', TS., 2nd year student) and then the second place is often taken by its adjacent extracurricular projects (the Olympiads come first, but there are also school clubs). As a difference, an informal learning experience was described like this

... learning by doing, you had freedom, you could learn and take what you want, nobody did evaluations on you in that sense, that you were either good or bad, we all did something, and besides, you weren't sitting from 8 in the morning on a chair reading, (TS., 2nd year student).

Thanks to the spread of the internet, a lot of learning can now be done by oneself, at home, and is done like this indeed ('I learnt English on my own, I learnt it from the internet...', MF., 2nd year student).

Finally, much of the structure of institutionalized high school learning in Romania seems to overlook the importance of social relationships. Targets and standards are set without truly accounting for the fact that it is social beings that teach and social beings that learn, coming from particular socio-economic context and having their own psychology and individuality. Firstly, while pupils place a lot of weight on the friendships they make in high school, these seem to not be taken into account when designing learning. Secondly, teachers themselves are put into a position of power that at times is difficult to handle and perform as desired. Thirdly, pupils do enjoy in many other forms of learning (such as hobbies) that are sometimes not considered legitimate enough and thus are pushed aside in favour of schooling – again, an act that hampers their self-definition and is a proof of the powerful grab the educational institution has on them.

Conclusions

The careful, detailed exploration of lived learning experiences in high schools has unravelled a map of narratives about how teaching is practiced and what impacts it has on the learning self and the relationship to knowledge. It has been shown that many high schools endorse a banking model of education, rewarding good memorizing and listening abilities, keeping a cold distance between the teacher and the pupil, using disciplinary techniques and defining the learning self. Disciplinary power is used openly in working class high schools to keep pupils in their seat and control their movements, and more subtly in elite high schools, to make pupils learn according to the institution's standards. Most pupils learn, most of the time, due to an extrinsic motivation, seeing schooling as their 'job' they rarely take pleasure in. The standardized packing of the content doesn't help much, making information often seem lifeless and useless beyond school walls. While understanding the purpose of schooling and the internal logic of each teacher's courses could be of much aid, it does not always happen, as there

is little work done to make it transparent. Institutions aim to categorize the pupils and often succeed, as pupils can become, at times, quite competitive and start seeing knowledge as some 'thing' to have a bit more of than your peers. Even so, being a 'good pupil' has more to do with performing well and at the appropriate time, rather than memorizing all you are given. Insight in how the institution works and what each teacher asks is essential in passing, as well as knowing the right shape of answers to the form of the questions. Learning for the BAC is the peak symbol of this kind of educational system, as it requires proper understanding of instructions and abilities to reproduce from memory in order to pass. However, life also bulges into the neat fabric in which educational institutions have sewn learning into, showing that it has its own lessons to give. Teaching humans by humans cannot be seen as a technical transmission of information, as it obviously does not work that way. Both teacher and pupil/student have a self and a life outside of school that deeply influences what they can do inside of it. Finally, it should be understood that learning is also a process of transformation that meets other transformations pupils go through, and the increasing drive to institutionalize, measure, and set targets, will not lead to true improvement.

Writing and researching educational practices is a continuous process that requires reiteration. The question is, truly, how can we bring this knowledge where it is most needed, and how can we, by making the system's failings transparent, help create a better one. My study, although an exploration of recalled practices of a small number of individuals, wishes to play a part in showing what seems to work and what doesn't, and also how it does work and what kind of subjectivity it does produce. Hopefully, striving to see clearly and act responsibly will guide both educational research and reform in the very near future.

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