Environment and Technocracy from State Socialism to Neoliberalism. The Czech Case, 1960–2000



Martin Babička

Wadham College
University of Oxford

Dissertation Submitted in Fulfilment of the Requirements for the Degree of Doctor of Philosophy in History

Trinity Term 2023

Abstract

The dissertation examines the long transformation of state socialism into postsocialist neoliberalism in Czechia from the perspective of the cultural and intellectual history of the environment and technocracy. Specifically, it explores how environmental discourses intersected with changing attitudes towards a technocratic form of governance, from socialist attempts to address environmental criticism while maintaining a commitment to technocracy as the carrier of socialist progress to the neoliberal adoption of the discourse of environmental crisis to argue against socialism as overly technocratic. Unlike most histories of the transformation, it relies to a considerable extent on an analysis of popular media to understand the broad foundations on which the political arguments of state socialism and neoliberalism were based, while also examining intellectual and expert discourses.

The dissertation argues that anti-technocratic and environmental discourses supported, transformed, and challenged dominant ideologies, whether state socialism or neoliberalism. It provides evidence that there were attempts to reconcile socialist progress and environmentalism before the latter was used by liberal critics to attack socialist technocracy. It also proposes that anti-technocratic sentiments were not simply an oppositional reaction to a waning belief in technocratic socialism but were an integral part of the late socialist worldview. Expressing anti-technocratic sentiments was permitted, as they were supposed to legitimise the socialist present by revealing its imperfections, and this made it possible to discuss environmental problems. Despite efforts to integrate ecology into the vision of technocratic socialism, images of environmental problems often carried a negative view of technocracy, and environmental discourses played an important role in the turn towards liberal ideas of governance. In the late 1980s and early 1990s, the dissertation argues, neoliberals mobilised existing anti-technocratic sentiments connected with the ecological crisis to argue for market reforms, ultimately accusing ecologists of being the new ‘technocrats’.

Extended Abstract

This dissertation examines the long transformation of state socialism into postsocialist neoliberalism in Czechia from the perspective of the cultural and intellectual history of the environment and technocracy. It studies the ways in which socialists addressed environmental criticism while maintaining a commitment to ideas of socialist progress, and how despite these efforts environmental discourses ultimately contributed to a negative view of socialist technocrats. It also investigates how that scepticism towards the socialist idea of technocracy intersected with the subsequent neoliberal transformation.

The main argument is that anti-technocratic and environmental discourses at various points supported, transformed, and challenged dominant ideologies, whether state socialism or neoliberalism. It shows that liberal critics of socialist technocracy were preceded by socialist attempts to reconcile socialist progress and environmentalism, offering a vision of a technocratically-governed ecological future. Nevertheless, by the late 1980s, there were several ecological conceptions that to a varying extent questioned socialist technocracy. For this reason, around 1989, neoliberals were able to use scepticism towards socialist technocracy associated with environmentalism to present the market as superior to the socialist economy.

The dissertation therefore intervenes in the existing literature by challenging the idea that environmental ideas necessarily stood in opposition to the dominant ideology. First, the dissertation challenges a common assumption that ecological discourse evolved exclusively in opposition to state socialism. It links socialist environmentalism with questions of political legitimacy, problems that have usually been approached separately or in opposition to each other. It identifies various environmental discourses, some of which explicitly reinforced the belief in technocratic governance, while others associated environmental problems with existing anti-technocratic sentiments. However, contrary to prevailing understandings, the dissertation shows that anti-technocratic sentiments were not a reaction to a waning belief in

technocratic socialism in the 1980s but were present during the whole late socialist period. Rather, moderate criticism of socialist technocracy were encouraged in order to provide a humanistic balance to the technocratic rule and thus legitimise the imperfections of the present, yet it also provided a way to speak about environmental problems.

And second, although after 1989 environmentalism and neoliberalism are often considered as antagonistic, the dissertation provides a more nuanced account. Building on recent scholarship that has emphasised the need to explore continuities with late state socialism to understand the postsocialist transformation, this is the first study that explores encounters between environmentalism and the origins of neoliberal thought among socialist experts already in the 1980s. It examines how ecological discourses reinforced the shift in expert thinking from a socialist idea of technocratic governance towards liberal ideas of self-regulation and spontaneous order, and how that expert discourse was transformed into a moral and political language of postsocialist transformation. The thesis concludes that neoliberals drew from an existing repertoire of negative images of socialist technocracy and its harmful effects on nature, and only later did they discredit environmentalists as the new 'socialist technocrats'.

To broaden our understanding of how environmental discourses related to both state socialism and neoliberalism, the dissertation analyses popular media alongside intellectual history. It explores how a language that developed under state socialism – that of anti-technocratic sentiments and environmentalism – became a way of criticising that very system. Unlike most histories of the transformation, it relies considerably on an analysis of television, and to a lesser extent literature, film, and radio, to understand the broad foundations on which the political arguments of state socialism and neoliberalism were based. Apart from intellectual discourses, it focuses on the works of filmmakers, writers, literary critics, journalists, and public experts. Combining approaches of intellectual and cultural history, the dissertation

shows the relevance of popular media to an analysis of the long transformation of state socialism as something that shaped, and sometimes even mocked, rather than just transmitted expert discourse.

The first chapter focuses on the rise of anti-technocratic sentiments in the cultural sphere in the 1960s and the growing importance of environmental images as a shorthand for technocratic failures in the 1980s. It challenges the oversimplified view of the 1960s as an era of optimism about the powers of technology, which was supposedly only later superseded by new anxieties. The years between the 1960s and 1980s saw changing ideas of what was wrong with technological progress, from humanistic fears about the loss of human character in the wake of the rise of cybernetics in the 1960s to ecological themes in the 1980s.

In the 1960s, the vision of a cybernetic future brought about a new rift between experts and laypeople. The proponents of the scientific-technological revolution, which was a communist vision of a postindustrial society that became particularly attractive to many Prague intellectuals, constructed with the help of television producers a particular image of an expert as one who held obscure knowledge unavailable to others. In that view, experts equipped by a new, cybernetic way of thinking would deliver progress to the rest of society. Cybernetics, therefore, on the one hand, presented a promise of a technologically advanced future, but, on the other, became a shorthand for a vision of a society stripped of its agency, or even its humanity.

The downsides of a 'technical civilisation' were a common theme of fiction, which ranged from inherently optimistic, comic portrayals where the conflict between technology and humanity was resolved to the benefit of all and rather pessimistic, existentialist pieces that were sceptical of the linking of technology and progress. While the wholly pessimistic accounts disappeared from cinemas and television screens in the 1970s, when anti-reformist communists came to power and used the idea of the scientific-technological revolution as their legitimation

tool, optimistic comedies that satirised science and technology continued to be made throughout the late socialist period. However, despite their optimistic tone, these comedies still expressed anxieties about the negative impacts of a technocratic approach to nature and human life, and it was their ambivalence that made them both a convenient legitimation tool and a reservoir of potentially subversive imagery. They portrayed the imperfections of present-day science and technology as a way to allow for a humanistic, lay approach to reality and its problems. In the 1980s in particular, these comedies presented environmental problems as the result of an alienated technocracy.

The second chapter studies the ways in which late socialist culture attempted to reconcile socialist progress with environmentalist concerns, at a time when environmentalism posed a challenge to socialist optimism. The chapter shows that the ecological crisis in Czechoslovakia was a matter of concern not just for the political opponents of the regime or for the state's technocrats, who took a rationalist approach to environmentalism, supposedly uninterested in human feelings, but also for the period's media and literature. Analysis of the reception of *Silent Spring* and the reflection of the debates around environmental limits to economic growth in the 1970s demonstrates that socialist optimism about environmental issues was often a matter of discursive framing rather than content. In late socialist thought and literature, there were attempts to reconcile an ecological vision of the future and the socialist value of rising material wellbeing.

While socialist philosophers wanted to bring together ideas about Marxist progress and new holistic conceptions of the world as an ecological system, nature-writing turned to a romantic appreciation of the lost past, including the natural landscape remade by technological progress. That literature expressed sorrow over loss of the old while still giving primacy to joy over progress. Such 'ecological techno-optimism' eventually came to focus on nuclear energy as the proposed solution to the ecological crisis, while also stressing the values of family life

and material comfort. This conception opposed both a 'pessimistic' Western ecology and the 1960s reformists at home; writers and literary critics made the ecological turn a part of a late socialist celebration of life, contrasting it with those whose visions were allegedly too apocalyptic and anti-socialist. The late socialist optimistic discourse around the environment and technocracy therefore reconciled environmental claims about the need to address the harmful impacts of technology on nature and a continued belief in the need for technocratic governance.

Nevertheless, as the third chapter shows, by the 1980s, 'ecology' had acquired various meanings, from scientific concerns about ecosystems to journalistic criticisms of technocrats for harming the local environment, to filmmakers' idealised portrayals of an authentic life free from 'technical civilisation'. Rather than an attempt to tear down the regime, environmental discourses were initially used to argue for a change within the existing political order. But while for ecologists the need for change stemmed from their understanding of nature and people as one whole, non-experts often retained a dualistic view of the world divided between nature and technical civilisation, where one could escape from the latter to the former.

What these conceptions had in common was a tension between behavioural change and systemic reform as a solution to environmental problems. Ecologists, with their transnational contacts in bodies such as the United Nations, endeavoured to promote environmental education at schools and on television, resulting in a peculiar mixture of global environmental principles and domestic socialist values. Journalists, meanwhile, focused on local issues and associated individual wrongdoings with a figure of an incompetent technocrat. Environmental journalism and visual culture contrasted laypeople's wisdom and technocratic incompetence, as did the comedies of that era. Environmentalists, on the one hand, appealed to existing late socialist values, such as health and childhood, but, on the other, supported potentially subversive anti-technocratic sentiments. What began as an ecological discourse informed by

socialist progress, philosophy, and values, paved the way for a turn against socialist technocracy.

The fourth chapter considers the points of convergence between environmentalism and neoliberalism, and the way in which neoliberals mobilised existing anti-technocratic sentiments against environmentalists. Czech economists were becoming acquainted with neoliberal thought as early as the 1980s and considered the issue of ecological crisis through the lens of what they saw as 'standard' Western economy. They claimed that the inefficiency of socialist economy, governed by the imaginary central planner, led to a depletion of resources and environmental collapse that would not happen under the free market. Rather than a matter of policy, neoliberals argued that the problem reflected an unattainable socialist fixation on the rule of reason, which supposedly disregarded the fact that human knowledge was always an imperfect reflection of self-regulating economic processes.

This neoliberal view found broad support among postsocialist liberals, who saw state socialism as a cautionary tale about the detrimental effect of technocratic rationality on both nature and humans and sought a political order that would replace technocratic structures with an 'authentic' relation between humans and their environment. In that context, former socialist ecological experts who became active in the politics of the 1990s used the concepts they acquired as scientists – that of cybernetic feedback or the tragedy of commons – to criticise state socialism, turning expert discourse into a moral language of liberalism; while cybernetic language was now used to criticise the absence of democratic mechanisms and disregard for environmental problems under state socialism, the idea of the tragedy of commons was deployed to prove the superiority of private over state property. Supporting markets to a varying degree, either as a vital part of democracy or a downright solution to environmental problems, these ecologists hoped that a moral transformation of the population would become the main guide on the way out of what they saw as intertwined moral and ecological crises.

When it comes to popular media, previously ambiguous images of environmental decline and incompetent technocrats from the 1980s were given an explicit anti-communist meaning, helping to frame the ecological crisis as the moral crisis of state socialism.

Meanwhile, neoliberals framed the ecological crisis as a 'social' rather than a 'natural' problem, challenging the ecological view of the world as one interconnected whole and defending economic expertise as superior to ecological expertise. They portrayed neoliberalism as a continuation of the anti-state and anti-bureaucratic tradition, evoking various cultural references going all the way back to the Czech nationalist struggle against the Austrian empire. Moreover, in the early 1990s, neoliberals began to accuse environmentalists of being the new 'socialist technocrats', discrediting their political efforts. This neoliberal anti-environmentalism thus exploited the arguments and images that environmentalists had previously used to challenge state socialism.

The dissertation concludes that both state socialism and neoliberalism exploited anti-technocratic sentiments and environmental ideas for their own purposes. It argues that analysing the connections between political, expert, and media discourses helps us to understand the intellectual and cultural dynamics of state socialism more broadly, while explaining the role of late socialist ideas and images of nature and technology in the neoliberal transformation.

Table of Contents

Acknowledgements *3*
List of Abbreviations *4*
Introduction *5*
The Environment, Socialist Technocracy, and Neoliberalism 6
Defining Environment and Technocracy 16
Methods and Sources 22
Chapter Outline 28
Chapter One. From Ploughs to Computers: Technocracy and Socialist Comedy *34*
Prometheanism under Stalinism and Post-Stalinism 40
The Scientific-Technological Revolution on TV 53
Popularising Cybernetics 63
Speculative Fiction between Comedy and Tragedy 76
Crazy Komedie and Late Socialist Optimism 85
The Marriage of Fantasy and Technology 89
The Czech Handyman Saves the Future 99
Conclusion 109
Chapter Two. A 'Right to Sadness': Technological Optimism Meets Ecological Crisis *111*
Silent Spring in Czechoslovakia 116
Ecological Optimists and Pessimists 123
Progress and Nature 130
Nature Writer Jaromír Tomeček 134
A 'Right to Sadness' 146
The Harvest of Light 152
Conclusion 162
Chapter Three. The People's Turn: Ecosystems and Scepticism Towards Technical Rationality *164*
Ecosystems, Environmental Education, and Individual Responsibility 168
Optimism and Irony 181
Childhood 191
Images of Environmental Destruction 199
Laypeople and Technocrats 213
Technical Rationality Versus Pub Wisdom 222
Conclusion 230

Chapter Four. The Nature of Markets: Neoliberalism, Ecology, and the Socialist Past *233*
Environmentalism and Neoliberalism 239
Sustainability and the Crisis of Spirit 246
Cybernetics and Liberal Environmentalism 250
Ecology and the Liberal Community 256
The Tragedy of the Commons 262
How to Hold a Crocodile 269
The Abuse of Reason 276
Spontaneous Markets 289
Conclusion 295
Conclusion *297*
List of Figures *301*
Bibliography *307*
Primary Sources 307
Secondary Works 318

Acknowledgements

First and foremost, I would like to thank my two supervisors, Dr Kate Lebow and Prof David Priestland, for their advice, kind words, and meticulous edits. They have been an invaluable support at all stages of my doctoral studies. I would also like to thank everybody who provided comments, asked questions, and exchanged ideas at various workshops and conferences as well as in in more informal settings.

I thank all archivists and librarians without whom this work would not be possible. My specials thanks go to the archivists of the Czech Radio Archive, who amid the pandemic lockdown helped me produce a radio documentary, an opportunity without which I would not be able to access in time and to the same extent the historical recordings I use in this dissertation.

This dissertation would not exist without the financial support of the Arts and Humanities Council UK and the David Richards Scholarship at Wadham College. Thanks to the support of the Oxford–Sciences Po Network, I spent the spring semester 2022 writing the dissertation at the Centre of European Studies, Sciences Po, Paris. I am also indebted to the Institute of Contemporary History, Prague, and Dr Veronika Pehe, who leads the Research Group for Historical Transformation Studies, for giving me time and resources to write up the thesis during my first months as a postdoctoral researcher.

I also want to say thanks to my family and my friends in Oxford, Prague, and elsewhere. As some of them know, words are but raindrops.

List of Abbreviations

APFCT	Archives and Programme Collections of Czech Television, Prague (*Archiv a programové fondy České televize)*
ACR	Czech Radio Archive (*Archiv Českého rozhlasu*)
APNP	The Archive of the Museum of Czech Literature, Litoměřice (*Archiv Památníku národního písemnictví*)
NFA	National Film Archive, Prague (*Národní filmový archiv*)
ABS	State Security Archives, Prague (*Archiv bezpečnostních složek*)
AKVH	Václav Havel Library Archives, Prague (*Archiv Knihovny Václava Havla)*

Introduction

> Today, we can only wonder at how naïve we were, imagining linear development using science and technology as a road to an absolutely problem-free future full of computers… We did not see the problems: economic, ecological, social… we believed in the omnipotence of technology.
>
> – A voiceover in *Century of New Connections*, episode 6, 'New Civilisation?', Czechoslovak Television (1988) [1]

> I used to live in a world where prices and property rights were made meaningless. It gave me an opportunity to see how irrationally resources were used (and often depleted) and how damaged the environment was as a result. We should not let anyone again play the market and dictate what to produce, how to produce it, what inputs to use, what technologies to implement. It would result in another, these days worldwide, disaster and in the true 'immiseration of the masses', especially in developing countries.
>
> – Václav Klaus, a speech to the Mont Pèlerin Society General Meeting, Tokyo (2008)[2]

This dissertation examines the long transformation of state socialism into postsocialist neoliberalism in Czechoslovakia from the perspective of the cultural and intellectual history of the environment and technocracy. It is mainly concerned with the anti-technocratic sentiments evoked by environmental issues. First, I explore how failures of technocracy and environmental problems were reconciled with ideas about socialist progress in late socialism. I go on to ask how the demise of that optimism intersected with the collapse of state socialism and the subsequent postsocialist transformation. In contrast with most histories of that transformation, I rely considerably on an analysis of popular media to understand the broad foundations on which the political arguments of state socialism and neoliberalism were based. I therefore focus on, among others, the works of filmmakers, writers, literary critics, journalists, and public experts.

---

[1] APFCT, IDEC 288 360 52748, *Století nových souvislostí* (1988), ep. 6., 3:00–3:40.
[2] Václav Klaus, 'Current Global Warming Alarmism and The Mont Pelerin Society's Long-Term Agenda', *Economic Affairs (Harlow)* 29, no. 1 (2009): 46.

I suggest that that anti-technocratic and environmental discourses at various points supported, transformed, and challenged the dominant ideologies, whether state socialism or neoliberalism. They were neither simply a negation of state-socialist ideology nor destroyed by the triumph of neoliberal thought as it is often assumed. Contrary to the current understanding, anti-technocratic sentiments were not a later reaction to a waning belief in technocratic socialism, but were present in late socialist culture, legitimising the imperfections of the present. Equally, it has been too often assumed that anything resembling ecological awareness was a sign of liberalisation. However, that view overlooks the inner dynamics of state socialism. In fact, liberal critics of socialist technocracy were preceded by socialist attempts to reconcile socialist progress and environmentalism, in a way that was supposed to support rather than subvert technocratic socialism. And conversely, although often seen as a lost battle of environmentalists against markets, the allure of neoliberalism in the late 1980s and early 1990s was in a surprising number of cases based on the presumed naturalness of the market order and its promise to solve the ecological crisis. Along with neoliberal arguments against technocratic planning, the question of nature was thus one of the key issues in the postsocialist transformation and was as much about reckoning with the socialist past as about a vision of a better political order.

The Environment, Socialist Technocracy, and Neoliberalism

This dissertation is a contribution to environmental history, the history of neoliberalism, and the history of state socialism and its transformation. It has been argued that state socialist countries were changing alongside and together with the rest of the world, ultimately accepting neoliberal globalisation.[3] Historians of Eastern Europe have recently approached the problem by looking at 'technocratic socialism' and its continuities after 1989.[4] According to this view,

[3] James Mark, *1989: A Global History of Eastern Europe* (Cambridge: University Press, 2019); Philipp Ther, *Europe since 1989* (Princeton University Press, 2016).
[4] Matěj Spurný et al., 'Technokratischer Sozialismus in Der Tschechoslowakei', *Bohemia* 57, no. 1 (2017): 12–24.

the experts of the socialist state, with their social and cultural capital at home and transnational links, were often the midwives of the postsocialist transformation.[5] Exploring the inner evolution of state socialism, Matěj Spurný has proposed that those countries in their late phase were also faced with the breakup of 'organised modernity', which included the erosion of technocratic powers of the state and reflection of environmental risks, just like the capitalist counterparts.[6] Yet, despite a growing interest in environmental history of Eastern Europe, most literature explores environmentalism as a particular interest of experts and movements or a specific policy conflict. I explore instead the ways in which the understanding of nature in both intellectual discourses and popular media related to the evolution of state socialist countries and their neoliberal transformation in the 1990s.

My two main interventions are to challenge the 'anti-communist' and the 'anti-neoliberal' lines of argumentation which argue that environmental ideas stood in opposition to the dominant ideology. First, I challenge what may be called an 'anti-communist' or a 'liberal' interpretation of environmentalism, which postulates that ecological discourse evolved in opposition to state socialism. Second, I qualify what may be called an 'anti-neoliberal' interpretation, which sees the rise of ecology in late socialism as a victim of neoliberal reforms.

---

[5] Recent research on Czechoslovakia has emphasised the role of lawyers, managers, psychiatrists, urban planners and ecologists in helping to ignite change already in the 1980s and carrying it over 1989. Michal Kopeček et al., *Architekti dlouhé změny: expertní kořeny postsocialismu v Československu* (Praha: Argo, 2019).

[6] Matěj Spurný turns to Western European sociological theories to talk about the evolution of state socialism as an organised form of technocratic control facing the breakup of modernistic consensus: Peter Wagner has described what he calls 'organised modernity' and the subsequent 'second crisis of modernity', taking place around 1968 and characterised by the transformation of authoritative practices of the state, erosion of collective identity, loosening of formal hierarchies and the liberalisation and globalisation of markets; and Ulrich Beck has notably stated that, under 'reflexive modernity', Western society began to reflect upon the risks it had been posing to itself. Based on the example of late socialist urban space in Northern Bohemia, Spurný has shown that technological progress and the exploitation of nature were becoming intertwined with an appreciation for the environment in a way that had parallels to the developments described by Beck. Peter Wagner, *A Sociology of Modernity: Liberty and Discipline* (London: Routledge, 1994), 123–140; Ulrich Beck, *Risk Society: Towards a New Modernity* (London: Sage, 1992), 19–22; Matěj Spurný, *Making the Most of Tomorrow: A Laboratory of Socialist Modernity in Czechoslovakia* (Praha: Karolinum Press, 2019), 94–99.

Both interpretations emerged from the historical process that this dissertation aims to analyse. While the former originated in the anti-communist opposition and remained a part of the post-dissident liberal narrative, the latter was a response of the anti-neoliberal environmentalists from the 1990s on to their supposed loss of 1989 as a 'green' revolution to the market. These interpretations are not mutually exclusive. In fact, some viewed continuities between ecological opposition over 1989. Nevertheless, such accounts sometimes obscured the ways in which state socialist and neoliberal advocates thought about nature. Therefore, I shall be engaging with a number of historiographies. These include literatures on the environment under state socialism and its relation to political legitimacy; on postsocialist transformation and continuities between socialist technocracy and neoliberalism; and on environmentalism and economic thought. To broaden our understanding of how environmental discourses not only challenged but rather shaped state socialism and neoliberalism, I will suggest analysing popular media alongside intellectual history.

Historians of environmentalism in Eastern Europe have mostly focused on the ecological crisis under late socialism as a fundamental challenge to communist ideology, but there is still very little understanding of what 'nature' meant in late socialist culture. Much existing scholarship has too easily presupposed that communist elites would by default be 'against nature' while the opposition formed 'little corners of freedom' as 'a sort of antidote to the materialist logic' of the socialist state, seeing problems such as pollution simply as the result of Marxist-Leninist ideology.[7] In this vein, Miroslav Vaněk has argued that in Czechoslovakia the 'lack of interest in anything outside the area [of private life] also affected

[7] Arvid Nelson, *Cold War Ecology: Forests, Farms, and People in the East German Landscape, 1945-1989* (New Haven, Conn.: Yale University Press, 2005), xii; Douglas R. Weiner, *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachëv* (Berkeley: University of California Press, 1999); Philip R. Pryde, *Conservation in the Soviet Union* (Cambridge: Cambridge University Press, 1972); Júlia Čížová and Michal Ďurčo, 'Pozitívna Deviácia v Československu v 80. Rokoch: Prípad Bratislavského Environmentálneho Hnutia', *Historický Časopis* 70, no. 3 (2022): 461–486.

the environment, in all respects – aesthetic, ecological, and intellectual'.[8] This itself was a view adopted from the dissidents; in 1987, Charter 77 wrote a letter to the Czechoslovak government titled 'To Be Able to Breathe', criticising its neglect of environmental problems. Although that discourse became dominant after 1989, to understand better the meanings given to nature under late socialism it is also necessary to pay attention to discourses that were prominent in socialist culture but forgotten later. Rather than seeing anything related to ecology as necessarily anti-establishment and contributing to the fall of state socialism in 1989, I suggest that there were several ecological discourses that to varying degrees legitimised the late socialist regime.

This dissertation thus also links socialist environmentalism with questions of political legitimacy, problems that have usually been approached separately or in opposition to each other. For example, many scholars have considered the provision of material needs as one of the main tools of legitimation of the late socialist regimes. German historiography is particularly fruitful in this regard. Moving beyond the totalitarian paradigm, Konrad Jarausch called the GDR a 'welfare dictatorship', by which he attempted to express the tensions between the progressive goals of social emancipation and the repressive power of the state.[9] Studies of Czechoslovakia, such as those of Michal Pullmann, have also stressed the political importance of both material progressivism and conservative social order in the period after 1968 as 'peaceful dictatorship'.[10] The economic problems that Eastern European countries were facing in the 1980s then culminated in a crisis of legitimacy. In this context, nature advocates have been seen as the regime's opponents. In contrast, Joan DeBardeleben has studied East German and Soviet environmental discourses as both a tool of political legitimacy and advocacy for

---

[8] Miroslav Vaněk, *Nedalo se tady dýchat: ekologie v českých zemích v letech 1968 až 1989* (Praha: Maxdorf, 1996), 7.
[9] Konrad H. Jarausch, *Dictatorship as Experience: Towards a Socio-Cultural History of the GDR* (New York: Berghahn Books, 2009), 47–65.
[10] Michal Pullmann, 'The Ideological Face of Normalisation: Socialist Modernity and the "Quiet Life"', in *Czechoslovakia and Eastern Europe in the Era of Normalisation, 1969–1989*, ed. Kevin McDermott and Matthew Stibbe (Springer, 2022), 53–71.

nature.[11] She has argued that after the death of Stalin, natural scientists were no longer necessarily expected to provide theories that would approve the Communist Party's view of historical development, and which allowed them 'to seek explanation, rather than simply to explicate justifications'.[12] She has described in detail how East German and Soviet economists were trying to find ways to make production more ecological to continue economic growth.[13] Particularly in the Soviet Union, there was a lively debate on the importance of care for the environment, mainly from the anthropocentric perspective of humanity's self-preservation.[14] Certainly, as Eagle Glassheim has posited, the Czechoslovak state mobilised its technocratic apparatus to organise citizen activity and provide studies and reports, despite failures in introducing effective measures.[15] So, although dissenting groups, particularly from the 1980s, criticised the state for doing too little, nature was also becoming more central to the legitimising discourses revolving around technocracy and welfare.

Existing research has compellingly suggested that ecological movements shook the political legitimacy of state socialism towards the end of the 1980s but has not focused so much on the broader significance of ecology.[16] In the case of Czechoslovakia, some scholars have focused on the formation and development of the environmental movement within the

---

[11] Similarly, sociologist Zsuzsa Gille has also contrasted the simplistic view of state socialism as a 'wasteful economic order' with her research on waste management in socialist Hungary. Joan DeBardeleben, *The Environment and Marxism-Leninism: The Soviet and East German Experience* (Boulder: Westview Press, 1985), 47; Zsuzsa Gille, *From the Cult of Waste to the Trash Heap of History: The Politics of Waste in Socialist and Postsocialist Hungary* (Bloomington: Indiana University Press, 2007).

[12] DeBardeleben, *The Environment and Marxism-Leninism*, 61.

[13] DeBardeleben, 181–190.

[14] DeBardeleben, 77–79.

[15] Eagle Glassheim, 'Building a Socialist Environment. Czechoslovak Environmental Policy from the 1960s to the 1980s', in *Nature and the Iron Curtain: Environmental Policy and Social Movements in Communist and Capitalist Countries, 1945–1990*, ed. Astrid Mignon Kirchhof and John R. McNeill (Pittsburgh: University of Pittsburgh Press, 2019), 137–150.

[16] For instance, Jane Dawson has argued that in the USSR anti-nuclear activism was a way of making nationalist claims towards Moscow that lost its appeal with the fall of the Soviet Union, pointing out that the surge of interest in the anti-nuclear cause under *perestroika* followed by sharp decrease in the post-Soviet period speaks to the political rather than environmental motivations of the movement: Jane I. Dawson, *Eco-Nationalism: Anti-Nuclear Activism and National Identity in Russia, Lithuania, and Ukraine* (Durham, N.C: Duke University Press, 1996), 9.

institutions of the socialist state and its subsequent demise after 1989. According to that view, the formation of ecological organisations in the 1970s such as the Brontosaurus Movement inspired ideas of a non-consumerist, 'authentic' lifestyle that, along with the networks of experts and dissidents working to uncover the true state of the environment, culminated in several protests and finally the revolution in November 1989.[17] In that vein, several rallies against polluted air or unwanted construction projects in places such as the capital city Prague, Teplice in Northern Bohemia or Bratislava in Slovakia that took place throughout the year 1989 have been seen as heralds of regime change. As many more movements and protests swept through Eastern Europe, some have even called 1989 a 'green revolution'.[18] As others have further suggested, in East-Central Europe, ecological expertise, journalism and diplomacy all raised concerns about the environment, taken up in the 1980s by dissidents and the international press.[19] However, this dissertation suggests that an optimistic form of ecological discourse and a humanistic critique of technocracy also had their place in late socialism. Moreover, the anti-technocratic sentiments voiced in these discourses were particularly compatible with the arrival of neoliberalism in the 1990s.

This dissertation therefore reinforces recent scholarship that has emphasised the continuities between state socialism and what came afterwards. Indeed, the key issue of post-1989 historiography has been the relationship between the political change after 1989 and

---

[17] Andrew Tickle and Ian Welsh, *Environment and Society in Eastern Europe* (Harlow: Addison Wesley Longman, 1998), 134; see also: Vaněk, *Nedalo se tady dýchat*, 112–133.

[18] For early use of the term by Western environmental policymakers, see: Hilary F. French, *Green Revolutions: Environmental Reconstruction in Eastern Europe and the Soviet Union* (Washington, D.C., 1990); for more recent theoretical conceptualisation, see: Olaf Corry, 'The Green Legacy of 1989: Revolutions, Environmentalism and the Global Age', *Political Studies* 62, no. 2 (2014): 309–325.

[19] Doubravka Olšáková, 'Environmental Journalism? Radio Free Europe, Charter 77 and the Making of an Environmental Agenda', *Environment and History* 28, no. 2 (2022): 203–227; Spurný, *Making the Most of Tomorrow*, 314–322; Kacper Szulecki, 'Hijacked Ideas: Human Rights, Peace, and Environmentalism in Czechoslovak and Polish Dissident Discourses', *East European Politics and Societies* 25, no. 2 (2011): 272–295; Alexandra Wedl, 'Green Volunteers in Czechoslovakia: The Youth Magazine Mladý Svět and Its Environmental Campaign, 1970s–1980s', *Labour History Review* 86, no. 3 (2021): 397–423.

continuities with state socialism, with a gradual shift to studying continuities and pre-1989 roots of transformation. Roughly until the turn of the century, the paradigms of totalitarianism and transitology were mainly concerned with 1989 as a total break with the past.[20] Later, scholars began to examine the various origins and forms of market liberalism in East-Central Europe.[21] To further address these problems, scholarship has shifted from studying political regime change towards observing longer continuities in technocratic expertise, pointing at the roots of neoliberalism in the state socialist countries themselves.[22]

This is also why I explore the shift away from authoritarian control towards self-regulation from the 1960s to the 1990s, as seen in expert discourses on topics such as cybernetics, ecology, and neoliberalism.[23] Slava Gerovitch sees cybernetics as a discourse that was both scientific and ideological, having developed in the late 1950s after it was rehabilitated following Stalinist accusations that it was reactionary.[24] He has asserted that later, in the 1970s, 'cyberspeak' was used to conserve the status quo through the scientific management of society.[25] In reaction to that argument, Eglė Rindzevičiūtė has insisted that the transformational

---

[20] For a summary of interpretations of 1989, see: Kevin McDermott and Matthew Stibbe, eds., *The 1989 Revolutions in Central and Eastern Europe: From Communism to Pluralism* (Manchester: Manchester University Press, 2013), 4–23. For a summary of approaches to transformation, see: David Lane, *The Legacy of State Socialism and the Future of Transformation* (Lanham, Md.: Rowman & Littlefield, 2002), 5–32.For a critique of 'transition', see: Michael D. Kennedy, *Cultural Formations of Postcommunism Emancipation, Transition, Nation, and War*, Contradictions 15 (Minneapolis: University of Minnesota Press, 2002), 1–44, 91–119.

[21] For global/transnational approaches, see: Hilary Appel and Mitchell A. Orenstein, *From Triumph to Crisis: Neoliberal Economic Reform in Postcommunist Countries* (Cambridge: Cambridge University Press, 2018). For neo-Polanyian approach of embedding markets, see: C. Ban, *Ruling Ideas: How Global Neoliberalism Goes Local* (Oxford, 2016). See also literature on 'varieties of capitalism': David Lane and Martin Myant, *Varieties of Capitalism in Post-Communist Countries* (Basingstoke: Palgrave Macmillan, 2007).

[22] Johanna Bockman, *Markets in the Name of Socialism: The Left-Wing Origins of Neoliberalism* (Redwood City: Stanford University Press, 2011).

[23] For a shift in the political use of cybernetic language in the USA, see: Fred Turner, *From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism* (Chicago, Ill. ; London: University of Chicago Press, 2006).

[24] Slava Gerovitch, *From Newspeak to Cyberspeak: A History of Soviet Cybernetics* (Cambridge, Mass.: MIT, 2002), 3. For the rise of cybernetics in the USA, see: Ronald R. Kline, *The Cybernetics Moment, or, Why We Call Our Age the Information Age* (Baltimore: Johns Hopkins University Press, 2015).

[25] Gerovitch, *From Newspeak to Cyberspeak*, 285.

potential of cybernetics was not lost in the 1970s; later morphing into a 'systems' approach, cybernetic ideas were not only associated with command-control expert models but also with notions of reflexivity and uncertainty.[26] In other words, based on cybernetics, technocracy could lead both to authoritarian centralism and self-regulation.[27] Rindzevičiūtė thus turns attention away from the view that all socialist technocrats were misguided believers in the mathematical control of nature, showing that cybernetics also in fact established a new, non-authoritarian epistemology.[28] The political use of cybernetic language by Estonian reform economists is a good case in point: as Juhan Saharov shows, cybernetic concepts such as 'self-regulation' were suddenly associated with free-market relations.[29] At the same time, it is known that cybernetics and its offspring, systems theory, also had a substantial influence on ecology.[30] This dissertation builds on these insights to examine how ecological discourses reinforced the shift towards ideas of self-regulation and spontaneous order. However, unlike previous work on this topic, it puts emphasis on the interconnections of expert knowledge, political language, and media discourse.

Therefore, this dissertation will show how cultural scepticism towards planning and centralised control is connected with neoliberal arguments against the socialist economy and, subsequently, with environmentalism. Existing studies highlight the fact that neoliberals imagined the economy as a sphere that eludes full human comprehension and thus cannot be wholly captured in numbers and planned.[31] Yet, despite growing interest in postsocialist

---

[26] Eglė Rindzevičiūtė, *The Power of Systems: How Policy Sciences Opened up the Cold War World* (Ithaca: Cornell University Press, 2016), 9.
[27] Rindzevičiūtė, 18.
[28] Rindzevičiūtė, 25.
[29] Juhan Saharov, 'From Future Scenarios to Sovereignty Declarations: Estonian Cyberspeak and the Breakup of the Soviet Union', *Europe-Asia Studies*, 2022, 809–831.
[30] Bruce Clarke, *Gaian Systems: Lynn Margulis, Neocybernetics, and the End of the Anthropocene* (Minneapolis: University of Minnesota Press, 2020).
[31] For example: Quinn Slobodian, *Globalists: The End of Empire and the Birth of Neoliberalism* (Cambridge, Mass: Harvard University Press, 2018), 58. Indeed, this is a central argument of Friedrich von Hayek, a key figure of neoliberal thought: F. A. Hayek, 'The Use of Knowledge in Society', *The American Economic Review* 35, no. 4 (1945): 519–530.

neoliberalism, there has been only a handful of studies that would suggest there was a broader intellectual support for these ideas. Sociologists Gil Eyal, Iván Szelényi and Eleanor Townsley, for instance, argue that technocrats and dissidents aligned to create a liberal capitalist society, rooted in ideas of civil society and economic rationalism cultivated in the 1980s.[32] According to this account, the two groups had a similar vision of the limited role of knowledge as a basis for governing, thus rejecting planning.[33] In this dissertation, I explore how that view was reinforced by popular articulations of scepticism towards technocrats and a vision of a natural order.[34] This analysis will allow me to show that the union of neoliberal and environmental ideas after 1989 is perfectly explicable given the multivocality of environmental ideas.

Although there is a wealth of intellectual history on relations between ecological and economic thought, there is still little work on their evolution in the neoliberal transformation of Eastern Europe. As Philip Mirowski has examined, a neoclassical approach to economics – on which neoliberalism is based – borrowed the apparatus of 19th century physics to establish the market order as law-like, universal, and natural.[35] More recently, in the same vein, Jeremy Walker has turned attention to the common roots of neoliberalism and ecology. As Walker posits, both economic and ecological notions of natural order and its reproduction, articulated in the concepts of equilibrium and growth, had common roots in the physical understanding of energy.[36] Walker suggests that the two collided again in the 1970s, when environmentalism became a global matter and neoliberalism moved, at least in the United States, from the fringes

---

[32] Gil Eyal, Iván Szelényi, and Eleanor R. Townsley, *Making Capitalism without Capitalists: Class Formation and Elite Struggles in Post-Communist Central Europe* (London: Verso, 1998), 11, 84.
[33] Eyal, Szelényi, and Townsley, 95–96.
[34] William Davies turns attention to the ways the neoliberal economy is 'a mixture of empirical facts, expectations, fantasies and shared narratives', both an object of science and fictions. He suggests to 'cultivate ambiguity between the role of "experts" and that of "artists" or "amateurs", and to challenge assumptions about who really influences our political economy and how.' William Davies, *Economic Science Fictions* (London: Goldsmiths Press, 2018), 24, 29.
[35] Philip Mirowski, *More Heat than Light: Economics as Social Physics, Physics as Nature's Economics* (Cambridge: Cambridge University Press, 1989).
[36] Jeremy Walker, *More Heat than Life: The Tangled Roots of Ecology, Energy, and Economics* (Basingstoke: Palgrave Macmillan, 2020), 3–4.

of economic thought to the centre of governmental power.[37] However, as Walker observes, neoclassical economic models omitted the question of how natural resources were turned into energy and, in turn, economic growth. '[D]espite being the most directly relevant principle of physics to our economic existence on Earth,' Walker states, the second law of thermodynamics never became part of orthodox economic theory.[38] In the 1970s, this led, according to Walker, to a conflict between neoclassical economists and ecologists. Of course, this was not a mere academic dispute between different disciplines or paradigms, as that neglect ensured that mainstream economics was unable to tackle what we now call the climate crisis; and at the same time, as recent works on political ecology, such as those by Timothy Mitchell and Pierre Charbonnier, argue, the ideas of freedom and democracy that constitute the liberal political order were historically tied in manifold ways with the extraction of energy from fossil fuels.[39] Yet little has been written about the ways in which these issues influenced state socialism, which was also founded on the 19th century ideas of scientific materialism, and about the role of ecology in postsocialist neoliberalism. Therefore, apart from exploring state socialist attitudes towards nature, I aim to historicise the initial promise of postsocialist markets to profoundly alter the relations between nature and humanity after 1989. This opens the way for future research on the connections between postsocialist, neoliberal, and environmental histories.

I therefore ask how a scepticism towards technocracy and an awareness of ecological crisis were related to the end of state socialism and the neoliberal transformation in the Czech Republic. What role did scepticism towards science and technology play in late socialist popular media? How was a belief in technological progress and ecology reconciled in late socialist culture? What meanings did ecology have under late socialism and how did it become

---

[37] Walker, 3.
[38] Walker, 8–9.
[39] Timothy Mitchell, *Carbon Democracy: Political Power in the Age of Oil* (London: Verso, 2011); Charbonnier, *Affluence and Freedom*.

associated with scepticism towards technocrats? And how did the notion of ecological crisis intersect with neoliberal transformation?

Defining Environment and Technocracy

Before proceeding with an outline of my methods and argument, I need to explain some of the historical meanings given to the environment, nature, technology, and technocracy, as different intellectual traditions meet in this dissertation. I will address the different conceptions related to nature and the environment and their use in political discourses, the definition and meanings given to technocracy and 'the technical' more generally, and the relationship between the environmental and technocratic discourses as presented in this dissertation.

The environment as an idea had a long history, slowly gaining traction after World War II, leading to its global institutionalisation in the early 1970s, such as in the United Nations Environment Programme (UNEP).[40] The concept of the 'environment' shifted its meaning in the postwar era, from a term referring to the immediate surroundings or context, to one signifying the interrelatedness of the whole world, giving ecologists a tool to link various dimensions of the 'environmental problems' they faced.[41] Indeed, a broad range of environmental discourses developed at that time.[42] There was no clear division between those who spoke about nature (*příroda*), environment (*životní prostředí*), and ecology as these were often used interchangeably. However, those who saw environmental problems from a moral rather than a scientific perspective sometimes considered the 'environment' as too narrow and technocratic a concept and preferred to talk about nature or ecology.

---

[40] Paul Warde, Libby Robin, and Sverker Sörlin, *The Environment: A History of the Idea* (Baltimore: Johns Hopkins University Press, 2018).
[41] For a history of the concept of the 'environment', including its uses in other European languages, see: Etienne Benson, *Surroundings: A History of Environments and Environmentalisms* (Chicago: The University of Chicago Press, 2020).
[42] John S. Dryzek, *The Politics of the Earth: Environmental Discourses* (Oxford: Oxford University Press, 1997).

Compared to the 'environment', the concept of 'nature' often encompassed a broader characterisation of how humanity related to the outer world. Of course, the shades of meaning given to nature differ among diverse European traditions and in individual languages. What in English would be called the 'natural world', Czechs simply call 'nature' (*příroda*). One of the defining features of the European history of 'nature' was a debate over humanity's separation or inclusion in nature, seen as opposed to history, culture, and convention.[43] In reaction to these modern conceptions of nature, ecological criticism often condemned the separation of humans from the natural world in favour of integrating humans into a holistic conception of nature as a totality of being (reflected in concepts such as the 'ecosystem', Gaia, and the 'noosphere').

Along with the question of the relation between humanity and the natural world, environmental assumptions about humans' capacity to change their material conditions and to exploit resources was very often linked with the notion of historical development and political order. Socialists were faced with a new paradox that technological progress at once enabled greater material wellbeing, which formed the core of their political legitimacy, while also creating environmental challenges that undermined it. As this dissertation will show, there were many intellectual attempts to resolve this contradiction, by bringing together Marxism and theory of ecosystems or rationalistic and romantic approaches to nature. And although taken up by neoliberals as an argument against socialist economy, this paradox was in fact never resolved. On the contrary, to counter ecological criticism, neoliberals questioned a holistic view of the world, which implied that incessant economic growth led to ecological problems due to its need for an ever-increasing input of energy, and posited environmental problems as a firmly social rather than a natural phenomenon.[44] Indeed, the continued belief in growth was,

---

[43] Kate Soper, *What Is Nature?: Culture, Politics and the Non-Human* (Oxford: Blackwell, 1995).
[44] In the history of economic thought, the natural and the social constituted one of the key metaphors for social scientists, and particularly economists, who made different claims about both depending on whether the relationship between the two was seen as identical, disjunct, or otherwise jointly constructed. Philip Mirowski, ed., *Natural Images in Economic Thought: Markets Read in Tooth and Claw* (Cambridge: Cambridge University Press, 1994), 11.

in terms of environmental ideas, ultimately the decisive continuity between state socialism and neoliberalism, but to understand how this continuity was overshadowed by a sense of change, it is necessary to describe what neoliberals had in common with environmental critics.

The broad coalition of anti-socialist views informed by an awareness of ecological crisis was made possible by the multiple meanings given to ecology in the 1980s. Whereas ecologists promoted a holistic view of the world, a common understanding of environmental problems still operated with the idea of 'nature' as the opposite of 'technical civilisation'. Liberal dissidents were informed mainly by phenomenology and the concept of human rights, linking environmentalism with a philosophical, moral, and political opposition to state socialism. Referring to ecology, they identified technical rationality as the main problem of state socialism. As this dissertation will demonstrate, these tensions between objective rationality and subjective emotions or between technocratic governance and individual life were also addressed in late socialist culture, but only after 1989 became explicitly anti-socialist. Around that time, neoliberals presented an epistemological argument: whereas socialism allegedly falsely believed in the ability of technocratic reason to govern from one centre, neoliberalism proposed that economy was a sphere that could not be simply grasped by reason and, on the contrary, was based on the idea of a spontaneous order that had been ruined by overconfident technocrats. The discourse of ecological crisis was therefore used by neoliberals as evidence of technocratic failures.

Environmentalism was therefore closely connected with the notion of technocracy as well as the meanings formed around technology. Just as the concept of 'nature' did not imply only material conditions, so the concept of 'technology' or 'the technical' (*technika*) was often associated with rationality, science, and progress but also social alienation and a loss of human

contact with nature.[45] Phrases such as 'technical civilisation' (*technická civilizace*) signified an era permeated by machines and relying on expert, technical knowledge. Socialists by default celebrated 'rational', technocratic management, in contrast with the anti-socialist critique of technocracy as an alienating political system that was supposedly destroying both the natural world and humanity.[46] Critics came to see all things technical as an alienating mechanism, a material representation of hierarchical social forces and a barrier between humanity and nature. As shown in this dissertation, even late socialist discourses took these critiques somewhat into account by shifting the emphasis from the central role of technocrats to the value of subjective experience, lay knowledge, individual behavioural change, and imperfect present in contrast to a utopian technocratic future.

Technocracy was a divisive idea as early as the 1960s because of doubts about the ability of experts to govern society and fears about its impact on human character.[47] Vítězslav Sommer, whose works are among the most important for the Czech history of technocracy, understands technocracy as a form of governance which depends on scientific methods and expert control.[48] Sommer uses that definition to talk about technocratic socialism as a specific form of governance and a legitimation narrative, rooted in the political debates of the 1960s and characteristic of socialist Czechoslovakia in the 1970s and 1980s. The idea itself had, of

---

[45] For a historical survey of the concept of technology, see: David E. Nye, *Technology Matters: Questions to Live With* (Cambridge, Mass.: MIT, 2006), 1–16.

[46] More generally, Marxism associated technological and social evolution, assuming that through their labour and technology, humans were transforming ('humanising') nature, which was understood as a material precondition of their development. Paul Burkett, *Marx and Nature: A Red and Green Perspective* (Basingstoke: Macmillan, 1999); John Bellamy Foster, *Marx's Ecology: Materialism and Nature* (New York: Monthly Review Press, 2000); John Bellamy Foster, *The Return of Nature: Socialism and Ecology* (New York: Monthly Review Press, 2020).

[47] Historians of state socialism have lately been inspired by older accounts of technocrats' importance in the Soviet Union as well as works on the role of expertise in contemporary societies; see the return to a 'forgotten debate on Soviet technocracy': Rindzevičiūtė, *The Power of Systems*, 16. Examples of older works include: Erik P. Hoffmann, *Technocratic Socialism: The Soviet Union in the Advanced Industrial Era*, Duke Press Policy Studies (Durham, N.C: Duke University Press, 1985); Frank Fischer, *Technocracy and the Politics of Expertise* (Newbury Park: Sage, 1990).

[48] Vítězslav Sommer, *Řídit Socialismus Jako Firmu : Technokratické Vládnutí v Československu, 1956-1989* (Praha: Ústav pro soudobé dějiny AV ČR, 2019), 5.

course, longer history; technocracy was central to ideas about governing the world in the 19th and early 20th century.[49] However, in the 1960s, as Sommer has put it and as others have shown, Czechoslovak debates over the ideal form of socialism were characterised by a tension between democratic and technocratic tendencies.[50] While some intellectuals envisioned a radically democratic, almost anarchist polis, others sought to govern the world in a scientific manner to ensure rapid technological development in the name of human progress. The Marxist idea of a 'scientific-technological revolution' was a vision a world governed by experts, who steer technological advancement towards human progress. This idea, which resonated strongly in Czechoslovakia, linked the socialist debates with the Western debates on postindustrial society and the role of expertise. As Gil Eyal has asserted, the rise of expertise as a discourse in the 1960s was symptomatic not simply of experts' increased social relevance but of the very uncertainty around who they were and what their role in society was.[51] In the Czech case, the tensions between humanistic and technocratic approaches to the Marxist progress remained an issue throughout late socialism but, as this dissertation shows, whereas socialists attempted to resolve them, their critics considered them unreconcilable. In essence, whereas state socialism was built on the idea of technocracy, the liberalism of the 1990s was founded on the repudiation of technocratic socialism.

Although there was a conflict between socialist and liberal views of technocracy, the shift in the evaluation of technocracy was in fact gradual. In the late 1980s, the discourses on technocracy differed from the initial Marxist dilemma of the 1960s between humanizing and alienating effects of technocracy in seeking a different epistemological and, ultimately,

---

[49] See also studies on Czech technocracy in the first half of the 20th century: Emilie Těšínská and Jan Janko, eds., *Technokracie v Českých Zemích (1900-1950)* (Praha: Archiv Akademie věd České republiky, 1999).
[50] Sommer, *Řídit Socialismus Jako Firmu*, 6. See also, for instance: Matyáš Křížkovský, Michael Polák, and Ondřej Slačálek, 'The Anti-Authoritarianism of the Movement of Revolutionary Youth?: Three Contextualisations', *Kontradikce* 5, no. 2 (2021): 31–55.
[51] Gil Eyal, *The Crisis of Expertise* (Cambridge: Polity, 2019).

political order. The attack on technical knowledge held by technocrats – technology as 'knowing how' – was made not against knowledge as such, but in favour of different kinds of knowledge, those derived from experience and practice, and constituting wisdom or mystical insight.[52] The dissidents, influenced by phenomenology, brought up the question of authentic social relations, without power imbalances and knowledge hierarchies, and unmediated experience of the world. In that view, even instrumentalising nature was the result of a technical way of thinking, which, applied to political matters, engendered technocracy. Besides, the experts were themselves reconsidering the idea of technocratic control in favour of liberal ideas of governance. To understand the shift away from technocracy, this dissertation explores ecologists' increasing doubt about a prevailing mechanistic approach towards nature and their desire to share responsibility with laypeople, which was bolstered by the media's praise of ordinary people's knowledge as opposed to the perceived incompetence of technocrats.

This dissertation is not a conceptual history of environment and technocracy, but a history of meeting points between environmental discourses and various meanings given to technocracy. Although late socialist culture often aimed to harmonise the contradictions between technocracy and the environment, its representation of technocratic failures eventually fed into an intellectual rejection of socialist technocracy after 1989. The different anti-technocratic discourses of the era – whether popular images of environmental decline, phenomenological criticisms of alienation and the advocacy of 'authenticity', or Hayekian critiques of collectivism and planning in the name of the markets – agreed that ecological crisis was a sign that socialist management failed. Neoliberals, whose core idea was a refusal of the figure of a planner in favour of a self-regulating market, mobilised the existing anti-technocratic images for their own anti-socialist agenda. Therefore, while in late socialist culture, technocratic neglect was mostly considered an isolated failing of individuals or a

[52] Cf. Peter Burke, *What Is the History of Knowledge?* (Cambridge: Polity Press, 2016), 7–9.

particular fault of an otherwise functioning system, anti-socialist critics saw it as a symptom of a systemic failure. The multiple meanings given to technocracy and the fact that a 'technocrat' was, in different cases, an engineer, a planner, a bureaucrat, a factory manager or even any communist in general, was what made these sentiments so effective.

Methods and Sources

One of the primary goals of this dissertation is to explore how language that developed under state socialism became a way to criticise that very system. For this purpose, the dissertation combines the methods of cultural and intellectual history. To be more precise, I draw inspiration from the historiography of state socialism that studies cultural meaning, environmental history of ideas that explores the interplay between the environmental and the political, and sociology of expertise that brings to fore the interactions between experts and broader society. The chosen methods correspond to the different levels of analysis, including the media as well as expert and political discourses. Bringing these together will also inevitably require accounting for both transnational transfers and the specificities of the Czech case. To achieve this, the dissertation employs a variety of sources, from television production materials to the works of experts and political thought and brings together cultural sentiments and intellectual discourses.

Most historians of socialism have abandoned earlier totalitarian perspectives in favour of asking what meanings individual actors and parts of society gave to socialist politics and life.[53] To go beyond the binary of consent and opposition, many historians have suggested the need to study the socialist 'world of meaning' (*Sinnwelt*).[54] Some study the everyday history

[53] The seminal work focused on the Soviet Union in this regard was: Michael Geyer and Sheila Fitzpatrick, *Beyond Totalitarianism: Stalinism and Nazism Compared* (New York: Cambridge University Press, 2008).

[54] Thomas Lindenberger and Zentrum für Zeithistorische Forschung Potsdam, *Herrschaft Und Eigen-Sinn in Der Diktatur : Studien Zur Gesellschaftsgeschichte Der DDR* (Köln: Böhlau, 1999); Jarausch, *Dictatorship as Experience*. Apart from taking loose inspiration from revisionist turn in Soviet history and French studies of power relations (Foucault, Bourdieu), the German historiography was mainly based on history of everyday life (*Alltagsgeschichte*): Alf Lüdtke, *Eigen-Sinn: Fabrikalltag,*

of common people, while others focus on the symbolic realm.[55] Martin Sabrow, for instance, urges us to 'reconstruct the symbolic representations such as media, literature, philosophy, and ideology' to understand the 'limits of the sayable'.[56] Following that approach, I ask in the dissertation how different people repurposed discourse, within given discursive constraints, in the form of either expert theories or media images, to pursue their goals.[57]

In this regard, television is a very useful source that has been mostly studied in isolation from intellectual history. Studying socialist television has proven to be a suitable avenue for showing a world of meaning beyond existing binaries of official and unofficial culture and histories of secret police and dissent.[58] Television was foremost a tool for the implementation of socialist political culture and a means of communication between intellectuals and socialist citizens.[59] It was the latest mass medium, combining the powers of film and radio, for the young and the old and for families who came together in the evening to watch whatever was on.[60] Yet, as Anikó Imre argues, socialist television was situated 'in the intersection of the public and domestic spheres, between top-down attempts at influencing viewers and bottom-up

---

Arbeitererfahrungen und Politik vom Kaiserreich bis in den Faschismus (Hamburg: Ergebnisse Verlag, 1993). See also a review essay: Sandrine Kott, 'Everyday Communism: New Social History of the German Democratic Republic', *Contemporary European History* 13, no. 2 (May 2004): 233–247. For reception in Czech historiography, see: Michal Kopeček and Pavel Kolář, 'Projekt „Socialistická diktatura jako myšlenkový svět"', *Soudobé dějiny* XIX, no. 2 (2012): 189–195.

[55] Examples of this approach from Czech history include: Petr Roubal, *Spartakiads: The Politics of Physical Culture in Communist Czechoslovakia* (Prague: Karolinum Press, 2020); Spurný, *Making the Most of Tomorrow*.

[56] Celia Donert, Ana Kladnik, and Martin Sabrow, *Making Sense of Dictatorship: Domination and Everyday Life in East Central Europe after 1945* (Budapest: Central European University Press, 2022), 25.

[57] Literary historian Petr Andreas alerts us to the discursive practices under state socialism, in which the pragmatic use of ideological language served to legitimise one's goals. Petr Andreas, 'Polistopadový Konsensus a Porozumění Historii', *Kontradikce* 1, no. 1 (2017): 13.

[58] Paulina Bren, *The Greengrocer and His TV: The Culture of Communism after the 1968 Prague Spring* (Ithaca, N.Y.: Cornell University Press, 2010), 7–8; Heather L. Gumbert, *Envisioning Socialism: Television and the Cold War in the German Democratic Republic* (Ann Arbor: University of Michigan Press, 2014), 1.

[59] Ivan Tesár, ed., *Televizní Výkladový Slovník*, vol. 2. K-P (Praha: Československá televize, 1978), 236–237.

[60] In Czechoslovakia, the second channel began broadcasting in 1970, so viewers were left with little or no choice of what to watch, yet the practice of watching television was widespread. '[By the mid-1970s, nine out of ten families in Czechoslovakia owned a television set. On average, television reached 65.6 percent of its potential audience.' Bren, *The Greengrocer and His TV*, 112.

demands for entertainment'.[61] Indeed, popular culture theorists argue that, given the need to be 'relevant to the immediate social situation', a popular work contains 'both the forces of domination and the opportunities to speak against them'.[62] Building on the studies of socialist television, this dissertation enriches these debates by exploring both the television content and accompanying production documentation in parallel with intellectual history.

Therefore, rather than seeking to replace an analysis of the political use of language, the approach used here helps to account for its complexity: the legitimising and the subversive often appear as two sides of the same coin. Alexei Yurchak has provided perhaps the most influential definition of what he calls authoritative discourse: he sees ideological language under late socialism as stabilised and predictable, performative and allowing for creation of new meanings.[63] But rather than focusing on the collapse of the authoritative discourse, as many studies have done, this dissertation follows the interaction between the authoritative and the unorthodox, the ways in which those two were balanced, and the continuing influence of initially heterodox discourses after 1989.[64] In concrete terms, it examines how the imperfections of technocracy, which were exposed under late socialism as part of an ideologically-inspired effort to make improvements to the system, were reframed as claims against that ideology.

Looking at different types of sources side by side, this dissertation shows the relevance of the popular media to an analysis of the long transformation of state socialism as something that reshaped, and sometimes even mocked, rather than just transmitted what had been

---

61 Anikó Imre, *TV Socialism* (Durham: Duke University Press, 2016), 4.
62 John Fiske, *Understanding Popular Culture* (Boston: Unwin Hyman, 1989), 21. In her study of Czechoslovak socialist television, Paulina Bren suggests that television serials in particular did not simply seed propaganda but rather forged identification, and the 1970s communist politicians were aware of this more subtle function: Bren, *The Greengrocer and His TV*, 123–125.
63 Yurchak was inspired by Mikhail Bakhtin's literary theory. Alexei Yurchak, *Everything Was Forever, until It Was No More: The Last Soviet Generation* (Princeton: Princeton University Press, 2005), 14–15, 37.
64 For study of the breakup of authoritative discourse in Czechoslovakia, Michal Pullmann, *Konec experimentu: přestavba a pád komunismu v Československu* (Praha: Scriptorium, 2011).

conceived elsewhere – in experts' offices and, generally, in written form. Therefore, the following chapters will examine, among other things, various attempts to explain complicated scientific ideas in a simple, often entertaining way, or to mock that very expert language. But even more importantly, I hope to show that it is possible to study discourse as something that is formed beyond thought-collectives: one does not have to read Norbert Weiner to imagine a cybernetic future or Friedrich Hayek to believe in the power of the markets.[65] What was lost and gained in the process of recreating certain ideas for the screen? Moreover, how were certain ideas and images repurposed in light of new political development?

This dissertation not only draws from the cultural history of state socialism, but also takes inspiration from environmental history of ideas, a productive combination of intellectual and environmental history. This approach starts from the premise that environmental issues and questions of political order are closely intertwined, and that one cannot be comprehended without the other. I therefore follow a line of inquiry Pierre Charbonnier calls an 'environmental history of ideas', rather than a 'history of environmental ideas', as a way of analysing a wide variety of concepts and beliefs and the ways in which they relate the natural and the social.[66] As Julia Nordblad and Troy Vettese contend, one of the ways environmental history can contribute to our understanding of the environmental crisis is by exposing 'the way in which knowledge about environmental disturbances has been produced, communicated and distorted in our time'.[67] Here I turn attention to ideas and images of technology and nature as a way of analysing how state socialism was changing in the light of the ecological crisis, ultimately resulting in a new neoliberal order. Apart from exploring state socialist attitudes

---

[65] On 'neoliberal thought-collective', see: Philip Mirowski and Dieter Plehwe, *The Road from Mont Pèlerin: The Making of the Neoliberal Thought Collective* (Cambridge, Mass.: Harvard University Press, 2009).

[66] Pierre Charbonnier, *Affluence and Freedom: An Environmental History of Political Ideas* (Cambridge: Polity Press, 2021), 15.

[67] Julia Nordblad and Troy Vettese, 'European Histories of the Economic and Environmental: Introduction', *Contemporary European History* 31, no. 4 (2022): 487.

towards nature, I aim to historicise the initial promise of postsocialist markets to profoundly alter the relations between nature and humanity after 1989.

To bring together expert and popular discourses on environmentalism, I explore expertise as a social construction and a particular kind of intervention. As Gil Eyal and Larissa Buchholz argue, sociologists have recently challenged the assumption that ideas should be seen as a product of a particular social type (the 'intellectual') in favour of studying how knowledge becomes public through interventions of various 'experts' in the public sphere.[68] They emphasise the various forms of public engagement as well as different social roles those actors adopt along the way. They suggest it is necessary to study the multiplicity of knowledge, stemming from the way it is produced in and for the public. Following that approach, this dissertation studies how expert discourses changed into an accessible form as well as how they blended with lay understandings of the problem. It studies, among other things, how Marxist philosophers collaborated with television to portray the rise of expertise as a driving force of history, how ecologists on television expressed environmental principles in line with late socialist values, or how after 1989 an originally expert discourse of ecological systems became a political language with which to criticise the socialist past.

Clearly, despite a focus on Czech sources, the dissertation often refers to transnational trends. Working mainly with expert discourses and mass media, it certainly does not capture the regional breadth of Czechoslovakia, nor does it address the specificities of Slovak history and the country's federal character. Becoming a federation in 1968, the country dissolved into two in 1992. While much of the television production was broadcast federally, it was produced by Czech cultural elites, and this dissertation does not explore the archives of the Slovak Television and Radio, formerly the Bratislava studios of the federal media. The intellectual

[68] Gil Eyal and Larissa Buchholz, 'From the Sociology of Intellectuals to the Sociology of Interventions', *Annual Review of Sociology* 36 (2010): 117–137.

discourses were also dominated by the Czechs, who often universalised their experience at the expense of the Slovak and other perspectives.[69] The different trajectory of Slovak elites, and, at least hypothetically, Slovak culture, resulted in a different course of postsocialist transformation. Most importantly, neoliberal reforms in Slovakia did not gain nearly as much political support as in the Czech case. Therefore, this dissertation does not claim to account for differences between the Czech and the Slovak cases, as this would be beyond its scope and would diverge from one of the core research questions of the confluence of environmentalism and neoliberalism in the Czech postsocialist transformation.

Instead of studying the differences between Czech and Slovak transformations, it deals with the nexus of the national and the transnational. As Patricia Clavin has proposed, transnational actors and ideas both give shape to the nation state and make existing national actors and ideas disappear.[70] So although the Czech archives are at the core of this research, I also examine the ways in which seemingly country-specific ideas and images move and fuse with those from other places. The dissertation discusses both domestication of transnational ideas, such as was the case of cybernetics and neoliberal thought, and the spread of domestic ideas across borders, such as was the case of the export of television comedies.

Reflecting shifting understandings of different repertoires and discourses in late socialism and postsocialism, I use a variety of sources: mass media, printed material, and archival documents. First, I have examined media sources, mainly those found in the Archive and Programme Collections of Czech Television. Their rich database proved to be a fount of untapped sources for topics so far understood mostly through the lens of expert discourse, and Czechoslovak Television programmes thus constitute the core of the dissertation. I also use

---

[69] See the case of Czech Marxist humanists: Jan Mervart, *'Rehabilitovat Marxe!': Československá stranická inteligence a myšlení poststalinské modernity* (Praha: Nakladatelství Lidové noviny, 2020), 197–215.

[70] Patricia Clavin, 'Defining Transnationalism', *Contemporary European History* 14, no. 4 (2005): 421–439.

sound recordings from the Czech Radio Archives, mainly to look at late socialist representations of nature writing in the second chapter and the understanding of ecological crisis in 1989 in the fourth chapter. I complement the television and radio material with press coverage (although I do not cover it exhaustively, partly because it has been the most used source and partly because it would be beyond the scope of this research). Second, I have examined archival records, both institutional and personal files, including the National Film Archive, the Archive of the Museum of Czech Literature, and the Security Services Archive. This has allowed me to understand the creation and production process, and hence the discursive limits to cultural production. Third, I study written published sources of experts and intellectuals, where I give preference to popular writings over specialist literature.

Chapter Outline

The dissertation consists of four chapters, an introduction, and a conclusion. The chapters are both thematic and chronological. While each starts at a later point, their timespans partly overlap. Each chapter focuses on a different set of actors and discourses, following the changing understandings and usages of environmental and anti-technocratic discourses.

The first chapter focuses on the rise of anti-technocratic sentiments in the cultural sphere in the 1960s and the growing importance of environmental images as a shorthand for technocratic failures in the 1980s. It challenges the oversimplified view of the 1960s as an era of optimism about the powers of technology, which was supposedly only later superseded by new anxieties. The years between the 1960s and 1980s saw changing ideas of what was wrong with technological progress, from humanistic fears about the loss of human character in the wake of the rise of cybernetics in the 1960s to ecological themes in the 1980s.

In the 1960s, the vision of a cybernetic future brought about a new rift between experts and laypeople. The proponents of the scientific-technological revolution, which was a communist vision of a postindustrial society that became particularly attractive to many Prague

intellectuals, constructed with the help of television producers a particular image of an expert as one who held obscure knowledge unavailable to others. In that view, experts equipped by a new, cybernetic way of thinking would deliver progress to the rest of society. Cybernetics, therefore, on the one hand, presented a promise of a technologically advanced future, but, on the other, became a shorthand for a vision of a society stripped of its agency, or even its humanity.

The downsides of a 'technical civilisation' were a common theme of fiction, which ranged from inherently optimistic, comic portrayals where the conflict between technology and humanity was resolved to the benefit of all and rather pessimistic, existentialist pieces that were sceptical of the linking of technology and progress. While the wholly pessimistic accounts disappeared from cinemas and television screens in the 1970s, when anti-reformist communists came to power and used the idea of the scientific-technological revolution as their legitimation tool, optimistic comedies that satirised science and technology continued to be made throughout the late socialist period. However, despite their optimistic tone, these comedies still expressed anxieties about the negative impacts of a technocratic approach to nature and human life, and it was their ambivalence that made them both a convenient legitimation tool and a reservoir of potentially subversive imagery. They portrayed the imperfections of present-day science and technology as a way to allow for a humanistic, lay approach to reality and its problems. In the 1980s in particular, these comedies presented environmental problems as the result of an alienated technocracy.

The second chapter studies the ways in which late socialist culture attempted to reconcile socialist progress with environmentalist concerns, at a time when environmentalism posed a challenge to socialist optimism. The chapter shows that the ecological crisis in Czechoslovakia was a matter of concern not just for the political opponents of the regime or for the state's technocrats, who took a rationalist approach to environmentalism, supposedly

uninterested in human feelings, but also for the period's media and literature. Analysis of the reception of *Silent Spring* and the reflection of the debates around environmental limits to economic growth in the 1970s demonstrates that socialist optimism about environmental issues was often a matter of discursive framing rather than content. In late socialist thought and literature, there were attempts to reconcile an ecological vision of the future and the socialist value of rising material wellbeing.

While socialist philosophers wanted to bring together ideas about Marxist progress and new holistic conceptions of the world as an ecological system, nature-writing turned to a romantic appreciation of the lost past, including the natural landscape remade by technological progress. That literature expressed sorrow over loss of the old while still giving primacy to joy over progress. Such 'ecological techno-optimism' eventually came to focus on nuclear energy as the proposed solution to the ecological crisis, while also stressing the values of family life and material comfort. This conception opposed both a 'pessimistic' Western ecology and the 1960s reformists at home; writers and literary critics made the ecological turn a part of a late socialist celebration of life, contrasting it with those whose visions were allegedly too apocalyptic and anti-socialist. The late socialist optimistic discourse around the environment and technocracy therefore reconciled environmental claims about the need to address the harmful impacts of technology on nature and a continued belief in the need for technocratic governance.

Nevertheless, as the third chapter shows, by the 1980s, 'ecology' had acquired various meanings, from scientific concerns about ecosystems to journalistic criticisms of technocrats for harming the local environment, to filmmakers' idealised portrayals of an authentic life free from 'technical civilisation'. Rather than an attempt to tear down the regime, environmental discourses were initially used to argue for a change within the existing political order. But while for ecologists the need for change stemmed from their understanding of nature and

people as one whole, non-experts often retained a dualistic view of the world divided between nature and technical civilisation, where one could escape from the latter to the former.

What these conceptions had in common was a tension between behavioural change and systemic reform as a solution to environmental problems. Ecologists, with their transnational contacts in bodies such as the United Nations, endeavoured to promote environmental education at schools and on television, resulting in a peculiar mixture of global environmental principles and domestic socialist values. Journalists, meanwhile, focused on local issues and associated individual wrongdoings with a figure of an incompetent technocrat. Environmental journalism and visual culture contrasted laypeople's wisdom and technocratic incompetence, as did the comedies of that era. Environmentalists, on the one hand, appealed to existing late socialist values, such as health and childhood, but, on the other, supported potentially subversive anti-technocratic sentiments. What began as an ecological discourse informed by socialist progress, philosophy, and values, paved the way for a turn against socialist technocracy.

The fourth chapter considers the points of convergence between environmentalism and neoliberalism, and the way in which neoliberals mobilised existing anti-technocratic sentiments against environmentalists. Czech economists were becoming acquainted with neoliberal thought as early as the 1980s and considered the issue of ecological crisis through the lens of what they saw as 'standard' Western economy. They claimed that the inefficiency of socialist economy, governed by the imaginary central planner, led to a depletion of resources and environmental collapse that would not happen under the free market. Rather than a matter of policy, neoliberals argued that the problem reflected an unattainable socialist fixation on the rule of reason, which supposedly disregarded the fact that human knowledge was always an imperfect reflection of self-regulating economic processes.

This neoliberal view found broad support among postsocialist liberals, who saw state socialism as a cautionary tale about the detrimental effect of technocratic rationality on both nature and humans and sought a political order that would replace technocratic structures with an 'authentic' relation between humans and their environment. In that context, former socialist ecological experts who became active in the politics of the 1990s used the concepts they acquired as scientists – that of cybernetic feedback or the tragedy of commons – to criticise state socialism, turning expert discourse into a moral language of liberalism; while cybernetic language was now used to criticise the absence of democratic mechanisms and disregard for environmental problems under state socialism, the idea of the tragedy of commons was deployed to prove the superiority of private over state property. Supporting markets to a varying degree, either as a vital part of democracy or a downright solution to environmental problems, these ecologists hoped that a moral transformation of the population would become the main guide on the way out of what they saw as intertwined moral and ecological crises. When it comes to popular media, previously ambiguous images of environmental decline and incompetent technocrats from the 1980s were given an explicit anti-communist meaning, helping to frame the ecological crisis as the moral crisis of state socialism.

Meanwhile, neoliberals framed the ecological crisis as a 'social' rather than a 'natural' problem, challenging the ecological view of the world as one interconnected whole and defending economic expertise as superior to ecological expertise. They portrayed neoliberalism as a continuation of the anti-state and anti-bureaucratic tradition, evoking various cultural references going all the way back to the Czech nationalist struggle against the Austrian empire. Moreover, in the early 1990s, neoliberals began to accuse environmentalists of being the new 'socialist technocrats', discrediting their political efforts. This neoliberal anti-environmentalism thus exploited the arguments and images that environmentalists had previously used to challenge state socialism.

The dissertation concludes that both state socialism and neoliberalism exploited anti-technocratic sentiments and environmental ideas for their own purposes. It argues that analysing the connections between political, expert, and media discourses helps us to understand the intellectual and cultural dynamics of state socialism more broadly, while explaining the role of late socialist ideas and images of nature and technology in the neoliberal transformation.

Chapter One. From Ploughs to Computers: Technocracy and Socialist Comedy

In 2022, the Karlín Theatre in Prague premiered a musical *Sun, Hay, Strawberries* about a South Bohemian collective farm in Hoštice whose peaceful life is interrupted by an ambitious student, Šimon Plánička. Plánička, of Prague's University of Agriculture, comes to try out an experiment on the 'milk yield of cows in relation to the culture of their environment'.[71] The people in the village react sceptically to Plánička's 'applied scientific' proposal to give cows headphones and play them music. Most care more about their life outside of work, far away from the planners' offices, rather than about rationalising agricultural production. With a hyperbolic scene featuring rapping dancers dressed as cows and a video projection of firefighters hosing milk and ending with images of the Milky Way, the 2022 musical is a pastiche of a 1983 film of the same name that has since become one of the most watched Czech films ever.[72] The original film satirised a longstanding expert discourse of automation and rationalisation dubbed the 'scientific-technological revolution' in political language that had roots in the philosophy of 1960s Marxist technological optimists.

This chapter places philosophical debates about the scientific-technological revolution in the context of popular science, film, and television. It would be wrong to conceptualise this, however, in terms of a linear story of growing resignation resulting in the mockery of earlier optimism, as the initial example might suggest. Around the time when *Sun, Hay, Strawberries* was shot, there was an increased interest in the use of computer technology for economic

---

[71] *Slunce, seno, jahody*, dir. Antonín Procházka, The Karlin Theatre, Prague, 24 Jun 2022.
[72] *Slunce, seno, jahody* (dir. Zdeněk Troška, Czechoslovakia, 1983). (The film is a part of a trilogy; the last part, *Sun, Hay, Eroticism*, premiered in 1991, 'has been repeated across several television channels more than 160 times since 1997 (i.e., since electronic ratings were first collected in the Czech Republic)', more than any other film, and has been watched by Czech ritualistically many times, see: Veronika Pehe, 'Privatization Comedies as Media of Memory of the Czech(Oslovak) Economic Transformation', in *Remembering the Neoliberal Turn: Economic Change and Collective Memory in Eastern Europe after 1989*, ed. Veronika Pehe and Joanna Wawrzyniak (London: Routledge, 2023), 205.

growth, in agriculture and other fields.[73] And, conversely, already in 1966, just a year after the use of computer modelling on managing milk yields was presented on television (Fig. 1.1), the film *Who Wants to Kill Jessie?* features a scientist, Doctor Beránková, who manipulates cows' dreams with a new drug (Fig. 1.2). The scientific experiment triggers a debate about whether scientists have the right to control people's dreams as well. Promising to improve their mental stability and productivity, Beránková asserts that scientists know what is good for people and initiates a social-political transformation.[74] As might be expected, the experiment goes terribly wrong. The film expressed, in a satiric fashion, the big questions of the 1960s, from the role of scientists in society to the impact of their inventions on humanity. So rather than a case of increasing scepticism towards science and technology, the cultural history of technocratic socialism appeared to be a never-ending story of inner contradictions whose evolution from the 1960s to the 1980s is traced in this chapter.

[73] See the first episode of the 1985 television programme about the 'electronation' of the Czechoslovak economy: APFCT, IDEC 85 430 21717, *Majáky budoucího věku*, ep. 1., Czechoslovak Television (1985), 10:40–14:30. See also a film about a fictional collective farm that combined entrepreneurship and modern technology, evoking the 'Slušovice miracle' of an existing farm in South Moravia: *Hauři* (dir. Július Matula, Czechoslovakia, 1987). On the Slušovice farm, the could inspire also the film *Sun, Hay, Strawberries*, see: Martin Jemelka, '"The Miracle of Slušovice". The Municipality and the United Cooperative Farm–Slušovice Agrocombine as the Pilgrimage Site of the Czechoslovak Consumerism at the Dawn of the Socialist State Era.', *Przegląd Historyczny* 109, no. 4 (2018): 739–756.

[74] *Kdo chce zabít Jessie?* (dir. Václav Vorlíček, Czechoslovakia, 1966), 9:01–12:41.



Figure 1.1. The host of the television programme *Cybernetics* (1965) Jiří Hurta and Antonín Prokop, an invited expert, discuss the application of cybernetic modelling in agriculture.

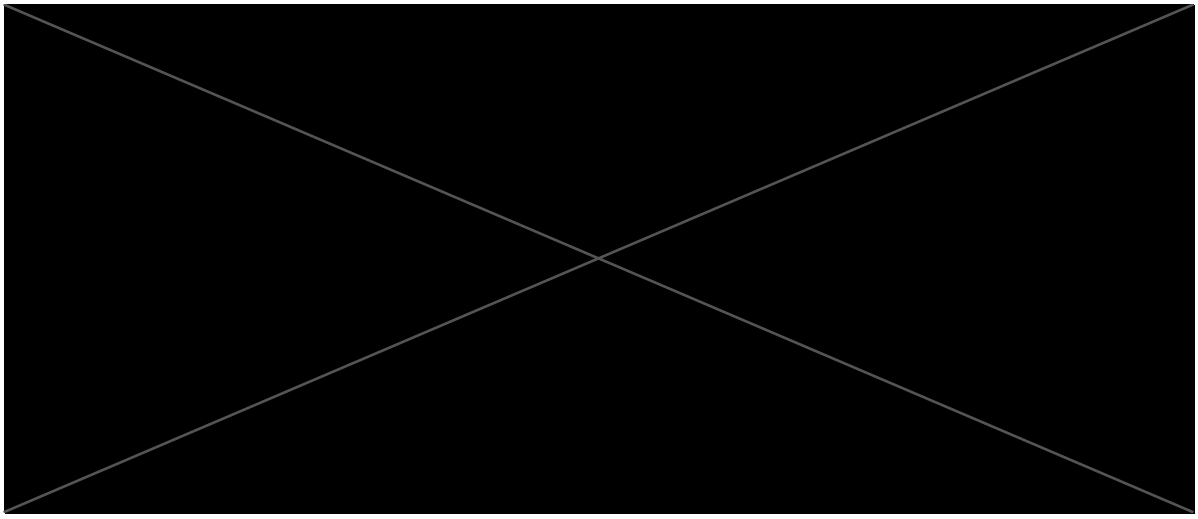


Figure 1.2. The cow in *Who Wants to Kill Jessie?* (1966) dreams of relaxing in a hammock, orchestra playing, after being given a dose of an experimental anti-nightmare drug.

I argue that the tensions over technocracy that developed in the 1960s continued in late socialist culture in its optimistic form, as a way to both legitimise and criticise 'technocratic

socialism'. The 1960s brought a new vision of a future greatly influenced by cybernetics and the theory of a scientific-technological revolution that raised fears about human alienation in an overly technological world. While Marxist technocrats saw in cybernetics a revolutionary tool and a new way of thinking, for filmmakers it became a theme to popularise and satirise. Cybernetics also created a new differentiation between experts and laypeople that was, at the same time, ridiculed and challenged. While political developments after 1968 meant that certain forms of criticism were deemed as too pessimistic, a more optimistic satire of technical civilisation nonetheless developed, which was supposed to act as a motivation for society's improvement. Yet it also appeared to have an unquestionable role in preserving scepticism towards technocracy, as those works of popular media humorously distanced themselves from the authoritative discourse. The genre of comedy, which in the 1960s voiced humanistic criticism of technological progress, continued to show the inadequacies of technocracy, and particularly in the 1980s it thematised ecology. Importantly, that scepticism was a part of late socialist ideology, as it was supposed to evidence the superiority of the imperfect socialist present over distant utopias.

Many scholars have pointed out that capitalist and state socialist societies shared a common vision of progress, but we actually know very little about the articulation of critical views of those visions under state socialism.[75] As many have argued, economic growth was the common goal of both systems, for which they competed against each other; their visions were ingrained not only in their economic doctrines but also ideologies and imaginaries from the space race to consumerism. Those visions were rooted in the intellectual and scientific

[75] Some have argued that the social science theories about modernisation and post-industrial society served as an ideology that gave the Western countries a new reason to intervene from their economically superior position: Michael E. Latham, *Modernization as Ideology: American Social Science and 'Nation Building' in the Kennedy Era* (Chapel Hill: University of North Carolina Press, 2000); Kristoffer Chelsom Vogt, 'The Post-Industrial Society: From Utopia to Ideology', *Work, Employment and Society* 30, no. 2 (2016): 366–376.

discourse of modernity, with its emphasis on productivity, innovation and progress.[76] From the 1960s, Western optimism was characterised by the idea of a 'postindustrial society': as Howard Brick has argued, this was a vision of new forms of community emerging out of an economic transformation from industrial to knowledge production; and as Andrew Sanchez has asserted, this shared vision formed around an idea that cybernetics would lead to unprecedented automation, compelling socialist countries to distinguish themselves ideologically as heralds of workless communist utopia, which they contrasted with anti-capitalist portrayals of the impoverished unemployed.[77] In socialist countries, and particularly in Czechoslovakia, this took a peculiar form of the so-called scientific-technological revolution, around which hopes and criticisms of technocracy were formed.

While existing studies of state socialism in Eastern Europe have examined technocracy as a mode of governance, this chapter turns attention to the significance of television culture focusing on popular science and speculative fiction. Recent research has highlighted the continuities between the post-Stalinist and late socialist eras, traditionally separated by the events of 1968 as the end of political reforms in Czechoslovakia and the beginning of consolidation after the Warsaw Pact invasion. Vítězslav Sommer has argued that after 1968 technocracy was used by the new political elites as part of their consolidation efforts; the late

---

[76] David C. Engerman, Nils Gilma, and Mark H. Haefele, *Staging Growth: Modernization, Development, and the Global Cold War* (Amherst, Mass.: University of Massachusetts Press, 2003); David C. Engerman, 'The Romance of Economic Development and New Histories of the Cold War', *Diplomatic History* 28, no. 1 (2004): 23–54. For an example of competition in progress and its importance for the construction of national narratives, see literature on space race: Asif A. Siddiqi, 'Competing Technologies, National(Ist) Narratives, and Universal Claims: Toward a Global History of Space Exploration', *Technology and Culture* 51, no. 2 (2010): 425–443. On intellectual roots, see: David Carvounas, *Diverging Time: The Politics of Modernity in Kant, Hegel, and Marx* (Lanham, Md.: Lexington Books, 2002).

[77] Howard Brick, 'Optimism of the Mind: Imagining Postindustrial Society in the 1960s and 1970s', *American Quarterly* 44, no. 3 (1992): 350; Andrew Sanchez, 'Cyber-Nations: The Cold War Contest for Cybernetics and Automation in the US, USSR, and Divided Germany' (PhD Thesis, University of Oxford, 2022. Critical works from that period include books from two sociologists, French and American, respectively: Alain Touraine, *The Post-Industrial Society: Tomorrow's Social History: Classes, Conflicts and Culture in the Programmed Society* (New York: Random House, 1971); Daniel Bell, *The Coming of Post-Industrial Society: A Venture in Social Forecasting* (New York: Basic Books, 1973). I discuss Daniel Bell further in this chapter.

socialist technocratic management thus had direct roots in the techno-optimistic thinking of post-Stalinism, although it was stripped of the idea of political emancipation.[78] While there is disagreement about the extent to which late socialist culture was still future-oriented, most scholars agree that late socialism remained less rigidly teleological than the Stalinist era.[79] Yet, Sommer argued that late socialism was still based on faith in the power of modernity with its positive programme of a technocratic future, unlike its 1968 counterpart in Western Europe. It remains, however, to analyse the culture in which experts' technical rationality was said to give legitimacy to state socialism. I suggest that pessimistic accounts did not become more common in the later period nor were not always more critical than optimistic ones – as Sommer has hypothesised.[80] I agree with Sommer that proponents of scientific-technological revolution accommodated their theory to the new political situation after 1968; I posit that, in the same way, the optimistic criticism of technocracy's inadequacies appears to be a political reaction to the 1960s. I find that scepticism was not a new development but persisted from the post-Stalinist era, while attempts were made to create a new positive vision that would incorporate such criticism.

The chapter can also be read as an exploration of Promethean visions of science and technology in Czechoslovakia and their development from the 1960s to the 1980s. The myth of Prometheus, often evoked by Marxist intellectuals at the time, embodied these tensions

---

[78] Sommer, *Řídit Socialismus Jako Firmu*, 7.

[79] Pavel Kolář has emphasised that post-Stalinism differed from the Stalinist utopia in a belief in concrete, practical progress with an element of return to the past, while Jan Mervart has instead emphasised the continued orientation towards the future of the post-Stalinist thought. Pavel Kolář, *Der Poststalinismus: Ideologie und Utopie einer Epoche* (Köln: Böhlau Verlag, 2016); Jan Mervart, *'Rehabilitovat Marxe!': Československá stranická inteligence a myšlení poststalinské modernity* (Praha: Nakladatelství Lidové noviny, 2020); Martin Schulze Wessel, *Der Prager frühling: aufbruch in eine neue welt* (Ditzingen: Reclam, 2018). Similarly, the German historian Stefan Plaggenborg has characterised late socialist temporality as void of futuristic thought, contrasting it with a Stalinism aiming towards the radiant future, whereas Stefan Guth questioned that argument, suggesting that the late Soviet Union dedicated a lot of effort to forecasting, stressing a positive vision of the future: Stefan Plaggenborg, *Experiment Moderne: der sowjetische Weg* (Frankfurt/Main: Campus, 2006); Stefan Guth, 'One Future Only. The Soviet Union in the Age of the Scientific-Technical Revolution', *Journal Of Modern European History* 13, no. 3 (2015): 355–376.

[80] Sommer, *Řídit Socialismus Jako Firmu*, 254n754.

between the positive and negative sides of technology. For Marx, Prometheanism was about the process of the 'humanisation' of nature and the 'naturalisation' of humanity as human-made technology transformed the natural world, but the term was also historically associated with the crude prioritisation of production and the instrumentalisation of the natural world by existing state socialist countries.[81] In European literature, the myth of Prometheus who defies the god Zeus and give the stolen fire to humankind was reiterated many times, and the allegory's power was that it spoke ambiguously about overcoming the limits of the human condition, embodying both forward-looking hope and misery of mortal life.[82] In this chapter, the Promethean motif is associated with a moment when agricultural technology separates humanity from the natural world; in the following chapter, the motif will be evoked in relation to the engineers and builders of an atomic power plant who bring energy to people's homes. As the two chapters explore, there was a shift between an idea of mastery of nature obtainable by all towards a vision of expert control as a guarantee of a comfortable life.

This chapter tells a story of scholars who theorised scientific-technological revolution, documentarists who popularised it, and filmmakers who satirised it in six sections. First, it explores the changing relationship between technology and imagination as well as laypeople's role in history. Second, it examines the goals of scientific-technological revolution as portrayed on television in the 1960s. Third, it considers how filmmakers popularised cybernetics as both a new epistemology and an obscure language accessible only to experts, often relying on evoking emotions rather than understanding. Fourth, it follows the development of speculative fiction from the 1960s to late socialism. In the last two sections, it explores anti-technocratic and ecological discourses in late socialist television serials and films.

Prometheanism under Stalinism and Post-Stalinism

[81] Kate Soper, 'Greening Prometheus: Marxism and Ecology', in *The Greening of Marxism*, by Ted Benton (London: Guilford Press, 1996), 81–99.
[82] See the history of the Promethean myth: Carol Dougherty, *Prometheus* (London: Routledge, 2006).

> Today's modern technology and the discoveries and inventions of various and extraordinary technical and scientific disciplines surprise and amaze us almost daily. Under the impression of the great discoveries of astronautics, astrophysics, cybernetics, biochemistry, biology and other fields, many will perhaps consider the invention of a *ruchadlo* [a new type of plough] negligible. Unsurprisingly. We are amazed by science, penetrating the macroworld of cosmic distances and speeds, revealing the existence of unknown substances in the microworld of the atom and the living cell. From the perspective of current discoveries, the past discoveries lose importance.
>
> – Josef Jungwirth, *Ruchadlo* (1964)

In Rybitví near Pardubice, Czechia, there stands an almost forgotten Monument to a Ploughed Furrow (Fig. 1.3). It is said that in 1827, an invention of a new type of plough by cousins Václav and František Veverkas spread across the region. The cousins, being of humble origins, did not profit from the invention and their idea was allegedly stolen by a German entrepreneur – and became a subject of nationalist struggle for another half century. In 1883, a monument was erected by the Czechs in an attempt to proclaim victory in the dispute. A book published on the occasion described the Veverkas' lives as 'quiet, simple, even unexceptional' – 'our nation's life generally' – and the author thus found it hard to even write their biography.[83] As a mythmaking gesture, it was said that the Veverkas abstained from most distractions offered to them, instead diligently working in the household and attending school. The creative and innovative force of the Czech people was embedded into the narrative of poor, simple men (and barely any women) standing against the German nation.[84] Creativity, innovation and humble origins were recurring motifs readily available to be filled with different ideologies. For instance, a pamphlet published in 1952 reframed this Czech-German struggle as a historical-materialist story in which Veverkas' plough manifested 'the creative force of the working people, the greatest force of our nation'.[85] The story of hardworking countryfolk was

[83] František Vratislav Sova, *Vynálezci ruchadla: slavnostní upomínka Hosp. spolku pro okresy pardubický, holický a přeloučský při odhalení pomníku bratranců Veverků v Pardubicích* (Pardubice: Hospodářský spolek pro okresy pardubický, holický a přeloučský, 1883).
[84] See, for instance: Jan Petrus, *Pro Blaho Lidstva : Osudy Vynálezců* (Praha: Kropáč a Kucharský, 1947).
[85] Oskar Mališ, *Bratranci Veverkové, Vynálezci Moderního Pluhu* (Praha: Osvěta, 1952).

one of many revived by postwar communists in Czechoslovakia, who labelled themselves as the heirs of the national tradition.[86] Accenting the motif of technological innovation, hard work and political resistance also recalled the myth of Prometheus.



Figure 1.3. The Monument to a Ploughed Furrow in Rybitví, Czechia. The plaque says: 'Here the first furrow was ploughed by the cousins Veverkas in 1827'.

To understand the development of technological optimism under state socialism, it is thus first necessary to sketch the relations between technology and imagination in the early years of building communism and the post-Stalinist response.[87] The 1964 pamphlet in Rybitví resurrected a myth of folk invention at times when an image of an expert as the Promethean

[86] Zdeněk Nejedlý, *Komunisté : Dědici Velikých Tradic Českého Národa* (Praha: Český spisovatel, 1951).

[87] The periodisation is, of course, a simplification that says more about how it became a significant historical reference point than about continuities in political and economic discourse that should not be overlooked. Recent scholarship has suggested continuities with the immediate postwar period; and comparative analysis of the Protectorate and Stalinist films has hinted at similar emphasis of productivism and collective work: Christiane Brenner, *'Zwischen Ost und West': tschechische politische Diskurse 1945-1948* (München: Oldenbourg, 2009); Kamil Činátl and Jaroslav Pinkas, *Dějiny ve Filmu : Film ve Výuce Dějepisu* (Praha: Ústav pro studium totalitních režimů, 2014), 148–149.

force of history was more common. In the age of the atom and computer, a plough might seem like a historical curiosity rather than a historic breakthrough. Nevertheless, what the inventors of the plough and cyberneticians had in common, from the perspective of 1964, was their contribution to progress. They made history as geniuses who pushed the humanity towards a better future; the basic narrative structure remained unchanged in the course of a century. But the discourse changed: the confidence of the early 1950s pamphlet was replaced by an apologetic tone of the mid-1960s, as one would more likely hear the media talk about the promises of cybernetics than celebrating folk tradition in the way Stalinist historiography did. It was an era when ordinary people's place in history supposedly changed because they were said to no longer be able to come up with inventions themselves. As Miroslav Král, a philosopher whose work for television will be discussed later in this chapter, put it: in the 'age of science', people could no longer 'participate equally in their own history'; they could not all 'contribute' in the same way to the 'creation of social reality'.[88] Král would explain that, in the Veverkas' age, it was still possible to become the 'carrier of progress' just by applying one's 'common sense', whereas the contemporary era of scientific-technological revolution required high level of expertise unavailable to laypeople.

The Rybitví exhibition has several historical layers, as the conceptions of progress were dramatically changing from the Stalinist to the post-Stalinist and late socialist eras. Such changing views are sometimes obscured by the contemporary view of state socialism as monolithic. The exhibition's narrative works much like the musical *Sun, Hay, Strawberries*, whose comedy relies on multiple distancings from the ideology of scientific-technological revolution. The musical's success largely stands on the postsocialist viewers' practice of watching the 1983 film as *retro*, which only adds to the already satirical character of the film.[89]

---

[88] Miloslav Král, *Věda a Civilizace* (Praha: Svoboda, 1968), 5.

[89] Pehe defines postsocialist *retro* as a 'political rejection of the past and aesthetic indulgence combined with ironic appreciation': Veronika Pehe, *Velvet Retro: Postsocialist Nostalgia and the Politics of Heroism in Czech Popular Culture* (New York: Berghahn Books, 2020), 5.

Similarly, when I visited the monument in 2018, the 1964 booklet was still hanging on one of the big plastic panels from around the same time, portraying the history from neolithic revolution to socialist agrotechnology. However, the exhibition was complemented with new, colourful sheets of paper that explained, for example, the history of agricultural cooperatives as a history of violent collectivisation. The communist vision of progress was just another chapter in history. The inadvertent palimpsest of texts from different eras could easily give the impression that state socialism was a short period of naïve optimism. However, if one goes to the archives to watch long-forgotten television programmes, reading the notes that their creators left behind along with books and magazines from that period, a much more dynamic and complex story will unfold. In fact, the discourse of technological optimism that the 1964 booklet expressed was just one of contemporary perspectives, and we can imagine some visitors even then reading it with a sense of irony, a mode of expression they were very much used to from television.

Post-Stalinist thought therefore accented different features of technological progress compared to Stalinism, including its tragic sides and the insecure position of ordinary people as movers of history. As this and the following chapter will discuss, the Stalinist period became an important reference point in the 1960s and after 1968. Criticising socialist realism, the artistic doctrine of the Stalinist era, served to define one's own outlook not just on art but on the relations between fiction and reality, humanity, and the natural world. In hindsight, the Stalinist period was characteristic of a romantic relation to work and the collective and of a Promethean belief that humans could subdue nature through technology. While the 1960s broke away from the compulsory joy of production, the 1970s attempted to revive some of Stalinism's early optimism modified in light of 1960s criticism to accommodate the imperfection of everyday life.

In Stalinist Czechoslovakia, science and technology were first of all a means of beating the capitalist world, educating socialist subjects and bringing a better future.[90] In popular science magazines, technological advancement and the subjugation of nature were presented as part of a greater story of human triumph. As a rule, any popular science article began in prehistory, telling the story of human progress up until the present day, from the first fire to, say, television.[91] Such a Marxist view of history was then woven into the nationalist narrative. For instance, in 1952, Václav Kopecký, the Czechoslovak Minister of Information, stressed the importance of science alongside the national tradition.[92] His words were reiterated in the second issue of the magazine *Science and Technology for the Youth* (*Věda a technika mládeži*), in an article that celebrated the long tradition of Czech science.[93] The Veverkas, who fitted both the nationalist and anti-capitalist framing, were of course mentioned, together with others, such as František Křižík (1847–1941), a famous electrical engineer and entrepreneur.

The plough was a powerful motif of this technological mastery of nature; ploughing new furrows meant programmatically creating a new order. As depicted in a poem from 1949 by Konstantin Biebl, a communist avantgarde poet active from the 1920s, a tractor symbolised the inevitable progress of history and the conquest of the natural world.[94] Joyful work in the

---

90 On the creation of a new socialist person in Czechoslovakia, see: Denisa Nečasová, *Nový socialistický člověk: Československo 1948-1956* (Brno: Host, 2018).

91 The articles would usually use a motif of some basic element like fire or an ancient human desire to illustrate the historical-materialist logic. So, for instance, nuclear energy was placed on a historical trajectory of inevitable scientific and social development, marking a new epoch in the development of the humankind. A *VTM* article from 1954 linked it back to the discovery of fire by 'primitive men' as primary difference between humans and animals. Similarly, an article explaining how television worked on the occasion of the establishment of the Czechoslovak Television, claimed that 'since prehistory, humans were dreaming of seeing to a great distance'. R. Štechmiler, 'Ke kořenům naší vědy a techniky', *Věda a technika mládeži* 2 (1954), 51; 'Na cestu naší televize', *Mladý Technik* 1 (1953), 15.

92 Ladislav Štoll, 'Věda jde s lidem', in *Marxisticko-leninskou ideovostí a stranickostí proti kosmopolitismu a objektivismu ve vědě: sborník dokumentů I. ideologické konference vysokoškolských vědeckých pracovníků v Brně 27. února - 1. března 1952* (Praha: Naše vojsko, 1952), 21–26.

93 Štechmiler, 'Ke kořenům', 51.

94 Karel Kouba and Vít Schmarc, '„Tank Míru". Traktor Jako Popkulturní Emblém Československého Socialistického Realismu', *Slovo a Smysl* 3, no. 6 (2006).

fields, made easier by the introduction of technology, was contrasted with the toil of unmotorised ploughing; in the ubiquitous discourse of war, nature was at last the fallen enemy:

> The time has come to win the peace
> But Přemysl the Ploughman no longer walks behind the plough
> Rather he serves behind the wheel in the army of tractors
> One who is a skilled comrade
> Will become the commander of weather
> And will shower the world
> With a hail of wheat and potatoes.[95]

Biebl's poem recalled the premodern founding myth of ploughing, but its message was slightly different. In medieval East-Central Europe, there were figures of ploughmen, like Piast in Poland and the Hungarian kings-ploughmen St. Stephen and Matthias Corvinus.[96] (Similar figures could be found in other cultures, including the English Beowulf.[97]) Equally, Přemysl the Ploughman was the legendary founder of the first Czech dynasty. In *Chronica Boemorum*, the chronicler Cosmas of Prague wrote about Přemysl the Ploughman who used the plough to delimit the rules of the human world, to formulate the laws of society, to divide human from the non-human and to set the boundaries between domestic, cultivated space and wild nature.[98] Furthermore, the plough symbolised production and fertility, and as such its symbolism was used in Slavic agricultural rituals until the 19th century.

Přemysl the Ploughman thus combined in himself the quality of a ruler who possessed creative force (his first name meaning 'the one who thinks and ponders') and a peasant who embodied manual work. The legend of Přemysl the Ploughman was also a variation of the Promethean Myth, including his name 'Fore-thinker' and his son/brother Nezamysl, equivalent to Prometheus' foolish brother Epimetheus.[99] When the monument to the Veverkas' plough

---

[95] Konstantin Biebl, *Bez obav: básně z let 1940-1950* (Praha: Československý spisovatel, 1951), 230.
[96] Martin Golema, 'Medieval Saint Ploughmen and Pagan Slavic Mythology', *Studia Mythologica Slavica* 10 (2007): 155–177.
[97] John M. Hill, *The Cultural World in Beowulf* (Toronto: University of Toronto Press, 1995).
[98] Kosmas, *Kosmův letopis český s pokračovateli* (Praha, 1874), 12.
See also: Golema, 'Medieval Saint Ploughmen and Pagan Slavic Mythology'.
[99] Dušan Třeštík, *Mýty Kmene Čechů. Tři Studie Ke 'Starým Pověstem Českým'. (7.-10. Století)* (Praha: Nakladatelství Lidové noviny, 2003), 154.

was unveiled in 1883, Jan Neruda, a Czech nationalist journalist and writer, recalled the myth of Přemysl that heralded ploughing as the Czech nation's lot: loosening the soil meant lifting up the nation through the hard and humble work of ordinary people.[100] The postwar communists adopted this folkish interpretation, but as Biebl's poem suggests, the key difference between medieval people and the modern communists was the latter's reliance on science and technology in their struggle against nature thanks to which, they believed, they could become nature's true masters.

In the 1950s media, science was portrayed as a romantic quest to understand the mysteries of the natural world. For example, according to Miloš Jakeš, the Secretary of the Czechoslovak Youth Union, the rationale of the magazine *Science and Technology for Youth* was to 'show the youth the mystery and beauty of science and technology'.[101] Writing in 1954, Jakeš insisted that 'today more than ever, one who stands idle remains backward and will be surpassed by time'. In this and many other articles in this magazine, the guiding motif was the conquest of nature in a similar fashion to war. This time, as Jakeš put it, 'the frontlines' consisted of 'working and creative youth' who were reaching up towards the 'victory of human genius over nature'. Much like in the Veverkas' case, creativity and imagination were historical forces that pushed society technologically forward and further away from nature. To do so, one had the 'right to be enthralled by the romance of scientific research, creating daring but realistic perspectives'.[102]

That progress was enabled by a dose of fantasy within the limits of what was scientifically possible. Indeed, the imagination of the early 1950s was held back by the 'theory of the near limit'.[103] Under socialist realism, fantasy and imagination were to be subordinated

---

[100] Jan Neruda as cited in: Josef Jungwirth, *Ruchadlo. Vynález Bratranců Veverkových* (Praha: Ministerstvo zemědělství, lesnictví a vodního hosp., 1964).
[101] M. Jakeš, 'Ukázat mládeži tajemství a krásu vědy a techniky', *Věda a technika mládeži* 2 (1954), 3.
[102] Jakeš, 3.
[103] Patrick Major, 'Future Perfect? Communist Science Fiction in the Cold War', in *Across the Blocs*, by Patrick Major and Rana Mitter (London: Routledge, 2004), 76.

to scientific facts and technical limits. Of course, that did not mean that socialist realist art would necessarily depict reality, or that popular science would resign from imagination. But imagination had to accord with what reality was supposed to be. As a result, science fiction was limited by the anticipated potential of science, which allowed it to depict the future only a few years or maybe decades in advance. Soviet sci-fi novels written according to these rules were also published in Czechoslovakia.[104] But such fantasies remained very technical. The future was quantitatively, but not qualitatively better: aeroplanes were faster, but society remained the same.

The romanticisation of the power of science and technology remained an important continuity in what was otherwise a post-Stalinist shift from the celebration of work to visions of automation. Under Stalinism, scientific progress was to be driven not by 'cold rationalism' but by a political and individual passion for improvement.[105] An example of this line of thinking is the work of a communist thinker and propagandist Gustav Bareš, whose ideas link the Stalinist and post-Stalinist views of science.[106] According to Bareš, scientists were supposed to take the role of an 'active superstructure', an idea that resonated with theorists of the scientific-technological revolution in the 1960s as well.[107] In 1958, Bareš wrote *Birth of the Atomic Age*, wanting to tell the youth their age was 'not an end, but a beginning of a new civilisation'.[108] Apart from being recommended for discussion in local libraries, in 1962,

---

[104] A good example is S. Běljajev, *Desátá planeta: fantastická reportáž o cestě do vesmíru* (v: Rudé právo, 1951).
[105] On the difference between 'objective' and 'partisan' science, see: Štoll, 'Marxisticko-leninskou ideovostí a stranickostí proti kosmopolitismu a objektivismu ve vědě', 51–70.
[106] In 1952, Bareš came into conflict with Minister of Information Kopecký. He was removed from politics and worked at the Department of History of the Communist Party of Czechoslovakia.
[107] Vítězslav Sommer, 'Scientists of the World, Unite! Radovan Richta's Theory of Scientific and Technological Revolution', in *Science Studies during the Cold War and beyond: Paradigms Defected*, ed. Elena Aleksandrovna Aronova and Simone Turchetti (New York: Palgrave Macmillan, 2016), 182–183.
[108] Gustav Bareš, *Zrození Atomového Věku : Obavy a Naděje* (Praha: Mladá fronta, 1958), 254.The book was in high circulation and recommended to be read by soldiers. It was later reprinted in an updated version: Gustav Bareš, *Zrození Atomového Věku : Obavy a Naděje* (Praha: Mladá fronta, 1961).

Bareš's book was also made into a television programme.[109] There the Atomic Age was presented as a new communist epoch in which nuclear energy and geoengineering would transform the natural world.[110] But rather than celebrating hard work, Bareš's view of automation was underpinned by an anti-capitalist vision of a workless society. The argument was that, if capitalism ushered in automation, the resulting affluence only intensified its problems.[111] The communist vision of an automated 'twenty-fold production' thus contrasted with the danger of mass unemployment in the capitalist West.[112] Similarly, Marxist sociologist Blanka Filipcová, associated scientific-technological revolution with a vision of a technocratic society of leisure.[113]

Nevertheless, although increased material wellbeing was supposed to make people happier, Bareš also acknowledged that individual suffering and 'Promethean' tragedy would never disappear no matter how advanced the technology.[114] Progress, symbolised by Promethean fire, was borne out of a dialectical struggle, which made it what Bareš called an 'optimistic tragedy', in which progress is necessitated by pain.[115] Bareš saw Prometheus as a 'proletarian hero', who was 'selfless, manly, proud, courageous, tender, compassionate' as he stole fire and gave it to humans to use.[116] This was also manifested also in Goethe's *Faust*, which Bareš saw as a modern version of the Promethean optimistic tragedy. Faustian man was

---

[109] František Franc, *Zítřek Nastal Již Dnes : Metodický Text Ke Knize Gustava Bareše 'Zrození Atomového Věku'* (Jihlava: Kraj. lid. knihovna, 1960). Unfortunately, only two episodes out of five have been preserved in APFCT.
[110] APFCT, IDEC 263 531 13940, *Zrození atomového věku*, ep. 4, 'Chléb a růže pro všechny'.
[111] For instance, the television adaptation featured an alien who wondered why people simply had not abolished shareholders and redistributed all wealth. APFCT, IDEC 262 531 24453, *Zrození atomového věku*, ep. 5, 'Kouzla automatizace'.
[112] For instance, the TV programme highlighted the advantages of the socialist economy that did not have to fear automation in the way capitalist countries did: APFCT, IDEC 265 531 1576, *Kybernetika*, ep. 2, 28:42–30:06.
[113] Blanka Filipcová, *Člověk, Práce, Volný Čas* (Praha: Svoboda, 1966).
[114] Bareš, *Zrození Atomového Věku*, 1958, 205, 280–281.
[115] Bareš, *Zrození Atomového Věku*, 1958, 16.
[116] Bareš, 16–17. Bareš's interpretation was partly inspired by George Thomson, a British Marxist classical scholar: George Thomson, *Aeschylus and Athens: A Study in the Social Origins of Drama* (London: Lawrence & Wishart, 1941).

active and creative, 'heralding' Marx's appeal to philosophers to change the world. The struggle between Faust and Mephisto was an illustration of the dialectic of the capitalist era, where money represented the historical force of progress.[117] The character of Faust was indeed motivated by money, but Bareš contrasted Faust's 'useful work in conquering nature for the wellbeing of all common people' with the selfishness of capitalists and fascists.[118] Therefore, Faust's Prometheanism concerned his ability to use capitalist technology in a progressive way, while accepting the misery needed to achieve that progress. As the next chapter will show, it was the same Promethean combination of sorrow and optimism that played a crucial role in the techno-optimistic ecological literature of the 1980s about nuclear power. Promethean 'optimistic tragedy' thus also offered a way to explain the negative sides of technological and scientific progress.

Indeed, according to Bareš, the latest stage of this Promethean history was science, and the issue arose who the new Promethean hero was.[119] Science was, for Bareš, taking over the revolutionary qualities ascribed to Prometheus that originally pertained to proletarian heroes, like the Veverkas. When science itself became the Promethean force in the post-Stalinist era, it thus brought new questions about the relationship between laypeople and technocrats and between art and science. Although seeing science as the driving forces of progress, Bareš asserted that communism could not be achieved technocratically but only with the creative activity of the masses.[120]

Bareš therefore believed that, alongside science, social imagination had to play a crucial role in the new era of scientific-technological revolution.[121] In that context, he reminded his readers of the 1920–1921 dispute between Ivan Olbracht, a communist poet arguing for a

[117] Bareš, 43.
[118] Bareš, 47.
[119] Bareš, 91.
[120] Bareš, 296.
[121] Bareš, *Možnosti a meze*, 9–10.

'revolutionary romantic' approach to history, and Jindřich Fleischner, an engineer who adhered to social-democratic reformism.[122] While Fleischner was seen by his contemporaries as a realist and Olbracht as a dreamer, history proved, Bareš argued, that it was Fleischner who was only fantasising.[123] Thus, according to Bareš, imagination and science were no longer supposed to limit each other.[124] Science could make utopian ideals real, while imagination made science move forward.[125]

Bareš thus foreshadowed the enthusiasm for scientific-technological revolution and its representation in popular media, with portrayals of cyberneticians as carriers of a profound intellectual shift, compared to the dawn of the modern era. He envisioned that contemporary intellectual development would surpass the colonial and scientific discoveries of the European modern era, with 'Columbuses of laboratories and researchers' offices' undertaking the 'most amazing and thrilling adventure of all ages'.[126] He suggested that, in an age in which there was seemingly 'little romance left', nor 'fantasy', nor 'chivalry', one could find these in scientific exploration of the 'mysteries of nature'.[127] Bareš therefore considered people like Albert Einstein to have brought, in contrast to imaginary religious promises, a true paradise. Those scientists who discovered the atom were, for Bareš, more powerful than Prometheus.[128] Narratives about scientific discoveries that were supposed to motivate children to become

---

[122] Their newspaper exchange was reprinted in: Ivan Olbracht and Jindřich Fleischner, *Básník a Inženýr : Diskuse o Naší Sociální Revoluci Mezi Ivanem Olbrachtem a Jindřichem Fleischnerem* (Plzeň: Omladina, 1921).
[123] Bareš, *Zrození Atomového Věku*, 1958, 295.
[124] The attempts to bring back science and imagination attested, however, to the separation of the two. In the Soviet Union, this was perhaps best illustrated by a debate between 'physicists' and 'lyricists'. Similarly, in the UK around the same time, C. P. Snow criticised the split of knowledge into 'two cultures' and C. P. Snow's theory was reflected by Bareš, too. Rosalind J. Marsh, *Soviet Fiction since Stalin: Science, Politics, and Literature* (London: Croom Helm, 1986), 213–215; Guth, 'One Future Only. The Soviet Union in the Age of the Scientific-Technical Revolution', 366; Gustav Bareš, *Možnosti a meze: úvahy o budoucím vývoji naší společnosti* (Praha: Svoboda, 1968), 59; C. P. Snow, *The Two Cultures and the Scientific Revolution*, 1959 (New York: Cambridge University Press, 1959). Bareš, *Možnosti a meze*, 59; Snow, *The Two Cultures and the Scientific Revolution*.
[125] Bareš, *Zrození Atomového Věku*, 1958, 165; Bareš, *Možnosti a meze*, 8.
[126] Bareš, *Zrození Atomového Věku*, 1958, 109.
[127] Bareš, 119.
[128] Bareš, 122.

scientists themselves. As will be discussed below, the same scientists were given as role models, and sometimes ridiculed, in late socialist fiction.

Bareš also put hopes in new methods of constructing the image of the future that would supposedly surpass the linear and short-term thinking of the Stalinist era, linking science and imagination. Stalin's thought, for Bareš, operated within the limits of the given historical 'stage', refusing to account for future alternatives.[129] He therefore appreciated the rise of cybernetics that made possible computer modelling of the future; instead of one historical necessity, it constructed the future as consisting of alternative routes of development. Bareš referred to two thinkers associated with the science of prediction, Betrand de Jouvenel and Robert Jungk. De Jouvenel was the director of the project Futuribles, founded by the Ford Foundation to study the future.[130] Whereas De Jouvenel saw the future as speculative fantasy, distinguishing it from fact (*fait*) that had already happened, and considering it therefore a subject of art rather than scientific method, Bareš was, inclined to see the future as subject to the scientific method of modelling reality (citing Western futurists Dennis Gabor and Wolfgang Wieser).[131]

Bareš was interested in these new methods because he hoped that cybernetics would allow Marxists to explore several models of the future, bringing it closer to reality than linear philosophy of planning, yet allowing to imagine alternative futures.[132] Following the Austrian futurist Robert Jungk, who distinguished between futurology as pure and applied social fantasy and social technology, Bareš emphasised the role of fantasy and imagination, which had been too often wrongly taken as the opposite of the scientific method.[133] Social imagination was, for Bareš, projection of the Marxist hope to create a scientifically-feasibly utopia, yet one that

[129] Bareš, *Možnosti a meze*, 10–11.
[130] Jenny Andersson, *The Future of the World: Futurology, Futurists, and the Struggle for the Post-Cold War Imagination* (Oxford: Oxford University Press, 2018), 58–62.
[131] Bareš, 13.
[132] Bareš, 14.
[133] Bareš, 9.

would escape the confines of the current state of affairs.[134] Bareš also valued the work of Radovan Richta, the most significant theorist of scientific-technological revolution in Czechoslovakia, for its original, non-dogmatic engagement with Marxism.[135] In Richta's theory of the scientific-technological revolution, people were taking control over the development of science to steer it towards the betterment of human life.

Nevertheless, along with the Marxist view of knowledge becoming the main Promethean force of history and imagination becoming freed from the Stalinist limitations, new tensions between technocrats and laypeople were emerging. In this connection, the Czechoslovakia of the 1960s saw an unprecedented debate about futurology, prompting the German sociologist Ossip Flechtheim, who had coined the term futurology, to title Prague the 'futurological centre of the communist world'.[136] In addition to academic debates, ideas about futurology were presented on television to reach non-expert audience. Their portrayal on television reveals how these intellectuals thought of themselves and their theories in relation to broad audiences.

The Scientific-Technological Revolution on TV

> Thus, while the mute creation downward bend
> Their sight, and to their earthly mother tend,
> Man looks aloft; and with erected eyes
> Beholds his own hereditary skies.
> From such rude principles our form began;
> And earth was metamorphos'd into Man.[137]

In 1967, Czechoslovak Television broadcast *Six Urgent Disputations* (*Šest naléhavých disputací*), directed by Josef Kořán, who wrote the script based on suggestions by Miloslav Král and Radovan Richta, two prominent Marxist philosophers. In six half-hour episodes,

---

134 This was also in reference to Ernst Bloch's Marxist defence of fantasy and utopianism. Ernst Bloch, *The Principle of Hope* (Oxford: Basil Blackwell, 1986).
135 Gustav Bareš, 'Cesta a Směr', *Sociologický Časopis / Czech Sociological Review* 1, no. 4 (1965): 451–454.
136 Sommer, *Řídit Socialismus Jako Firmu*, 64.
137 Ovid, 'Metamorphoses, I: 1-162', accessed 2 November 2022, http://knarf.english.upenn.edu/EtAlia/ovidmeta.html.

intellectuals from the Czechoslovak Academy of Sciences discuss theoretical aspects of the scientific-technological revolution related to practical problems of the present. The first episode, titled 'Of Paradise Lost', opens with verses about Prometheus from Ovid's *Metamorphoses*.[138] While the rest of creation remains bowed down to the ground, Prometheus allows humans to look upward. That part of the Promethean myth is about humans becoming civilised and separated from animals with the invention of technology. The episode asked how much truly human there was left in the world in the face of contemporary technology. Technology was seen not only as a liberating force but also a danger that had to be addressed; the episode ended with Ovid's verses: the Promethean powers equipped humans to extract from the soil not only grain but also metals needed for war.[139] It seemed that technological progress was not in itself liberating but had to be steered towards emancipation.

The portrayal of scientific-technological revolution on television suggests that the media helped establish the role of experts and knowledge as a distinctive historical force that would play a decisive role in the future. In *Six Urgent Disputations*, references to European intellectual history confirmed that scientific-technological revolution was a similarly significant development. Old books and a Renaissance globe, chosen as the central image of the programme included in the stage design, illustrated the historical desire to overcome the limits of the known. [140] Moreover, every episode was opened quotations from classical works. In that way, the scientific-technological revolution and the philosophers' reflections in the programme were linked to earlier efforts to transcend boundaries of knowledge. Various images and quotes used throughout the programme referred to the legacy of modern European science as well as the great Czech thinkers who were part of the national canon. It was stressed that the philosophers' offices were found 'above' the urban hustle; the setting evoked a need

[138] *Šest naléhavých disputací* (dir. Josef Kořán, Czechoslovakia, 1967), ep. 1, 1:02–1:30.
[139] *Šest naléhavých disputací*, ep. 1, 31:42–32:19.
[140] NFA, Kořán Josef, sg. 45, Vědecko-technická revoluce – 1. Část (1967), f. 19.

for detachment required for serious intellectual reflection.[141] Carefully staged, the debate was hosted in the Baroque Nostitz Library, where it was stressed that there were many great works of the past, including by significant Czech scientists.[142] The format of medieval 'disputations' was originally suggested to producers by Richta himself.[143] A genre and a technique historically tied mainly with the medieval university evoked the image of scholars debating over serious and timeless questions.[144] The disputation in the Middle Ages indeed evolved into a public performance, and performativity was likewise important in these television debates.[145] The point was to portray arguments in the making; the questions were drafted in advance by the philosopher Miloslav Král, but there was no verbatim script, giving enough leeway for the guests to make it appear natural.[146] The programme thus portrayed contemporary philosophers as history-making characters who spoke about contemporary problems with a remarkable gravity.

This Marxist technological optimism, as presented on television, was rooted in philosophical debates about the effect of science and technology on contemporary society. These optimists were in dialogue with Marxist humanist philosophers who began to accent the role of human activity, rejecting the strictly scientistic view of the society proposed by Marxism-Leninism.[147] They also reacted to Western Marxists, such as Herbert Marcuse, who

---

141 *Šest naléhavých disputací,* ep. 1, 3:46-4:04.
142 *Šest naléhavých disputací,* ep. 1, 5:42-8:30. For a detailed reasoning behind the stage design, see: NFA, K. J., sg. 45, Vědecko-technická revoluce – 1. část (1967), f. 25.
143 NFA, K. J., sg. 45, Vědecko-technická revoluce – 1. část (1967), f. 21.
144 With origins in Ancient Greek philosophy, a 'disputation' became central to the teaching of medieval universities of the 13th and 14th centuries. For a detailed history, see: Olga Weijers, *In Search of the Truth: A History of Disputation Techniques from Antiquity to Early Modern Times* (Turnhout: Brepols, 2013).
145 For the concept of disputations as a 'representational performance' see: Alex J. Novikoff, *The Medieval Culture of Disputation: Pedagogy, Practice, and Performance* (Philadelphia: University of Pennsylvania Press, 2013), 5.
146 NFA, K. J., sg. 45, Vědecko-technická revoluce – 1. část (1967), f. 24.
147 To that effect, many Eastern European Marxist philosophers in the 1960s returned to Hegelian and phenomenological traditions; Karel Kosík and Robert Kalivoda were prominent in the Czech context: Jan Mervart, 'Czechoslovak Marxist Humanism and the Revolution', *Studies in East European Thought* 69, no. 1 (2017): 111–126; James H. Satterwhite, *Varieties of Marxist Humanism: Philosophical Revision in Postwar Eastern Europe* (Pittsburgh: University of Pittsburgh Press, 1992).

criticised bureaucracy and alienation stemming from new technology.[148] Marxist advocates of technocracy in Czechoslovakia heard their pleas, but on the other hand countered 'one-sided' fears of an alienated mechanical world with a vision of humans freed by technology. In response to Marcuse and building on Norbert Wiener's cybernetics, they promised a world of abundance managed by experts, yet not directively. Abandoning a mechanical model of society, Richta's team suggested a development of society as a self-regulating system, based on a set of social rules and latest knowledge that would foreground human creativity and collective subjectivity.[149]

Their vision was of a world governed by technocrats, with an abundance of material goods and leisure, giving people time for their full self-realisation.[150] While the scientific-technological revolution originated as a political programme of the Communist Party of the Soviet Union, Czechoslovak scholars turned it into a robust Marxist theory of social change. First mentioned in 1955 in a speech of Soviet leader Nikolai Bulganin, the scientific-technological revolution became the official politics of the Soviet Union in 1961.[151] Whereas in an industrial society what mattered was the quantity of production and its continuing expansion, the notion of the scientific-technological revolution concerned the 'intensification' of this process made possible by the advancement of science and technology.[152] Specifically, three types of technological progress were to make such liberation of humans possible: cybernetic automation, new chemical materials and nuclear energy.[153] These fields would

[148] Herbert Marcuse, *One Dimensional Man : Studies in the Ideology of Advanced Industrial Society* (London: Routledge and Kegan Paul, 1964).
[149] Radovan Richta, *Civilizace Na Rozcestí : Společenské a Lidské Souvislosti Vědeckotechnické Revoluce* (Praha: Svoboda, 1967), 261–266.
[150] Richta, *Civilizace Na Rozcestí*, 52–53.
[151] Guth, 'One Future Only. The Soviet Union in the Age of the Scientific-Technical Revolution', 355–356.
[152] Richta, *Civilizace Na Rozcestí*, 40.
[153] Richta, 27–29, 33.

ultimately transform jobs into highly-qualified engineering positions, uninvolved in direct production and therefore requiring little physical input and less time spent at work.

This post-industrial vision was not unlike contemporary French or American ones; in fact, the 1960s Czechoslovak Marxist philosophers were in conversation with Western debates. Perhaps the most well-known US book on this topic, Daniel Bell's *The Coming of Post-Industrial Society*, published in 1973, repeatedly referenced and discussed at length the work of members of the Czechoslovak Academic of Science, presented concisely in the 1966 book *Civilisation at the Crossroads*. Led by Radovan Richta, the authors of the Czechoslovak book theorised the scientific-technological revolution, which they saw as a qualitatively new step in historical development. This was reflected on television as well. In the opening scene of *Six Urgent Disputations*, images of ancient maps were gradually replaced by symbols of 'today's world' such as planes, smokestacks, rushing crowds. The alternating images of historical and contemporary Prague implicated technological progress in history but also showed the negatives, such as pollution.[154] And as also portrayed in the programme, experts would gain a central position in such society, both as carriers of technological progress and those who could solve the problem of technology's adverse effects – a double bind that, as I will discuss, became the target of satire.

Abandoning the anti-elitist Communist national tradition, discussed in the previous section, the techno-optimists found a new vocabulary in the discourse of developmentalism and convergence. The second episode of *Six Urgent Disputations*, entitled 'The Age of Abundance and Decay', presented the conference Mankind 2000, organised in 1967 in Oslo. Also attended by Czechoslovak delegates, the conference concerned future researchers' hope for global cooperation on world problems, beyond the divisions of the Cold War.[155] Initial

[154] NFA, K. J., sg. 45, Vědecko-technická revoluce – 1. část (1967), f. 22.
[155] Andersson, *The Future of the World*, 153.

quotes from Epicurus and Baruch Spinoza emphasised the unity of physical and spiritual comfort; images of power lines, evoking abundance, alternated with baroque sculptures of children. While the Czechoslovak thinkers were aware that the wellbeing of the 'developed' world was at the expense of the 'developing' world and considered ways to change it, they adopted a developmentalist discourse which offered only two basic options: either to give aid or to let the gap between the worlds widen.[156]

In so doing, they set a clear boundary between 'civilisation' which enjoyed 'the comfort of abundance' and the 'backward' rest.[157] That distinction appeared more clearly on television than in their writing, reinforcing the idea of Czechoslovakia as a developed country on par with the capitalist West. The second episode of *Six Urgent Disputations* featured several scenes that expanded on this idea – for example an Indian fish market full of insects compared with fish from a supermarket wrapped in plastic.[158] Notably, images from the USA or Western Europe were used when talking about Czechoslovakia as well. The world of progress and speed was contrasted with the world of backwardness and inaction (Fig. 1.4). The television programme showed people living in abundance as those with agency; travelling, or shopping; work was done solely by machines. In contrast, poor people were depicted as sitting, waiting in line or doing menial work in food production.[159] Progress, this time, was not linked to manual labour with the help of machines as in socialist realism (liberated ploughmen behind a tractor), but to consumption and enjoyment of technical achievements.

[156] *Šest naléhavých disputací*, ep. 2, 8:02–10:14.
[157] NFA, K. J., sg. 46, Vědecko-technická revoluce – 2. část (1967), f. 29.
[158] *Šest naléhavých disputací,* ep. 2, 14:08–14:20.
[159] *Šest naléhavých disputací*, ep. 2, 10:14–16:02.

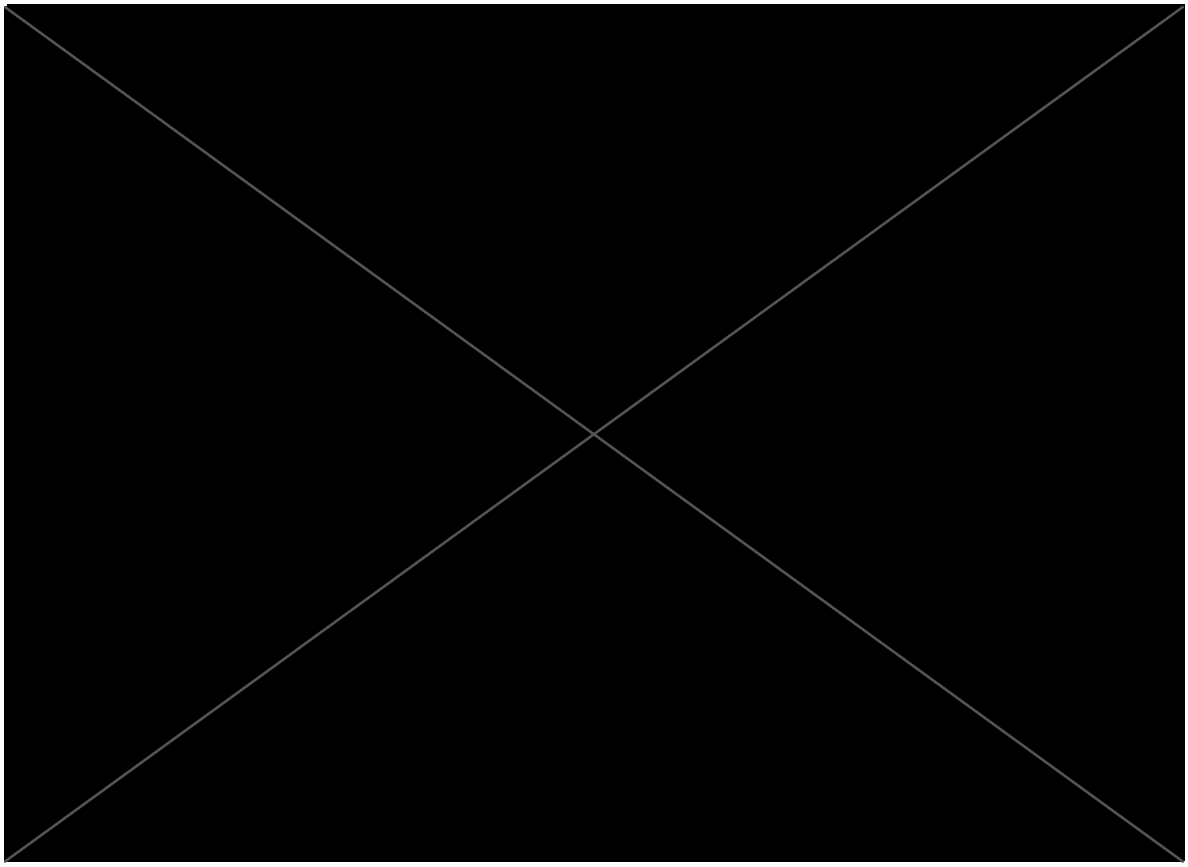


Figure 1.4. The topic of the second episode of *Six Urgent Disputations* was 'the Age of Abundance and Decay', portraying the technological achievements of the 'developed' world, here cars and a motorway, accompanied by a voiceover: 'The world of abundance honours technology, speed and comfort'.

The techno-optimistic philosophers believed that a transformed form and content of work would be based on creativity rather than productivity and would bring 'a higher degree of inner subjectivity and responsibility, a larger extent of initiative and self-realisation'.[160] In this context, the philosopher Jiří Hermach called for an end to the Stalinist fetishisation of work. Hermach's philosophical works criticised the Stalinist system which he called 'barracks communism', claiming that it had led to the bureaucratisation and formalisation of control and led Marxist theory astray; productive forces had been understood in strictly materialist terms and the revolutionary character of workers had been turned into a mere phrase.[161] In *Six Urgent Disputations*, Hermach argued that since the human brain was already 'programmed' already

[160] Richta, *Civilizace Na Rozcestí*, 254.
[161] Jiří Hermach, *Filosofie a řízení: několik základních problémů řízení vývoje socialismu* (Praha: Nakladatelství politické literatury, 1965), 78–79.

before the rise of technical civilisation, there was something deeper to happiness than what technological progress and productivity alone could bring. This was the beginning of a quest for some hidden substance to human life – the need to link science and emotion – which would become important for later debates about the need to respect the past and return to the natural world, as will be discussed in the following chapter.[162]

The discourse of the scientific-technological revolution also allowed philosophers to identify contradictions between social change and the current state of politics and the economy in the country. In a special television programme dedicated to economic reforms, *Of Shoes and Violins*, broadcast in 1968, Hermach criticised existing Czechoslovak society, which could only 'quantitatively' repeat and expand on what it had been doing.[163] In other words, the Czechoslovak economy was not managed in ways that would bring qualitative improvement and, according to Hermach, it needed expert knowledge to operate production and the entire workplace better. Likewise, the other programme's guest, Radoslav Selucký, criticised 'deformed socialism', in which the economy served only as an 'ideology of industrialisation' and ignored actual material conditions. Selucký was an economist who in the 1960s often populariszed his discipline in the media. Selucký's aim was to present economics in an accessible manner, as a matter of everyday life and an open debate where facts and truth mattered.[164]

To that effect, the futuristic vision of a cybernetic world embraced the 'productive' tension between fact and imagination, discussed in the previous section. Gustav Bareš, who proposed that social imagination should help guide scientific efforts, depicted the First International Congress in Cybernetics, Paris 1957, as a futuristic event that, as he highlighted,

---

[162] *Šest naléhavých disputací*, ep. 1, 22:29–23:06.
[163] APFCT, IDEC 268 531 18806, *O botách a houslích,* Czechoslovak Television (1968), 13:48–16:42.
[164] Vítězslav Sommer, 'The Economics of Everyday Life in "New" Socialism', *History of Political Economy* 51, no. S1 (2019): 54–59.

was reminiscent of science fiction but was already the reality.[165] The congress was also featured on the radio, in a programme made by Radoslav Selucký to be used in schools to teach civic education.[166] The 1966 programme introduced a boy named František who thought the conference was a 'fairy-tale' but was 'proved wrong'; a banquet with automatic service and a machine that printed the inaugural speech in six languages on a 'paper made of plastic' did indeed take place. So the programme confirmed that futuristic visions were becoming reality. But this also provided an opportunity to examine fact and fantasy in a different, more critical way. The radio programme asserted that it was no surprise many people took communism to be a fantasy, given the poor technical state of today's production, contrasting with the futuristic Paris conference. Selucký thus legitimised the reformist efforts of his colleagues, acknowledging deficiencies in the economy.[167]

Establishing cybernetics in Eastern Europe was in itself a move away from Stalinism but also, at least in the view of its proponents, away from modern science.[168] A 1965 television programme *Cybernetics* also defined its theme as a critique of Stalinism: the host appreciated that the time was gone when cybernetics was defined as a 'mechanistic, metaphysical pseudoscience' founded in the USA, quoting the Czech translation of a 1950s Soviet philosophical dictionary.[169] According to Otakar Zich, Chair of the Cybernetic Commission of the Czechoslovak Academy of Sciences (established in 1958), who appeared in the programme, the scepticism towards cybernetics was caused by 'a great degree of ignorance' and attachment to those sciences that were approved by the great theorists of Marxism-Leninism, whereas cybernetics (with other disciplines, such as relativity theory, semantics or formal genetics) had

---

165 Bareš, *Zrození Atomového Věku*, 1958, 231–232.
166 ACR, *Technická výzva dneška a zítřka* (1966), 0:01–2:13.
167 ACR, *Technická výzva dneška a zítřka*, 2:14–2:50.
168 For Soviet cybernetics in opposition to Stalinism, see: Gerovitch, *From Newspeak to Cyberspeak*, 155.
169 APFCT, IDEC 265 531 15797, *Kybernetika*, Czechoslovak Television (1965), ep. 1, 16:55-18:19. The programme quoted the definition from: Pavel Fedorovič Judin and Mark Moisejevič Rozental', *Stručný Filosofický Slovník* (Praha: SNPL, 1955), 242.

later origins.[170] Radovan Richta even declared a break with a Cartesian conception of science.[171] Richta believed that it was no longer possible to separate the observer from the observed because science was becoming ever more the very driving force of change.[172] Like Norbert Wiener, who emphasised the need for an interdisciplinary and holistic approach in science, Richta cast himself in the tradition of great European thinkers, which was ultimately also reflected in how he outlined the television programme *Six Urgent Disputations*.[173]

The rise of cybernetics in 1960s Czechoslovakia thus had a legacy that went beyond technocratic management, as will be discussed in the following chapters. When Miloslav Král was preparing the first episode of *Six Urgent Disputations*, he underscored the need for a new, synthetic approach that was better able to 'get to the heart of the matter'.[174] It was no longer enough to construct a mosaic of encyclopaedic knowledge from a variety of specialised disciplines. There was a need for a new methodology that would look for a common language and for connections among disciplines.

However, there is first more to be said about the ways in which those cybernetic ideas were presented to the television audience. Cybernetics became both a challenge for documentarists who sincerely wanted to portray it as a new ontology as well as material for satirists who depicted detached experts and their obscure language. The portrayal of

---

[170] *Kybernetika*, ep. 1, 18:20-20:25
[171] Miroslav Smetana, ed., *Hovory o budoucnosti* (Praha: Symposium, 1969), 7.
[172] Richta envisioned an engaged science whose goal was Marxist humanism. He referred to, among others, John Desmond Bernal, a British communist scientist, who argued that science must become aware of its social significance to deliver social advances. First, Bernal appreciated the rise of evolutionary theory in biology that he contrasted to the static model of the world in mechanistic physics. Marxism, he argued, was seen by scientists as metaphysical because it did not analyse the world as static but as dynamic, with new unforeseen phenomena rooted in the existing ones. Biological evolution proved to Bernal that in the natural world things were indeed not static and it was the task of Marxist theory to shed light on the social as well. Second, Bernal argued that the new discoveries in particle physics called for an entirely new understanding of the world, 'an explanation of development and the origin of things'. Smetana, 8. Bernal as quoted in: Ludwig von Bertalanffy, *General System Theory: Foundations, Development, Applications.* (New York: Braziller, 1968), 6.
[173] Norbert Wiener, *Cybernetics or Control and Communication in the Animal and the Machine* (Cambridge, Mass: MIT Press, 1948), 2.
[174] NFA, K. J,, sg. 45, Vědecko-technická revoluce – 1. část (1967), f. 28.

cybernetics in popular media shows that while it appeared as a revolutionary ontology to some, it represented an alienated, technocratic world for others.

Popularising Cybernetics

Rudolf Krejčík's initial enthusiasm when he began work on *Cybernetics*, a 1966 six-episode television documentary, was not well received by the co-director Vladimír Horák nor by the editors who sought something more concrete and practical.[175] Indeed, one of the editors insisted on the topic of using computers at collective farms. This must have appeared too mundane to Krejčík, annoyed that most people did not understand that cybernetics was not just about computers and thrilled by the intellectual breakthrough it represented.[176] An enthusiastic reader of cybernetic literature, he saw that cybernetics could connect disparate disciplines and bring about a more holistic understanding of the world. Nevertheless, he was invited to work on the series after Horák and the producers had already made some of the episodes. Because of endless changes, approvals, and disagreements about the topics to be covered, Krejčík almost walked away from the unfinished work.

As apparent from both the television programmes themselves and problems behind the scene, cybernetics appeared obscure and too difficult to understand to most, which only helped in constructing the image of an expert. One producer, Mrs Fišerová, appreciated that Krejčík explained the principles of cybernetics using a 'black box', but asked him, apparently misunderstanding what it was, whether he did not confuse the image with a 'black case', which was a title of a recently published but unrelated book.[177] In cybernetic theory, a 'black box' meant describing a given 'system' only based on its inputs and outputs, without knowing how

[175] NFA, Krejčík Rudolf, sg. 51 Kybernetika, 'Kybernetika a televize 1966 aneb historie jednoho populárně vědeckého cyklu', f. 95, 96. A television 'director' in Czechoslovakia (*režisér*) had a narrower set of roles than a British 'producer', whose production tasks were partly performed by an editor (*dramaturg*): Jan Vrabec, *Základy Tvorby a Výroby Televizních Pořadů* (Praha: Státní pedagogické nakladatelství, 1968), 42.
[176] NFA, K. R., sg. 51, Kybernetika, f. 95.
[177] NFA, K. R. 'Kybernetika a televize 1966 aneb historie jednoho populárně vědeckého cyklu', sg. 51, Kybernetika, f. 96.

it functioned. This metaphor was familiar to Krejčík but apparently not to others in the production team. In Krejčík's *Cybernetics*, the black box came to symbolise the unknown mechanism by which a given result was produced. Turning it into a prop, Krejčík used it as an analogy that associated cybernetics with magic, while at the same time accenting the differences (Fig. 1.5). The host would turn the black box into a camera or a vacuum cleaner, as examples of machines that people used every day without knowing how they worked. As the first episode put it, while some became highly-skilled experts, others were becoming 'technical barbarians'.[178] The 1960s thus saw the rise of experts as a new character type who possessed a 'mysterious' knowledge of cybernetics that was normally inaccessible to ordinary people.

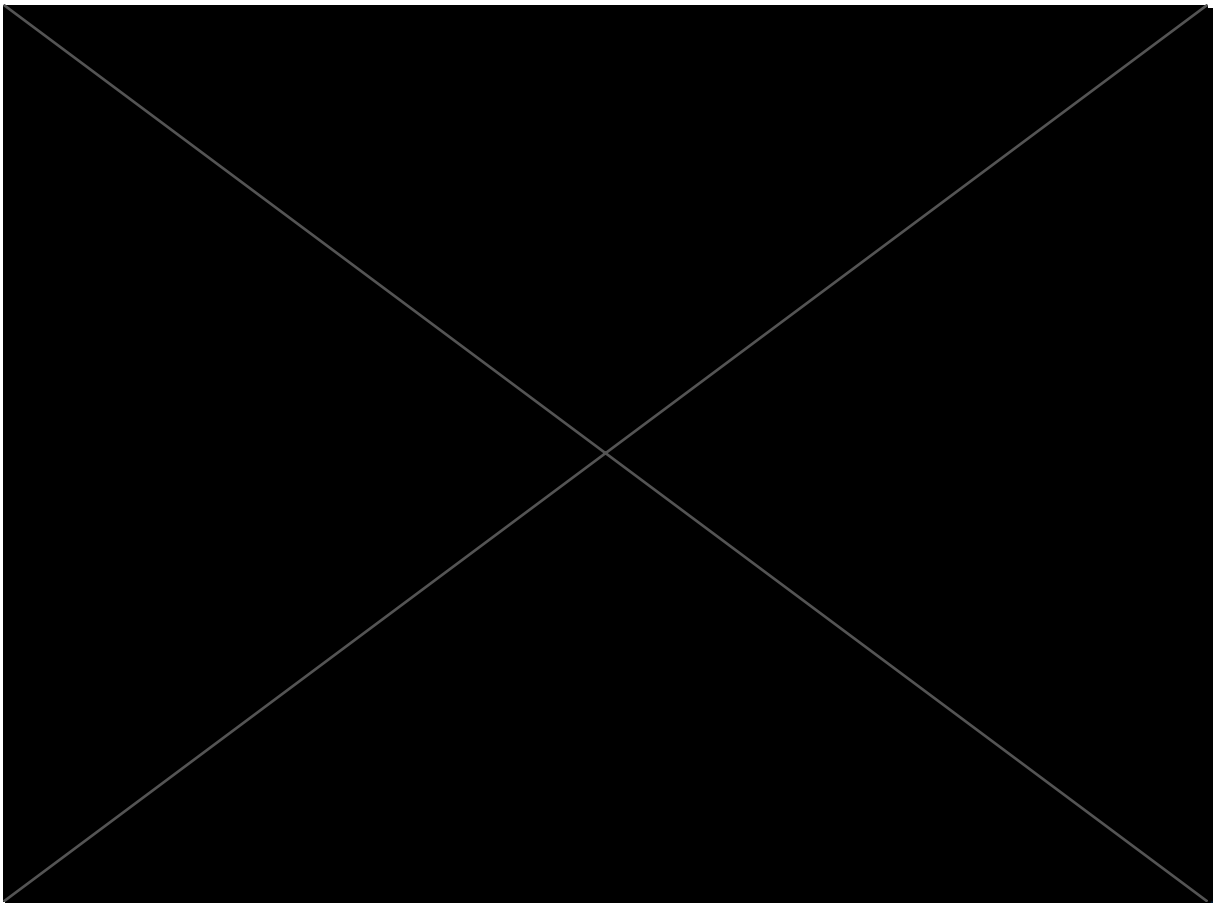


Figure 1.5. A black box, a magician's hat and a wand in the popular science programme *Cybernetics* (1965). *Kybernetika* (1965), ep. 1, 11:46.

[178] *Kybernetika*, ep. 1, 13:42–14:13.

The archives reveal some of the dilemmas, frustrations, and motivations of two documentary filmmakers, Josef Kořán and Rudolf Krejčík, tasked with popularising cybernetics and scientific-technological revolution. In the 1960s, Czechoslovak Television broadcast many programmes that were collaborations between experts and filmmakers on those topics. Both Kořán and Krejčík were in contact with leading Czechoslovak cyberneticians, such as Antonín Kolman.[179] A Soviet scientist of Czech-Jewish origin, Kolman diverged from Stalinist, Lysenkoist science, which forbade the use of mathematics in biology, and as early as the mid-1950s embraced the great prospects of cybernetics for the development of socialist science.[180] Returning to Czechoslovakia between 1958–1963, Kolman had a great influence on the local understanding of cybernetics that he understood as a theory for a communist future based on material prosperity and individual human development.[181] However, the programmes were not just a mere translation of academic literature into a television format. For example, *Six Urgent Disputations* was commissioned by the Czechoslovak Academy to promote their work, hiring the experienced documentary film director, Kořán, whose main passion was films about the arts, including music, painting, and architecture, and who thus focused on the artistic expression of scientific ideas when making the documentary.[182] Meanwhile, Krejčík hoped to create appealing images and entertaining scenes to convey what he himself had learnt from the literature on cybernetics. The final work was thus a combination of the commissioner's wishes and creator's inventiveness.

Kořán and Krejčík conceived of cybernetics not just as a new way of thinking but also as a highly specialised mathematical language. Such a language was obscure to most people

[179] Apart from those directly involved in the production, Kořán, for example, had contacts on cyberneticians Kolman and Sedmidubský. NFA, Josef Kořán, sg. 23, Nejvšednější povolání, f. 44.
[180] Gerovitch, *From Newspeak to Cyberspeak*, 166–173.
[181] Arnošt Kolman, *Kybernetika : O Strojích Vykonávajících Některé Duševní Funkce Člověka* (Praha: Státní nakladatelství politické literatury, 1957); Sommer, *Řídit Socialismus Jako Firmu*, 87.
[182] nh, 'Art and Artists. The Basic Subject of Director Josef Kořán', *Czechoslovak Film* 1-2, no. 25 (1972), 28.

and reinforced hierarchies and differences between experts and laypeople. In associating expertise and positive emotions in their programmes, Kořán and Krejčík presented an optimistic view of cybernetics. Nevertheless, they had to reflect concerns about the downsides of automated technology while remaining optimistic. For example, in Kořán's *Six Urgent Disputations*, the philosophers were purposedly confronted with caricatures and criticism, giving them an opportunity to rebut potential fear. For example, the third episode asked whether technology could act 'mischievously' towards humans, creating a superior civilisation which would master humans in the same way humans had mastered nature. The programme began with cartoons drawn by Jiří Jirásek that satirised the fetishisation of the computer: in one, Hamlet holds a computer in his hand, turning the issue into an existential question; this time, not a skull, but the computer invites us to ask about the purpose of human life (Fig. 1.6).[183] As the philosophers indeed drew analogies between a computer and a brain, it was a powerful image, which challenged the isomorphy of human and artificial intelligence, putting in focus the very meaning of human life.

[183] Jirásek's drawings and short stories about the confines of overly bureaucratic and technical civilisation appeared in cultural magazines from 1957. In August 1968 Jirásek was drawing caricatures of the Warsaw Pact invasion, which made his works politically undesirable in the 1970s, being published only in *samizdat*. Jiří Jirásek, *72 Drawings* (Newcastle upon-Tyne: Stand, 1969).

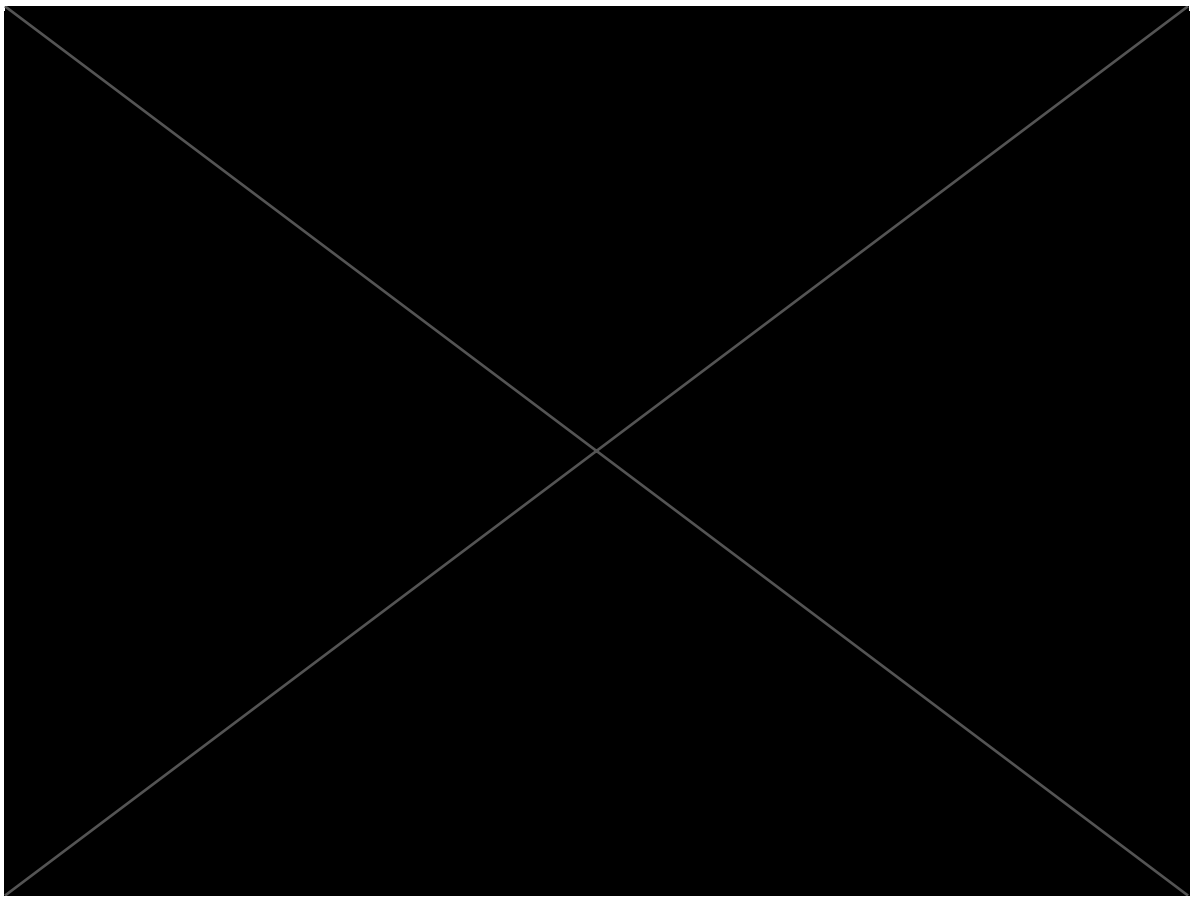


Figure 1.6. Hamlet holding a computer instead of a skull, drawn by Jiří Jirásek, shown to philosophers in the television programme *Six Urgent Disputations*. *Šest naléhavých disputací*, ep. 3, 2:45.

Faced with satirical cartoons about the detrimental impact of computers, the philosophers argued that there was too much 'civilisational pessimism' and ungrounded fear of technology before such technology had been given a chance to prove itself.[184] Instead, they saw the potential of automation in overcoming the heavily-criticised bureaucracy; one episode even featured *The Memorandum,* a play by the future dissident Václav Havel, that ridiculed the bureaucratic language of the modern state apparatus.[185] In another programme, the last episode of Krejčík's *Cybernetics*, experts were asked what they thought about anxieties around technology and life in an 'over-technologised' and 'over-scientific' world. The creators said that it was worth working on the programme just for the opportunity to ask such questions.[186]

[184] *Šest naléhavých disputací*, ep. 3, 2:55–3:33.
[185] *Šest naléhavých disputací*, ep. 3, 7:10–10:31.
[186] *Filmové informace,* 2 Jun 1965, no. 22, p. 15.

The techno-optimists were confronted with Jan Trnka's film *Cybernetic Grandma* (1962), a stop-motion animation about a petrifying robotic grandmother, showing a world of machines gone bad.[187] Cartoons, films and theatrical plays thus represented views similar to the humanist and existentialist criticism of technocracy in contemporary philosophy, giving the advocates of the scientific-technological revolution the chance to object such ideas. The experts argued that, on the contrary, cybernetics meant decision-making, choice, and freedom.[188]

Krejčík's own ambition was to present cybernetics as a new epistemology, opposing his colleagues who understood it simply as a matter of computing machines. Having read American and Soviet cyberneticians, a new way of thinking opened for him, which promised to be more holistic and synthetic.[189] The increasing specialisation of science that Norbert Wiener and other pioneers of cybernetics attempted to overcome appealed to Krejčík who, as he put it himself, confronted a similar problem: it was getting harder and harder to popularise ever more obscure scientific knowledge. Clearly an enthusiast, Krejčík even adopted cybernetic jargon to talk about his work. Thrilled by Wiener's promise to connect disparate fields of knowledge, Krejčík claimed he wanted to show 'relations' between 'all causes and effects' instead of presenting 'atomised' knowledge. Aware of the confines of his own television programme, he conceived of it as a 'closed system', containing only a certain, limited sum of knowledge. In the programme itself, however, Krejčík used such jargon sparingly. He was worried that cybernetics, as a new scientific paradigm with its own concepts and terms, could be a big obstacle for viewers, opting to use more ordinary vocabulary where possible.[190] Whereas the application of cybernetics could not be understood without the use of advanced

[187] *Kybernetická babička* (dir. Jiří Trnka, Czechoslovakia, 1962).
[188] *Kybernetika*, Czechoslovak Television (1965), ep. 5, 29:12–34:07, APFCT, IDEC 265 531 15787.
[189] See, for example, Krejčík's notes from Ross Ashby's *Cybernetics*, published in Czech in 1961 with the introduction by Czech-Soviet cybernetician Arnošt Kolman: [189] NFA, Krejčík Rudolf, sg. 51, Kybernetika, f. 206, 'W. Ross Ashby Soustavy a informace'; W. Ross Ashby, *Kybernetika*, trans. Karel Berka (Praha: Orbis, 1961).
[190] NFA, K. R., sg. 51, Kybernetika, f. 97.

mathematics, Krejčík believed that its general lesson was explainable through real-life analogies and could be 'even amusing'.[191]

This was not the first time Krejčík wanted to take the opportunity to present cybernetics as more than an applied science but as a new way of thinking about both humans and machines. Just as cybernetics grew out of US military research, so its popularisation in Czechoslovakia to some extent grew out of the army's needs for instructional films. Already in 1959 Krejčík worked on the first film about cybernetics in Eastern Europe, *The Basics of Cybernetics*.[192] In 1961, he scripted a film for the Czechoslovak Army, *Analogue Computers*, that showed cybernetics beyond its use in the military air defence.[193] Although his task was to make an instructional film about the use of computing machines for shooting down airplanes, he asserted that this would in itself not be so interesting. He suggested instead that the film should show analogies between how soldiers and computers worked to locate and bring down the enemy in the sky.[194]

An underlying philosophical question addressed in the above programmes was whether machines could think, but agency was in this case still mainly given to experts. This questions was addressed by the philosopher and advisor to the TV programme *Cybernetics*, Ladislav Tondl.[195] It could seem at first sight that replacing intellectual activity with computing machines challenged the primacy of humans, as many films depicted how computers would replace human thinking. The cybernetic analogy between humans and machines went both ways, however: for example, a nerve cell in the brain could be switched on and off like a relay.[196] Cyberneticians, in fact, preferred to talk about 'isomorphy' rather than 'analogy' to

[191] NFA, K. R., sg. 51, Kybernetika, 'Koncepce', 10 Feb 1965.
[192] *Základy kybernetiky* (dir. Josef Vácha, Czechoslovakia, 1959).
[193] NFA, K. R., sg. 51, Kybernetika, f. 128, 'Analogové počítače'.
[194] NFA, K. R., sg. 51, Kybernetika, f. 128, 'Analogové počítače'.
[195] Ladislav Tondl, 'K diskusi o perspektivách kybernetiky', *Pokroky matematiky, fyziky a astronomie* 8 (1963), no. 1: 2–14.
[196] NFA, K. R., sg. 51, Kybernetika, f. 130.

emphasise such perceived identical structure. In 1950, the British mathematician Alan Turing proposed that asking whether machines could think was meaningless without further definition; one could compare the results the machine gave to that of human intellectual activity but one could also look at whether the machine's process actually resembled human thinking.[197] And in 1961 in Moscow, there was a debate between 'optimists' and 'sceptics' over whether machines could think like humans, but as Tondl argued, the two positions were self-explanatory: while 'optimists' considered only the end results that were the same, 'sceptics' compared the differences in the process of acquiring information.[198] Tondl argued quite simply that, in the end, since people created machines, the machines' abilities were in fact human abilities. He thus, at least in theory, resolved the problem to accommodate the Marxist view of both creative work and emotions as something that distinguished humans from other animals.[199]

To emphasise the role of humans in cybernetics, the films stressed the agency of experts, such as the mathematicians who programmed computers and interpreted their results. As Kořán wrote in his notebook, the computer machine, in contrast, was a mere tool that '[did] not laugh'.[200] Joy and laughter, as exclusively human emotions, were the key motif of Kořán's 1963 documentary, *The Most Ordinary Profession*, about mathematicians at work.[201] Kořán wanted to capture the 'thinking' faces of mathematicians.[202] But rather than explaining what they were doing, the film showed the poetics of their work: mathematicians meet early in the morning, trying to figure out the 'mystery of numbers', listening to Johann Sebastian Bach and

[197] Alan Turing, 'Computing Machinery and Intelligence', *Mind* 59, no. 236 (1950): 433–460.
[198] Ladislav Tondl, 'K diskusi o perspektivách kybernetiky', *Pokroky matematiky, fyziky a astronomie* 8 (1963), no. 1: 2–14.
[199] Tondl's article was also among materials for the TV programme *Cybernetics*: NFA, K. R., sg. 51, 'Kybernetika', 'K diskusi o perspektivách kybernetiky'.
[200] NFA, K. J., sg. 23 Nejvšednější povolání', f. 38.
[201] *Nejvšednější povolání* (dir. Josef Kořán, Czechoslovakia, 1963).
[202] NFA, K. J., sg. 23, Nejvšednější povolání', f. 54.

taking pleasure in the small pictures of paintings they pinned on the wall (Fig. 1.7).[203] Kořán portrayed mathematicians as embedded in the same world of culture and meaning as the arts, with mathematics as the art of abstracting that world. In his notes, he brainstormed the 'emotions of mathematics', or various perceptions such as those of the vibration of a string, light or the force of water (Fig. 1.8).[204] *The Most Ordinary Profession* opens with a scene of buying a lottery ticket, but the film concludes that instead of relying on luck as in a lottery to bring us joy, we should rely on experts who know how to operate the computing machines. And instead of being happy with winning, the 'joy and laughter' comes, in the film's example, from building a more efficient smokestack that would both save money and be better for the environment.[205] Thus experts were portrayed as those who held agency, in contrast to the machine that was seen as void of 'initiative' and 'imagination'.[206] Echoing Bareš and the role of fantasy in scientific method, here the experts were defined by the combination of knowledge and imagination.

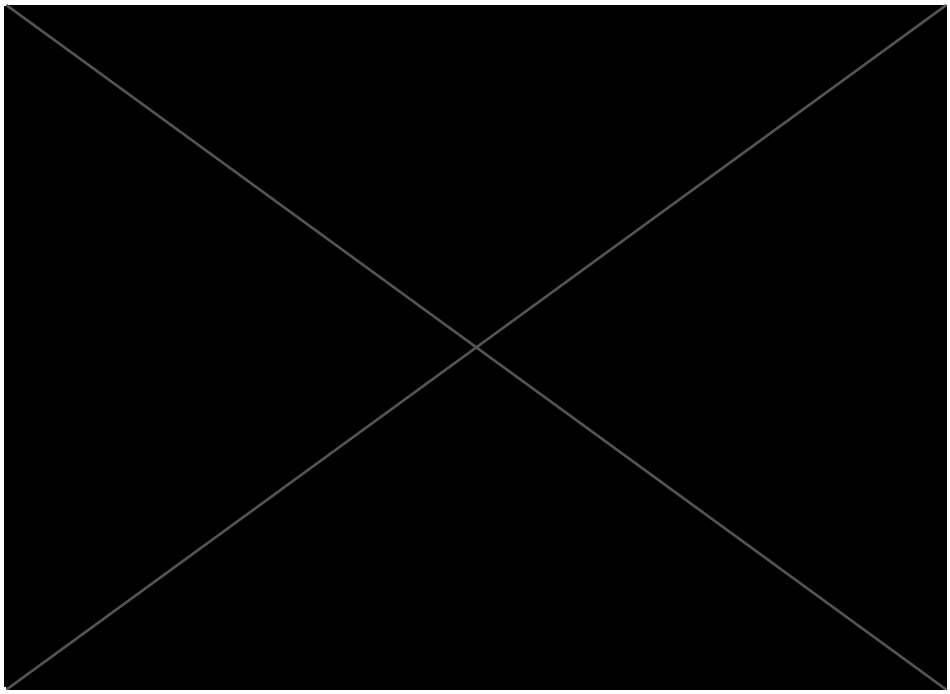


Figure 1.7. Mathematicians' workplace as portrayed in the film *The Most Ordinary Profession* (1963).

[203] *Nejvšednější povolání*, 2:52–3:20.
[204] NFA, K. J., sg. 23, *Nejvšednější povolání*, f. 39.
[205] *Nejvšednější povolání*, 10:49–11:19.
[206] NFA, K. J., sg. 23, 'Nejvšednější povolání', f. 54.

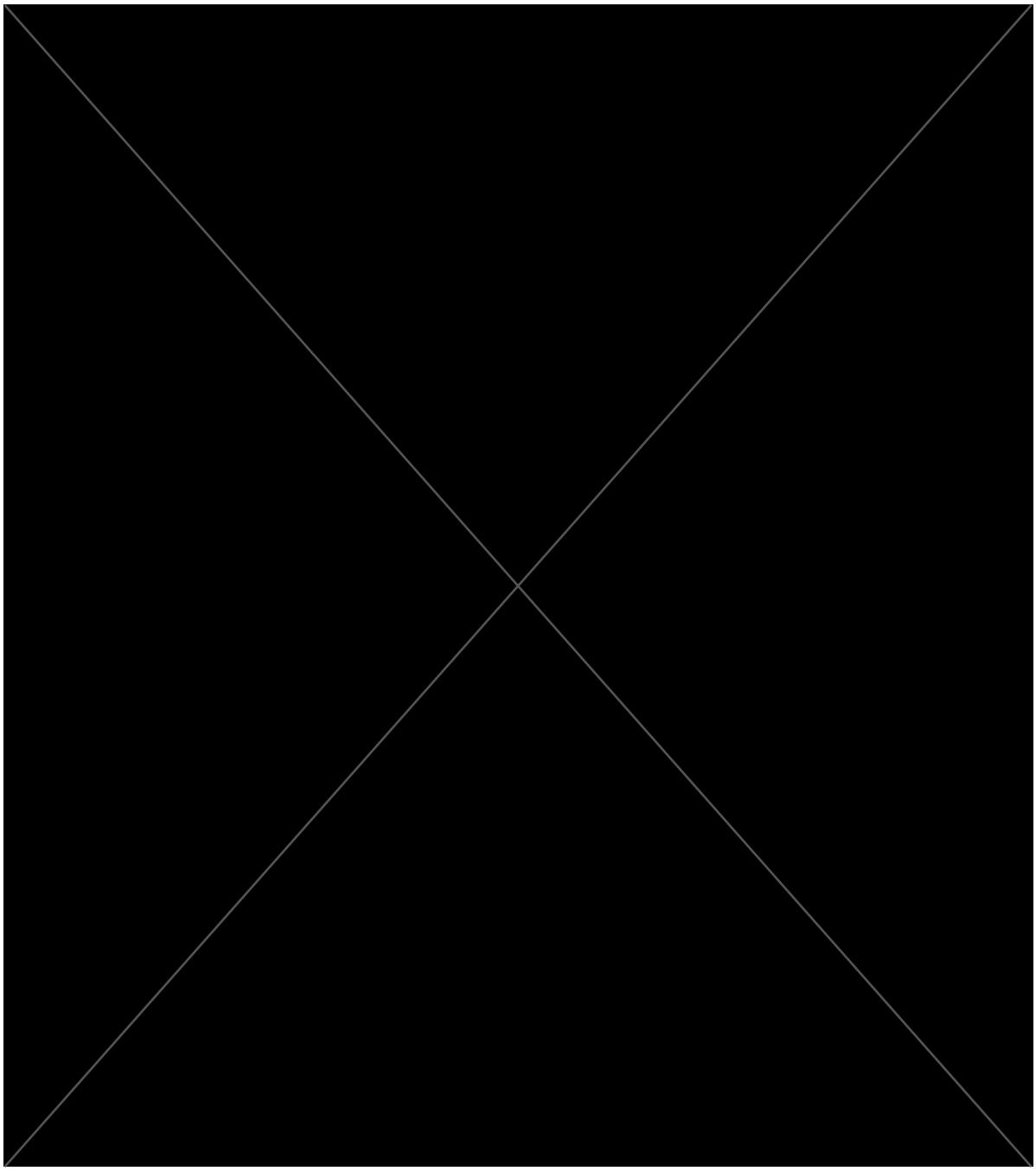


Figure 1.8. The schematic drawing by the director Rudolf Krejčík shows how he was thinking about his film *The Most Ordinary Profession* (1963), portraying the emotional side of mathematics.

And yet while experts were portrayed in such representations as rational agents, their knowledge had an esoteric character to a layperson. Props and images associated with mystery and magic appeared in both documentary filmmakers' works. In his notes that capture the preparations for shooting *The Most Ordinary Profession*, Kořán likened the 'Machine' to

Pythia, the priestess of the Ancient Greek oracle at Delphi.[207] Pythia was mainly a forecaster of the impact of potential political actions; Delphi was also the name for a decision-making method developed at the RAND Institute to formalise the intuitive judgments of experts, as Kořán may have known.[208] However, for Kořán, it was the 'adventure' of obtaining the machine's calculation that constituted the plot.[209] On the one hand, the film explicitly defined mathematics as something completely different from esoteric numerical practices such as numerology and astrology. On the other hand, it suggested that the mathematicians' calculations 'look[ed] incomprehensible to us, perhaps even mysterious'.[210] What then in fact distinguished mathematical modelling from esoteric forecasting was the 'rational' input of the expert at the start of the process, demystifying the computer as an instrument that did basic physical tasks that only humans could interpret.

At their 1962 congress, the filmmakers tasked with the creation of popular science films were complaining that cybernetics was particularly difficult to comprehend and convey in an accessible manner, sometimes requiring months of studies before even approaching the experts.[211] In *Cybernetics*, Krejčík and Horák wanted to convey, at the very least, Norbert Wiener's main message that all 'systems' – organic, mechanical, social – were formally similar and related on an abstract level.[212] But despite their efforts, understanding the content, according to the creators themselves, required at least a high school education.[213] The programme used the very difficulty of the task of popularising cybernetics as its guiding motif. The first episode consisted of repeated attempts to start the programme anew, each with a

[207] NFA, Josef Kořán, sg. 23, 'Nejvšednější povolání', f. 38.
[208] Andersson, *The Future of the World*, 87–88.
[209] NFA, K. J., sg. 23, 'Nejvšednější povolání', f. 38.
[210] *Nejvšednější povolání*, 3:41–3:52.
[211] Radúz Činčera, ed., *Krátký Film 1962-1963* (Praha: Ústřední půjčovna filmů, 1963), 109–110, 113.
[212] *Filmové informace,* 2 Jun 1965, 14. The definition of cybernetics as an 'analytical stage of homomorphism of communication and control in organisms, mechanisms and society' was frequently repeated in every episode.
[213] *Filmové informace,* 2 Jun 1965, 14.

different introduction that would explain what cybernetics was, yet to no avail. For instance, after a failed attempt to survey people on the street about what cybernetics was, the host, actor Jiří Hurta, calls the Academy of Sciences to ask for an expert, only to find out that cybernetics was not even a distinct discipline and there were in fact officially no cyberneticians.[214]

If experts were depicted as holding otherwise inaccessible knowledge, ordinary men and women were portrayed as almost uninterested in the subject. One episode featured an implied viewer behind the television screen – a man, drinking beer, who wanted to be entertained and preferred to watch football but had no choice but to watch *Cybernetics* (there was only one channel until 1970). The host 'gave in' to his wishes and, to entertain him, explained the theory of information using the example of a football match broadcast to Prague from Santiago de Chile (Fig. 1.9). Women, on the other hand, featured in the programme either as a 'housewife baking a cake according to a cookbook' – a way of explaining the functioning of a computer algorithm – or as objects of the lust of the implied (male) viewers, whose attention could supposedly only be secured by showing pictures of beautiful women (Fig. 1.10).[215] Jirásek's cartoons, as shown in *Six Urgent Disputations*, on the other hand, portrayed a woman as unaffected by technology, possessing a hidden power that men of civilisation who faced the new technology did not hold, which incited one philosopher to wonder, hyperbolically, whether a woman would always triumph over cybernetics (Fig. 1.11). The programmes also reinforced the image of the expert as mainly, although not exclusively, male, and this remained typical throughout the late socialist period as well.[216]

[214] *Kybernetika*, ep. 1, 0:31–4:37.
[215] APFCT, IDEC 265 531 15851, *Kybernetika*, Czechoslovak Television (1965), ep. 3, 21:42.
[216] There was one woman, sociologist Blanka Filipcová, present in *Six Exigent Disputations*, but philosophical debates in reality as well as on television remained, despite their ambitions to speak for a universal subject, male-dominated.

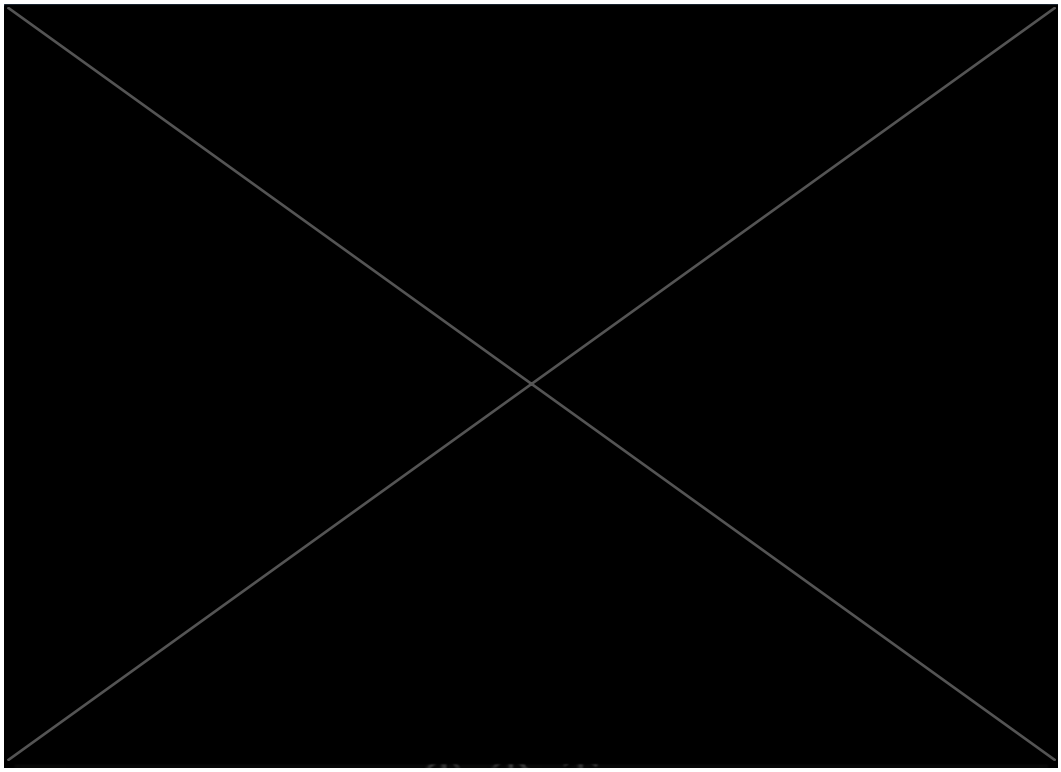


Figure 1.9. Transfer of information illustrated using the case of a football match in the television programme *Cybernetics*.

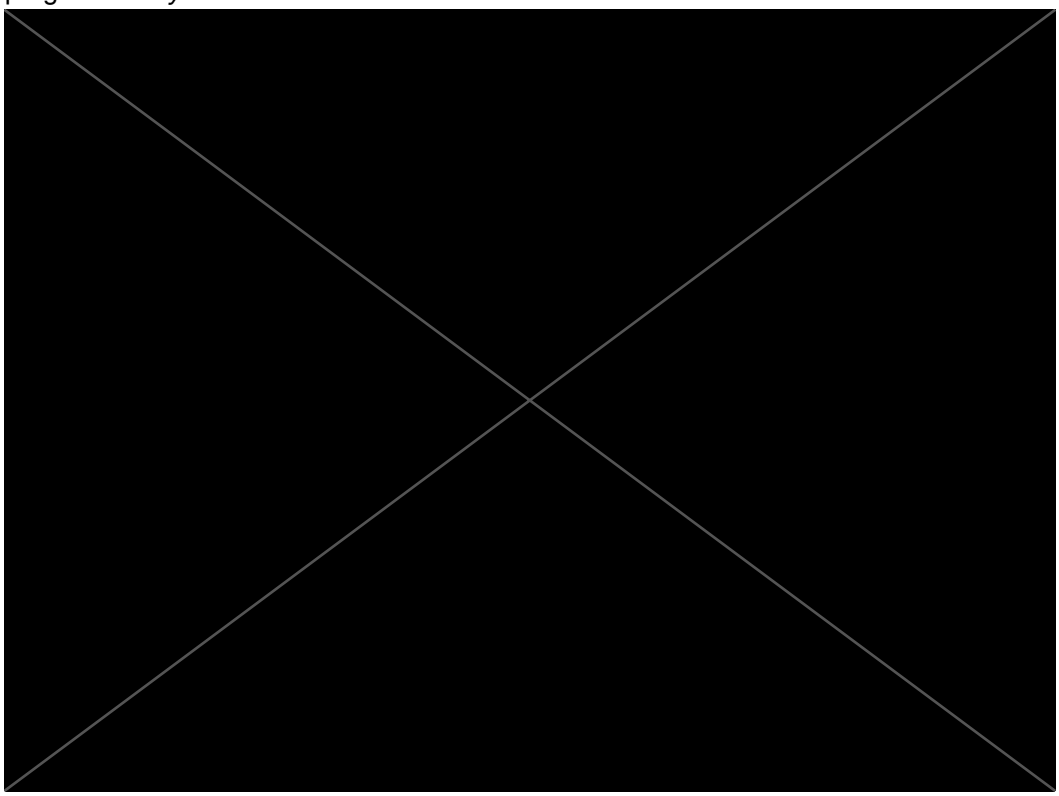


Figure 1.10. After promising the viewers to show a picture of a beautiful woman, the host discusses why one embryo ‘grows into a tortoise’ while another grows ‘into Sophia Loren’, the famous Italian actress. Prague, APFCT, IDEC 265 531 15851, *Kybernetika* (1965), ep. 3, 20:49.

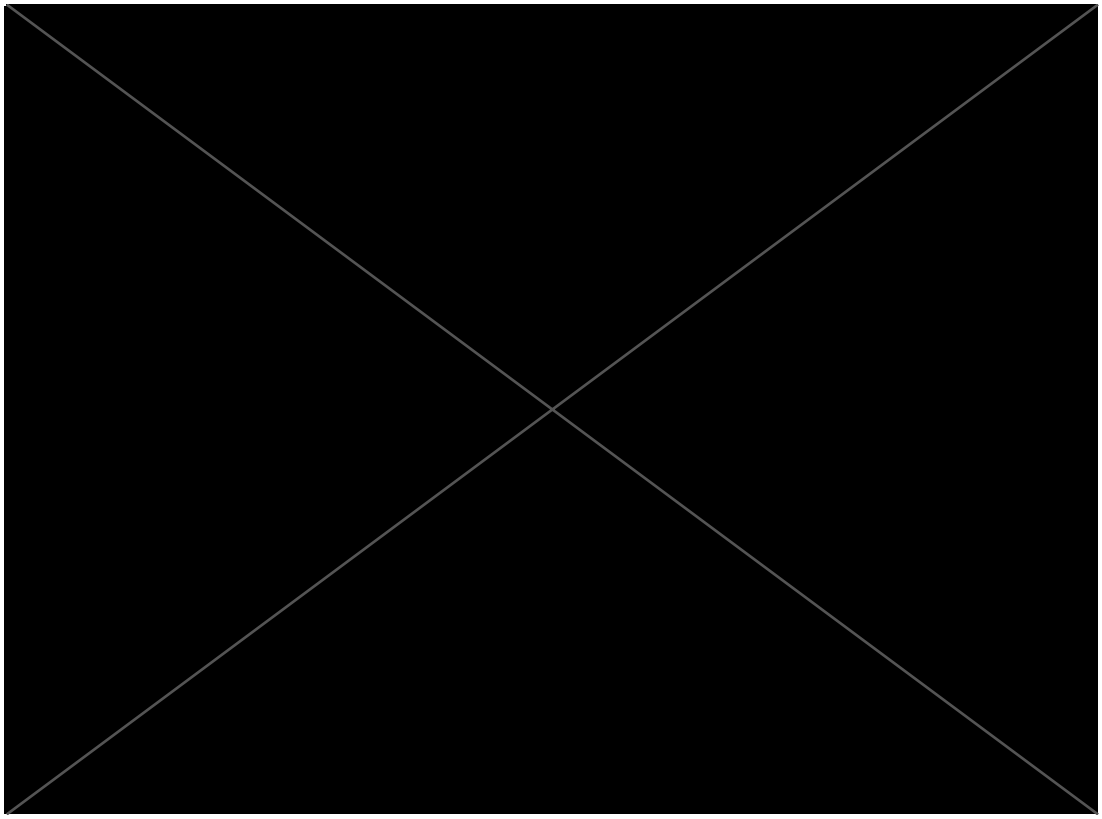


Figure 1.11. 'Is that to say that a woman would always triumph over cybernetics under all conditions?' a philosopher comments on a cartoon shown in *Six Urgent Disputations*. *Šest naléhavých disputací*, ep. 3, 4:18.

Popularising cybernetics meant efforts to overcome the knowledge barrier between experts and laypeople. However, it was obvious to documentary filmmakers that that difference was unsurmountable, as even a good part of the production teams was not sure what cybernetics was. Nevertheless, the documentary filmmakers were committed to presenting cybernetics in an optimistic light and the experts were portrayed as positive characters. It was speculative fiction filmmakers, who mocked such technological optimism. While some challenged the very idea that technology meant progress, others balanced that idea by celebrating the power of fantasy, humanistic values, and practical knowledge.

Speculative Fiction between Comedy and Tragedy

> We are now – and that was stated through acute analyses and passionate discussions by the speakers – at the point of junction between a civilisation and a society which might be dominated by robots and technology, but which might also – and we hope it

> very much – be strongly attached to sentiments, and all the old dear things of this Earth and our soul.[217]
>
> — Diulio Magris, President of the 1st International Festival of Science Fiction Film, Trieste

There were three Czechoslovak films that competed at the 1963 International Festival of Science Fiction Film in Trieste, Italy; two of them, *Ikarie XB 1* (1962) and *Cybernetic Grandma* (1963), won festival prizes for their portrayals of the social and psychological aspects of technological progress.[218] The former was a sci-fi feature film about space travel in the future that portrayed individual human emotions and everyday struggles in the context of universal historical progress. The latter was an animated short film about replacing humans by machines without emotions; a little girl is saved from a heartless robotic grandma only when a human comes and turns her off. If technology was a way to make society better, science fiction asked what would happen to humanity on the way. Certainly, the same questions were addressed by the theorists of the scientific-technological revolution, but films gave a less definitive, less clearly optimistic answer.

In the rest of this chapter, I will focus on speculative fiction on film and television screens from the 1960s to the 1980s as well as some theoretical reflections of audio-visual culture. In the post-Stalinist era, works of fiction participated in an ongoing political debate about the future, using techniques that blurred the line between fact and fiction. Many films questioned the philosophy of linear progress and the role of knowledge, featuring of scientists and historians as their characters. There were tragic films that were deeply sceptical about technology and placed humanistic and technocratic values in opposition to each other, but there

---

[217] *1st International Festival of the Science Fiction Films* (Trieste, 1963), 31.

[218] In the jury were, among others, Kingsley Amis, a British writer, and Umberto Eco, an Italian philosopher. Magris asserted that those two films posed important questions about the social impacts of technology. Furthermore, Franco Valobra, an Italian film critic, alleged that such 'sociological' ideas were the most important in science fiction. He referred to Erich Fromm's criticism of a society that was not driven by the quality of life but by a managerial bureaucracy and consumerism. *1st International Festival of the Science Fiction Films*, 11, 15, 31, 36–37. *Ikarie XB 1* also had success in the same year at the Cannes Film Festival. *Kybernetická babička* (dir. Jiří Trnka, Czechoslovakia, 1962); *Ikarie XB1* (dir. Jindřich Polák, Czechoslovakia, 1963).

were also more comic ones that satirised futile attempts to improve humans by technocratic means. While the tragic tones of humanism were criticised under late socialism as being too pessimistic, comic criticism of technocracy remained common and continued to have its place on screen. The 1960s thus saw the development of a satirical film language about technocracy, which in some forms continued into the 1980s.

Indeed, post-Stalinist fiction in the Soviet Union and other Eastern European countries was generally more ambivalent towards science than before.[219] With the launch of Sputnik in 1957, there was a sense that the fantastic and the real were overlapping.[220] In some films, Sputnik was even referred to as the start of a new calendar.[221] There was a political motivation also behind making *Ikarie XB 1* around the time when the Soviet rocket reached the moon in 1959.[222] But like Soviet fiction (such as the works of Strugatsky brothers), so Czechoslovak films did not so much celebrate space travel as use it as an opportunity to reflect on contemporary society. *Ikarie XB1* was loosely based on *The Magellanic Cloud* by Stanisław Lem, a Polish sci-fi writer, who was sceptical about idealising the humans of the future.[223] In comparison to Lem's novel, Juráček foregrounded anxieties about leaving the Earth and approaching the unknown, creating a melancholic atmosphere that even more than Lem's work challenged a naïve optimism about socialist progress.[224] *Ikarie XB 1* depicted fallible individuals, questioning the extent to which historical progress was able to change daily human

---

219 Marsh, *Soviet Fiction since Stalin*, 302–312.
220 Major, 'Future Perfect?', 82.
221 References to Sputnik and Yuri Gagarin, a Soviet astronaut and the first human in space, respectively, appeared in two films scripted by Zdeněk Bláha: *Muž z prvního století* (dir. Oldřich Lipský, Czechoslovakia, 1964), 51:20-51:50; *Byla jednou jedna přítomnost. Reportáž z podivuhodné události* (dir. Jaroslav Dudek, Czechoslovakia, 1965), 55:10-55:33.
222 Pavel Juráček, *Deník (1959–1974)* (Prague: Národní filmový archiv 2003), 60, cited in: Petra Hanáková, 'First Contact or Primal Scene. Communism Meets Real Socialism Meets Capitalism in Early Czechoslovak Science Fiction Cinema', in *Red Alert: Marxist Approaches to Science Fiction Cinema*, by Ewa Mazierska and Alfredo Suppia (Detroit: Wayne State University Press, 2016), 25n1.
223 Although Lem did not wish to be linked with film since the adaptation deviated too much from the original, see: *Ikarie* 9 (1998) no. 11: 44, cited in: Jakub Jiřiště, 'Optimisté a skeptici. Dramaturgické konfrontance sci-fi filmu Ikarie XB 1', in *Zpět k českému filmu: Politika, estetika, žánry a techniky*, by Michal Večeřa (Praha: Národní filmový archiv, 2017), 182n033.
224 Jiřiště, 180–181.

struggles. The film was a collaboration of director Jindřich Polák and screenwriter Pavel Juráček; and while Polák in the 1970s continued a successful career in film, Juráček was barred from filmmaking for political reasons, yet, as I will explore, their paths crossed in unexpected ways.

Most Czech sci-fi films of this period were satires of the existing order, but while some accented a humanist critique of the modern technical world, others were more absurd and existentialist. The former were represented by films such as *Man from the First Century* (1964), made by Oldřich Lipský, Miloš Macourek and Zdeněk Bláha, which was also shown at the Trieste festival. The main hero, Josef, a careerist from the present, travels in time and is confronted with the communist future and an alien from a different planet. The future is a society of abundance where Josef's careerism has no use. An alien, who is a perfect mathematician but lacks feelings, confirms the primacy of human emotions over technical rationality. Yet, the film is a comic reconciliation of both technocratic advances and humanism.

A more tragic view, one that associated cybernetics with bureaucracy, was portrayed in *Case for a Rookie Hangman* (1969), scripted and directed by Pavel Juráček.[225] It was a satire of a world governed by an educated elite, inspired by Jonathan Swift's *Gulliver's Travels*. The film is based upon the third part of the book, Gulliver travels to Laputa, a floating island inhabited by an educated elite who is failing to put their knowledge to practice. Juráček himself preferred to define his film as a grotesque, for he explained that a satire, such as Swift's, required a view of the society from above, whereas he was one of the crowd who just like others felt at once responsible for and embarrassed by the fact that he did not know what do with his life.[226] A grotesque, for Juráček, could portray social criticism in the way that tragedy used to be able to. In *Case for a Rookie Hangman*, the grave tragedy is replaced by the absurd

[225] *Případ pro začínajícího kata* (dir. Pavel Juráček, Czechoslovakia, 1969).
[226] Pavel Juráček, 'Případ pro začínajícího kata', *Film a doba* (1968), 235–238, cited in Stanislav Ulver, ed., *Film a Doba : Antologie Textů z Let 1962-1970* (Praha: Sdružení přátel odborného filmového tisku, 1995), 149.

logic of rules and mechanisms that are followed to the letter. A surreal fantasy is mixed with the image of bureaucratic authorities: reflecting on the film, Juráček recalled how he experienced the same smells and noises when he visited the Palace of Nations in Geneva, as when he would go to a local office in Nymburk, his Czech hometown.[227] Juráček related the seemingly all-pervasive bureaucracy, hidden in half-forgotten local offices as well as in forward-looking global institutions, to the obsession with cybernetics. Ridiculing the political language of the time, Juráček depicted the computing machine as a device used to intensify the production of thoughts (Fig. 1.12):

> Twenty years ago, the King told the gathering of engineers: 'If all our cybernetic machines can count today, why couldn't sewing machines count someday, too?' This thesis, gentlemen, allows us to class pulleys and shaft propellers as computing machines.[228]

The main target of satire thus was the vision that technological progress backed by specialist knowledge would achieve the ideals of socialism.

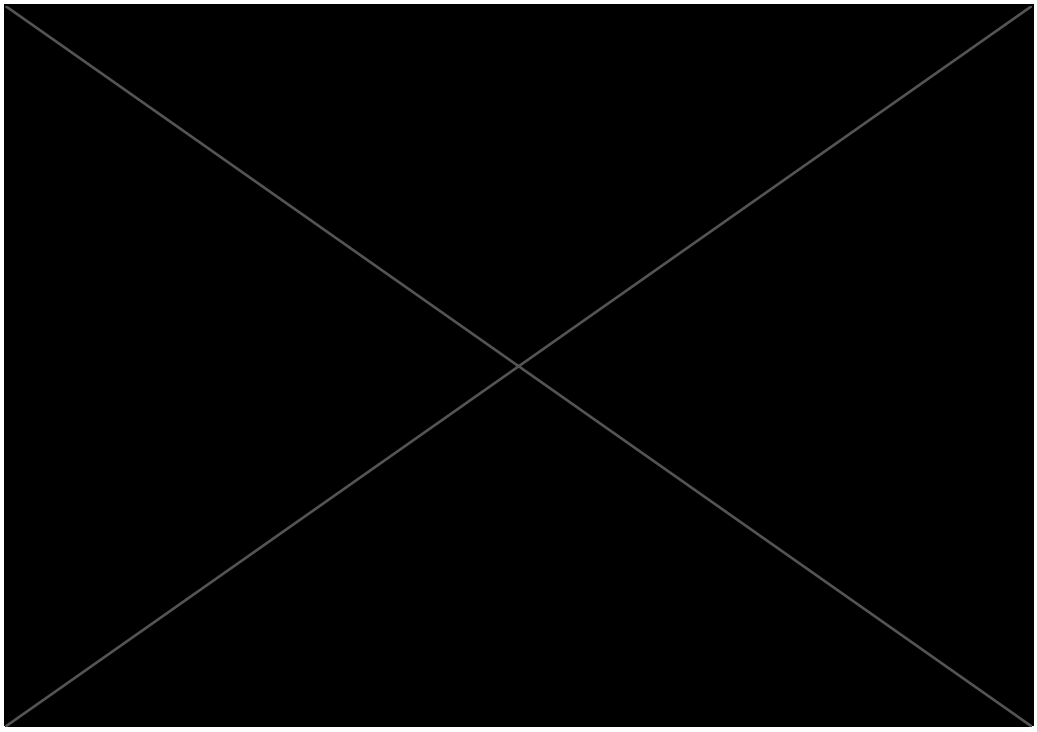


Figure 1.12. A thought-making machine in *Case for a Rookie Hangman* (1969).

[227] Juráček, cited in Ulver, 149–150.
[228] *Případ pro začínajícího kata*, 28:27–28:48.

In another challenge to the vision of socialist progress, filmmakers explored the Marxist unilinear view of history. One of Juráček's unrealised ideas for *Case for a Rookie Hangman* was that Gulliver would find out that the history of Balnibarbi, a fictional land where Academy of Projectors obsessed with increasing production is located in Swift's original story, was unfolding in the opposite direction to what was conventionally understood as progressive. The irony would be that this would still be a philosophy of progress, in which people expend intellectual effort 'to gradually build a civilisation [that was] more and more primitive'.[229] Although Juráček did not fully realise this idea, two other films, made for television in 1965, caught critics' attention thanks to their ambition to tackle similar philosophical questions: *The End of A Great Era*, directed by Antonín Moskalyk, and *Once Upon a Time in the Future: A Strange Reportage from the Present*, directed by Jaroslav Dudek.[230] The critics appreciated that such themes appeared in a television drama, which had a bigger chance to reach a wider audience with serious topics. But it also allowed filmmakers to challenge the television's portrayal of reality by experimenting with television formats.

Once Upon a Time in the Future is a fictional piece of reportage about a woman who comes from the future to the fictional town of Pískov. The film features a television debate between philosophers, who discuss how to decide whether the woman is truly from the future. One scene portrays two Marxists who, both referring to Lenin, come to opposite conclusions about the possibility of time travel: while one explains that it is impossible to overcome the objectivity of time defined by Lenin, the other infers that the very objectivity makes time travel possible.[231] This was a satire of the actual philosophical debates one could see on television, calling into question Marxist philosophers' quest for the scientific truth. The film opens the

---

[229] Juráček's idea was inspired by Swift's description of the fantastic land Balnibarbi as having been more modern in the past than in the present. Juráček, cited in Ulver, *Film a Doba*, 153.
[230] *Konec velké epochy* (dir. Antonín Moskalyk, Czechoslovakia, 1965); *Byla jednou jedna budoucnost: Podivná reportáž z přítomnosti 1965* (dir. Jaroslav Dudek, Czechoslovakia, 1965); Dušan Havlíček, 'Televizní sci-fi', *Kulturní tvorba* (23 Mar 1966), 12.
[231] *Byla jednou jedna budoucnost,* 43:39–45:24.

question whether the future can be anticipated from the logic of historical development. The main character, the historian Pařízek, who has the chance to talk to the mysterious woman, is accused of 'defaming' the future because as he describes it sounds too 'anarchist' and does not correspond to how the communists imagine it in the present.[232] Pointing out that the present also does not correspond to the utopias of the past, Pařízek argues that we cannot decide whether the woman's portrayal of the future is truthful solely from the point of view of our present knowledge. The films thus explored major problems of that era, brought to the fore by the boom of cybernetics and futurology, such as the question of the power of human knowledge to bring progress and the possibility of predicting future development.

Another film, *The End of a Great Era*, also explored the question of historical development, but it focused on the relationship between 'objective' unfolding of history and an individual's life. In *The End of a Great Era,* instead of time travel as a way to confront humanity with a more developed civilisation, present-day society was confronted with a more advanced species from outer space.[233] The aliens' computer predicts that the Earth is on the brink of a catastrophic war, and therefore they decide to freeze civilisation's development at the current stage, leaving the Earth as a cautionary tale for others in the universe.[234] The total stagnation of art and science is to be achieved by the 'system of bureaucracy' that humans have developed themselves and know so well.[235] The intervention from another galaxy therefore involved the end of history, condemning humanity only to repeat what has already happened. The entire film is set in a Prague café where a host of characters representing all walks of life reacts to the television news. A history teacher adheres to an objective view of history and is happy that he will finally have a chance to step out of history and see the truth.[236] His

[232] *Byla jednou jedna budoucnost,* 47:51–48:27.
[233] The film caught unusual attention of foreign journalists at a television festival in Prague and won the Prix Italia prize in 1965. Přemysl Janýr, 'Neztratit příležitost', *Literární noviny* (3 Sep 1966), 2.
[234] *Konec velké epochy*, 46:05–46:50.
[235] *Konec velké epochy*, 54:12–54:30.
[236] *Konec velké epochy*, 41:31–41:51.

perspective is an irony on objectivism; supposedly only once the historical development stops, the teacher can perceive history without himself shaping it as one of historical actors. In contrast, a waitress, uninterested in the historian's 'objective' laws, is worried that the end of history will mean the end of her and her children's dreams.[237] They present two views of history, one universal and based on the belief in progress, the other focused on family and the everyday good life. (That the former is represented by a man and the latter by a woman was not a coincidence.) The characters must decide whether to stay in the café, which offers 'lasting peace', safe from uncertainty, or to go outside; as history comes to a standstill, each has to decide about their life as an individual.[238] For most characters, unbothered by historical materialism, the end of history as an end of everyday uncertainties, rather than an end of universal progress, means the end of life.[239]

Fiction television directors often used the same narrative devices as their colleagues who made documentaries, blurring the distinctions between genres to give an equally serious philosophical commentary on current issues.[240] Their goal was to use mimetic settings and techniques, such as 'unedited' footage from television debates and news reports, for their otherwise fictional plot.[241] A textbook for future film and television producers defined a reportage as capturing 'objective reality', which was not, unlike in a documentary, significantly 'influenced, edited, [or] rehearsed' by the creator.[242] Experimenting with the genre of reportage was a cinematographic expression of the unclear boundary between fact and fiction. For the same reason, the directors also cast actual journalists to play themselves in films. The

---

[237] *Konec velké epochy*, 1:06:14–1:09:21.
[238] *Konec velké epochy*, 1:13:11–1:18:00.
[239] Other topics, including anti-Semitism and civilisational superiority were addressed; and one reviewer interpreted aliens as conservative dictators: Milan Scholz, 'Život nechce do konzervy', *Literární noviny* (2 Apr 1966), 4.
[240] Dušan Havlíček, 'Léta dozrávání', *Kulturní tvorba* (13 Oct 1966), 4.
[241] Zdeněk Bláha as quoted in: Havlíček, 'Léta dozrávání', 4. See, for instance: *Byla jednou jedna budoucnost: Podivná reportáž z přítomnosti 1965*, 47:14–47:29.
[242] Vrabec, *Základy Tvorby a Výroby Televizních Pořadů*, 1968, 161.

filmmakers essentially came from the same milieu, centred around the Prague Film Academy, and they would also exchange roles; Josef Kořán, for example, was an actor in *Case for A Rookie Hangman*. But rather than an attempt at depicting the truth, *film-pravda* thematised the notions of truth and reality in various ways. This included techniques that pointed to the staged nature of the programme, as the previous section has touched upon, or, conversely, fictional documentaries.

In doing so, they questioned the facticity of the documentary genre; and, likewise, the documentary television programmes, discussed in the previous section, often intentionally broke the fourth wall and, for instance, commented on why they chose a certain special effect. Czechoslovak filmmakers in the 1960s were hugely interested in the methods of *cinéma verité* ('truthful cinema' in French, influenced by French, Italian and Russian cinematography).[243] Documentary filmmaker Rudolf Krejčík explained that Czechoslovak filmmakers became fascinated with *film-pravda* ('film-truth' in English, borrowed from Soviet director and film theorist Dziga Vertov's *Kino-Pravda*) not for theoretical and artistic reasons but due to the current political situation of the mid-1960s, in which people were ready to say what they truly thought.[244] Indeed, a conflict over the correct portrayal of humanist values in film and television became a significant part of the political consolidation after the invasion of the Warsaw Pact army.[245]

---

[243] *Filmové informace* (2 Apr 1964), 23.
[244] Rudolf Krejčík's contribution at a debate at the Karlovy Vary film festival as quoted in: Senta Wollnerová, 'Víme, při čem jsme?', *Divadelní a filmové noviny* 8, no 19 (14 Apr 1965): 3, cited in: Martin Šrajer, 'Rudolf Krejčík', *Filmový přehled*, 16 Nov 2022, accessed 4 Apr 2023, https://www.filmovyprehled.cz/cs/revue/detail/rudolf-krejcik
[245] In the 1960s, cultural policy was subject of political disputes, regardless of successes of Czechoslovak cinematography, and became politically defined only in the 1968 Action Programme, which stressed culture's humanist mission. Jan Mervart, *Kultura v karanténě: umělecké svazy a jejich konsolidace za rané normalizace* (Praha: Nakladatelství Lidové noviny, 2015), 197–198.

Crazy Komedie and Late Socialist Optimism

However, I am not interested here in the history of film industry or cultural opposition but rather in the continuities and shifts in treating the relationship between technological optimism, humanism, and technocracy in popular media.[246] Some films, such as *The End of a Great Era*, were censored after 1968 as they were considered to offer a too pessimistic outlook on society. Another case in point was *Late August at the Hotel Ozone* from 1966.[247] The film portrayed a post-apocalyptic world in which a handful of women were seemingly the sole survivors of a nuclear disaster and were looking for a man to continue humanity. The scriptwriter, Pavel Juráček, wanted 'to counter the myth of an ineradicable and immortal humanity' and 'excessive optimism'.[248] However, hard-line communists deemed the pessimism in this film and others as part of the 'political crisis' of the 1960s. As some Soviet critics wrote, the film was 'anti-socialist' and 'against life', condemning those who celebrated how the film portrayed absurdity, fragmentariness, and alienation.[249]

Observing political changes in 1969, which included review of filmmakers' previous political activities, Juráček, too, anticipated that his latest film, *Case for a Rookie Hangman*, would be banned.[250] However, not all of the films had the same fate. *Case for a Rookie Hangman* premiered in 1970, and although its distribution was curtailed, it was never banned entirely.[251] Juráček copied into his dairy a news item from *Rudé právo*, which declared that

---

246 There are only a few studies of film and literary spheres that go beyond the simple view of clear political divide between the democratising 1960s and post-1968 consolidation, exploring initial ambiguities in cultural politics and the complicated individual life trajectories: Hulík, *Kinematografie Zapomnění*; Mervart, *Kultura v karanténě*.

247 *Konec srpna v hotelu Ozon* (dir. Jan Schmidt, Czechoslovakia, 1966). The post-apocalyptic motif appeared also in a novel *From Nowhere to Nowhere* (*Odnikud nikam*) by Achille Gregor, published as a serial in the magazine *Svět sovětů* in 1964.

248 Z. Hron, 'Rozhovor s Pavlem Juráčkem', *Periskop* 4 (1967): 78.

249 Soviet criticism in the magazine *Isskusstvo kino*, cited in *Panoráma zahraničního filmového tisku* 15 (1968): 875.

250 Pavel Juráček, *Deník. III., 1959-1974*, ed. Marie Kratochvílová (Praha: Torst, 2018), 793.

251 The film was not in mass distribution, yet there were hundres of screenings in the 1970s, and the film was being lent abroad until 1983. Pavel Juráček, *Případ pro Začínajícího Kata : (Podobenství 1966-1968)* (Praha: Knihovna Václava Havla, 2020), 14. In January 1970 a 'Situational Report on Czechoslovak Cinematography', made by the heads of the Film Studio Barrandov, the main film

anybody who had seen the film 'would hardly recommend it for a festival that operates under the banner of humanist understanding and friendship'.[252] In March 1971, a 'Report on the Situation and Proposal for Further Consolidation in Czechoslovak Cinematography' identified the New Wave (since 1964) as one of the signs of the political 'crisis'.[253] Juráček was later dismissed from the film studio, working under a different name for some time. He signed Charter 77, soon emigrating to West Germany, where he had little success in film. Returning to Czechoslovakia in early 1980s, he contacted his colleagues to ask for work, but many (falsely) suspected him to be a secret police collaborator.[254]

In West Germany Juráček had contacts with Polák, who had known each other from the 1960s, although their careers radically diverged.[255] As I will discuss below, Polák worked for big international television co-productions. After Juráček returned to Czechoslovakia, the director Václav Vorlíček offered him in 1984 to work on a two-episode children's miniseries *Rumburak*, a spin-off of one of these West German co-productions.[256] Premiered in 1985, the plot revolves around misuse of a computer by an evil wizard who flees the Fairy-Tale Kingdom. But *Rumburak* is also about a conflict between technology and nature in the human world. The cybernetician, whose job the wizard steals, is portrayed as a one-sided advocate of

---

producer in the country, argued there were three categories of films: those with no major flaws, those that supposedly threw a bad light on postwar developments in the country and the party, which would consequently be banned, and those with partial shortcomings, which would be vilified by the critics and have limited distribution. Juráček's *Case for A Rookie Hangman* was in the last category. Štěpán Hulík, *Kinematografie Zapomnění : Počátky Normalizace ve Filmovém Studiu Barrandov (1968-1973)* (Praha: Academia, 2011), 74–76, 104–105.

[252] Kl, Polský důkaz v Karlových Varech. *Rudé právo*, roč. 50, č. 169, 18. 7. 1970, s. 4
As cited in: Juráček, *Deník III.*

[253] Hulík, *Kinematografie Zapomnění*, 105–106.

[254] ABS, Operativní agenda kontrarozvědky, sg. KR-813946 MV, Pavel Juráček, R. no. 13/83, 'LANDOVSKÝ Pavel – hodnocení situace mezi čs. emigrant v Rakousku a NSR v souvislosti s návratem čs. emigranta Pavla JURÁČKA do ČSSR', 12 Oct 1983, https://www.ebadatelna.cz/?id=f80347.

[255] ABS, O. a. k., sg. KR-813946 MV, 'Zápis o výpovědi', 27 Aug 1983.

[256] ABS, O. a. k., sg. KR-813946 MV, R. no. 2/84, 18 Jan 1984 f. 32; no. 4/84, 30 Mar 1984. *Rumburak* (dir. Václav Vorlíček, Czechoslovakia, FRG, 1984). In early 1989, Juráček co-wrote a script for another serial directed by Vorlíček and was already given credits: *Škola detektivky* (dir. Václav Vorlíček, Czechoslovakia, 1989).

technology who harms animals. Juráček was thus able to work on themes he was familiar with from the 1960s. Yet, even one of the secret police informers noticed an apparent 'paradox, since V[orlíček] is one of the most [politically] engaged F[ilm] S[tudio] B[arrandov] workers'.[257] Juráček's involvement perhaps influenced the result, but in terms of quality rather than an overall ideological message, as Vorlíček was more than satisfied with the scenario Juráček turned in.[258] This case illustrates both personal and thematic continuities between the post-Stalinist and late socialist era.

The question remains how the tension between technology and nature in popular media was reconciled with technocratic socialism as the main legitimation narrative in the 1970s. Václav Vorlíček (director of *Who Wants to Kill Jessie?*) was one of the directors active in the 1960s who continued to work on comedies that ridiculed technocracy in the 1970s, along with others such as Oldřich Lipský (director of *Man from the First Century*).[259] However, many creators often became estranged when their career and political paths diverged in the 1970s. For example, Václav Vorlíček made most of his films and serials with screenwriter Miloš Macourek, who in the 1960s also worked with Václav Havel in the theatre.[260] But while Macourek went on to make a career in film, Havel could no longer publish his theatre plays in Czechoslovakia and became one of the most prominent dissidents. Watching Vorlíček and Macourek's television serial *Arabela* in 1981, Havel, remembering his past collaboration with Macourek, commented that the serial was a 'cosmopolitan hotchpotch'.[261] Mocking the fact

---

257 ABS, O. a. k., sg. KR-813946 MV, R. no. 18/84, 19 Apr 1984.
258 ABS, O. a. k., sg. KR-813946 MV, R. no. 13/84, 27 Jun 1984.
259 For instance, Oldřich Lipský made a film *Jáchym, Put Him in the Machine!* about individualised computer prediction of lucky and unlucky days. *Jáchyme, hoď ho do stroje!* (dir. Oldřich Lipský, Czechoslovakia, 1974).
260 AKVH, ID 24875, Václav Havel and Miloš Macourek, 'Nejlepší rocky paní Hermanové', Nov 1962, https://archive.vaclavhavel-library.org/Archive/Detail/24875.
261 Note this was omitted from the English edition of Havel's *Letters*, which shows that Havel's opinions about popular media were by the editor considered insignificant in comparison to his philosophising, a bias that is found also in historiography on late socialism. Václav Havel, *Dopisy Olze*, ed. Michael Špirit (Praha: Torst, 1999), 230; Václav Havel, *Letters to Olga : June 1979-September 1982*, trans. Paul R. Wilson (New York: H. Holt, 1989).

that the serial was paid by West Germans, Havel criticised, among other things, its lack of a critical perspective and deviation from the fairy-tale genre. Indeed, the poetics of 'crazy comedies' (*crazy komedie* in Czech) was, according to Macourek who did not worry much about genre rules but instead purposedly mixed and parodied them, were supposed to be absurd and fantastic compared with their realistic counterparts.[262] Therefore, the views of the intellectual elite in opposition differed from those who continued to make popular films on the grounds of perceived quality.

But what about the lack of a critical perspective, alleged by Havel? In 1969, Havel wrote a script (with another filmmaker, Jan Němec), *Heart Beat*, which was never turned into a film. It is not clear whether this was because of the film content, as most scripts, whatever their political content, were every year left unrealised.[263] Yet there are some obvious differences between that film, *Heart Beat*, and Macourek's 'crazy comedies' of the late socialist era. In many regards, *Heart Beat* was no different from other comedies on the theme of technocracy. As the authors put it, they reflected on 'the failure to use peak science for humanistic purposes', portraying today's opulent world of politics and business.[264] The plot revolved around a world-class heart surgeon, Doctor B, who becomes involved with a secret organisation that, as it turns out, kills young, healthy individuals to have their hearts transplanted to the wealthy and powerful. Just like Vorlíček's films, this one also presented in a satirical way the idea that human life was becoming ever more permeated with technical thinking, while it made people's lives better only on the surface. And it also portrayed individuals who take advantage of the new technology. Yet, the overall message was different; in a clearly ironic final scene, Doctor B becomes a martyr, a 'symbol of the battle won by spirit

[262] Jana Bednaříková, 'Pohádkář první kategorie', *Květy* (2 May 1984), 42.
[263] Štěpán Hulík, *Kinematografie Zapomnění : Počátky Normalizace ve Filmovém Studiu Barrandov (1968-1973)* (Praha: Academia, 2011), 44–45, 49–50.
[264] Jan Bernard, ed., *Václav Havel a Film : Scénáře, Analýzy a Úvahy z Let 1957-1989* (Praha: Knihovna Václava Havla, 2018), 318.

over nature'.[265] The choice of one life over another was legitimised by a 'societal interest', allegedly substantiated by the struggle of reason over irrationality.[266] The satirical focus on the misuse of medicine was thus aimed at the Marxist belief in the power of science and rationality. Taking *Heart Beat* as an example of what Havel might himself considered a 'critical' film, the contrast with the late socialist crazy comedies becomes obvious.

In contrast to films that challenged the Marxist view of progress based on technological development, late socialist comedies explained character flaws as driven by 'petit-bourgeois morality' that deviated from the desired norm. This was also the case in Vorlíček's film *How About a Plate of Spinach?* (1977).[267] Expanding on the motif of *Who Wants to Kill Jessie?* (1966), the film was about the invention of a new type of machine to expedite milk cows' recovery, stolen by a researcher for use in a cosmetic studio for a rich, foreign clientele to make them appear younger, with unexpected side effects. Unlike *Heart Beat*, this film was about personal enrichment at the expense of the research institute and society as a whole. Yet, the late socialist films retained their humanistic themes and continued to portray the tensions between technological progress and everyday human life.

The Marriage of Fantasy and Technology

I will now focus on fantasy television serials for children that followed in the genre of 'crazy comedies', which will allow me to argue that imperfect technocracy was identified with innate human flaws, and neither of them had to be improved to live a good life. The inadequacies of the present were criticised but in a comedic way that remained optimistic in spite of those imperfections, refusing to be either too didactic or too pessimistic. What interests me is how anti-technocratic sentiment in popular media was attuned with technocratic socialism as a tool of governance and a source of political legitimacy while preserving the

[265] Bernard, 373–374.
[266] Bernard, 353.
[267] *Což takhle dát si špenát?* (dir. Václav Vorlíček, Czechoslovakia, 1977).

scepticism of the 1960s. I also wish to shed light on the context in which ecological themes appeared in television fiction in the 1980s.

Just as in the early 1970s the proponents of the scientific-technological revolution accommodated their theory to the new political situation, so did filmmakers align the humanistic satire with late socialist optimism. My argument runs in parallel with that of Vítězslav Sommer about the legacy of the debates about the scientific-technological revolution in late socialism. Sommer argues that the idea of scientific-technological revolution became a 'theoretical justification of the late socialist political system'.[268] He posits that in collaboration with Soviet scholars the Czechoslovak philosophy of scientific-technological revolution was reduced to a schematic theory of development towards a technologically advanced future, abandoning the emancipatory demands. Radovan Richta, who was the face of the STR in the 1960s, continued to work after 1968, stripping his theory of any criticism of the existing state socialist system.[269] A 1971 congress of Eastern European socialist philosophers and sociologists, hosted in Karlovy Vary, Czechoslovakia, declared the primacy of a Marxist-Leninist approach to the study of scientific-technological development and against 'bourgeois' ideologies.[270] Richta considered science and technology, including social science, as a tool for social development in the hands of communist parties competing economically and ideologically with capitalist countries.[271]

At the same time, a distinctive discourse of socialist humanism celebrating the value of the quiet life and the everyday developed in popular media, and, as I will discuss in more detail in the next chapter, also in literature. Czechoslovak Television played a crucial role in the

[268] Sommer, 'Scientists of the World, Unite! Radovan Richta's Theory of Scientific and Technological Revolution', 196.
[269] See the collaborative work of Czechoslovak and Soviet scientists on scientifich-technological revolution: *Člověk - Věda - Technika : K Marxisticko-Leninské Analýze Vědeckotechnické Revoluce* (Praha: Svoboda, 1973).
[270] APFCT, IDEC 271 531 04009, *Filosofický a sociologický kongres v Karlových Varech* (1971).
[271] APFCT, IDEC 274 531 18063, *Rozhovor s Radovanem Richtou k plénu ÚV KSČ* (1974).

political consolidation after the invasion of the Warsaw Pact army. *The Lessons from the Crisis Period*, a document published by the Communist Party of Czechoslovakia in response to the political development of the 1960s, identified the central role of mass media in the 'crisis' of the 1960s, calling for more control and more subtle propaganda. According to Jan Fojtík, the Central Committee Secretary whose task was to oversee culture, hitherto political agitation had not taken into account the 'psychology of our people'.[272] Although explicitly aimed against the 1960s reformist politics, Fojtík's approach thus also adopted some of the novel interest in the individual, common in 1960s culture. As a result, in the 1970s, the television serial (*seriál*) became the dominant genre of Czechoslovak Television. Rather than straightforward propaganda, television serials moulded a shared understanding of what everyday life under developed socialism looked like.[273] In addition to quarterly programming plans, the television prepared an annual 'Ideas and Themes Plan', which was debated by the Central Committee of the Communist Party of Czechoslovakia to ensure that the programming generally corresponded to political goals.[274] A 1983 university textbook of film and television production explains that, in the 1970s, the ideological planning of programming was in place to prevent a recurrence of what was seen as the political crisis of the 1960s.[275] Yet I do not want to suggest that television fiction straightforwardly reiterated the official line. Not only did Fojtík's call for subtle agitation necessitated the portrayal of a variegated society with conflicting views and shortcomings on television, but television also balanced various interests, not just of politicians but also of directors, producers and, at least implicitly, viewers.

---

[272] As cited in Bren, *The Greengrocer and His TV*, 123.
[273] Irena Reifová, 'Kryty Moci a Úkryty Před Mocí: Normalizační a Postkomunistický Televizní Seriál', in *Konsolidace Vládnutí a Podnikání v České Republiace a Evropské Unii. Díl II. Sociologie, Prognostika a Správa: Média.* (Praha: Matfyz Press, 2002), 354–371.
[274] This was a 3rd, updated edition, which newly included this information. Jan Vrabec, *Základy Tvorby a Výroby Televizních Pořadů* (Praha: SPN, 1983), 33.
[275] Vrabec, 27.

Humanist themes, as an artistic counterbalance to the scientific-technological revolution, therefore, continued to have a place in the 1970s culture. However, socialist culture, whose task was now to promote a positive idea of a socialist person, was clearly delineated from the 'decadent' cultural developments of the 1960s.[276] In 1972 at the Czech Film Institute, renowned communist filmmaker Otakar Vávra defined the function of film as a 'psychological rescue from technical one-sidedness'.[277] Vávra argued that, as technological progress resulted in a more complex society, with the material base developing faster than the moral and emotional superstructure, art would give expression to the new contradictions between the individual and society, technology and morality, giving people the will to make their lives better.[278] He defined his position against the generation of 1960s filmmakers who were allegedly 'drowning' in 'hopelessness' and 'aesthetic subjectivism', and called instead for 'optimistic realism'. As Vávra put it, the reality of alienation caused by technology should not be just 'passively' reproduced.[279] Their films had allegedly been too 'existentialist', 'subjectivist' and 'negativist'. So, the 1970s' renewed sense of morality, as spelled out by Vávra, would suppress this pessimism while leaving space for a critique of the negative aspects of the technical civilisation.

The relationship between fiction and politics was also addressed in the context of the divergence between capitalist and socialist future studies. Kornel Vavrinčík, author of a 1980 book series *The Year 2000* which popularised the science of prediction, saw both the creative and the scientific processes as 'adventures' – the former seeking experience and the latter knowledge – that were a result of a transcendental desire of the spirit to escape everyday

[276] Jan Mervart, 'Shaping "Real Socialism": The Normalised Conception of Culture', in *Czechoslovakia and Eastern Europe in the Era of Normalisation, 1969–1989* (Cham: Palgrave Macmillan, 2022), 203.
[277] Otakar Vávra, 'Poznámky k perspektivě čs. kinematografie pro přístích 10-15 let' in *Výhledy čs. kinematografie do r. 1985*, unpublished manuscript (Prague: Český filmový ústav, 1972), 4.
[278] Vávra, 6.
[279] Vávra, 8–10.

reality.[280] In that vein, Vavrinčík opposed the 'pessimism' of both capitalist future studies and science fiction, which were both allegedly driven by the logic of profit and functioned as ideological manipulation.[281] According to Vavrinčík, a good socialist sci-fi did not have to be didactic, yet should adhere to 'humanistic' values.[282] So, on an ideological level, the task of speculative fiction was different from the Western one. At least declaratively, late socialist cultural politics was based in a dichotomy between 'bourgeois' and 'socialist' culture, distinction originally made by Lenin that had largely lost its relevance in the 1960s's convergence.[283]

However, in late socialism, despite claims of political and cultural divergence, the 1970s and 1980s were times of lively television cooperation between the East and the West. Production of popular television films and serials made in coproduction with West Germany followed the successful genre of Czechoslovak 1960s 'crazy comedies'. A good example was the 13-episode long television serial *Arabela*, which was described as a 'modern fairy-tale'. This contemporaneous term distinguished the genre from a traditional fairy-tale, as it portrayed the contemporary world and the power of fantasy and magic to reshape it. Commissioned by West German producer WDR Köln, *Arabela* followed the success of films and serials made by screenwriter Miloš Macourek and director Václav Vorlíček that were broadcast not only by the Czechoslovak Television but also by West German TV channel ARD. Co-producer Gert Münterfering, from the production company WDR Köln, approached the Czechoslovaks with an offer based on the fact that the West German audiences had enjoyed Czechoslovak fairy-tale comedies such as *The Girl on the Broomstick* and *How to Drown Dr. Mráček.*[284] The

[280] Kornel Vavrinčík, *Rok 2000 : Spor o Budoucnost Člověka* (Praha: Mladá fronta, 1980), 192–193.
[281] Vavrinčík, 193.
[282] Vavrinčík, 193.
[283] Mervart, 'Shaping "Real Socialism"', 204.
[284] APFCT, HR VDM, sg. Red 381/2867, Zprávy a protokoly, 'Hlášení o jednání s cizinci', 27 Sep 1976. *Dívka na koštěti* (dir. Václav Vorlíček, Czechoslovakia, 1971); *Jak utopit dr. Mráčka and Konec vodníků v Čechách* (dir. Václav Vorlíček, Czechoslovakia, 1976).

former was about a young witch who wished to escape the magic world and become a human; the latter was about a family of water goblins whose home by the river was endangered by housing officer Mráček, who deemed the house too mouldy and wet, offering the family a flat in a new housing bloc. In these films as well as in other works, the clash between the human world and magical world was resolved for the benefit of humans, whose world turned out to be a better place, though significant satire was aimed at its technocratic character. That very ambiguity is the subject of this chapter. At the same time, this criticism of modern technology resonated with audiences outside Czechoslovakia and other socialist countries.

At first glance, the serial mimicked the official late socialist discourse of scientific-technological development, in which humanity and technology proved to be superior. The conceptual plan of *Arabela* stated that the serial 'favoured' present-day life, contemporary technology and human relationships in the clash between 'the contemporary world of technology … and the world of ancient traditions and magic'.[285] The West German co-producer Gert Münterfering at first had doubts about the idea of placing fairy tale and technology in opposition.[286] Furthermore, even after several changes to the script were made, he still found the final episode 'too didactic' and changed his view only when he watched the finished product, making sure the ending was still comical enough.[287] Indeed, the serial ends with the marriage of princess Arabela and engineering student Petr as a symbol of the connection between technology and fantasy, science and imagination – as one of the characters explains.[288]

---

[285] APFCT, HR VDM, sg. Red 305/2297, 'Dramaturgický podklad pořadu', 26 Sep 1978.
[286] APFCT, HR VDM, sg. Red 381/2867, Korespondence, 'Dopis WDR', 14 Feb 1977.
[287] APFCT, HR VDM, sg. Red 381/2867, 'Cestovní zpráva ze služební cesty do NSR – Westdeutscher Rundfunk Kolín n./Rýnem/,' 9 Feb 1980. It is difficult to reconstruct some of the objections since much of the communication happened in person rather than in correspondence, but it seems that the main concerns of both parties were about the quality of the storyline, albeit those could also be ideologically motivated: for example, the plot of the last episode was criticised for being too predictable and not entertaining enough, but it was also recommended that the affection between Arabela and Petr be accentuated to become role models for the youth: APFCT, HR VDM, sg. Red 381/2867, Zprávy a protokoly, 'Zpráva o služební cestě do NSR ve dnech 7.-13. Května 1978', 20 May 1978.
[288] *Arabela* (dir. Václav Vorlíček, Czechoslovakia, West Germany, 1980), ep. 13, 15:46–16:13.

Arabela is happy to be able to 'live normally' as she 'has always envied' others that they could work whereas she as a princess was obliged to be idle.[289] As in Macourek and Vorlíček's earlier works, the main heroine gives up magic to live in the human world.

In an internal communication of the Czechoslovak Television, the serial was presented as a chance to promote socialist ideas abroad, although the main motivation was clearly economic, as with other co-productions with the West – to bring in much needed foreign currency. Macourek and Vorlíček explained the ideological content to the Director of the Czechoslovak Television thus:

> When, under the influence of evil powers, the idyllic world of the fairy tale begins to fill with cars, guns, smog, and dirt in the rivers, it is an idea that defends the environment and peace. And when our human hero, inspired by the wonders of fairy tales, invents a sensational and universally beneficial device, it is an idea that celebrates the kind of technology capable of turning our world into a fairy tale of happiness and peace. Let's not destroy the world we live in, but let's make it a fairy tale – that is what our serial wants to say.[290]

Thus Macourek and Vaculík linked environmental issues with the discourse of peace, as was common at that time. They promised to show the power of fantasy in making technology a tool of human happiness rather than (environmental) destruction. As documents for the television's board of directors later concluded, the proposed serial would reflect on 'universally valid problems of the contemporary world', bringing both propagandistic and economic value.[291]

It would seem then that *Arabela* unequivocally affirmed the ideology of late socialism. However, the polysemy of *Arabela*, and the environmental discourses under late socialism more generally, allowed various possible interpretations, from the affirmation of the socialist worldview as presented in official communication to a universal tale about good and evil, to a criticism of modern civilisation and one-sided technocratic orientation. In the case of *Arabela*,

---

[289] *Arabela*, ep. 13, 26:48–27:04.
[290] APFCT, HR VDM Red 381/2867, Letter of Miloš Macourek and Václav Vorlíček to the Director of the Czechoslovak Television, undated.
[291] APFCT, HR VDM Red 381/2867, 'Návrh na zahraniční koprodukce', 28 Feb 1977.

the ambivalence is partly due to the two main techno-optimistic characters: student Petr, with whom princess Arabela falls in love, symbolises the good use of technology that can 'turn our life into a fairy tale', whereas Arabela's evil sister Xenia represents the arrogance of careless engineering interventions. It is important to note that Xenia's obsession with technology is triggered by her first visit to Czechoslovakia (although the country remains unnamed), whereas Petr's good intentions stem from his appreciation of fantasy. Xenia's intervention in the Fairy-Tale Kingdom is repeatedly likened to what was going on in the human world: for instance, her dislike for 'unfashionable' dwarfs is compared to the eradication of bears and wolves by humans.[292] Xenia, who along with a few other characters represent the 'evil powers', becomes fascinated with the modernity of the human world. On the other hand, she is disgusted by the backwardness of her kingdom, longing to replace the natural landscape with an industrial one (Fig. 1.13). She orders the Fairy-Tale Kingdom to be transformed to resemble the human world as closely as possible. The absurd incidents point at contemporary problems: in one scene, for example, Xenia makes a visit to a factory that makes garbage to be distributed in the kingdom's forests.[293] When in the final episode Petr brings order back to the Fairy-tale Kingdom with his magic ring, a high-rise building made of glass and concrete turns back into a baroque chateau, suggesting a normative difference between the protection of nature and heritage on one side and symbols of technical progress on the other (Fig. 1.14, 1.15). In other words, evil takes the form of turning a fairy tale into the contemporary world of environmental damage.

[292] *Arabela*, ep. 13, 3:16–3:23.
[293] *Arabela*, ep. 9, 5:07.

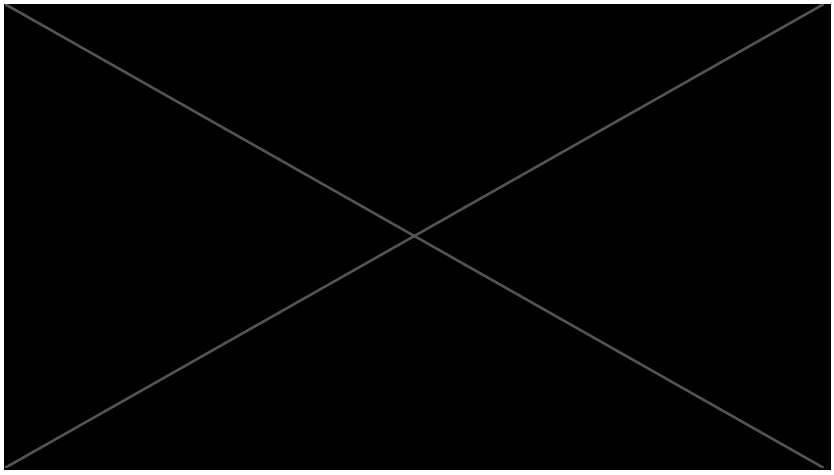
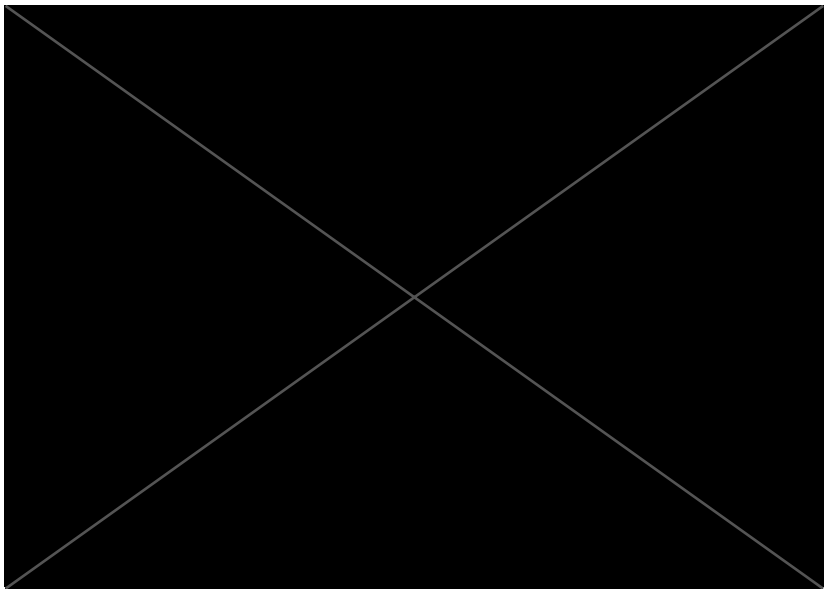
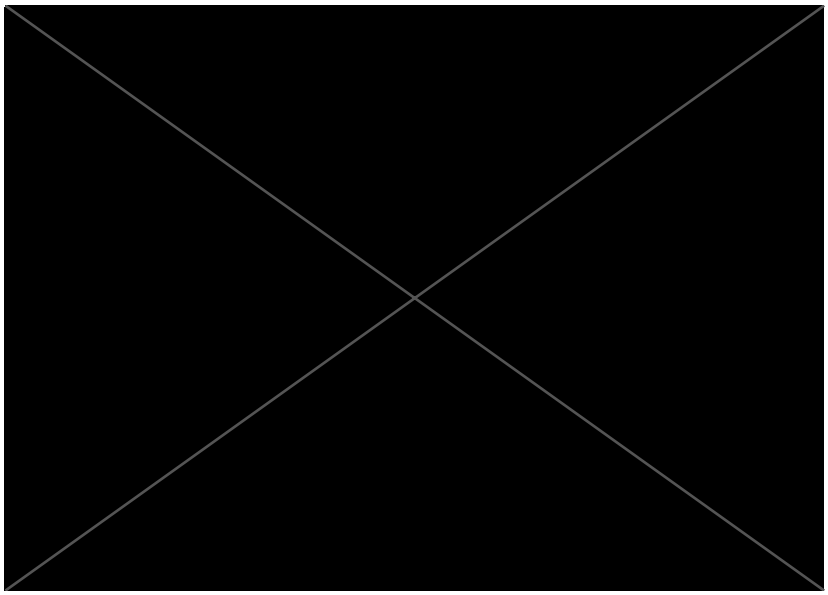


Figure 1.13. In the 7th episode of *Arabela*, princess Xenia contrasts the human and fairy-tale world, adding: ‘Just look. There's not a single skyscraper, not a single factory, not a single car, just nothing. The backwardness makes me angry.’





Figures 1.14, 1.15. With his magic ring, Petr turns a modern building back into a baroque castle.

However, environmental destruction was not presented as pertaining to Czechoslovakia alone but as a universal problem of humankind that lay in the behavioural patterns of individual people, making it accessible to audiences in capitalist countries, also giving it a moralistic rather than political message. The Czechoslovak productions arrived in West Germany at a time when there had previously been no dedicated high-budget children's programme and broadcasting was largely conservative.[294] Some West Germans saw the success of Czechoslovak programming as a progressive promotion of humanist and anti-consumerist values, in contrast to the Disney productions coming from the USA, whereas some social reforms criticised the fact that the programme did not take social problems seriously, solving them by magic.[295] The example of *Arabela* shows how imaginaries of a human civilisation affected by its own misuse of technology travelled as part of East-West cultural collaboration.

The balance between 'fantasy' and 'technology' in Macourek's stories allowed for the inclusion of criticism of negative aspects of socialist society. As Miloš Macourek put it, 'only technology inspired by sensibility and fairy-tale fantasy can make humans happy'.[296] In this case, environmental damage is contrasted with the revelation of positive human values, which include the ability to bring together technology and humanity. Fantasy, then, played the role of rectifying the present overwhelmed by technology. The optimism of the comedies was part of the plot structure, which made the reconciliation of the conflicting values possible. These programmes informed a symbolical realm that surpassed the formulas of authoritative discourse, providing a way to understand society's problems. As I explore in the following two chapters, an optimistic framing, and often an ironic tone, were characteristic not just of a fictional portrayal of environmental damage but of late socialist environmental discourse as a whole.

---

[294] Helena Srubar, 'Ambivalenzen Des Populären: Pan Tau Und Co. Zwischen Ost Und West' (PhD Thesis, Konstanz: UVK-Verl.-Ges., 2008), 82–83.
[295] Srubar, 89–90.
[296] Jana Bednaříková, 'Pohádkář první kategorie', *Květy* (2 May 1984), 42.

The Czech Handyman Saves the Future

If the serials advocated a balance between humanistic values and technology, they also portrayed the socialist present as superior to a technologically advanced future. Such was the case of *Visitors*, a 15-episode half-hour family sci-fi serial, made by Jindřich Polák and Ota Hofman, who were both experienced filmmakers from the 1960s. About two decades earlier, Polák had directed *Ikarie XB 1*, and he made several children's films and serials thereafter, often written by Ota Hofman, who was praised by critics for promoting 'positive human values' to children.[297] The plot of *Visitors* was drafted already during the preview screenings of *Arabela*.[298] This was by far the biggest coproduction project when it came to the hard currency revenue.[299] And although most attention during production was dedicated to negotiating financial issues, there was also some debate over the script about how the future and the present were to be depicted.

Like films of the 1960s, *Visitors* portrays a clash between humanist values and a technocratic future. However, unlike most 1960s science fictions, the serial celebrates the world of the present day with its shortcomings. *Visitors* is about an expedition from 2484, sent by the World Council to 1984, the present, as the Central Brain of Humanity predicts that a mortal danger is approaching the Earth from space. The expedition is sent to the town of Kamenice, Czechoslovakia, to find a young genius Adam, who is said to be the only person capable of saving the planet. In the end however, it turns out that the computer has miscalculated. The Central Brain is fixed by Drchlík, an old man the expedition meets in 1984 Kamenice, by putting a piece of wood underneath it. Originating in the 1870s, the image of a world brain became popular in the 1960s, as a cybernetic idea associated with a dream of a

---

297 Vladimíra Gebhartová, *Čeští a Slovenští Spisovatelé Knih pro Malé Děti* (Praha: Albatros, 1980), 27. Representative works that Hofman and Polák made together and that were also shown in West Germany include: *Pan Tau* (dir. Jindřich Polák, Czechoslovakia, FRG, Austria, 1971–1977); *Chobotnice z II. patra* (dir. Jindřich Polák, Czechoslovakia, FRG, 1986).
298 APFCT, HR VDM Red 381/2867, 'Hlášení o jednání s cizinci' (18 Aug 1980).
299 APFCT, HR VDM Red 381/2867, 'Hlášení o jednání s cizinci' (9 Oct 1979), 2.

world federation. (Fig. 1.16).[300] Yet as that image waned from a futurist political imagination, in the case of *Visitors*, the World Brain was a retrospective vision of the global future from the 1960s. At the same time, the motif of a global governing body and universal peace was familiar to non-socialist audiences, while still achieving the goal of promoting socialist ideals abroad. The serial portrays the capitalist West in a somewhat negative light; for example, preparing to travel to the 20th century, the expedition from the future could not understand the meaning of archival footage from wars and political demonstrations against unemployment, suggesting these things no longer exist in the future.[301] However, apart from a few shortcomings such as a delayed construction of a motorway on which the expedition was supposed to land, the serial does not criticise the socialist present. Rather, as defined in official materials, the serial depicts the superiority of 'materially developed socialist society' and its 'full, creative life' in contrast with the world of the future.[302] At the same time, according to official plans, the serial 'unmasks' both the 'petit-bourgeois' present and the 'overly technological future', celebrating instead the power of fantasy and great ideas that 'elevate the meaning of human existence'.

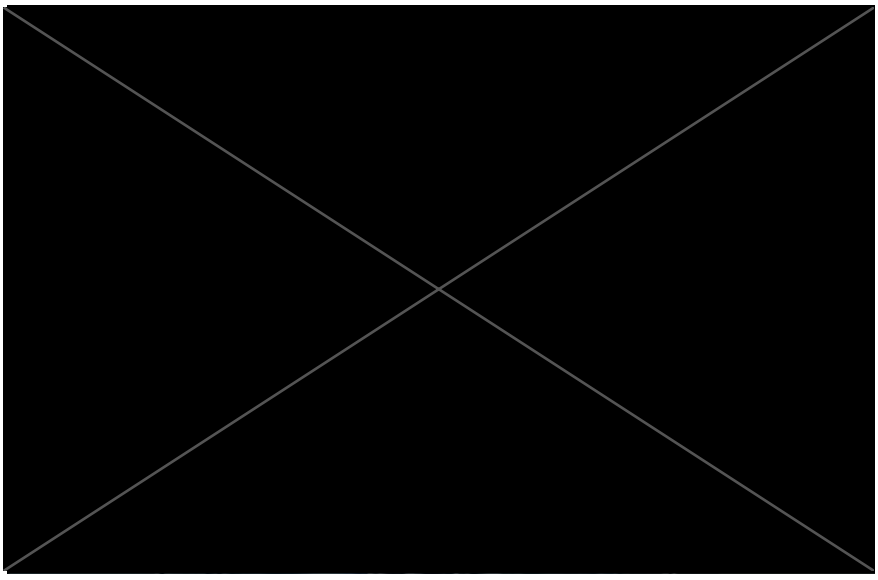


Figure 1.16. The Central Brain of Humanity featuring in the late socialist sci-fi *Visitors* (1983).

[300] Andersson, *The Future of the World*, 169–170; Mark Mazower, *Governing the World: The History of an Idea* (New York: The Penguin Press, 2012), 110.
[301] *Návštěvníci* (dir. Jindřich Polák, Czechoslovakia, FRG), ep. 1, 23:55–25:50.
[302] APFCT, HR VDM Red 381/2867 'Dramaturgický podklad pořadu' (8 Jul 1980).

Although most of the producers' attention during production was dedicated to negotiating financial issues, there was also some debate within Czechoslovak Television over the content. Deputy Editor-in-Chief of the Children and Youth Department, Miloslav Doubrava, was thrilled when he first read what Polák and Hofman's new programme would be about. But unlike many other colleagues who cared more about transferring Deutsche Marks across borders, his job was also ideological, and he believed that there were some issues that needed to be addressed.[303] He claimed that the serious motif of a mortal threat to Earth contrasted too sharply with the comic motif of an incompetent expedition sent from the future. Why was the World Council of the future unable to equip them with a complete account of history? Why was there an incompetent Council member? And how would the divided world of today become a world federation?[304] It would perhaps be better, Doubrava suggested, if the World Council were replaced with a time travel agency and the expedition would not come to save the planet but only to trial time travel before future tourists voyaged *en masse*. The serial would be just a snippet of the future, with plenty of room for farce. Doubrava understood the serial was not dealing with the future in a serious way. Yet he was worried that despite the genre of comedy, some could take its representation of the future seriously. Doubrava asserted that in West Germany audiences were used to romantic-realistic science fiction and thus could tell the difference more easily, whereas in Czechoslovakia comedies, often parodies of the genre, prevailed and so it would be harder to understand.[305] Doubrava thought that it would perhaps be better to at least move the future to somewhere around 3000. Hofman and Polák, however, ignored most of Doubrava's comments, arguing that it was too late to make plot

[303] APFCT, HR VDM Red 385/2875, Návštěvníci, Miloslav Doubrava, 'Návštěvníci' (6 Jun 1980), 1–2.
[304] APFCT, HR VDM Red 381/2867 Zprávy a protokoly, Miloslav Doubrava, 'Návštěvníci' (6 Jun 1980), 4.
[305] The Czechoslovaks were thus 'skipping' the genre's development, Doubrava believed, adopting a historical-materialist perspective.

changes in an already approved proposal.[306] Nevertheless, the editor's job was to make sure the programme followed the Ideas and Themes Plan; and in the letter to Hofman and Polák, he remined them that the serial should carry 'propagandistic meaning', not 'half-baked ideas'.[307] After a meeting of the editorial staff of the Children and Youth Department, Doubrava insisted on responses to what he saw as indisputable issues:

1) To abandon the presentation of men of the future as people who liked to make themselves beautiful
2) To tone down the depiction of the expedition's leader as a simpleton
3) To limit the old man Drchlík's tendency to drink and, on the other hand, accentuate his character as a Czech handyman (*český kutil*)
4) To remove the few vulgarisms
5) To explain neologisms

Doubrava was primarily guarding what he saw as current social norms.

As reinforced by Doubrava's remarks, the superiority of the present over a technocratic future was epitomised by the character of a Czech handyman who outsmarts the computer-based expertise of the future. Doubrava demanded that Drchlík, who represented present-day wisdom, should not be depicted as an antisocial hard drinker. In an early version of the serial, he was even portrayed as a thief.[308] Doubrava suggested instead emphasising Drchlík's character of a handyman, which captured the cultural significance of amateur home improvement and other do-it-yourself activities (*kutilství*).[309] Drchlík thus represents the contemporary wisdom of an imperfect civilisation as opposed to a technologically advanced future. As Blanka Činátlová's anthropological study posited, the figure of the *bricoleur*, a term borrowed from Claude Lévi-Strauss who contrasted *bricolage* to an engineering approach to knowledge, was key in late socialist Czechoslovak popular culture. Činátlová proposed that the

306 APFCT, HR VDM Red 385/2875, Ota Hofman and Jindřich Polák, a letter to Jarmila Turnovská (5 Jul 1980).
307 APFCT, HR VDM Red 385/2875, Miloslav Doubrava, 'Stanovisko k seriálu Návštěvníci', a letter to Jindřich Polák and Ota Hofman (14 Aug 1980).
308 APFCT, HR VDM Red 385/2875 Návštěvníci, Ota Hofman and Jindřich Polák, 'Návštěvníci. Synopse seriálu' (undated), 11.
309 APFCT, HR VDM Red 385/2875 Návštěvníci, Miloslav Doubrava, 'Návštěvníci' (6 Jun 1980), 3.

kutil's conduct characterised late socialism in several ways: as a productive use of leisure time, one of the central topics of contemporary sociologists; as escapism to the privacy of one's home from socialist politics; or perhaps as a way to make one's surroundings more habitable and authentic.[310] A Czech handyman arguably combined all those qualities, making for a late socialist character that balances between great ideological goals and everyday life. The seemingly far-fetched plot device of Drchlík's amateur repair of the futuristic computer, as the documents show, was an explicit gesture of late socialist superiority. As I explore in Chapter 3, the figure of a handyman, as a layperson facing technocratic neglect, also appeared in environmental journalism. In that way, the present appeared as a fully developed soceity, making the challenge to technocracy a central part of the late socialist order.

As exemplified by the editor's interventions and creators' assertions, the notion of materially developed socialism was also founded on a particular conception of masculinity and family values. Criticising the presentation of men of the future as people who liked to make themselves beautiful, Doubrava rejected such a portrayal of men on 'cultural-philosophical' and 'aesthetic' grounds.[311] However, the creators likely did not put that into the script as an attempt to question present-day masculinity, but rather to make the future stand out from the present and to highlight the theme of fantasy. As I have argued, fantastic portrayals of the future were a way to combat one-sided technocratic thinking in socialism and provide a socialist alternative to capitalist science-fiction but also to inspire scientific imagination. In that vein, *Visitors* was also a story about the need for fantasy in scientific discovery, anchored in the values of family and childhood. The theme of the need for fantasy in scientific discovery is represented by the character of eleven-year-old Adam, due to whom the expedition travels to

310 Blanka Činátlová, 'Invaze Barbarů Do České Kultury: Antropologický Rozměr Domácího Umění', in *Tesilová Kavalérie : Popkulturní Obrazy Normalizace*, ed. Petr A. Bílek and Blanka Činátlová (Příbram: Pistorius & Olšanská, 2010), 154–159.
311 APFCT, HR VDM Red 385/2875, Miloslav Doubrava, 'Stanovisko k seriálu Návštěvníci', a letter to Jindřich Polák and Ota Hofman (14 Aug 1980).

the past. Drafting the scenario, the creators stressed that, although they surely did not want to be blatantly didactic, their aim was 'to make young boys dream of becoming an Einstein'.[312] In the 25th century, Adam has a museum dedicated to him and his memoirs are read in school, recounting a beautiful, peaceful childhood, full of family harmony and dreams of great inventions of benefit to all. Next to his maths calculations, Adam keeps in his notebook a nude photo (Fig. 1.17), just one of many scenes featuring a naked woman's body.[313] The portrayal of boys, on the one hand, corresponded with the association between scientific discovery and masculinity. On the other hand, the erotic scenes were only partly a sign of socialist attitudes towards naked women bodies; as the West German producer Gert Münterfering argued, the serial needed erotic and action scenes to grapple with rising commercial competition.[314] Meeting different audience expectations thus proved to be at least as important as promoting socialist values.

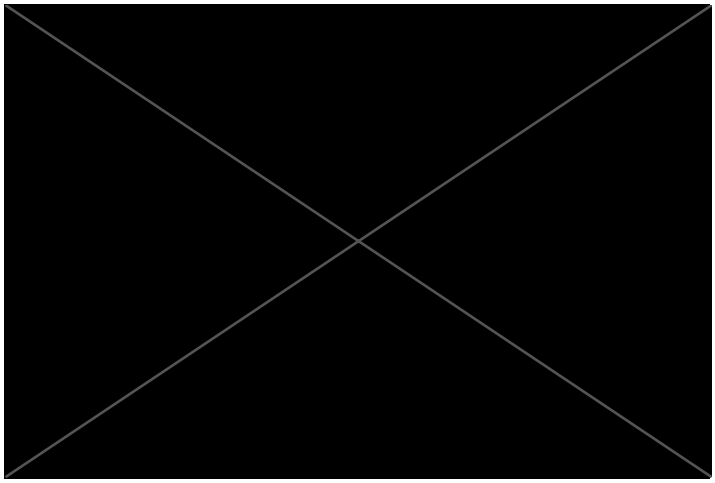


Figure 1.17. A female nude and 'secret calculations' in the notebook of Adam Bernau, the protagonist of *Visitors* (1984).

[312] APFCT, HR VDM Red 385/2875, Ota Hofman, 'Návštěvníci. Synopse sci-fi seriálu pro mládež' (1977), 15.
[313] As director Jindřich Polák put it, they decided to regularly show a woman's body in the series, because 'every normal man likes a beautiful woman'. *Pokračování příště: Návštěvníci* (Czech Television, Prague, 2003), 05:10–05:25, http://www.ceskatelevize.cz/porady/1096084343-pokracovani-priste/203562261400013-navstevnici/.
[314] *Pokračování příště: Návštěvníci*, 4:30–5:03, 6:33–5:58. For socialist attitudes towards female nudity, see: Anna Dobrowolska, '"Why Don't They Display Male Nudes?": Nude Photography, Women's Art, and the Redefinition of Socialist Morality in 1970s Poland', *Aspasia* 17, no. 1 (2023): 164–182.

The theme of an imperfect but materially secure life was central to late socialist popular media, but individual works differed in their degree of anti-technocratic criticism. In the film film *Warm Greetings from Earth* (1982), two aliens are sent to Earth to explore the human species.[315] At the end of their mission, they send the following message:

> The inhabitants of the Earth are rational creatures. They can think, use tools and invent new things. The most rational humans are called scientists. Scientists gather in research institutes where they engage in organised rational activity. A group of scientists is called a scientific team. Scientific teams make discoveries that benefit all humankind. The highest form of rational activity on Earth is the scientific symposium. It addresses the harmful consequences of beneficial scientific activity. The individual scientists wear name tags so they don't get confused. The more scientific teams, the more perfect and beautiful life on Earth will be. If this continues, life on Earth will soon be absolutely perfect.[316]

The clearly ironic tone aimed at scientists is different from *Visitors*, which still aimed to promote enthusiasm for scientific discoveries. The script was a collaboration of Oldřich Lipský, a renowned filmmaker of several such comedies, Alexander Lukeš, and the cartoonist Vladimír Jiránek, whose work I will explore in the third chapter.[317] Landing on a dump next to new housing blocs (Fig. 1.18), two aliens, A and B, choose the 'most ordinary specimen' of the human race, Doctor Jánský, who works at the Institute for Communication with Extraterrestrial Civilisations. Live action is interspersed with Jiránek's animations of the aliens' reports about humanity. The leitmotif is that the aliens, having an ingenious, childlike perspective, see obvious shortcomings as signs of technological progress.

---

315 The film's long-lasting popularity is also evidenced by the 1999 advertisement that featured the two aliens: 'Česká pojišťovna: Srdečný pozdrav ze Zeměkoule', TVspoty.cz, September 2010, https://www.tvspoty.cz/ceska-pojistovna-srdecny-pozdrav-ze-zemekoule/.

316 *Srdečný pozdrav ze zeměkoule* (Czechoslovakia, dir. Oldřich Lipský, 1982), 1:29:58–1:31:28.

317 The script was also written in consulation with two main actors, Milan Lasica and Július Satinský, a Slovak comedy duo.

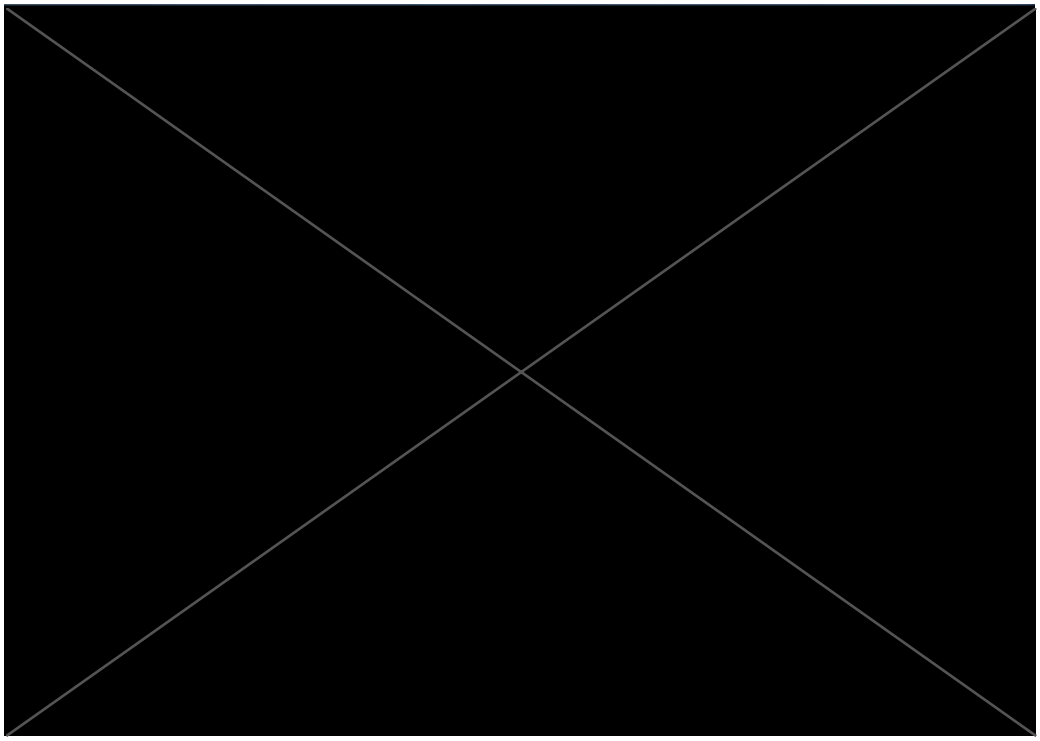


Figure 1.18. In *Warm Greetings from the Earth* (1984), two aliens land on a dump near newly built housing blocks, through which runners are running, the first of many ironies shown in the film.

In contrast to the progressively oriented satires of the 1960s, some films in the 1980s resigned on the ambition to look towards a better future, and their optimism was rather a matter of form. As one reviewer noted, unlike Lipský's 1964 film *Man from the First Century*, which satirised the inadequacies of a society on the way to communist utopia, *Warm Greetings from Earth* depicted a human civilisation that had entirely lost the enlightened spirit.[318] The film suggests that the cause of environmental problems is scientific and bureaucratic formalism, portraying silly television experts and pointless scientific conferences.[319] When a nature reserve turns out to be a technical creation full of mechanical animals, the guide notes ironically that 'according to the plan for dynamic landscape development, there should be pristine nature here in a hundred years' (Fig. 1.19).[320] By disclosing the performativity of authoritative

[318] NFA, IIf-3664 Srdečný pozdrav ze zeměkoule, Milan Hanuš, 'Srdečný pozdrav ze zeměkoule', *Scéna* (15 Jun 1983).
[319] This is also noted in a period review: NFA, IIf-3664 Srdečný pozdrav ze zeměkoule, M. Švagrová, "Komedie o naší civilizaci", *Svobodné slovo*, 15 Apr 1983. *Srdečný pozdrav ze zeměkoule* (Czechoslovakia, dir. Oldřich Lipský, 1982), 1:26:37–1:27:10.
[320] *Srdečný pozdrav ze zeměkoule* (Czechoslovakia, dir. Oldřich Lipský, 1982), 1:05:23–1:05:28.

discourse in this way, comedies ridiculed the achievements of present-day technocracy. And yet, environmental problems were sometimes depicted in a way that did not allow viewers to distinguish between realistic criticism and fantasy. In reaction to the above scene, one reviewer of *Warm Greetings from Earth* noted that the film's depiction of a nature reserve would hardly resonate with the viewer's experience.[321] The reviewer criticised the fact that the film did not clearly distinguish between a reflection of the present situation and a portrayal of the future.

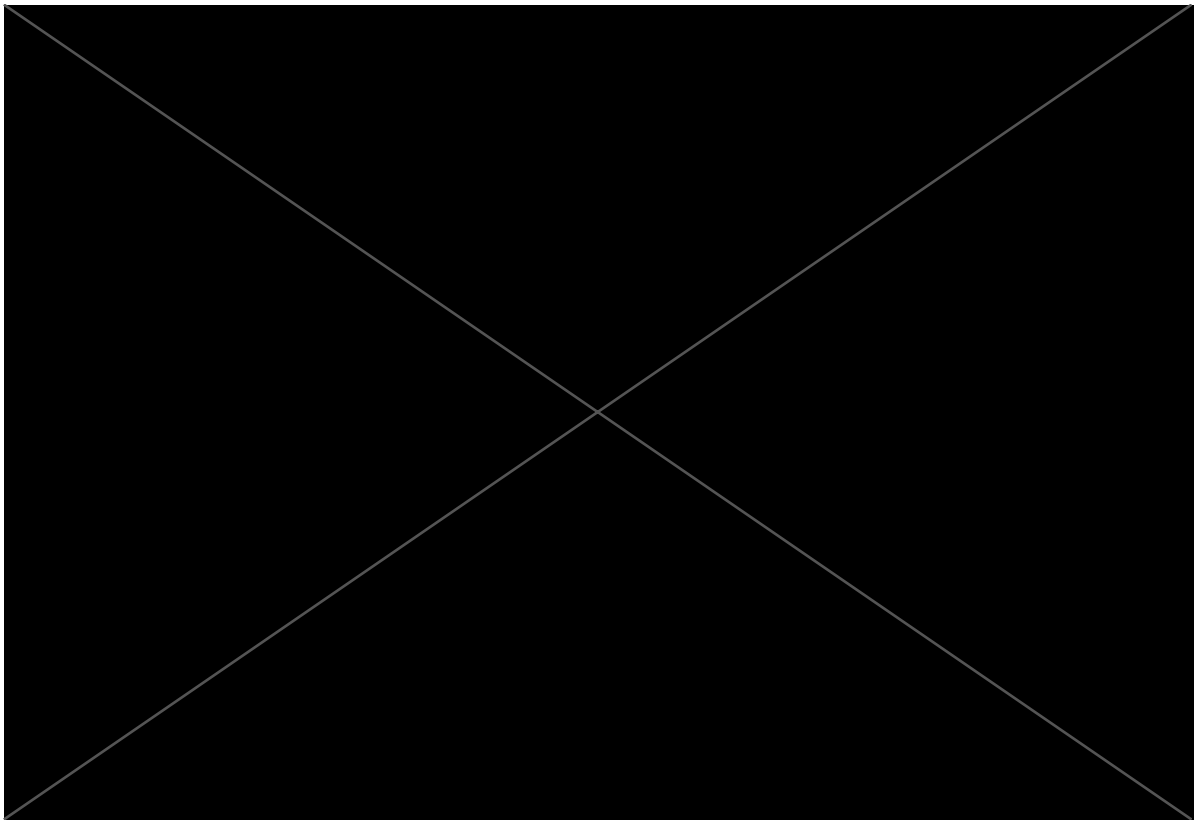


Figure 1.19. The building of 'pristine nature' as a parody of technocratic attempts at regulating the natural world in *Warm Greetings from Earth* (1982).

Yet environmental problems were portrayed not in a pessimistic, catastrophic tone, but as a comedy, which necessarily remained optimistic towards the current order, despite mocking it. Lipský emphasised that, in contrast to Western disaster films, their film's aim was not to 'scare' anybody but instead to 'talk to people cheerfully about serious problems', such as

[321] NFA, IIf-3664 Srdečný pozdrav ze zeměkoule, Milan Hanuš, 'Srdečný pozdrav ze zeměkoule', *Scéna* (15 Jun 1983).

environmental destruction.[322] Indeed, rather than ultra-rational intruders, the aliens are depicted as naïve and good-hearted fools who could not see how bad things were but continued to uphold the belief in progress, thus casting doubt on the future-oriented optimism.[323] So long as fiction constructed reality as optimistic, it was free to depict contemporary problems. As the following chapters will show, this motivated some to link materialist values with the ecological cause, while others used an ironical style to talk about environmental problems.

Apart from the foolish or wicked scientists of crazy comedies, other films portrayed individuals disillusioned with technocracy. For example, *What's up Doc?*, a 1984 film directed by Vít Olmer, portrays a forty-year-old doctor, Bohouš, fed up with his wife who is only interested in computers, and longing for a life somewhere away from the city hustle. The film opens with alternating images of housing blocks, steel smelting, computers and punch cards – the various symbols of technological progress associated with state socialism.[324] The film ridicules the scientific-technological revolution and the artificial environment it has created, from sterile kitchens and ready-to-cook meals to landscapes of the future 'to be planned like an industrial product', as is said in a televised debate of experts whom the disillusioned doctor calls 'lunatics'.[325] Alienated from technical civilisation, Bohouš also becomes alienated from his wife, a cybernetics enthusiast, and finds another woman with whom he moves out to the countryside, only to have his country house demolished due to the construction of a new road. In this case, nature was not just the environment but also the opposite of an ideological obsession with science and technology.

At the same time, the original ambitions and visions of the scientific-technological revolution were portrayed as naïve in light of current economic and environmental issues, and

---

322 NFA, IIf-3664 Srdečný pozdrav ze zeměkoule, jn, 'Pozdravy ze zeměkoule, *Ahoj na sobotu* 14 (1983); lt, 'Pozdrav ze zeměkoule', *Svobodné slovo*.
323 NFA, IIf-3664 Srdečný pozdrav ze zeměkoule, V. Rath, 'Ufoniáda Oldřicha Lipského', *Zemědělské noviny* (23 Jun 1983).
324 *Co je vám, doktore?* (dir. Vít Olmer, Czechoslovakia, 1984), 0:01–1:59.
325 *Co je vám, doktore?*, 23:26–24:43.

not just in fiction. To give an example, past visions of the future, such as the one in *Ikarie XB 1*, were used in 1983 in a television documentary to illustrate the thesis that there had been times when humans believed a machine would become their perfect servant.[326] Although in fact, as I have discussed, that film itself challenged the era's notion of technological optimism, and the view of the 1960s as an era full of hope that machines would bring a better future perhaps revealed more about the perspective of the early 1980s. This reflection was motivated by a renewed political interest in social prognostics in the early 1980s, this time in the hope of providing solutions to the country's economic problems.[327]

On television, the everyday was represented by a practical approach to problems rather than by technocratic thinking. Late socialist speculative fiction therefore captures the shift from the 1960s debates over the existential questions raised by technological changes towards the 1980s focus on everyday life and ordinary experience, contrasted to technical knowledge.

Conclusion

This chapter has shown that late socialist Czechoslovak popular media retained aspects of a post-Stalinist humanist critique of technology. The 1960s saw the rise of a new vision of a technocratic society, which created an incentive for documentarists to popularise the central role of experts in an automated, cybernetic future. At the same time, however, the leading role of technocrats in human progress was mocked in post-Stalinist fiction, from both existential and humanist standpoints. While 1970s politicians and cultural producers rejected the 'pessimism' of 1960s speculative fiction, an 'optimistic' critique in the form of 'crazy comedies' and children's television serials remained on screen. In effect, humanistic themes that challenged the primacy of technical thinking continued to be central to late socialist culture, in parallel with redefining the theory of scientific-technological revolution into a robust

[326] APFCT, IDEC 283 430 61457, *Kde je pravda?*, ep. 'Rok 2000 – člověk nebo stroj?', Czechoslovak Television (1983), 3:36–5:28, 20:33–21:12.
[327] Sommer, *Řídit Socialismus Jako Firmu*, 75–76.

legitimation narrative. Yet humanist values and a technocratic orientation were balanced against celebration of imperfect present-day and in stark contrast to a futuristic vision of a better future. Meanwhile, environmental damage was portrayed as a general failure of modern society. In the case of international co-productions, this allowed even non-socialist audiences to grasp Czechoslovak programmes easily. The genre of comedy also portrayed the society as coherent despite its imperfections, which were depicted as rectifiable. Yet television fiction did portray the tensions between technocratic promises and everyday life under socialism. As the following chapters will elaborate, critiques of 'technical civilisation' were especially common in the 1980s, linking that scepticism more and more to environmental issues.

Chapter Two. A 'Right to Sadness': Technological Optimism Meets Ecological Crisis

In January 1967, the Czechoslovak Radio broadcast a fictional debate about nature between 'great men' of history.[328] Johan Wolfgang Goethe discussed that men – and even more so 'beautiful women' – were surely part of the natural world.[329] Although supposedly commenting on a universal relationship between humans and nature, these were mostly men's stories about men. The men in the radio debate, late European writers and philosophers, agreed on one thing: that nature presented to the human mind a mystery which was exciting to discover. But the continuing successes of humanity in subjugating nature were also impacting people in a negative way. As Friedrich Engels reminded listeners, humans had never mastered nature and should not forget they were still just its conscious part.[330] In the end, the men were sure that human ingenuity would bring an answer to a growing clash between technological progress and the environment. Such discussions were still very dependent on the arguments and disputes of the 19th century – from Romanticism to the question of whether technological progress would sustain growing population. Reanimating those debates in the late 1960s signalled their continued relevance to the intelligentsia that had control of the popular media. It also meant that one could explore current ecological crisis with reference to Marxist classics, mainly Engels's *Dialectics of Nature*. And as I will explore, some took the opportunity to write themselves into the literary canon by exploring these themes.

This and the following chapter examine how the notion of ecological crisis impacted the ideas about relations between humans and technology in late socialist Czechoslovakia. And while this chapter focuses on late socialist attempts to reconcile technological optimism with

328 ACR, *Rada moudrých,* 'O přírodě' (1967).
329 Dita Skálová, *Rada moudrých: záznam besed, které se nikdy nekonaly : rozhlasová pásma z myšlenek velikánů lidského rodu : 1964-1967* (Praha: Svoboda, 1968), 183.
330 Skálová, 192.

environmentalism, the next one discusses environmentalism as a challenge to technocratic socialism. Particularly in the 1980s, socialist authors asked whether and to what extent society could remain techno-optimistic in the face of ecological crisis. Many agreed that it was necessary to understand humans as part of nature rather than its masters, but the question was whether technological progress, a basis for growing material wellbeing, could be reconciled with care for nature. This chapter thus aims to analyse how those who remained confident about technocratic socialism until the 1980s coped with the challenge of ecological crisis.

This chapter argues that late socialist environmentalism was characterised by a rejection of an earlier understanding of humans as masters of nature and tried to find a new harmony between the human and natural spheres, but also rejected, at least discursively, the 'pessimistic' perspective of Western ecology and remained generally optimistic about technology. The focus was on reconciling technology and ecological risk in the provision of material needs. I shall suggest that the emerging discourse of this ecological techno-optimism differed from earlier techno-optimism in three respects: it understood humans as part of nature; it acknowledged the negative aspects of techno-scientific achievements; and it saw technology as a solution to the ecological crisis rather than a means of revolutionising social relations. As I will explain, it meant that linear progress was qualified by a new need for harmony, based on an appreciation of the value of the human past and a transcendental relation to nature. At the same time, the promise of material wellbeing was tied to conservative ideas about family and the value of everyday life participating on historical development.

Although this techno-optimistic discourse was defined against 'Western pessimism', the continued belief in technology was in fact shared with those in the capitalist world whom other scholars have called 'Prometheans' or 'cornucopians'.[331] This was the belief that natural

[331] Dryzek, *The Politics of the Earth*, 52–72; Fredrik Albritton Jonsson, 'The Origins of Cornucopianism: A Preliminary Genealogy', *Critical Historical Studies* 1, no. 1 (2014): 151–168.

resources were virtually limitless and progress, defined in material terms, was in theory limited just by human ingenuity. This dismissal of 'Western pessimism' was motivated by Marxist-Leninist ideology and, in fact, said little about the actual differences between views on ecology between capitalist and state socialist countries, as I will argue that proponents of either limits or cornucopianism could be found in any of the countries. And although this chapter focuses on how environmental discourses conformed to the optimistic idea of socialist progress, there were in fact also less conforming advocates of 'socialism without growth' in several Eastern European countries.[332] Nevertheless, state socialist environmentalists, however optimistic, tended to be more ambivalent about technology and accept that material progress was achieved at the cost of a certain degree of tragedy. Recalling Gustav Bareš's notion of 'optimistic tragedy' – in fact based on his interpretation of Prometheanism – from the previous chapter, I shall analyse late socialist attempts at reconciling constructive and destructive aspects of progress.

Building on studies of environmentalism as an agenda of socialist experts, this chapter therefore draws attention to how technological progress and ecological crisis were reconciled in late socialist culture. Looking at Czechoslovakia in the 1960s, Doubravka Olšáková and Jiří Janáč have argued that the Stalinist project of 'transforming' nature was replaced by a technocratic management that, on the level of ideology, emphasised 'control' over nature rather than its 'mastery.'[333] In terms of politics, this marked a transition from a 'charismatic' to a 'technocratic' model, that was thus less dependent on direct political control and more reliant

[332] Alexander Amberger, 'Post-Growth Utopias from the GDR: The Ecosocialist Alternatives of SED Critics Wolfgang Harich, Rudolf Bahro, and Robert Havemann from the 1970s', *Kontradikce* 5, no. 2 (2021): 15–29; Weronika Parfianowicz, 'Limits to Socialist Growth: The Question of Economic Growth and Environmental Crisis in Polish Discussions of the 1970s', *Kontradikce* 6, no. 2 (2022): 41–66.
[333] Doubravka Olšáková and Jiří Janáč, *The Cult of Unity : The Stalin Plan for the Transformation of Nature in Czechoslovakia, 1948-1964* (Praha: Academia, 2021), 251.

on technocratic expertise.[334] Moreover, Petr Jehlička and Joe Smith have argued that the technocratic rationality of late socialism was accompanied by a romantic appreciation of nature that had a long history in Czechoslovakia.[335] They have asserted that the blend of a scientific approach to nature in education and its romantic undercurrent in the tradition of hiking culture (called *tramping* in Czech) led many people to take an interest in the environment. However, according to Jehlička and Smith, that approach failed to provide Czech environmentalists with a systemic critique of either state socialism or capitalism.[336] This chapter further explores the combination of technocratic rationality and a romantic view of nature as a potentially powerful legitimating discourse that opposed both Western environmentalism and the reform socialism of the 1960s.

Therefore, I study environmental discourses in relation to the late socialist conception of history and subjectivity. As Matěj Spurný has suggested, the preservation of cultural heritage and the protection of nature were considered hand in hand: on a global scale, UN institutions and their proclamations such as the 1972 World Heritage Convention often tackled both issues together; and in Czechoslovakia, this merger is well illustrated by a magazine *Monuments and Nature* (*Památky a příroda*) published between 1976–1991 by the State Institute for Heritage Preservation and Protection of Nature.[337] Initially two separate magazines, the new periodical promised to bring the issues together; both past culture and nature were valued for their present potential to help create the new environment – understood as combination of human and natural processes – of a socialist society.[338] Other state socialist countries saw similar tendencies;

---

334 Olšáková and Janáč refer to Stefan Guth's work discussed in the previous chapter: Olšáková and Janáč, 15–16; Guth, 'One Future Only. The Soviet Union in the Age of the Scientific-Technical Revolution'.

335 Petr Jehlicka and Joe Smith, 'Out of the Woods and into the Lab: Exploring the Strange Marriage of American Woodcraft and Soviet Ecology in Czech Environmentalism', *Environment and History* 13, no. 2 (2007): 187–210.

336 Furthermore, they have pointed out that the increasing knowledge of the poor state of the environment in Czechoslovakia before 1989 did not translate into effective policy measures.

337 Spurný, *Making the Most of Tomorrow*, 355, 362–364.

338 'Úvodem', *Památky a příroda* 1 (1976): 1.

Marcus Colla has argued that Eastern Germany manifested an increased interest in popular history that was a symptom of 'the loss of historical direction', similar to the Western memory turn.[339] Nevertheless, as Colla points out, East German thinkers drew a distinction between an 'ahistorical' and 'nostalgic' West and Eastern 'historical consciousness'.[340] Colla has suggested a particular late socialist shift in understanding history, yet I wish to connect that firmly with the debates on the environment.

Indeed, a similar distinction between the West and the East was made by the Czechoslovak literary theorist, Josef Peterka, whose aim was to incorporate memory and sadness, such as that over the loss of a landscape to a power plant, into socialist realism. While in East Germany, Colla posits, the turn to non-Communist past as the nation's heritage was partly motivated by accepting the existence of two Germanys, I argue that the Czechoslovak theory was instead responding to the challenge of the Prague Spring.[341] As this chapter argues, that included attempts to revive socialist realism in a more individualistic and ecological way to overcome the modernist tendencies of the 1960s. In comparison, the Polish and Hungarian literary theory of the same time historicised socialist realism as a bygone literary movement.[342] Both exploration of nature and everyday human struggles were supposed to become part of the historical movement towards progress, in memories of ordinary individuals and in art.

I therefore focus on the discourse of ecological techno-optimism found in both public science and literature. In the first two sections, the chapter considers 'optimistic' and 'pessimistic' responses to the ecological crisis in the USA, Czechoslovakia, and the Soviet

---

339 Marcus Colla, 'The Politics of Time and State Identity in the German Democratic Republic', *Transactions of the Royal Historical Society* 29 (2019): 226.
340 Colla, 232.
341 On East Germany see: Jon Berndt Olsen, *Tailoring Truth: Politicizing the Past and Negotiating Memory in East Germany, 1945-1990* (New York: Berghahn Books, 2015), 137–138.
342 Peterka already contrasted Polish and Hungarian, on the one hand, and Czechoslovak and Soviet cases, on the other, but see also Rohozińska's study of Polish memory of socialist realism: Josef Peterka, *Teoretické otázky rozvoje socialistického realismu* (Praha: Československý spisovatel, 1986), 8; Zofia Rohozińska, 'Transforming the Polish Field of Art by Changing the Memory of Socialist Realism over the 1980s' (Transforming State Socialism in East-Central Europe. Historical Sociology of the Long Change, Warsaw, 2022).

Union. From a fascination with Rachel Carson, who became famous for a brisk critique of overusing chemicals, to the limits to growth, the Czechoslovak media discussed a variety of views but remained optimistic, while ecologists had to rethink their own view of progress. The third section turns attention to the works of the author Jaromír Tomeček. Literary critics at the time interpreted his increasing interest in the conflict between humans and nature as a reflection of the ecological crisis. The fourth section explores Josef Peterka's assertion of a 'right to sadness of memory'.[343] Peterka emphasised the need to remember what was lost to the force of progress, but also argued against what he saw as the 'existential despair' of 1960s socialist reformism and modernism. As examined towards the end of the chapter in the case of the Dukovany nuclear power plant, the new optimism materialised in nuclear energy as a solution to the ecological crisis that would preserve material wellbeing.

Silent Spring in Czechoslovakia

Reconciling a future-oriented belief in technological progress with knowledge of ecological crisis was a new challenge not just to state socialism but globally. Beyond a shared imaginary of environmental problems, premised on the tension between nature and the human use of technology, there was a disagreement between 'pessimists' who accented a need to limit growth and 'optimists' who ultimately saw human knowledge, rather than the material capacity of the planet, as the only limit, and a surmountable one at that. In Czechoslovakia and the Soviet Union, these optimistic and pessimistic discourses were typically framed as differences between the capitalist West and socialist countries, but in fact proponents of both views could be found in any of the countries.[344] The analysis of media discourses in this section will suggest

[343] Peterka did not use the 'right to sadness' analytically, but I adopt it here to characterise the overall tension in late socialist literature between the individual past and the collective future that he theorised. Josef Peterka, 'Téma Paměť', *Česká Literatura* 33, no. 2 (1985): 109.
[344] Likewise, DeBardeleben suggested that the divide between 'technologists' and 'environmentalists' was essentially the same in the USA and the USSR. DeBardeleben, *The Environment and Marxism-Leninism*, 95. Furthermore. On the other hand, see also, for instance, how US demographers rebuffed the Malthusianism of Paul Ehrlich and other advocates of population control: Emily Klancher Merchant, *Building the Population Bomb* (New York: Oxford University Press, 2021), 175–176.

that there was no clear geographical division between them. As seen in the popular media analysed in the previous chapter, the optimistic discourse was a framework that permitted a wide diversity of views.

From at least the 1960s, Western societies started reflecting on environmental problems and rethinking the relations between human societies and nature. In the USA the publication of *Silent Spring* by Rachel Carson had a huge impact: the idea that chemicals like DDT could penetrate and harm human bodies and even the remotest ecosystems shook public trust in the uncontrolled might of science and technology.[345] In Czechoslovakia the reverberations of Carson's book were much weaker than in the United States, yet its publication did not go unnoticed. In 1966, excerpts from *Silent Spring* were broadcast on Czechoslovak Radio.[346] Parts of the book were also published in the popular science magazine *Cosmos* (*Vesmír*) in 1966.[347] While Rachel Carson would not be familiar to most readers, experts who wrote books and articles for the public cited her book frequently. Although never fully translated to Czech until 2021, *Silent Spring* was repeatedly mentioned in popular works on ecology and university textbooks throughout the 1970s and 1980s as an example of the dangers technology concealed.[348]

On the radio, excerpts from *Silent Spring* were accompanied with a commentary by experts from the Union for Nature Conservation who compared the American and Czechoslovak situations. While some breaches of environmental protection were deemed

---

345 Rachel Carson, *Silent Spring* (Boston: Houghton Mifflin, 1962); Thomas R. Dunlap, *DDT: Scientists, Citizens, and Public Policy* (Princeton: Princeton University Press, 1981), 98–126.
346 *Mlčící Jaro* (Praha: Československý rozhlas, 1966); 'Rachel Carsonová Poslala Lidstvu Varování a Zemřela. Její Bible Environmentalistiky Změnila Svět', Český rozhlas Plus, September 2017, https://plus.rozhlas.cz/rachel-carsonova-poslala-lidstvu-varovani-a-zemrela-jeji-bible-6510783.
347 Rachel Carsonová, 'Mlčící jaro', *Vesmír*, 5 (1966), 143-146.
348 For example, *Silent Spring* was presented in the section 'Books that shook the world' of a local libraries' bulletin as a work that was perhaps unknown to Czechoslovak readers but whose findings were 'known to any curious schoolchild': Zdeněk Pinc, 'Rachel Carsonová: Mlčící jaro', *Čtenář: měsíčník pro práci s knihou*, 2 (1976) 376-9. Other mentions include: Jan Bauer, *Uživí Naše Planeta Lidstvo? : O Zemědělství v Blízké Budoucnosti* (Praha: Albatros, 1978), 54; Emil Hadač, *Ekologické Katastrofy* (Praha: Horizont, 1987), 92. It also appeared in translated works such as: Jean Dorst, *Ohrožená Příroda* (Praha: Orbis, 1974), 203. More references cited subsequently.

almost unthinkable in Czechoslovakia due to the absence of market pressures or the fact that the Czechoslovak industry was less technologically advanced, many problems were seen as analogous.[349] Suddenly, a 'forest ranger from Toledo' appeared to have similar concerns to that of a Czechoslovak fruit grower; both faced pressure to use chemical treatment for trees.[350] But many, the ecologists on the radio contended, were simply negligent and ignored legal norms. For example, according to the zoologist Otakar Leiský, the problem was that people did not feel responsibility towards the natural world and only observed the law when others were looking.[351] Milada Leiská, also a zoologist and Otakar's wife, pointed out that many laws in theory surely protected Czechoslovakia from what Carson was describing but in reality they were not even taught at school.[352]

Therefore it began to appear that expertise alone could not guarantee the protection of nature because environmental protection required people to act accordingly.[353] In this regard, Jaroslav Weiser, a molecular biologist and a conservationist, appreciated that Carson acted as a 'translator' between science and the public and lamented that such people were missing in his country.[354] Leiský, however, claimed that Czech writer Jaromír Tomeček might be seen to have made efforts similar to Carson in the last few years.[355] This was in 1966, when Tomeček was already a well-known author, but before literary critics fully recognised him as an ecological writer, as I discuss later in this chapter. In the following decades, other environmentalist appeared whose goal was to bridge the gap between scientific knowledge and ordinary people, as I will discuss in the next chapter.

---

349 *Mlčící Jaro*, pt. I: 2, II: 4, III: 3.
350 *Mlčící Jaro*, pt. VIII: 9.
351 *Mlčící Jaro*, pt. XVII: 8.
352 *Mlčící Jaro*, pt. VIII: 5.
353 *Mlčící Jaro*, pt. XVII: 4.
354 To get his point across, Weiser referred to a novel *Arrowsmith* by Sinclair Lewis (published twice just in the 1960s) that featured leading scientists Arrowsmith and Gottlieb as well as a more socially engaged 'soldier of science' Sondelius, who Weiser took for a model: *Mlčící Jaro*, pt. XVII: 7–8; Sinclair Lewis, *Arrowsmith* (Praha: Státní nakladatelství krásné literatury a umění, 1963).
355 *Mlčící Jaro*, pt. XVII: 11.

Silent Spring certainly served as a warning against excessive human control over nature and questioned the idea of linear scientific progress. The technological control of nature produced both the energy that was liberating humanity from work and unexpected risks that endangered it, thus problematising the modern temporality of progress and assumptions of human omniscience. As Carson argued, even if every possible test had been conducted and a certain substance was deemed harmless, unexpected outcomes could appear later. Freons were one such example, as philosopher and populariser Zdeněk Pinc, reviewing *Silent Spring*, suggested: it was only after their mass production that it became clear that a seemingly inert chemical could destroy the ozone layer.[356] Scientific knowledge as the supposed agent of progress suddenly seemed to be failing, at least in some respects. But Carson's argument was not anti-scientific. She acknowledged the successes of DDT in the fight against hunger; she was merely wary of its overuse in agriculture and home products.[357] In her emphasis on the links between human interventions into nature and their impact on human health, Carson wanted to reposition humans as part of nature, and show how they were directly affected by their treatment of nature. This idea influenced not only the ontological notion of the human place in the world, but also the understanding of science as a purely progressive force. In his introduction to Carson, Pinc warned that the benefits of fossil fuel energy also had adverse effects: the comfort of cooking on an electric stove also had a damaging effect in the form of air pollution.[358] As Carson showed, the provision of material wellbeing through the technological mastery of nature began showing its opposite face.

In other words, the myth of the powers of modern science was now being revised to accommodate risk. If popular understanding of science was based on stories about geniuses like Isaac Newton or Albert Einstein, Carson brought a different and very compelling

---

[356] Zdeněk Pinc, 'Rachel Carsonová: Mlčící jaro', *Čtenář: měsíčník pro práci s knihou*, 2 (1976) 376-9.
[357] Carson called the era 'the age of poisons'. Rachel Carson, *Silent Spring* (Harmondsworth: Penguin in association with Hamilton, 1965), 158.
[358] Zdeněk Pinc, 'Rachel Carsonová: Mlčící jaro', *Čtenář: měsíčník pro práci s knihou*, 2 (1976) 376-9.

narrative.[359] In a book with the telling title *Elixirs of Life and Death*, Ivan Boháček, a chemist and an author of many popular science books, quoted in full Carson's 'Fable for Tomorrow' which opened *Silent Spring*.[360] This was a two-page account of a harmonious country town surrounded by animal life which was suddenly afflicted by 'an evil spell', after which animals began dying. Carson wanted to turn her readers' attention to the insidious character of chemicals. Boháček stated that Carson's 'dismal vision' did indeed implicate modern chemistry, even if it created marvels too.[361] Ecological warnings thus became part of the discourse of popular science in Czechoslovakia. For example, the biologist Pavel Pecina in his 1972 article about Lanžhot Forest in Southern Moravia, published in *Živa*, evoked Carson's central motif – the silence of nature void of birds killed by insecticides.[362] Pointing out that Carson's story was not just an American phenomenon, Pecina added sarcastically that the misuse of pesticides in Lanžhot was perhaps a case of an 'official' who fulfilled the plan 'by 300 percent'. The issue of harmful technocratic interventions was presented as a Czechoslovak matter, and sometimes even evoke the anti-technocratic discourse, with which the ecological became increasingly associated, as discussed in the next chapter.

American, Czech, and Soviet authors alike therefore expressed scepticism towards modern science, represented by bureaucrats, taxonomists and irresponsible scientists, who were supposedly unaware of the tension between natural limits and human capabilities. For Carson, the idea of 'controlling' nature came from 'Stone Age' scientists with modern 'weapons' at their disposal.[363] The great achievements of knowledgeable people thus

---

[359] See: Craig Waddell, *And No Birds Sing: Rhetorical Analyses of Rachel Carson's Silent Spring* (Carbondale: Southern Illinois University Press, 2000).
[360] Ivan Boháček, *Elixíry Života a Smrti: O Chemii a Chemicích* (Praha: Albatros, 1977), 16–17.
[361] Boháček, 18.
[362] *Živa* was a magazine published by the Czechoslovak Academy of Sciences and its aim was the popularisation of biology. The magazine was named after the Slavic goddess of life, fertility and harvest. Pavel Pecina, 'Mlčící jaro v lužním pralese', *Živa*, 2 (1973), 62-63. Carson, *Silent Spring*, 1965, 100. To state a similar example, a quote from *Silent Spring* was followed by an observation that birds were dying in Southern Moravia after spraying of DDT. Jaroslav Suchý, *Jak Se Mění Člověk: Základy Vývojové Antropologie* (Praha: Státní pedagogické nakladatelství, 1972), 54.
[363] Carson, *Silent Spring*, 1965, 257.

contrasted with their 'primitive' consequences. Similarly, Pecina sarcastically noted that humans should live up to the expectations of the 'erudite taxonomists' who attributed them with the name '*sapiens*'.[364] They criticised the arrogant scientists who often did not foresee the consequences of their actions. In the same way, the book *Tomorrow's Life: Tragedy or Harmony* by Ivan Ivanovitsch Adabashev, a Soviet science-fiction and popular science writer, published in Czech in 1978, and even before publication broadcast on Czechoslovak Radio, opened with a portrayal of 'the beginning of the end'.[365] The sand desert of Karakum in Soviet Central Asia was being penetrated by modern people with growing demands, forgetting about the wisdom of indigenous people, exploiting more raw materials and intensifying agriculture. Humans came with 'mighty technology – and living nature gave in to blazing sand'. According to Adabashev, the 'illusion' of a 'fabulously rich' planet that would sustain humanity for eternity stemmed from a pre-modern past in which a small number of people without modern technology could not endanger nature.[366] To that extent, Adabashev's view might seem similar to those Western environmentalists who argued that humanity had reached a scale that the planet could not sustain.[367] Postwar visions of planetary-scale geoengineering, shared by the political, military and scientific elites of the postwar world, were being cast off.[368] The same passage was read out on the Czechoslovak Radio before the book's publication in Czech, foregrounding a disillusionment, tempered by the proclaimed need to create new harmony between people and nature. [369] So even though media discourse on ecology remained mostly optimistic, it still brought a new awareness of risks posed to humanity and allowed for various interpretations from serious concern to reassurance.

---

[364] Pavel Pecina, 'Mlčící jaro v lužním pralese', *Živa*, 2 (1973), 62-63.
[365] Igor' Ivanovič Adabašev, *Život Zítra - Tragédie Nebo Harmonie* (Praha: Svoboda, 1978), 8–9. ACR, *Okénko do světa přátel – tragédie, nebo harmonie*, ep. 1–3 (1978).
[366] Adabašev, 15.
[367] Cf. Herman E. Daly, *Toward a Steady-State Economy.* (San Francisco: W. H. Freeman, 1973).
[368] Jeremy Baskin, *Geoengineering, the Anthropocene and the End of Nature* (Cham: Palgrave Macmillan, 2019), 27–34.
[369] ACR, *Okénko do světa přátel – tragédie, nebo harmonie*, ep. 1., 1:06–2:37.

Even optimistic discourses could allow for different interpretations, including scepticism towards technocracy. To give just one example, in 1986, Adabashev's book was advertised in the youth magazine *Young World* (*Mladý svět*) right below a quote from 'a UNESCO document' that said that humanity 'must maintain balance with nature and natural resources – or it will perish.' The advertisement was accompanied by some of Vladimír Jiránek's cartoons, one of which depicted a clueless man in a suit (perhaps an expert or a politician) with a tree trunk instead of legs and tree stumps all around him (Fig. 2.1). Therefore, even ecological techno-optimism could evoke interpretations and feelings that were pessimistic or sceptical towards technocratic solutions. These possible interpretations inform the effort of some late socialist writers to reconcile destructive features of technology and socialist optimism.

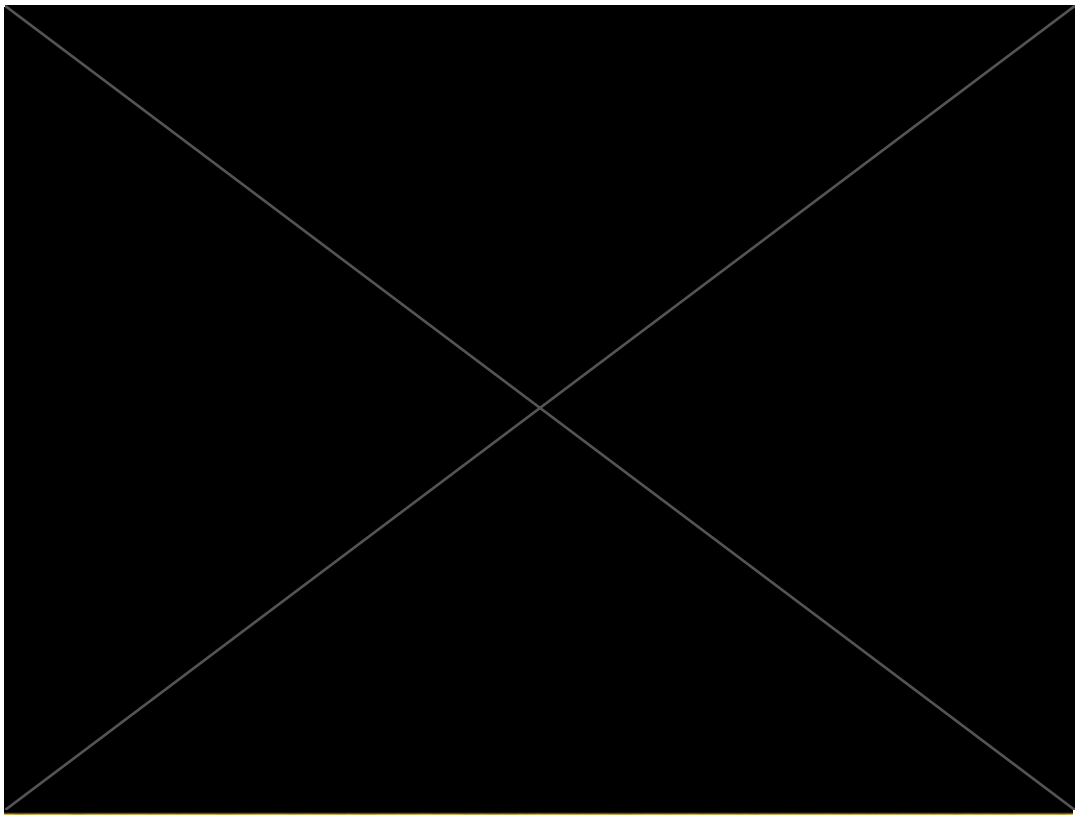


Figure 2.1. Vladimír Jiránek's cartoon in the magazine *Young World* (1986) that illustrated Adabashev's book *Tomorrow's Life: Tragedy or Harmony* (in Czech 1978) depicts tree trunks and a man, perhaps a politician or a bureaucrat, standing in place of the cut trees with a tree trunk in his legs' place. The cartoon suggests ironically that all there will be left are perhaps politicians and bureaucrats in place of nature.

From the 1960s to the 1980s, Czechoslovaks could hear optimistic as well as more sceptical voices, although often framed in a way that favoured the ideologically appropriate optimistic outlook on the future. When the members of the Union for Nature Conservation presented *Silent Spring* on the radio in 1966, they claimed it could surely come across as too 'negativist', and desired a more 'positive' promotion of environmental values.[370] However, they indeed identified with Carson's findings more than with the optimism that was around them: for instance, one of the conservationists, Vlastimil Liebl, reacted with great scepticism to an article from the magazine *Science and Technology for Youth* that proclaimed that new herbicides would create 'farmers without ploughs' who would no longer need to cultivate the land (recalling a theme from the previous chapter).[371] Liebl thus cautioned against the optimistic interpretation of the of scientific-technological revolution. As his colleague Leiský put it, the belief in technology had to be countered by 'philosophy, law, and emotions'.[372] Indeed, combining knowledge and emotions became crucial for Jaromír Tomeček's nature writing, as I will explore bellow, as well as for the project of environmental journalism and portrayals of ecological crisis, as observed in the next chapter. However, it would be too schematic to suggest that there was, on the one hand, an official optimistic outlook and, on the other, an increasingly critical ecological view.

Ecological Optimists and Pessimists

> Until recently, scientists believed that world hunger was the greatest threat to humanity, given the so-called population boom in developing countries. But it turns out that food resources should be sufficient, with socially just distribution. A far more serious danger is posed by today's ecological crisis, the rapidly increasing deterioration of the basic conditions of life on our planet, water, air, soil.[373]

[370] *Mlčící Jaro*, pt. XVII: 2–3.
[371] *Mlčící Jaro*, pt. VII: 1.
[372] *Mlčící Jaro*, pt. IV: 13.
[373] ACR, *Meteor*, 14 Mar 1979, 0:44–1:11.

The 14 March 1979 broadcast of the weekly popular science radio programme *Meteor* was dedicated to the topic of the 'ecological crisis'. The hosts of the programme accepted the gravity of situation, discussing exceeding capacities of nature to manage human activities, yet the programme remained optimistic by offering a positive vision of a technologically advanced future. While 'ecological crisis' was deemed as a 'real problem', this was contrasted with assumptions about overpopulation and hunger. This was because, unlike most capitalist countries, Czechoslovakia was among those countries that saw issues around food provision and overpopulation as a result of economic underdevelopment, manageable through better redistribution of resources. Most capitalist countries, on the other hand, considered overpopulation as the reason why the affected countries were underdeveloped in the first place. This conflict between Marxists and 'neo-Malthusian' approaches thus roughly mapped onto the difference between socialist and capitalist camps.[374] The Czechoslovak media identified not just capitalism but also an insufficient application of technological solutions as the underlying cause of ecological problems. On the other hand, the optimistic framing of these problem allowed for the discussion of other issues, such as depletion of resources and overall deterioration of the biological conditions of life. Therefore, as I will discuss, as long as ecologists did not question socialist progress, the idea of planetary limits remained a legitimate one.

The idea that overpopulation underpinned the global ecological crisis became especially popular in the 1960s.[375] If there were fewer people on the planet, some American

---

[374] The conflict over population growth divided the countries in the early 1970s into two camps that did not agree whether 'overpopulation' was a cause or an effect of 'underdevelopment'. At the 1974 World Population Conference in Bucharest, the former consisted mostly of the 'developed' Western European countries, USA, but also India and others, the latter of all socialist countries, but also France and the Netherlands). Corina Dobos, '"For a More Just World": Population and Politics at the World Population Conference, Bucharest 1974', *Romanian Journal of Population Studies* 9, no. 1 (2015): 152–164.

[375] Environmentalist Malthusianism had roots already in the 1940s: Thomas Robertson, *The Malthusian Moment: Global Population Growth and the Birth of American Environmentalism*, ¨ (New Brunswick: Rutgers University Press, 2012), 36–60.

environmentalists began to believe, the burden on the ecosystems could be reduced to tolerable levels. The revival of Malthusianism was perhaps best represented by the popularity of Paul and Anne Ehrlich's book *The Population Bomb* (1968), its message captured in the section titles of its first chapter: 'Too Many People', 'Too Little Food', 'A Dying Planet.'[376] In the USA, the book was criticised from several sides: some accused ot of racism and omitting the structural economic forces that led to poverty; others were defended middle-class consumerist habits against curbs to economic growth that made those habits possible.[377] In some ways, this was a revival of the dispute between Marx and Thomas Malthus over the capability of nature to sustain an ever-growing population. Nevertheless, neo-Malthusians differed from Malthus in one important regard: they saw increasing environmental pollution rather than insufficient increase in agricultural production as the major obstacle to a rising global population.[378]

By contrast, many Soviet ecologists identified environmental destruction with antagonisms within the capitalist system.[379] According to Adabashev, Western calls for 'global equilibrium' were incompatible with Marxist dialectics, which saw nature as continuously developing.[380] Czech writers generally echoed these Soviet criticisms. For instance, the Czech popular science book *Will Our Planet Sustain Humanity?* (1978) presented the solution to hunger as a matter of introducing the scientific-technological revolution in agriculture along with a more just redistribution of resources. The book's illustrations envisioned a future led by a scientific-technological revolution: one picture showed the high-tech automated harvest of chlorella algae, a protein source of the future, from the seabed, controlled remotely by engineers (Fig. 2.2). A belief in technology, which continued to shape environmentalism

376 Paul Ehrlich, *The Population Bomb* (New York: Ballantine Books, 1968), 35.
377 Robertson, *The Malthusian Moment*, 176–200; For an influential critique, see: Barry Commoner, *The Closing Circle: Confronting the Environmental Crisis* (London: Cape, 1972).
378 Charbonnier, *Affluence and Freedom*, 192.
379 Ecology was debated in the Soviet philosophical journal *Voprosy filosofii*, read by Czechoslovak ecologists. Adabašev, *Život Zítra - Tragédie Nebo Harmonie*, 156–165; Danuše Kvasničková, *Systém Ekologické Výchovy* (Praha: Videopress MON, 1986), 19–21.
380 Adabašev, *Život Zítra - Tragédie Nebo Harmonie*, 29–30.

globally along with more pessimistic voices, thus corresponded well with the state socialist ideology and non-believers could easily look suspect.[381]

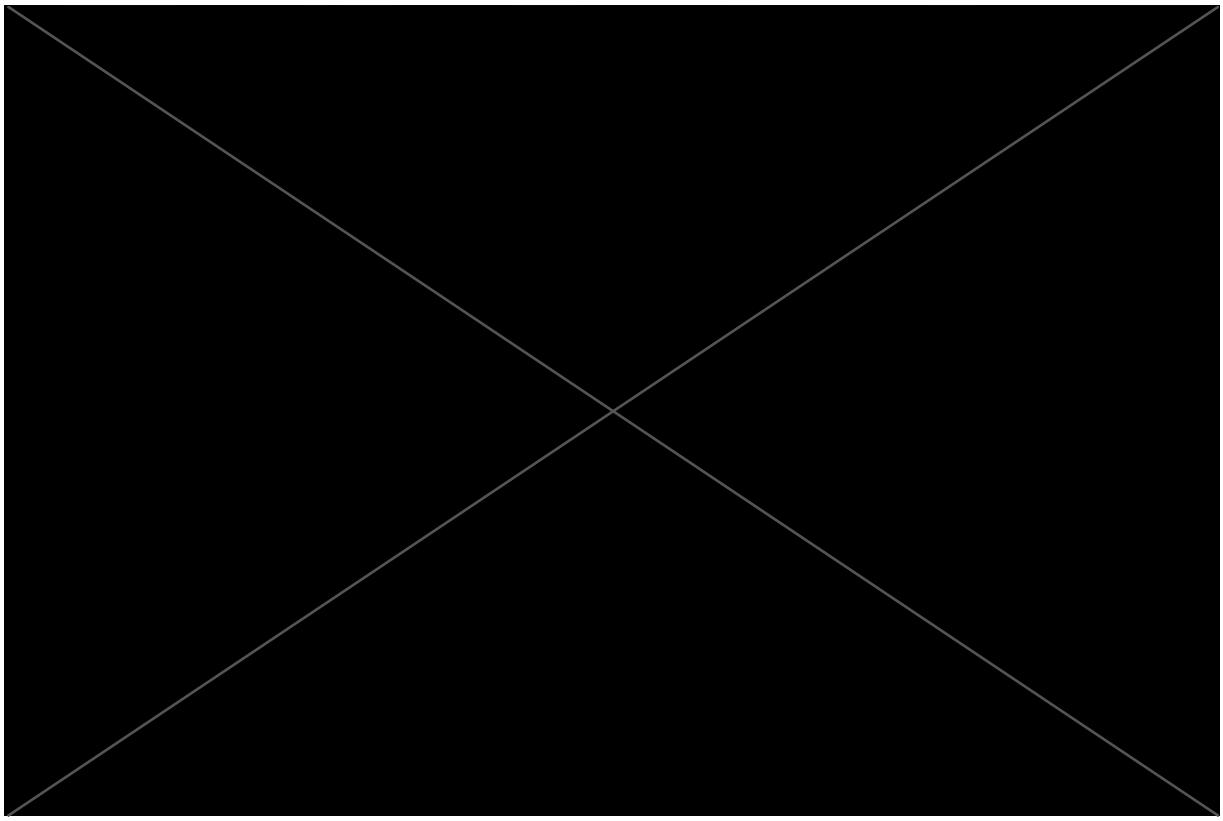


Figure 2.2. The harvest of chlorella algae from the seabed as depicted in popular science book *Will Our Planet Sustain Humanity?* (1978)

However, the emerging idea that economic growth had to be limited to sustain the future of humanity also had its advocates in Czechoslovakia. Anti-Malthusianism emerged during Stalinism and was qualified by the adoption of some neo-Malthusian views in the later periods.[382] In 1972, the Club of Rome published its ground-breaking report *Limits to Growth* projecting that the global economy would collapse by 2050 due to the exhaustion of natural resources.[383] *Limits to Growth* was strongly criticised by the Soviets, who instead proposed

[381] For the techno-optimistic imaginary of the seabed in global diplomacy, see: Sam Robinson, 'Scientific Imaginaries and Science Diplomacy: The Case of Ocean Exploitation', *Centaurus* 63, no. 1 (2021): 150–170.
[382] Olšáková and Janáč, *The Cult of Unity*, 77–90.
[383] Donella H. Meadows and Club of Rome, *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind* (London: Earth Island, 1972).

increasing the planet's production through better and more advanced technocratic control.[384] Its publication was initially influential among only a handful of intellectuals in Czechoslovakia but it had a lasting effect.[385] Just a month after its publication in London, the original English version was brought to Prague thanks to an informal network of Czechoslovak experts, translated in a matter of a few months and distributed in hundreds of copies.[386] Bedřich Moldan, who translated the text with Josef Vavroušek, worked in the Ecological Division of the Biological Society of the Czechoslovak Academy of Sciences. Reviewing the book, he stressed the importance of changing people's worldviews and values so that economic success would not be measured by production and consumption, whether of individuals or nations.[387] In 1983, Moldan co-authored 'An Analysis of the Ecological Situation in Czechoslovakia', a report for the Czechoslovak government that leaked to Western European newspapers and to the Czechoslovak public and contributed to an awareness of ecological problems in the late 1980s.[388] Although for Moldan, *Limits to Growth* confirmed that 'our own philosophy' was right, unlike capitalism, as it rejected the exploitation of nature and people, Moldan's later works were clearly influenced by, and written in conversation with, Western ecologists.[389] The ideological differences were thus often just a matter of framing, legitimising one's interest in the topic. As the last chapter also suggests, Moldan presented a significant personal and

---

384 DeBardeleben, *The Environment and Marxism-Leninism*, 176–181; Donald R. Kelley, 'Economic Growth and Environmental Quality in the USSR: Soviet Reaction to "The Limits to Growth"', *Canadian Slavonic Papers* 18, no. 3 (1976): 266–283; Julia Lajus, 'Soviet Official Critiques of the Resource Scarcity Prediction by Limits to Growth Report: The Case of Evgenii Fedorov's Ecological Crisis Rhetoric', *European Review of History: Revue Européenne d'histoire* 27, no. 3 (2020): 321–341.
385 See also the positive reception of *Limits to Growth* by some Polish ecologists: Parfianowicz, 'Limits to Socialist Growth'.
386 Its distribution is but one example of the interconnected network of environmentally aware people, who ranged from academics to dissidents. 'Bedřich Moldan', Memory of Nations, accessed 3 March 2022, https://www.memoryofnations.eu/en/moldan-bedrich-1935.
387 Bedřich Moldan, 'Meze ekonomického růstu na planetě Zemi', *Vesmír*, 52 (1973), 40-42.
388 Doubravka Olšáková, 'Environmental Journalism? Radio Free Europe, Charter 77 and the Making of an Environmental Agenda', *Environment and History* 28, no. 2 (2022): 208; Blanka Císařovská and Vilém Prečan, eds., 'D263 - Rozbor Ekologické Situace v Československu Zaslaný s Průvodním Dopisem Předsedovi Vlády ČSSR L. Štrougalovi', in *Charta 77: Dokumenty 1977-1989*, vol. 1, 3 vols (Praha: Ústav pro soudobé dějiny AV ČR, 2007).
389 B. Moldan, 'Meze ekonomického růstu na planetě Zemi', *Vesmír*, 52 (1973), 40-42.

conceptual continuity in the reasoning behind the two economic systems' orientations towards growth.

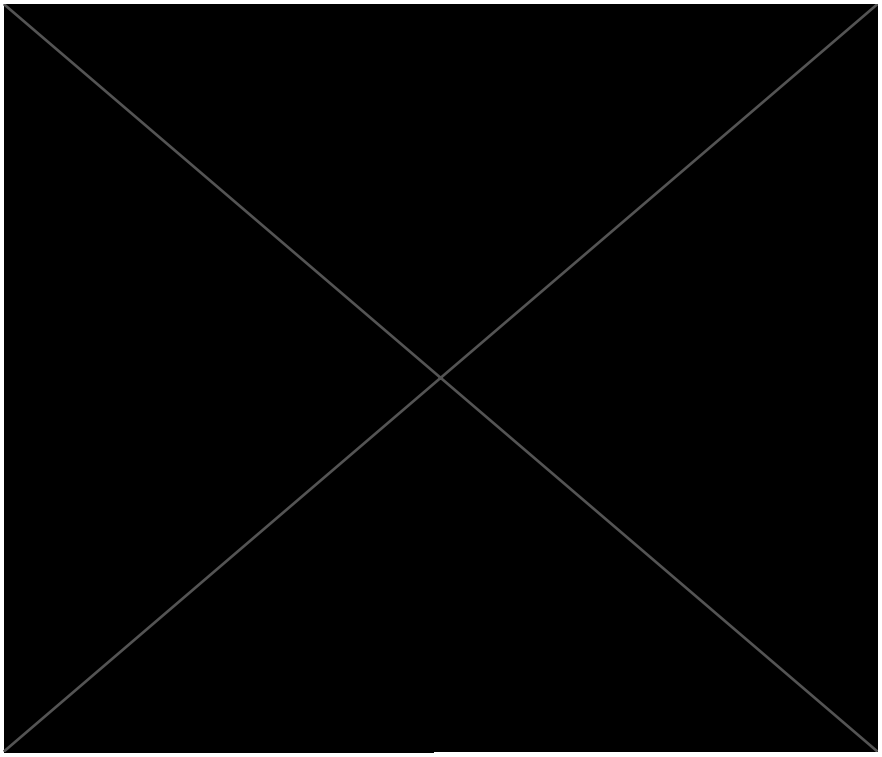
On the other hand, acknowledging planetary limits did not have to mean resigning from further progress. The influence of Western environmentalism in this regard is well illustrated by Moldan's adoption of the 'Spaceship Earth' metaphor, which was used by other Eastern European ecologists as well.[390] This was the idea that the Earth resembled a spaceship 'where all animals, all plants, all living and inanimate nature travel together with humans' that could 'only exist permanently as a single harmonic system', run by people who felt 'a responsibility for all passengers'.[391] The use of the metaphor grouped Moldan with Western environmentalists who criticised unlimited growth. It was made famous by English-born American economist Kenneth Boulding, who contrasted the 'cowboy economy' with the 'spaceman economy' – the former suggesting an image of economic growth as an ever more expanding conquest, the latter a closed-circuit system based on the management of finite sources.[392] Moldan presented the idea in his 1985 book *Will Technology Survive the Year 2000?* Moldan's answer to the question was what he called 'eco-technology' (*ekotechnika*): rather than resigning on the continued use of technology as an alleged cause of environmental problems, Moldan maintained that technological progress was necessary to alleviate ecological crisis. He later laid down the basics for the idea of ecological modernisation – technocratic and legislative measures to ensure further economic growth instead of radical systemic changes – that, as the last chapter will explore, prevailed after 1989 when he became the first Minister of Environment in Czechoslovakia.[393]

---

390 The same metaphor was adopted by Polish experts, such as Juliusz Goryński and Włodzimierz Michajłow: Parfianowicz, 'Limits to Socialist Growth', 47.
391 Bedřich Moldan, *Přežije Technika Rok 2000? : Hledání Ekotechniky* (Praha: SNTL, 1985), 50.
392 Kenneth E. Boulding, 'The Economics of the Coming Spaceship Earth', in *Environmental Quality in a Growing Economy*, ed. H. Jarrett (Baltimore: Johns Hopkins University Press, 1966), 3–14; See also: Stephen J. Macekura, *The Mismeasure of Progress: Economic Growth and Its Critics* (Chicago: University of Chicago Press, 2020), 77.
393 Jehlicka and Smith, 'Out of the Woods and into the Lab', 189–191.

Ecologists considered both optimism and pessimism as legitimate perspectives. Ecological literature worked with a notion of humanity 'at a crossroads'. The present day as a decisive moment was captured in the title of Adabashev's book: the humanity had to decide between tragedy and harmony. In the mid-1970s, the ecologist Emil Hadač, Head of the Institute of Landscape Ecology, wrote a foreword to the Czech translation of a popular science Soviet book about the consequences of environmental degradation, V. V. Dezhkin and T. I. Fetisov's *Balance in Nature*, where he considered the optimistic and pessimistic views of the environment of the future. Referring to the Limits to Growth debate, he argued that while the pessimists were perhaps too blindly driven by 'computer calculations' and believed in an impeding global catastrophe, the optimists credulously put their hopes to new technological and economic solutions.[394] The optimists were 'more in line with the socialist approach' but Hadač warned that excessive optimism would obscure the ongoing 'serious crisis of the biosphere.' The difference was therefore often only rhetorical; when Hadač quotes Paul Ehrlich in the foreword to *Balance in Nature*, he adds that he "[i]s a pessimist, but his conclusions are based on real facts, perhaps only presented too hopelessly."[395] On a visual level, the book presented the ecological crisis as a conflict between nature and industrial technology (Fig. 2.3, 2.4), and the challenge for Marxists was what do to ensure that humanity could continue to relish both.

[394] Vadim Vasiljevič Ďožkin and Tom Iosifovič Fetisov, *Rovnováha v Přírodě*, trans. Miroslav Martiš (Horizont, 1975), 5.
[395] Ďožkin and Fetisov, 12.



Figures 2.3, 2.4. Front and back cover of a Czech translation of Soviet popular science book *Balance in Nature* (1975, orig. 1972)

Progress and Nature

The question for ecologists in state institutions was how to cope with the challenge of ecological crisis on an ideological level. An underlying problem was different conceptions of time, or a clash between the idea of socialist progress and an ecological conception of nature as a self-regulating system. Some ecological thinkers remained optimistic about technical solutions but effectively gave up on Marxism altogether, while others synthesised a dialectical-materialist view of nature with that of the discipline of ecology. And although some ideologues thought of the Western environmentalists as the enemies of progress, the disagreement did not automatically map onto the ideological differences between state socialism and capitalism. Inspired by systems theory, ecology as a scientific discipline brought a new view of nature as a complex self-regulating system, but one that did not necessarily invalidate technological progress as a potential solution to the problem. An influential ecologist who together with

Ludwig von Bertalanffy founded general systems theory was Kenneth Boulding.[396] Their conception of organism as an open system resonated with the dialectical criticism of mechanistic and positivist philosophies.[397] Czech philosopher Jan Kamarýt, translator of Bertalanffy who he met in 1966 in Alberta, Canada, explained that both systems and dialectical approaches, instead of studying static objects, were based on an appreciation of historical and cultural context and saw phenomena in their dynamic development.[398]

Miroslav Gottlieb, a member of the Institute of Landscape Ecology, attempted to reconcile several approaches in a new field called 'anthropoecology', which was supposed to be distinct from the 'human ecology' of capitalist countries.[399] According to Gottlieb, Western human ecology fetishised computer modelling to the detriment of the Marxist 'social-philosophical analysis'.[400] However, Gottlieb also opposed a mechanistic, Cartesian understanding of the planet, calling for a more holistic approach that would combine consideration of the technical, social, biological and ecological spheres. Inspired by cybernetics and systems theory like his colleagues in the capitalist West, Gottlieb came up with a concept of the 'geo-bio-socio-techno-system' in which four structures – population, natural environment, artificial environment (technology) and social organisation and management – were connected by feedback loops and existed in a dynamic state of equilibrium. This was an attempt to bring together a Marxist idea of infinite progress and an ecological view of nature as a finite whole.

---

396 Bertalanffy, *General System Theory*, 14. On the influence of Bertalanffy on Boulding, see: Andersson, *The Future of the World*, 173.
397 See also an East German Marxist reflection of the systems theory, which was also published in Czech: Camilla Warnkeová, *'Abstraktní' Společnost : Systémové Vědy Jako Poselství Spásy ve Společenských Modelech Parsonse, Dahrendorfa a Luhmanna* (Praha: Academia, 1977).
398 Ludwig von Bertalanffy, *Člověk-Robot a Myšlení : Psychologie v Moderním Světě*, trans. Jan Kamarýt (Praha: Svoboda, 1972), 9–11.
399 Miroslav Gottlieb, *Poznámky k Pojmu 'Ekologie Člověka'* (Praha: Ústav krajinné ekologie ČSAV, 1976), 3.
400 Gottlieb, 27–33.

Gottlieb's ontology nicely illustrates some of the tensions between different temporalities in late socialist thought. In the 1990s, the ecologist Bohuslav Blažek, who was among Gottlieb's co-workers, reflected on the application of systems theory in late socialism, seeing it as a retreat from the ideology of dialectical materialism.[401] Implicitly dismissing Marxist theory, he saw 'anthropoecology' as a mere code name for the discipline of 'human ecology'. Still, according to Blažek, replacing 'dialectics' with 'systems' allowed for greater freedom of research. The increased use of cybernetic and systems theories in science can indeed be seen as a way to weaken direct political control over experts. But Gottlieb's founding text of 'anthropoecology' can be also interpreted as a serious attempt to overcome the overly technocratic orientation of late socialism and stress the value of past patterns and holistic approaches to the world, combining different temporal orders into a new philosophy. In line with a cybernetic understanding of isomorphism, Gottlieb argued that living and non-living entities, such as rocks and brain, were the same on a material level.[402] This implied a unity of all mater, leading Gottlieb to assert that any 'social' phenomenon could be considered as a material phenomenon, when one looks at a lower level of its complexity: for instance, the flow of people in cars to the cities was of the same quality as flow of a river. This opened a new perspective which focused on energy exchange between various entities, blurring the lines between the biological and the social, but still seeing those phenomena in terms of historical change.

Gottlieb's reconciliation of a technocratic, rational orientation towards the future with a sense of the cultural, emotional value of the past and an attempt to overcome the dualism of spirit and matter in science were themes characteristic already of some post-Stalinist thinkers discussed in the previous chapter. From Marxism, Gottlieb took the emphasis on active and

[401] Bohuslav Blažek, *Venkov, Města, Média* (Praha: Sociologické nakladatelství, 1998), 28.
[402] Gottlieb, *Poznámky k Pojmu 'Ekologie Člověka'*, 34–45.

conscious recreation of nature and society, while systems theory and critiques of Cartesian dualism inspired him to think about the 'unity of nature on the level of description'.[403] The search for the unity of nature and society led Gottlieb to a 'synthetic understanding of time'. According to Gottlieb, the future-oriented goals of the scientific-technological revolution, which insisted on the 'intensification' of all spheres of human life, were qualified by older layers of development, such as ancient knowledge or the persistence of patterns from the past. Gottlieb mentioned examples such as the division of the hour into 60 minutes as legacy of the Sumerian numeral system or the networks of roads and settlements sometimes unchanged for thousands of years. In addition to technocratic rationality, Gottlieb stressed the 'cultural history of man' and the 'palaeontology of the psyche'. However, faithful to Marxist dialectic, Gottlieb did not see the contrast between technical civilisation and unspoilt nature as a conflict to be resolved. On the contrary, he insisted that people needed a 'rhythmical contrasting alternation' of both.[404] The emotional and the rational, the natural and the technical thus were supposed to remain complementary.

Arguably, the idea of humans as part of nature that began to gain traction in ecology had common roots, in both Eastern and Western Europe, in the thought of Pierre Teilhard de Chardin. A French Jesuit and a palaeontologist, he came up in the 1920s with the concept of the 'noosphere', one that inspired both Soviet and Western ecologists.[405] This was a teleological view of human development that saw the world as a self-organising system aiming towards higher intelligence. The noosphere was a 'sphere of reason', the highest stage of planetary development. In the Soviet Union, the idea was adopted by Vladimir Vernadskyi, an

---

403 Gottlieb, 41.

404 Gottlieb participated in a large sociological project on the leisure time of the Prague residents, where he theorised the relations between human activity, living conditions and space. Jaroslav Pěnkava, Miroslav Gottlieb, and Milan Šimek, *Volný Čas Pražanů : Dílčí Úkol č. VIII-4-5/2 : Státní Program Základního Výzkumu č. VIII-4-5 : Závěrečná Zpráva* (Praha: Ústav pro výzkum kultury, 1973), 9.

405 Julia Nordblad, 'The Future of the Noosphere', in *Forum Interdisziplinäre Begriffsgeschichte*, vol. 3, 2014, 33–42.

ecologist who met Teilhard de Chardin in Paris and who was very influential on Czechoslovak ecologists. Vernadskyi saw humanity in the era of the noosphere as a 'large-scale geological force', which now had to think collectively how to reconstruct nature in its interest.[406] An idea of nature as a unified, thinking whole, independently of Vernadskyi but rooted in Teilhard's thought, underpinned James Lovelock's Gaia theory. Teilhard's Christian teleology was also compatible with the Marxist view of history, and particularly with the analysis of the contemporary world through the lens of scientific-technological revolution. The difference was, of course, the endpoint or the lack thereof: where Teilhard talked of 'Point Omega', a historical endpoint of intellectual unity, surely inspired by Christian teleology, Marxists countered that no transformation was the ultimate one. Ecological crisis thus posed a problem to the Marxist notion of progress, calling for incorporation of a holism stemming from systemic and spiritual views of nature. And as I discuss in Chapter 4, these complex layers of meanings were also what allowed ecology to transition so smoothly from socialist to liberal values in 1989.

Nature Writer Jaromír Tomeček

Although rather abstract, these theoretical arguments about interconnectedness, historical change, and value of the past (which included nature), were paralleled in late socialist literature. Referring to Ovid's *Metamorphoses* and reflecting on his own work, the writer Jaromír Tomeček proclaimed on Czechoslovak Radio in 1985 that no transformation was 'omega', the ultimate one.[407] But today, unlike in the ancient times, Tomeček continued, the transformation was in the hands of humans rather than gods. Tomeček told a story about the landscape of his childhood, which by then had changed beyond recognition. Yet the forests giving way to fields and ski slopes only meant, for Tomeček, that humanity took from nature

[406] On Vernadskyi, see: Benson, *Surroundings*, 126.
[407] ACR, *O čem se hovoří*, 20 Mar 1985, 22:32–22:49.

the food and leisure they needed. Accepting rather than opposing change in light of the human transformation of nature became Tomeček's focus particularly in the 1980s. This was further associated with debates over the role of literature and its relation to science. For Tomeček, it was literature's task not only to celebrate those changes but to preserve what was being lost.

Writing about nature was surely nothing new, but a literary interest in the ecological crisis under late socialism was. Jaromír Tomeček, an author active from the mid-1940s, wrote several books of prose dedicated to nature, with an increasing focus on ecology and the relation between nature and human civilisation towards the end of his career. Coming from a tailor's family, Tomeček studied law in Brno, leaving for Subcarpathian Ruthenia to work as a notary. Starting in the 1950s, Tomeček took part in numerous talks and debates on nature, sometimes organised by the Czechoslovak Society for the Dissemination of Political and Scientific Knowledge, at other times at the invitation of local libraries, galleries or factories (Fig. 2.5). He collaborated with both radio and television, where he appeared regularly to talk about nature. He wrote for diverse readers, both adult and children.[408]

[408] The personal archive of Jaromír Tomeček in the Archive of the Museum of Czech Literature contains 11 boxes of mostly newspaper and magazine articles by and about Tomeček that range from dailies to specialist beekeeping magazines to elite literary magazines. APNP, Jaromír Tomeček, boxes 61-71, unsorted.

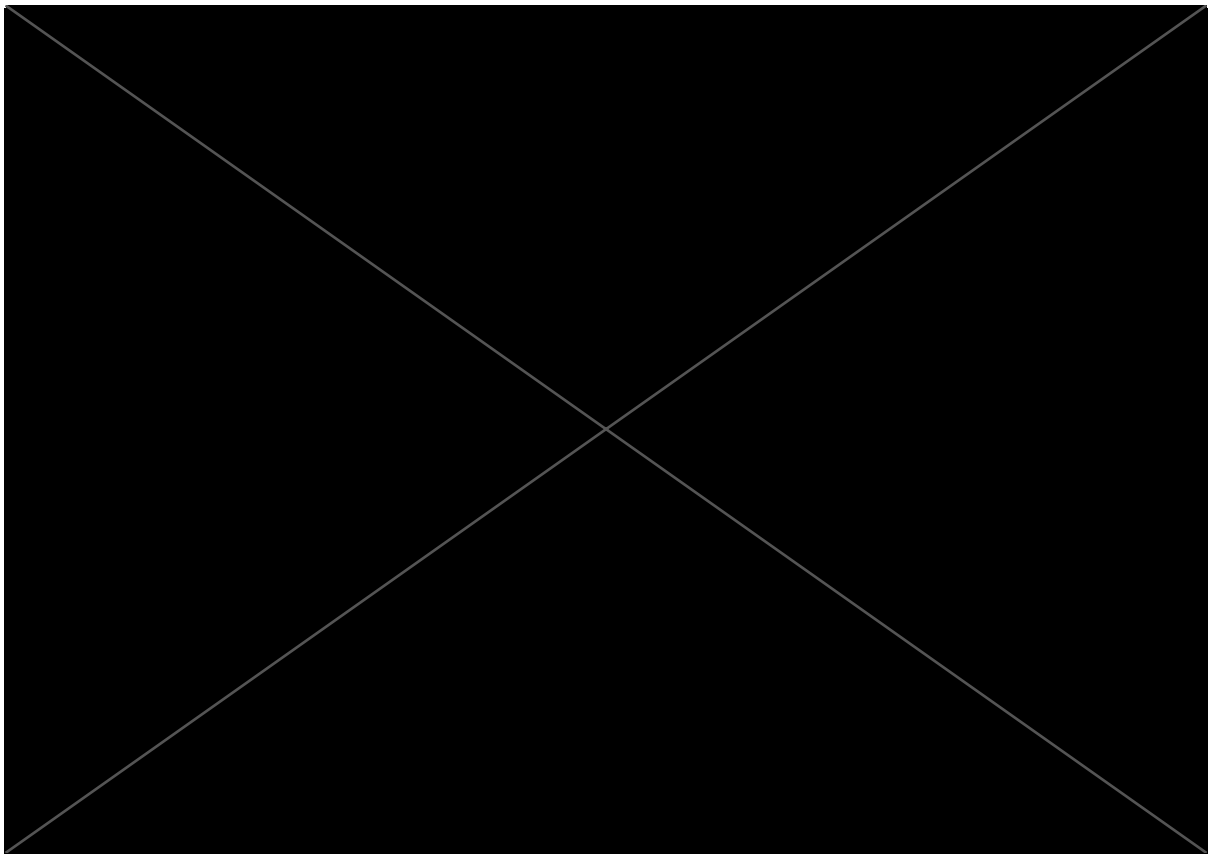


Figure 2.5. ‘Let us love the book – source of knowledge and beauty.’ A poster for a talk with Jaromír Tomeček in his hometown Kroměříž, 1956.

Analysing the context and reception of Tomeček’s work will thus be useful for the overall characterisation of the late socialist relationship to nature, since his central, yet in parts ambiguous, position speaks to the inner conflicts of late socialism. Jaromír Tomeček adhered to several intellectual traditions, serving as reference points that established him as a nature writer, including the 19th century Czech tradition of nature prose, American Transcendentalism, the interwar Czech left-wing avant-garde, and contemporary Soviet nature writing. The unexplored breadth of late socialist environmentalism is also apparent solely from the variety of discourses of the television programmes that Tomeček appeared in: from a literary magazine celebrating the beauties of the national landscape to a documentary promoting the construction of a nuclear power plant as a technocratic solution to the ecological crisis, to an educational programme trying to raise environmental awareness. However, I will not give much attention to the main body of Tomeček’s work but rather to the biographical

narratives, literary interpretations, and media representations that Tomeček and others created around him.[409] Rather than assessing his aesthetic merit or originality of thought as many literary scholars might do, my aim is a historical analysis of the mythology of Tomeček as an author who was making the rounds in a variety of media. Literary critics at the time interpreted his increasing interest in the conflict between humans and nature as a reflection of the ecological crisis, thus creating a new discourse around his works that will be the focus here.

In particular, I will discuss Tomeček's understanding of human-nature relations, based on his autobiographical explanations and public image; Tomeček repeatedly provided an interpretative framework for his work by referring to authors he admired and explaining links between his earlier life and his writings. Tomeček himself emphasised his memories from the Scouts and the time he spent in Subcarpathian Ruthenia. Yet he was also a member of the Union of Czech Writers, which followed the official line during the period of political consolidation after the Prague Spring.[410] Unlike many of his colleagues in the Writers' Union who took part in the debates about democratic socialism in the 1960s, what seemed to interest Jaromír Tomeček more was 'catching fish'.[411] When asked about the elections in 1971, Tomeček did not proclaim his confidence in the candidates of the National Front as did other writers who were queried but emphasised his patriotism and the need to care about nature.[412] Perhaps it was his lack of involvement that brought him in 1972 to the Control Committee of

---

[409] For a basic overview of his work, see the entry in the Dictionary of Czech Literature: Slovník české literatury, 'Jaromír Tomeček', accessed 17 January 2022, http://www.slovnikceskeliteratury.cz/showContent.jsp?docId=444.

[410] In 1972, when the Union of Czech Writers was established, Tomeček became a member of its control committee, keeping his position from the dissolved Union of Czechoslovak Writers. *4. Sjezd Svazu Československých Spisovatelů (Protokol) : Praha 27. - 29. Června 1967* (Praha: Československý spisovatel, 1968), 202; *Ustavující Sjezd Svazu Českých Spisovatelů ve Dnech 31.5. - 1.6. 1972* (Praha: Svoboda, 1972), 129.

[411] When writers debated the future of their association, Ivan Kříž allegedly said: 'Why should Jaromír Tomeček, who would go fishing last year and was not at all interested in the politics I was doing, lose together with me?' Kříž implied that Tomeček should not be disqualified from continuing to be active in the association, given his disinterest in politics. Ludvík Vaculík, *Nepaměti (1969-1972)* (Praha: Mladá fronta, 1998), 40.

[412] APNP, 'Hlas pro socialismus', *Tvorba*, no. 40 (1971): II.

the 'consolidated' Writers' Union. Throughout his writing, Tomeček considered the Marxist conception of historical progress to be important, and he was particularly explicit about the anti-fascist legacy of the Communist Party. Particularly in his later writing, he sought to reconcile the romantic relationship of the human subject to nature, which served as a necessary escape from life in a technical civilisation, and the indispensable role of technocracy as the driving force of progress. In some ways, he could be seen as a defender of unspoilt nature and a critic of modern alienation, yet he also remained an advocate of the comfortable life guaranteed by the technoscientific advances of the socialist state.

Tomeček's appearances on radio and television as well as his numerous discussions with readers made him into a public figure who should not be understood only as a writer but also as an oral storyteller. It is likely, in fact, that more people encountered him telling stories on radio or TV than by reading his books. He appeared in interviews, reviews, and various other news stories; for example, the daily newspaper *Work* (*Práce*) reported on 21 November 1958 that Tomeček brought home ripe strawberries and raspberries from his walk around Brno, adding that 'he knows where to go' to get them.[413] He also regularly visited schools: among countless press clippings, I found in the archive a miscatalogued linocut made by primary school pupils in 1976 as a Christmas present for 'distinguished writer' Jaromír Tomeček, giving me a glimpse into what may be in other, strictly inaccessible, disordered boxes (Fig. 2.6). Likely an art class assignment given to Tomeček when he visited the school, it depicts a girl with a pioneer necktie and a tree and two other children coming towards a tree in the background (as I discuss in the next chapter, childhood was indeed one of the central motifs of late socialist ecological discourse). Tomeček was indeed aware of his own influence as an author-celebrity: commenting in 1963 on debates about leisure time and scientific-technological revolution, he wrote: 'Well, I would suggest spending leisure time – apart from

[413] APNP, 'Kam na ně chodí?', *Práce*, Nov 21, 1958: 5.

self-education – in nature. That's why I am Tomeček'.[414] In 1962, he began hosting a television programme whose title could be loosely translated as *Shooting without Guns* (*Lovy beze zbraní*) about nature lovers carrying cameras instead of guns. Originally envisaged as a one-off series, the programme remained on television for two decades thanks to its popularity.[415] Critics appreciated him for his focus on nature, enchanting personality, and optimism.[416] Particularly later in his life, the media talked of Tomeček as 'a living classic'.[417] He would often be depicted as a poet surrounded by nature; one illustration even potentially evoked the archetypal image of Orpheus summoning animals with his music (Fig. 2.7).[418] That would mean that Tomeček, through his poetry, transcended the boundary between humanity and nature, which was indeed one of his aims.

[414] APNP, Jaromír Tomeček, 'Co s volnem a Gilgaméš', *Host do domu*, 10 (1963): 194-195.
[415] Jarmila Cysařová, *Česká Televizní Publicistika : Svědectví Šedesátých Let* (Praha: Česká televize, 1993), 34–35; Two books of the same name were published based on the programme: Jaroslav Müller, *Lovy Beze Zbraní* (Ostrava: Profil, 1967); Jaromír Tomeček, *Lovy Beze Zbraní : Výbor Próz* (Praha: Albatros, 1976).
[416] Josef Hrabák, *Život s Literaturou* (Brno: Blok, 1982), 181.
[417] See, for example, the ways Tomeček was introduced in both literary magazines and mass media: APNP, *Tvorba*, 10 Apr 1985, 10; ACR, *A léta běží ... - Jaromír Tomeček* (1986).
[418] APNP, Vilém Reichmann, 'Jaromír Tomeček', *Stadion*, May 24, 1961.

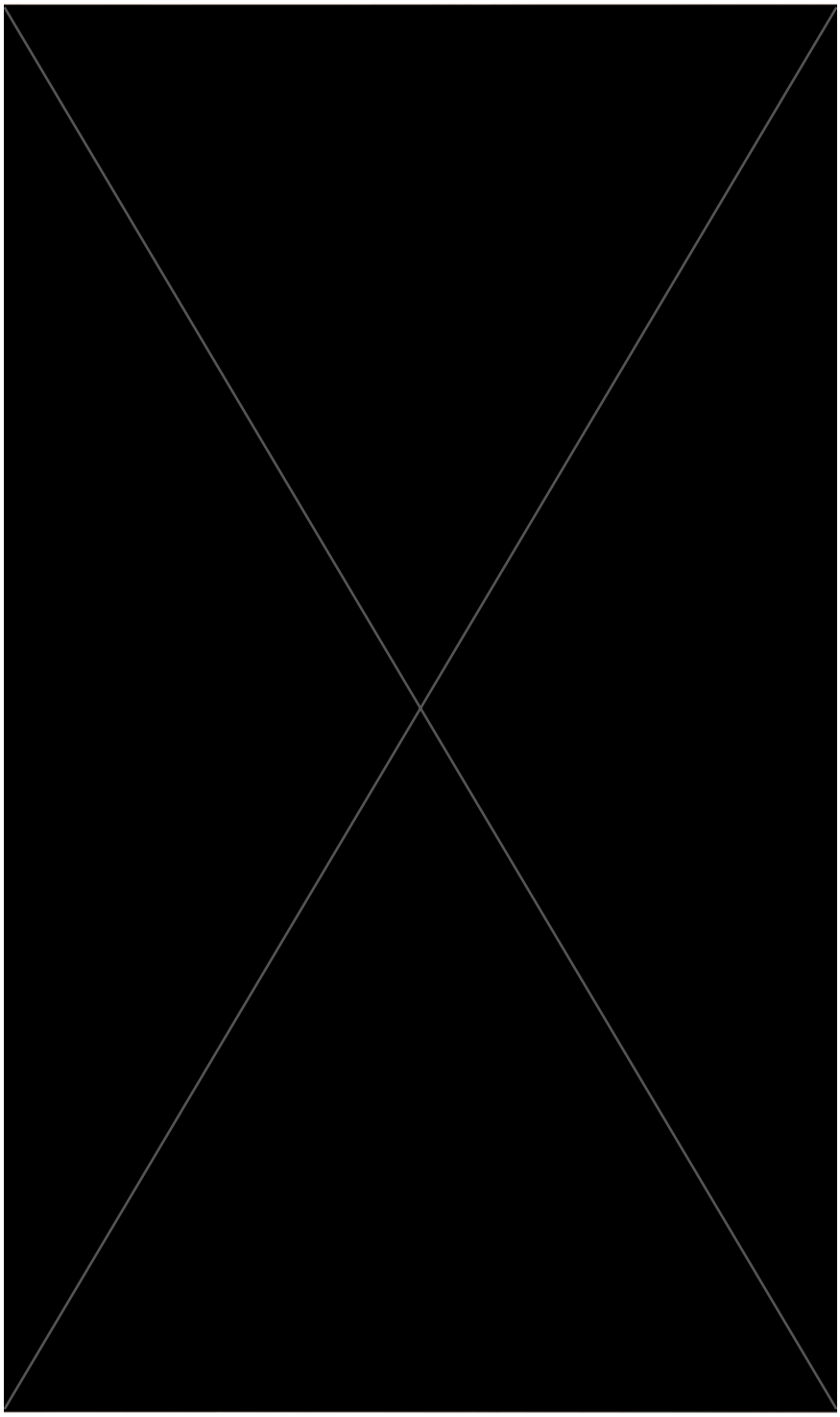


Figure 2.6. Pupils of Pavlovice u Přerova elementary school to Jaromír Tomeček for Christmas 1976.

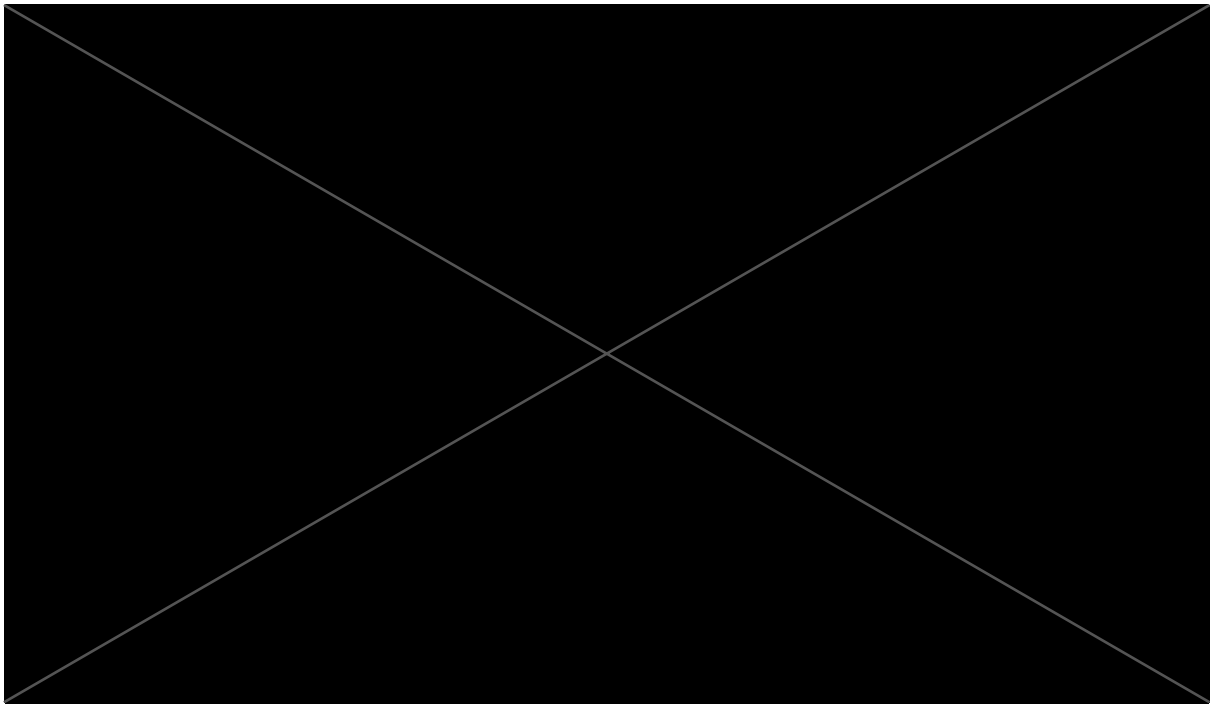


Figure 2.7. Tomeček as a poet among animals.

Tomeček explained that his initial interest in nature came from his childhood experiences, especially Scouting.[419] He recalled how he and his friends would collect forest fruit to bring home during World War I while pretending to be Robinson Crusoe or Winnetou, a fictional Native American hero from the novels of the German writer Karl May that were immensely popular in Czechoslovakia.[420] He joined the Czech Scouts, an organisation based on an outdoor lifestyle and nature preservation as much as on ideas about moral citizenship and discipline. In addition to the influence of the British Scout Movement of Baden Powell, the Czech Scouts took inspiration from Ernest Thompson Seton, a US author active at turn of the 19th and 20th century and one of the founders of Boy Scouts of America, who combined an Enlightenment emphasis on education, woodcraft arts, and advocacy for Native Americans in his programme.[421] Tomeček remembered his Scouting years as a time during which he

[419] ACR, *Spisovatel Jaromír Tomeček hovoří o svém životě* (1969), part 1, 15:23-15:37.
[420] APNP, Jaromír Tomeček, 'Kalokagathia', *Zlatý máj*, 2 (1972), 74-76.
[421] While the two later disagreed because of that, the founder of the Czech Scouts, Antonín Benjamin Svojsík, stressed both traditions. Brian Morris, 'Ernest Thompson Seton and the Origins of the Woodcraft Movement', *Journal of Contemporary History* 5, no. 2 (1970): 183–194; Antonín Benjamin Svojsík, *Základy Junáctví* (Praha: Merkur ve spolupráci s Junáckou edicí Ústřední rady Českého Junáka, 1991), 19–24.

cultivated his love for both nature and writing. His first literary attempt was for a Scout writing competition, which he won, using the prize money to buy 'world's classics' – linking the virtues of reading and love for nature.[422]

The idyllic landscape of Subcarpathian Ruthenia, isolated from civilisation and modern technology, became the subject matter of Tomeček's first novels.[423] In Subcarpathian Ruthenia, which was then part of the Czechoslovak Republic, Tomeček made the acquaintance of Czech communist writer Ivan Olbracht and was given his first offer to publish in a newspaper (*Lidové noviny*).[424] Tomeček was greatly influenced by Olbracht, finding the region fascinating not only for its spatial but also temporal distance from 'civilisation': both the landscape and people seemed to be 'from the eleventh century'.[425] He was fascinated by the Rusyns, who populated the mountainous region, as 'they believed in superstitions' and many did not know modern technology.[426] The Rusyns, seen as people supposedly outside of civilisation could serve as a mirror that questioned the established order of things.[427] The image of unspoilt nature and 'uncivilised' people as its part served Tomeček as a way to inspire modern humans to reconnect with nature, but also as an argument for modernisation, which he saw as a necessary step towards greater material wellbeing.[428]

---

422 The authors included Jack London, Rudyard Kipling, Ernest Thompson Seton and Henry David Thoreau. Sylva Bartůšková, *Jaromír Tomeček* (Praha: Československý spisovatel, 1981), 32.
423 His early novels, which were reprinted throughout the socialist period, took place in Carpathian Ruthenia: Jaromír Tomeček, *Stříbrný Lipan : (Román o Rybě.)* (Praha: J. Lukasík, 1944); Jaromír Tomeček, *Vuí Se Směje : Obrazy z Hor* (Brno: Průboj, 1944).
424 APNP, Ludvík Štěpán, 'Boj o zemi zaslíbenou', Tvorba, no. 40 (1976): 9.
425 *Spisovatel Jaromír Tomeček hovoří o svém životě*, part 1, 18:18-18:28. Ivan Olbracht dedicated several works to the region: Ivan Olbracht, *Nikola Šuhaj Loupežník* (Praha: Melantrich, 1921); Ivan Olbracht, *Země Bez Jména: Reportáže z Podkarpatska* (Praha: Otto Girgal, 1932).
426 *Spisovatel Jaromír Tomeček hovoří o svém životě*, part 2, 4:54-6:34. Although the Czech left-wing avantgarde criticised the interwar Czechoslovak Republic for its imperialism towards Subcarpathian Ruthenia, some could not resist exoticising the local people, see: Geoffrey Brown, 'Blaming the Bourgeoisie: The Czech Left-Wing Response to Perceived Czech Imperialism in Subcarpathian Ruthenia, 1931-1935', *New Zealand Slavonic Journal* 46 (2012): 71–90.
427 In a 1996 interview, Tomeček described Rusyns as 'Socrateses of our age': Jiří Poláček, 'Rozhovor o knihách se spisovatelem Jaromírem Tomečkem: Člověk musí mít svou identitu', *Duha* 10, no. 1 (1996): 27–28.
428 Under state socialism, the image of the region was alive largely thanks to Tomeček's generation. For example, a children's adventure writer, František Továrek, active in the Scouts and later the Pioneers, also admired the region for both its natural beauty and former technological backwardness,

Indeed, Tomeček and his interpreters saw the roots of his affection for nature in the Baroque character of his hometown. Jaromír Tomeček grew up in Kroměříž, a South Moravian town known for its Baroque architecture that served in both autobiographical and biographical narratives to explain his ideas about human life, beauty, and the landscape: as an altar boy he was supposedly drawn to the mystique and decoration of the church that made him contemplate the mystery of life and death.[429] Allusions to the Baroque architecture evoked a unity between landscape and the humanity, a distribution of religious principle in nature, as well as the themes of finite life, death, and human misery. Moreover, Tomeček remembered that he had learnt the importance of both good manners and a relationship with nature from a Catholic catechist; in particular, he had learnt about flowers and their traditional symbolism, things which were important to know on his trips to Subcarpathian Ruthenia and other regions to the East of the 'down-to-earth' Czechs.[430] The importance of religion thus lay mainly in a spiritual experience of the world, seemingly lost in contemporary civilisation.

So if Tomeček had a particularly 'baroque' sensibility, as some literary critics claimed in the 1980s, it was not so much a matter of religiosity as a Transcendentalist concern for the unity of humans with their landscape and perhaps a turn to existing local heritage.[431] In the first chapter, I discussed that in the television serial *Arabela*, the magic of turning a modern high-rise building into a baroque chateau symbolised the struggle against the negative effects of unhindered technological progress. Equally, Tomeček referred to the Baroque to describe the cultural value of landscape and the emotional impact of that landscape being lost to technology. In his book *The Mountain is Burning* (*Hora hoří*, 1984), Tomeček described the misery of a

---

which he witnessed when he was sent there as a teacher. Továrek contrasted the region's interwar poverty and superstition with today's 'health centres' and 'radio and television'. František Továrek, *Hory a Lidé : Reportáže Ze Zakarpatska* (Hradec Králové: Kruh, 1985), 13.

[429] Bartůšková, *Jaromír Tomeček*, 31.

[430] *Spisovatel Jaromír Tomeček hovoří o svém životě*, part 1, 09:30-14:01.

[431] Thoreau, like the Romantics, saw the 'God-principle [diffused] throughout nature'. Donald Worster, *Nature's Economy: A History of Ecological Ideas* (Cambridge: Cambridge University Press, 1994), 87.

dying forest, with trees being called 'baroque friends' and likened to martyrs.[432] In a rather eclectic fashion, just after the passage about 'baroque' elms in *The Mountain is Burning*, Tomeček praised the romanticism of the old path he walked, which was like 'leafing through Thoreau' without any fear the fumes from a car would poison his lungs.[433] In that and many other regards, Tomeček reflected the notion of nature developed by American Transcendentalists, particularly Henry David Thoreau, an American author whose holistic vision of nature offered an experiential and transcendental understanding of the relation between humans and the natural world.[434] Even the literary scholarship of the time noticed Tomeček's holistic approach to nature that extended 'to the whole universe', with humans 'its thinking, creative and conscious part'.[435] Furthermore, much as Thoreau was fascinated by Native Americans, Tomeček found his way towards the experience of nature through Karl May stories and his sojourn in Ruthenia; both gave him a semblance of a direct, unmediated access to old traditions and nature, unspoilt by civilisation.[436] Thus, they both romanticised indigenous peoples from a position of power as men coming from 'civilisation'.

However, Tomeček's romanticising approach to nature was combined with an allegedly strong dedication to scientific accuracy, which was based on Soviet nature writing and on the realistic conceptions of socialist literature.[437] Since nature was seen as constantly changing, it was as necessary for an artist as for a scientist to 'look with the eyes of an expert'.[438] Tomeček

---

[432] Jaromír Tomeček, *Hora Hoří: Balada o Křížovém Králi* (Praha: Československý spisovatel, 1984), 56.
[433] Tomeček, 57.
[434] Indeed, he noted that Henry David Thoreau was his biggest literary influence. *Spisovatel Jaromír Tomeček hovoří o svém životě*, part 2, 24:51-26:11. Thoreau and other Transcendentalists greatly influenced Western environmental thought, see: Worster, *Nature's Economy*, 58–111.
[435] Bartůšková based her interpretation on Tomeček's novel *Disquiet*. Bartůšková, *Jaromír Tomeček*, 117; Jaromír Tomeček, *Neklid* (Praha: Československý spisovatel, 1965).
[436] On Thoreau see: Worster, *Nature's Economy*, 96.
[437] Literary critic Markéta Uhlířová stressed that Tomeček's childhood in Kroměříž surely was not enough to make him a good nature writer. What he also needed was a 'great sensibility' and a 'very thorough knowledge of natural phenomena and laws'. Jaromír Kubíček, ed., *Přírodní Tematika v Literatuře.* (Brno: Státní vědecká knihovna, 1987), 17.
[438] Kubíček, 105.

himself claimed to spend two thirds of his creative time exploring nature, often in the company of experts.[439] The blend of objective knowledge and subjective experience echoed the works of Soviet author Mikhail Prishvin, who was an author of Siberian fairy tales and travelogues.[440] Soviet criticism praised Prishvin for his fusion of science and art, combining authorial lyricism with scientific data to create a cognitive truth.[441] Whereas science stood for objective, empirical knowledge, art brought in subjective perception.[442] As a host of a popular science programme broadcast by Czechoslovak Radio put it: 'Every modern person should have in oneself a bit of Einstein and a bit of, say for example, Prishvin and his relationship with nature'.[443] Here, the figure of a scientist is accompanied by a poet, to balance the scientific outlook on the world with a fantastic one. In a similar vein, Tomeček's late works used elements of facticity to tackle the 'subjective' causes of the ecological crisis, aiming to 'send a warning' and help people find their lost connection with nature.[444]

Already towards the end of the 1960s and even more so in the 1970s, there was a notable change in Tomeček's focus from nature as an idyllic retreat from civilisation to the ecological crisis caused by a conflict between technology and nature. Indeed, he explained that he had abandoned the idea of an idyllic nature after experiencing acid rains and seeing forest springs

---

439 Kubíček, 104.

440 At one point, Tomeček claimed that Prishvin was his 'only literary role model'. It somewhat contradicts his praise for Thoreau and others elsewhere, but since Thoreau also had a great influence on Prishvin, it should be taken as a way to claim allegiance to the tradition of nature writing generally. *Kultura*, no. 28 (1959), 1, cited in: Bartůšková, *Jaromír Tomeček*, 34. Prishvin was in turn sometimes compared to Thoreau, see: Richard Fleck, 'Mikhail Prishvin: A Russian Thoreau', *The Concord Saunterer* 9, no. 2 (1974): 11–13.

441 The two merged in the genre of *ocherk*: Ray J. Parrott, 'Questions of Art, Fact, and Genre in Mikhail Prishvin', *Slavic Review* 36, no. 3 (1977): 465–468. For the genre's characteristics, see: Hans Elveson, 'The Rural Ocherk in Russian Literature after the Second World War', Commentationes Slavicae Gothoburgenses 1 (Inst. f. slaviska språk, Göteborgs univ., 1975), 1–13.

442 Jiří Opelík noted that Tomeček's turn from unmediated fascination with wild nature to its perception by a 'loving observer' – firstly in his book *Eternal Woods* (*Věčný hvozd*) – was accompanied by a simultaneous turn to scientific observation. Oleg Sus, *Cesty k dnešku. [2]* (Brno: Blok, 1966), 163; Jaromír Tomeček, *Věčný hvozd: obrazy z hor* (Praha: Státní nakladatelství dětské knihy, 1956).

443 ACR, *Meteor*, 6 Apr 1974. The programme first appeared in 1968, and in 1972 it became a regular Saturday morning magazine with hundreds of thousands of listeners. Among its recurrent topics was the environment, see: Ivo Budil, *Hlásí se Meteor: populárně vědecký magazín Českého rozhlasu* (Praha: Horizont, 1993), 3.

444 APNP, Štěpán, 'Boj o zemi zaslíbenou', 9.

full of nitrates.[445] He would draw comparisons with memories from his childhood, for example, of the river Morava where he used to catch fish as a young boy that had effectively turned into an 'industrial sewer' during his lifetime.[446] He conceived of the changes as nature 'becoming less romantic because of civilisation.'[447]

A 'Right to Sadness'

Ecological concerns were turned into a legitimate concern of late socialism by linking them with the celebration of ordinary life, family values and material comfort, which was also related to a theoretical revision of socialist realism. As a Czechoslovak Radio host noted retrospectively in 1986, Tomeček's 'admiration for the beauty of nature turned into a warning against insensitive human interference in nature'.[448] For literary critics, Tomeček epitomised the genre of 'nature prose' (*přírodní próza*) in Czech literature, whose increasing focus on humans' place in nature they saw as a reaction to environmental problems.[449] The change in the perception of the human subject as being a part of nature was reflected in a focus on the introspection of human narrators instead of depictions of idyllic nature. Literary critics interpreted his works as part of a broader value shift from pure productivism to ecological concerns. The critics instinctively took a Marxist perspective on literature, interpreting the historical development of forms and genres in relation to larger political developments. Establishing nature prose as an emerging genre, one that was also increasingly concerned with social problems, played an important role in establishing the topic as a legitimate one for public discussion.

---

[445] Štěpán, 9.
[446] ACR, *Spisovatel Jaromír Tomeček hovoří o svém životě*, part 1, 26:18-27:29.
[447] ACR, *Spisovatel Jaromír Tomeček hovoří o svém životě*, part 1, 23:11-23:30.
[448] ACR, *A léta běží ... - Jaromír Tomeček*, 5:10-5:26.
[449] Kubíček, *Přírodní Tematika v Literatuře*, 15. Literary historian Sylva Bartůšková interpreted Tomeček as a successor of Josef Thomayer, a Czech professor of medicine active at the turn of the 19th and 20th centuries who wrote popularising books, including some about nature. Bartůšková, *Jaromír Tomeček*, 5; Josef Thomayer, *Příroda a Lidé* (Praha: Militký a Novák pomocí Lumíra, 1880).

These critics contrasted this literary turn to ecology with literature in the Stalinist period. For example, literary theorist Marie Uhlířová noted that in the 1950s nature writing was on the fringes of literature because it was deemed unhelpful in the early days of communism with its focus on production and construction.[450] In contrast to that era, theorist Milan Blahynka saw the rise of an 'ecological civilisational poetry' in the 1980s, and predicted that the ecological question would soon penetrate all literary production.[451] Similarly, Josef Hrabák understood Tomeček's work in the 1950s as ecologically vanguardist at a time when industrial production was the focal point.[452] He recalled a meeting of the Writers' Union in Brno sometime around 1950 at which Tomeček's interest in nature was badly received. Hrabák argued that the topicality of his work was appreciated only later when ecology and human-nature relations became the centre of attention.

Tomeček's romantic criticism of technocratic alienation resonated with ecologists too. In 1986, the ecologist Jan Lacina wrote an article on Tomeček in the inaugural issue of the magazine *Veronica*, published by the Czech Union for Nature Conservation, pointing out that his books were published in several thousand copies and were often reprinted as he was 'perhaps the most read Czech author'; this, he argued, was clear evidence that the Czechoslovak population was eager to hear about nature.[453] He also repeated the argument that Tomeček had been devoted to nature since the early years of communism, a time when most authors were interested only in writing novels about production and the building of communism. Unlike others, it was argued, Tomeček seemed never to give in to the idea of conquering and exploiting nature. To illustrate this, Lacina quoted Tomeček's short story 'The Purple Sun' (1966):

---

[450] Kubíček, *Přírodní Tematika v Literatuře*, 21.
[451] Kubíček, 76.
[452] Hrabák, 'Lovec beze zbraní Jaromír Tomeček', 26-27. Later reprinted in: Hrabák, *Život s Literaturou*, 182.
[453] Jan Lacina, 'Jaromír Tomeček (stále zelený)', *Veronica* 1 (1986): 13-14.

> Yes, we will perhaps occupy all the stars, but we have lost the spring, we have lost the breeze, we have lost the all-liberating church silence of the forest, and we have surrounded ourselves with sewers, with smoke and roaring machinery.[454]

In the context of the magazine's advocacy of nature conservation, Tomeček was presented as a strong voice against a technocratic neglect of the affective role the natural environment played in human lives.

But it would be wrong to read Tomeček as anti-technocratic. Indeed, his dialectical understanding of nature and technology, with humans in need of both, was in line with some of the ecological theorists of the time. As discussed above, for example, Miroslav Gottlieb proposed to reconcile a technocratic, rational orientation towards the future with a sense of the cultural, emotional value of the past. Tomeček saw the function of literature in parallel to the escape from city to nature.[455] He lamented civilisation's alienation from nature, and strove to reconnect children deprived of the charms of the forest with nature through his writings.[456] At the same time, Tomeček explained that his task was to make 'new' nature as beautiful as the 'old'.[457] He argued that it was possible and even necessary to see beauty in, for instance, an agricultural landscape changed by the industrial boom. He considered change a necessary step on the path to progress that guaranteed people comfort, and his task then was to help people appreciate the new beauty. His lament that children were no longer as close to nature as he had been when he was a child was not mere nostalgia but was instead intended to challenge literature to appreciate nature in a changed world.

In the 1980s, Josef Peterka, a prominent literary critic described the themes developed by Tomeček and other contemporary writers as a 'right to the sadness of memory'. He observed this in Tomeček's essay about the construction of the Dukovany power plant. In the essay,

---

[454] Lacina, 14.
[455] APNP, Tomeček, 'Kalokagathia', 76. Similarly, some urban theorists insisted that people needed 'rhythmical contrasting alternation' of both city and countryside: Pěnkava, Gottlieb, and Šimek, *Volný Čas Pražanů*, 9.
[456] ACR, *Spisovatel Dr. Jaromír Tomeček provází děti přírodou* (1970), 01:10-02:06.
[457] ACR, *Spisovatel Dr. Jaromír Tomeček provází děti přírodou*, 17:25-20:01.

Tomeček argued that 'as humans are born out of pain, the future is born out of the present in a very painful way.[458] Using long lyrical passages, he described the emotions of men working on the building site of an atomic power plant as they cut the trees that had to fall, for humans 'want heat, light, comfort, life'.[459] Here, the intervention into nature was no longer conceived as a celebration of its mastery. The joy of material comfort was a result of a painful act for which humans must ask nature its forgiveness. This tragic mode of thinking was similar to Gustav Bareš's Promethean 'optimistic tragedy', discussed in the previous chapter.

Peterka made two arguments about contemporary literature, contrasting it but also building continuities with both socialist realism of the early 1950s and the modernist turn in the 1960s. First, he wanted literature to reject both the 'existentialism' of the 1960s socialist reformists and Western 'decay' by celebrating the everyday life of individuals. The problem was, according to Peterka, that people as the movers of history were romanticised by the Stalinist authors who wrote about the masses of workers but forgot to see ordinary people.[460] But he also rejected an 'anti-socialist', modernist elitism of the post-Stalinist years that allegedly abandoned the people altogether. Instead, he argued that an emphasis on individual memory that would relate history to individuals allow them to internalise it.[461] Memory was supposed to retain its historical logic, with individual lives having their own trajectory but still being part of the collective. As the previous chapter discussed, the theme of an individual's life burdened by technological progress prevailed in 1960s art. The 'Kafkaesque' world 'with no past and perspective' was contrasted with a celebration of the everyday life.[462] By stressing

---

458 Jiří Křenek, ed., *Sklizeň Světla : Kniha Reportáží, Próz a Veršů o Stavbě Jaderné Elektrárny v Dukovanech* (Brno: Blok, 1983), 18.
459 Křenek, 17.
460 Josef Peterka, *Principy a tendence* (Praha: Český spisovatel, 1981), 25.
461 Peterka, 'Téma Paměť', 98.
462 Peterka, 99. The early 1960s saw an increased interested in Franz Kafka, as was apparent at the influential the 1963 conference in Liblice: *Franz Kafka: Liblická Konference 1963* (v: Nakladatelství Československé akademie věd, 1963); Jakub Rákosník, Matěj Spurný, and Jiří Štaif, *Milníky Moderních Českých Dějin : Krize Konsenzu a Legitimity v Letech 1848-1989* (Praha: Argo, 2018), 221.

individual memory and everyday life instead of the existentialist despair of individuals lost in a world of machines and bureaucracy, Peterka wanted to save humanism from the 'despair' of the 1960s.

Second, Peterka reinterpreted the doctrine of socialist realism to emphasise sadness as a complement of joy.[463] The preservation of the destroyed past in memory would transcend time and become part of the new. Peterka's example of a collective joyful creation that also brought individual sorrow was a poem that remembered nostalgically the times of childhood in a landscape now flooded and 'on the bottom of a future lake'.[464] Peterka therefore rendered human interactions with the environment as 'sad' but 'necessary' aspects of a modern civilisation committed to maintaining material comfort. Therefore, communism was for Peterka a 'civilisation of memory', whereas capitalism was a 'civilisation of oblivion and decay'.[465]

Literature was just one of many fields that evinced a heightened interest in the past, individual and nature; popular media also showed stories from new electrical plants, housing blocks and other building sites with an emphasis of the everyday. A good example was a serial *Today in a House* which depicted a move-in of several characters to a newly built housing block in the suburbs of Prague.[466] One character, an old resident of the Lesser Town, one of the oldest districts of Prague, complains that a block of flats 'is just a carton box for people', incomparable to the baroque facades he is used to seeing.[467] Such criticism of the loss of meaning was also part of a phenomenological turn in architectural thought and the dissident

[463] His theory was based on a historical study of the confrontation of realism and romanticism, with socialist realism as its synthesis. Josef Peterka, *Metamorfózy tradice: k ideologickým aspektům působení literárního dědictví* (Praha: Československý spisovatel, 1983).
[464] Peterka referred to a poem by Petr Skarlant about childhood memories of a place taken by a new lake: Peterka, 'Téma Paměť', 109; Petr Skarlant, *Kdo jde po dně budoucího jezera: básně ze svatební cesty* (Praha: Melantrich, 1973), 18–25.
[465] Peterka, 'Téma Paměť', 110.
[466] *Dnes v jednom domě* (dir. František Filip, Czechoslovakia, 1980), 9 ep.
[467] *Dnes v jednom domě*, ep. 1, 8:34–9:11.

movement.[468] Phenomenological concerns with meaning fuelled the critique of housing estates as an 'inauthentic' environment. But late socialist television offered a solution to the phenomenological argument about the lack of meaning without rejecting the promises of modernism. Instead, the anonymous space of the housing block was filled with individual human stories. The first episode of *Today in a House* ends with a voiceover:

> Yes, this house of ours looks exactly the same as others in the block. At first, you can tell it apart only by its number. House, yet without history and memory. It smells of the anonymous scent of novelty, plastic materials, and patiently waits for impatient applicants… who will start writing its history, who will bring their histories and their sorrows with them.[469]

The same held for how the loss of nature was integrated into the late socialist conception of history: just as people lived with their sorrows but in comfortable homes, so it was inevitable to sacrifice a part of nature to achieve that material security.

Late socialist literary theory thus showed how ecology fitted in with the themes of ordinary life and material comfort as part of the pushback against the 1960s reformism. Confessing his dedication to 'life', Tomeček discussed the 'one law' guiding humans and animals 'from creation to extinction'; when one realised the law's existence, one would be 'permeated with love of the ordinary day and its hardships'.[470] Drawing upon the romantic tradition, Tomeček thus combined a transcendental relation to nature with realistic portrayals of everyday life. Peterka himself wrote two collections of poems that were introspective observations about everyday life in the late socialist technical civilisation, poems that did not lead to existential despair but called for a 'responsibility for our world'.[471]

---

[468] Maroš Krivý, 'Quality of Life or Life-in-Truth? A Late- Socialist Critique of Housing Estates in Czechoslovakia', in *Re-Framing Identities*, ed. Torsten Lange and Ákos Moravánszky, vol. 3 (Berlin: De Gruyter, 2016), 303–318.
[469] *Dnes v jednom domě*, ep. 1, 1:12:16–1:12:47.
[470] Tomeček, *Lovy Beze Zbraní*, 14.
[471] Peterka, 'Téma Paměť', 109; Josef Peterka, *Autobiografie Vlka* (Praha: Československý spisovatel, 1980); Josef Peterka, *Autobiografie Člověka: Poetické Divadlo pro Několik Hlasů Jednoho Muže* (Praha: Československý spisovatel, 1984).

For late socialist writers then, the human subject was no longer the omnipotent master of nature but instead had to find ways of reconciling technological progress and ecological crisis. These themes were also evident in the representation of the Dukovany nuclear power plant in the 1980s. No longer were the great engineering works portrayed as examples of the heroic mastery of nature as in the 1950s, but as technology in harmony with nature. A nuclear power plan was represented the work of experts and ordinary workers, who brought light to family home.

The Harvest of Light

> The true purpose of the blue planet called Earth is to be, not to wander like a cold sphere through the endless wastes of dark space. The point is to be able to pick mushrooms and blueberries behind the walls of a nuclear power plant. It is the only way to get back to where humans started – nature. Because the moment one forgets this, one ceases to be human.[472]

The ending of the documentary television programme *Pilgrims to Light* (*Poutníci za světlem*, 1985), about the benefits of nuclear energy, perfectly illustrates how the discourse of ecological techno-optimism was in no way supposed to be a 'return to nature' in the conservationist sense but rather a return to a transformed nature that would preserve the progressive temporal orientation of socialist modernity. Humanity had to reconnect with whatever nature had become in the course of technological development. *Pilgrims to Light* depicts a grandfather and a grandson on a walk in fields near an atomic power plant (Fig. 2.8).[473] The grandfather is amazed that the boy is not looking for mushrooms, but for the power plant. The boy explains that 'the atomic plant is the nature of today'. Nuclear energy was now presented simultaneously as something in harmony with nature and as a technological achievement that would guarantee the continuation of a comfortable life.

[472] APFCT, IDEC 385 451 62675, *Poutníci za světlem* (1985), 24:31–25:27.
[473] *Poutníci za světlem*, 13:52–14:06.

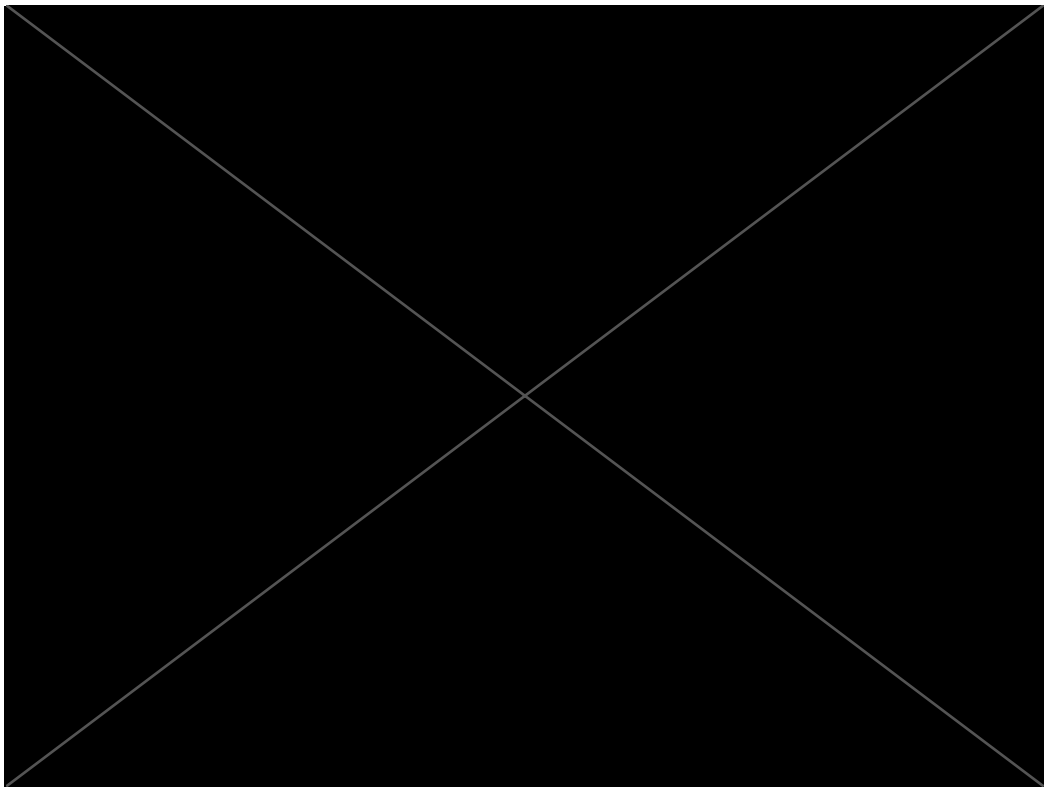


Figure 2.8. A grandfather with his grandson walking near a nuclear power plant. *Pilgrims to Light* (1985).

The discourse of ecological techno-optimism was commonly employed when promoting atomic energy as a technocratic solution of the ecological crisis, often tied to patriotic and family values and conservative gender order. Nuclear energy was supposed to become the vehicle of a qualitative change in the relation between the human world and the world of nature, without the need to abandon economic growth, as 'pessimistic' ecologists in the West were allegedly proposing.[474] In 1979, Ladislav Bohal, Director of Development of the Czechoslovak Energy Company, asserted that nuclear energy was overcoming 'the earlier limiting conditions of nature' as humans were penetrating the microstructure of matter, saving labour time and increasing productivity.[475] Nuclear energy was seen as the practical application of the principle of the scientific-technological revolution and as such, it would lead to a fundamental change in relations 'between humans, nature, environment and society'.[476]

[474] Jozef Štrba, ed., *Jaderná Energetika a Životní Prostředí : Sborník Přednášek z Konference, Žďár Nad Sázavou, Duben 1979* (Zbraslav: Ústřední informační středisko pro jaderný program, 1979), 12.
[475] Štrba, 7.
[476] Štrba, 8.

Nuclear power plants had become the new 'beacons of technological progress', as a newspaper article put it.[477] Older techno-scientific imaginaries were therefore combined with the new ecological discourse. As one promotional booklet put it in 1987, nuclear energy was a matter 'of the life and death of our landscape, forests, clean water, food safety'.[478] The Cold War idea of a 'peaceful' atom that stood in contrast to nuclear weapons was increasingly coupled with warnings of the danger of environmental disaster, represented by the continuous use of heavily polluting sources of energy – mainly coal power plants.[479]

Nuclear energy was a prime case of ecological techno-optimism that looked to disprove ecological pessimists and showcase the capabilities of socialist technocracy.[480] The history of nuclear energy in Czechoslovakia began, at the latest, in 1955 when the government established the Institute of Atomic Research in Řež, near Prague. Soon afterwards, in 1958, the construction of the first nuclear power plant began in Jaslovské Bohunice, Slovakia, although it opened only in 1972. Yet, the biggest nuclear power plant, and the biggest construction project in the history of the Czechoslovak economy, was built in the Czech part of the federation, in Dukovany near Brno. The works in Dukovany started in 1978 and the four blocks were successively connected to the grid in the 1980s. Nuclear energy appeared to fit perfectly with prevailing ideals of the complex, interconnected and technocratic society, and politicians were keen to educate the public on its benefits and ensure that it was supportive. Even though the Western anti-nuclear movement was interpreted as the product of capitalism's inability to reconcile particularist interests, the officials feared potential anti-nuclear sentiments. So, the

---

477 P. Hájek, 'Majáky technického pokroku', *Květy* (5 Dec 1985), 5-6.
478 Pavel Vrbka, *Jaderná Elektrárna Dukovany* (Brno: Průmyslové stavby, 1987), 5.
479 Michaela Kůželová, 'Příroda Na Prahu Atomového Věku : Obraz Jaderné Energetiky a Životního Prostředí v Publicistice Socialistického Československa', Soudobé dějiny, 24, no. 1/2 (2017): 102–126.
480 A promise that nuclear energy was a progressive and ecological source was not exclusive to socialist countries, and it had a particular place in French eco-modernist imaginary: Gabrielle Hecht, *The Radiance of France: Nuclear Power and National Identity after World War II*, Inside Technology (Cambridge, Mass.: MIT Press, 1998); Michael Bess, *The Light-Green Society: Ecology and Technological Modernity in France, 1960-2000* (Chicago: University of Chicago Press, 2003).

media were used to provide people with 'qualified information and scientific data' to influence public opinion.[481]

The construction of the Dukovany nuclear power plant in the early 1980s was thus accompanied by a major campaign involving writers and filmmakers, whose task was to bring to people's awareness not only the construction itself but also to give it a meaning that went beyond the provision of electricity. Jaromír Tomeček was involved in writing the book *Harvest of Light*, co-authored by members of the South Moravian branch of the Union of Czech Writers. The book included short stories, reportages, poems, and illustrations. In his contribution, Tomeček asserted that the problems of polluted air and diminishing coal reserves would be solved by nuclear energy, evoking an assemblage of technocrats and comfortable homes in harmonious unity with nature. In a similar vein, the television documentary film *Dukovany at the Starting Line* emphasised both experts' 'perfect knowledge of technology', guaranteeing the plant's safe operation, and the absence of 'smoking chimneys, sulphur dioxide, acid rains'.[482] As Tomeček put it, the workers of Dukovany were more powerful than Prometheus: they brought people the heat and light that they themselves extracted from the earth to power electric stoves in our homes, (allegedly) without pollution.[483] The power plant itself was portrayed using organicist metaphors– as a technological work reminiscent of, for example, growing trees and flying birds.[484] This was a poetic expression of what was by philosophers like Miroslav Gottlieb described as a dialectical process, as technology was becoming part of a new nature. It was a supreme example of Tomeček's aspiration to use art to teach people to

[481] Štrba, *Jaderná Energetika a Životní Prostředí*, 9; *Ekologické Podmínky a Bariéry Společenského Rozvoje ČSSR : Sborník Přednášek Ze Semináře : Jánské Lázně, 4.-8.10.1983* (Janské Lázně: Ekologická sekce Československé biologické společnosti při ČSAV, 1983), 23.
[482] APFCT, IDEC 384 451 62653, *Dukovany před startem* (1984), 24:10-25:14.
[483] APFCT, IDEC 384 451 52626, *Příběh světla* (1984), 23:05-23:36; Křenek, *Sklizeň Světla*, 20.
[484] For instance, Jiří Křenek wrote that 'above the forest of cranes floats a black necklace of ravens'; and Ivo Odehnal portrayed 'a vehicle with a peacock's tail of dust'. Křenek, 44–45.

appreciate the beauty of that new nature. Moreover, it was a new, ecological version of Prometheanism.

Books and films were no different from other works of the time in their proclaimed focus on Dukovany primarily as a workplace, thus according with Peterka's emphasis on the representation of people as a collection of ordinary individuals. The television documentary *The Story of Light* captured the handover of the completed book *Harvest of Light* to the workers: the writers went back to Dukovany, where they had spent considerable time collecting material for the book, to reflect and read out loud parts of their work. Writer Ivan Milota remembered that when they first came, their fear of being rejected by the workers was gone in an instant as they were accepted spontaneously and even made 'long-lasting friendships'.[485] According to the First Secretary of South Moravian Committee of the Czechoslovak Communist Party, Vladimír Herman, the publication was an 'excellent example of collaboration' between the artistic intelligentsia and the working class, the former having conversations with the latter to inform their creative work.[486] To that extent, the literary project followed the convention of socialist reportage, which was equally applied to the shooting of the film *Atomic Cathedral*, based on Stanislav Rudolf's novel *Race of a Weary Horse*.[487] To make the plot realistic, Rudolf spent about half a year collecting material for his book to get to know Dukovany's work environment, even taking part in meetings and reading through 'boring final reports and correspondence with subcontractors'; therein, he believed, lay his ability to depict problems at the workplace.[488] *Atomic Cathedral*, like other late socialist popular media representations, based its veracity on showing imperfect human lives and failures of both

[485] *Příběh světla,* 16:30-17:36.
[486] Křenek, *Sklizeň Světla*, 11.
[487] Stanislav Rudolf, *Běh Znaveného Koně* (Praha: Československý spisovatel, 1983). *Atomová katedrála* (dir. Jaroslav Balík, Czechoslovakia, 1984).
[488] Miloš Skalka, 'Lákavé téma současnost', *Květy*, February 28, 1985: 38-9.

individuals and the system: it showed problems and conflicts between management, the dissatisfaction of workers and the daily drama of family life.[489]

Moreover, the South Moravian writers also focused on the landscape and its meaning, accounting for sorrow in the joyful creating of the new. The landscape's several layers – literary, cultural, natural, and technical – created a unique sense of time and place that stretched into both the past and the future, the material and the imaginary, the natural and the technical. To evoke the literary meaning of the place, several authors referred to Czech surrealist writer Vítězslav Nezval, a native of a village near Dukovany and member of the avant-garde leftist association of artists *Devětsil*, who was active in the interwar period.[490] In *Edison*, one of his most famous epic poems, Nezval melancholically pondered upon life and death while celebrating technical inventions of the modern age that he compared to writing poetry.[491] Following Nezval's linking of poetry and scientific invention, Tomeček stressed the combination of poetry and hard work that was needed to bring a comfortable life to the people.[492] The connection between ecology as science and art was perhaps best epitomised by Jan Lacina, as he was himself a scientist who collaborated on ecological surveys of the area: Together with Antonín Buček, Lacina described a lizard 'basking in Nezval's verses', further extolling the biological diversity of the area by naming endangered species living there.[493] Thus, the collaborative work *Harvest of Light* was a prime example of the attempt to reconcile emotional attachment to nature and the ideology

Faithful to his literary style, Tomeček presented Dukovany in a number of diverse ways: he described walks in the countryside, a railway bridge, the ruins of the Rabštejn castle,

---

[489] See how it was replected in the period media: NFA, IIf-3918, Atomová katedrála.
[490] For the late socialist interpretation of Nezval, see: Milan Blahynka, *Pozemská poezie: kapitoly k české poezii (1945-1975)* (Praha: Československý spisovatel, 1977).
[491] Vítězslav Nezval, *Edison* (Praha: Rudolf Škeřík, 1928).
[492] Similarly, the writer Ludmila Klukanová wrote about how 'the nuclear power plant pervades the poetic space of the inventor Edison' Křenek, *Sklizeň Světla*, 21.
[493] Křenek, 22.

while also evoking local history and a biologists' research station belonging to the Czechoslovak Academy of Sciences.[494] Tomeček was describing a cultural landscape transformed by humans during its long history, from the first ploughmen to contemporary excavators, echoing Miroslav Gottlieb's call to consider 'cultural history' alongside technocratic rationality.[495] In that way, the landscape of Dukovany was presented as one comprised of both natural and technological beauty, past and future, literature and science. Buček and Lacina observed an area where a dam was constructed:

> We tried to imagine what it used to look like here, with old mills in the valley, spring paddlers in a wild river and *tramp* songs heard till late at night around campfires. And we understood the sorrow of our friends who knew the former river intimately and whose favourite places were lost to the dam, leaving them with only memories and photographs.[496]

The old and the new were contrasted and the need for progress was defended, but in a way that acknowledged the value of the old and the weight of emotional attachment to the past (Fig. 2.9).

[494] Křenek, 14–15.
[495] Křenek, 19.
[496] Křenek, 25.

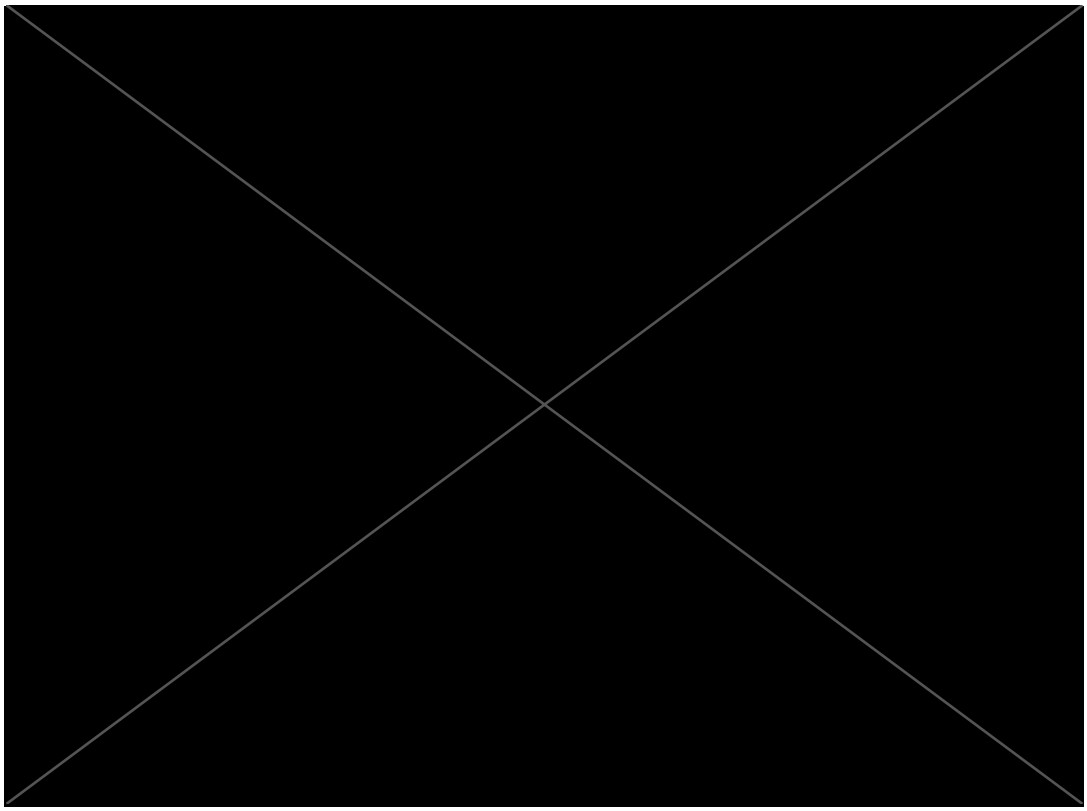


Figure 2.9. A new atomic power plant and a church in harmony.[497]

The loss of the former landscape to the industrial complex, consisting of a nuclear power plant and a dam, was justified by the guarantee of a comfortable life. On 20 March 1985, a Czechoslovak Radio report from Dukovany began:

> Soon it will get dark, we will turn on the lights in our homes, turn on our electric stoves and radios, and the TV screen will light up the room. At that moment, the lights on the panels in the power stations come on and the meter swings to the right.[498]

The provision of energy, in the form of light and heating, was associated with the comfort of family house. About a year later, Jaromír Tomeček posed a rhetorical question on Czechoslovak Radio: 'Do you want central heating? Do you want comfort? Warmth? Light?' Recognising the adverse effects of industrialisation, Tomeček asserted that it was necessitated by people's material needs. He remained optimistic about the future, because he believed in the power of new technologies that would revolutionise relations between humans and the

[497] APFCT, IDEC 384 451 52626, *Příběh světla*, 12:23.
[498] ACR, *O čem se hovoří*, 20 Mar 1985, 0:21–0:36.

natural world.[499] The new potential sources of energy gave Tomeček hope that a harmony between increasing material comfort and nature could indeed be achieved people were 'the children of nature'.[500]

Thus, in emphasising material provision overseen by technocratic management, this discourse of ecological techno-optimism legitimised the preservation of the existing social order structured around family values, a conservative notion of gender roles, and national prosperity. The discourses on nuclear energy, for instance, focused on the idea that children's future would be a result of the 'manly' work of both construction workers and experts that guaranteed a 'comfortable life' for all.[501] This did not mean that power plant workers were exclusively men, yet the division of roles had carried a symbolic meaning. The Czechoslovak Radio news from 20 March 1985 reported about Galina Pienkova, a Soviet engineer who was the only woman launching the new reactor. In Ivan Odehnal's poem about Dukovany, which was also read out that day on the radio, the men were celebrated for being 'connected with metal, disconnected from family'; and asked whether 'only construction worker's arms were strong or also his soul'.[502] This time, the sorrows out of which a great work grew was the men's sacrifice of their time with the family and physical effort. All in all, late socialist reconsideration of human-nature relations involved mainly materialist issues and rested on existing assumptions of human nature.

Women worked in Dukovany, too, but their role was different and their portrayal in the media was less common. When the filmmaker Drahomíra Vihanová arrived in Dukovany, she wanted to shoot a documentary that would portray working men, just as she had done with construction workers of the Prague metro.[503] For Vihanová, making the film about women was,

---

499 ACR, *A léta běží ... - Jaromír Tomeček*, 15:01–15:21.
500 ACR, *A léta běží ... - Jaromír Tomeček*, 16:18.
501 *O čem se hovoří*, 20 Mar 1985, 0:21-03:07. See also: *Poutnící za světlem*, 0:01-4:20.
502 ACR, *O čem se hovoří*, 10:40.
503 *Rozhovory* (dir. Drahomíra Vihanová, Czechoslovakia, 1983).

as she said, a 'coincidence'. As she later explained, moving to the Dukovany construction site, she was the only woman who lived there among men who would go home only every two weeks, while women workers, who did not work in construction, commuted. After a few visits to the pub in the evenings, she found that she did not like talking to the men at all and eventually decided to make her short film about women working in the site. The documentary, titled *Dukovany: Boiling Kettle*, suggesting both kitchen equipment and the nuclear reactor, begins with a kitchen helper reading out loud a futuristic vision of space travel powered by thermonuclear energy she had cut out from a newspaper for her children.[504] The women in the film question men's high-tech visions and engineering mentality, but also their lack of interest in family and their undervaluing of women's work. Images from the kitchen are interspersed with images of the power plant. Men talk in numbers, while women talk about emotions, but both types of work are portrayed as equally difficult. So, although the human subject was generally conceived as universal in nature writing, concrete stories and images of families, of workers and of children reveal the implied gender order that underpinned the value of material welfare.[505]

Meanwhile, late socialist writers saw love of nature as a healthy manifestation of one's patriotism.[506] Tomeček himself expressed a patriotic sentiment for the Czech landscape; its beauty was both physical and economic, as Tomeček stressed the importance of the national ownership of forests.[507] Even in the 1990s he explained that he was not interested in politics but instead cherished his home, mother, town, country, 'people of good will, the sun, the moon, the stars'.[508] Nevertheless he remained confident about ecological techno-optimism since what

---

[504] *Dukovany – vroucí kotel* (dir. Drahomíra Vihanová, Czechoslovakia, 1987), 0:23–0:49.
[505] See recent studies in gender history that characterise late socialism by a conservative notion of gender relations: Hana Havelková and Libora Oates-Indruchová, eds., *The Politics of Gender Culture under State Socialism: An Expropriated Voice* (London: Routledge, 2014), 14.
[506] See the television debate about the relationship between the landscape and literature: APFCT, IDEC 285 310 23805/0003, *Literární klub*, ep. 'Vztah krajiny a tvorby' (1985).
[507] *Spisovatel Dr. Jaromír Tomeček provází děti přírodou*, 5:29-6:58.
[508] Lacina and Poláček, *Odkaz Jaromíra Tomečka*, 74.

environmentalists preached was, according to Tomeček, surely admirable but hardly possible without 'light and central heating'.[509]

In late socialist nuclear propaganda and in nature writing more generally, the materialist understanding of nature was supplanted by a romantic vision of the human subject who would find peace in that 'new nature'. In his book *Elements and Destinies* (1986), Tomeček criticised the pessimistic ecologists of the West, but also lamented that he could hardly see any change on the level in human behaviour. He took a highly moralising perspective, reflecting on the 'frightening' rate of negative changes in his own lifetime.[510] If it made sense to struggle with nature in 'backward' Carpathia at the start of the 20th century, Tomeček asserted, today's nature had been ultimately defeated.[511] Tomeček criticised water pollution, deforestation, and species extinction, but he also opposed experts who 'announce that there is no way to help our planet, which [they say] is rushing towards destruction', as there were many people who believed in a 'calm' and 'joyful' life.[512] And in the mid-1990s, although admiring their efforts, Tomeček doubted the perspective of contemporary environmentalists, about whom he claimed ironically that they were 'preaching' from behind 'central heating'.[513] Tomeček's materialist criticism of environmentalism from a position of a nature advocate calls for more scholarly attention to postsocialist continuities. Yet as I explore in the last chapter, it is apparent that similar productivist opinions were later expressed by neoliberal politicians, although based in a different kind of conservatism, which resurrected Christian morality.

Conclusion

Environmentalism was a challenge to ideas about socialist progress. As I have argued, the ecological strand of late socialist literature mobilised the romantic tradition to make sorrow

509 Lacina and Poláček, 74.
510 Jaromír Tomeček, *Živly a Osudy* (Brno: Blok, 1985), 9.
511 Tomeček, 10.
512 Tomeček, 10.
513 Jan Lacina and Jiří Poláček, *Odkaz Jaromíra Tomečka* (Brno: Veronica, 2008), 74.

at the use of nature a part of the celebration of technological progress promised by socialist technocracy. To be sure, ecological techno-optimism was not the only environmental discourse available in late socialism, but nevertheless it formed an integral, and largely forgotten, part of late socialist environmentalism that advocated the ordering of the world that came to be seen by more and more people as a complete whole with humans making up an integral part. Perhaps most interestingly, it was an attempt to retain the technoscientific orientation towards economic growth, using the romantic relation to the natural world with its emphasis on subjective experience as a complement to rather than a subversion of technocratic socialism.

This optimistic narrative made it possible to discuss the ecological crisis in a way that, at least on the surface, confirmed the political legitimacy of state socialism grounded in the promise of material wellbeing and family values. Nevertheless, the efforts to make the individual relationship to the natural world part of socialist collectivism ultimately made it possible to turn that subjective position against technocratic socialism itself. The following two chapters therefore follow the evolution of that criticism of socialist technocracy from the 1980s to the 1990s.

Chapter Three. The People's Turn: Ecosystems and Scepticism Towards Technical Rationality

> Who's next - bison, buzzard, or lion? White polar bears are vanishing. All the more authorities, all the more noise and uproar. In the end it will be the people's turn.[514]

The above song lyrics appeared in the Czechoslovak film *Brontosaurus* (1979) about a group of children who decided to clean up a forest garbage dump. Brontosaurus was also the name of an ecological organisation that started in 1974, initially as a one-year campaign for environmental protection. Their motto – 'The brontosaurus didn't survive because it outgrew its limits' – evoked the planetary limits faced by contemporary human society. The song implied that global species extinction was the flipside of the continued growth of technical civilisation with its noisy and polluting machines – and bureaucracy. These few verses aptly expressed the issues brought up by ecological criticism in late socialism, in which the technocratic control of nature, on the one hand, and individuals, on the other, were often portrayed as two sides of the same coin. What was thought to be the progress of humanity, the lyrics suggested, was ultimately harming not just animals but humans themselves. Environmental destruction was mirrored in the song's emotional language; the wells were full of not just 'nitric acid' but also 'anxiety'. Yet there was hope: the song concludes; 'the brontosaurus will keep on living, the water will keep on gurgling, and the bird choir will be singing.' But despite an optimistic ending, environmentalism clearly propelled a more critical way of thinking about socialist technocracy. In fact, although historians have focused more on the frictions between ecology and state socialism, it was also socialism's very forward-looking optimism which made it possible at times to express ecological criticism in the first place.

In this chapter, I will explore manifestations of such scepticism towards technocracy associated with ecological thought, as popularised in magazines, books and TV from 1980s

[514] *Brontosaurus* (dir. Věra Plívová-Šimková, Czechoslovakia, 1979), 24:37–25:34.

Czechoslovakia**.** I will also draw from broader discourses in the popular media about the impacts of technical civilisation on humans and the natural world in this period. I will focus mainly on analysing 1980s mass media (albeit with roots in the 1970s), from educational television programmes to satirical cartoons. This chapter will show that although ecology was initially advocated within a technocratic framework, it resulted in questioning of that technocracy. My goal is to offer an insight into the productive tension between technocratic and anti-technocratic feelings in late socialist ecological discourse.

Pursuing this line of enquiry will allow me to argue that ecology under late socialism facilitated a slow end to the idea of the omnipotent technocratic state and turned attention to the tension between the idea that environmental problems were caused either by individual behaviour or by the political system, while remaining multivocal in terms of its meaning and aims. Ecology referred to thoughts as diverse as disequilibrium of global ecosystems, local concerns for human health and longing for an 'authentic' life away from civilisation. It was shaped by global expert debates about ecological crisis as much as international and national artistic and journalistic responses to local problems. But while many experts endorsed a holistic approach, a more popular understanding remained that nature was the opposite of human civilisation, stressing the moral change of individuals rather than a systemic change. What these conceptions had in common was an appeal for a change in individual behaviour and a scepticism towards technical rationality. However, this scepticism was not always aimed against expertise, as much of the value change was advocated by experts themselves. Rather, it was the idea that experts alone could not change the dire ecological situation. Environmental education was one such project that promoted changes in individual behaviour to tackle a global ecological crisis, while journalists focused on more immediate risks caused by 'incompetent' technocrats. As some came to blame environmental destruction primarily on

corrupt values and behaviour, a scepticism towards engineers detached from real life came to the fore, ultimately challenging the very idea of socialist progress.

Therefore, it is my aim to investigate the ways in which the ecological cause came from within technocratic socialism only to question the very role of technocrats in society. It was that very idea of socialist progress that had first made it possible to conceptualise ecological interests in the 1970s. In terms of rhetoric, the discourse of environmental destruction in the 1980s was an ironical counterpart to socialist optimism about technocracy. As the first chapter proposed, ironical distancing from ideological proclamations was a way to question the status quo in a comedic way, that is in a way that did not challenge its very legitimacy. Environmentalists, represented in this chapter by public experts and journalists, were mobilising the idea of socialist progress – including the celebration of childhood, work, and healthy life – to promote ecology in an optimistic way, but they were also challenging the primacy of technology in bringing a better future. The criticism of failures of individual technocrats became commonplace in the 1980s and ecology thus ultimately became a fertile ground for new anti-technocratic claims that legitimised the liberal order after 1989.

Building on the existing social history of environmentalism in Czechoslovakia and globally, I want to begin by addressing how a new understanding of relations between humans and natural world led to the rise of an idea of a life unconstrained by politicians or bureaucrats and governed by individual morality. As others have suggested, the 1970s saw the rise of global-scale environmentalism, concerned with the planet as one whole and manifested in new global institutions, emerging alongside locally focused initiatives propelled by the global movement of ideas.[515] Global concerns, such as arguments about planetary limits, thus also framed local actions, such as the Brontosaurus Movement in Czechoslovakia. As Doubravka

[515] John R. McNeill, 'The Environment, Environmentalism, and International Society in the Long 1970s', in *The Shock of the Global: The 1970s in Perspective* (Cambridge, Mass: Belknap Press of Harvard University Press, 2010), 263–278.

Olšáková has shown, Czechoslovakia was active in scientific diplomacy that facilitated the internationalisation and institutionalisation of ecology in the country.[516] She has also asserted that the environment became a common topic of Czechoslovak journalism even before it was taken up by dissidents and the Western media; journalist Josef Velek, for example, co-founded the Brontosaurus Movement.[517] Christianne Brenner has proposed that the relatively loose structure of the Brontosaurus Movement, which was part of the Socialist Youth Union yet in practice largely independent of it, allowed its broad membership to experience an alternative, anti-consumerist lifestyle under the banner of socialist nature protection rather than in opposition to it.[518] The dissidents, on the other hand, as Olšáková has elaborated, became interested in the environment as a political issue only in the early 1980s, at the same time when, as Eagle Glassheim has pointed out, the Western media began portraying environmental problems as a uniquely socialist issue.[519] Olšáková has evidenced that Radio Free Europe, for one, discovered the political potential of the environment only after the Chernobyl disaster; an event that, on the other hand, did not directly change the socialist discourse on the environment, as the state media downplayed its impact.[520] Building on these studies, I will explore the tensions between mounting environmental problems and state socialism, not as a niche expert topic or alternative lifestyle, but revealing people's core political grievances.

To explain the anti-technocratic turn, I point to ecologists' growing scepticism towards the mechanistic control of nature and their will to share responsibility with ordinary people, supported by the popular media's celebration of laypeople's knowledge in contrast to

---

516 Doubravka Olšáková, 'The International Biological Program in Eastern Europe: Science Diplomacy, Comecon and the Beginnings of Ecology in Czechoslovakia', *Environment and History* 24, no. 4 (2018): 543–567.
517 Olšáková, 'Environmental Journalism?'
518 Christiane Brenner, 'Mnoho odstínů zelené: Hnutí Brontosaurus v Socialistickém svazu mládeže Československa', *Historie, otázky, problémy* 10, no. 2 (2018): 80–82.
519 The dissidents petitioned against environmental problems to the Czechoslovak government, and in 1987 even met the members of the West German Green Party. Glassheim, 'Building a Socialist Environment', 147–149; Olšáková, 'Environmental Journalism?', 219.
520 Olšáková, 222–223.

technocratic incompetence. I concentrate on late 1980s television, with recurring references to the mid-1970s, when ecology was being institutionalised on numerous fronts and the first environmental programmes began to appear on television. First, I follow the story of Danuše Kvasničková, an ecologist, whose lifelong goal was to establish environmental education in Czechoslovak schools and society at large. Scientific concerns for the environment were anchored in late socialist values, particularly childhood; children and youth were both targets and protagonists of television production about ecology. Furthermore, I analyse how the knowledge of environmental destruction began to circulate as images. I also focus on the journalist Josef Velek and his contrasting of laypeople's wisdom with technocratic incompetence. Finally, I explain how this criticism of technocrats was associated with authenticity and wisdom in the illustrations of cartoonist Vladimír Jiránek. These cases will give a rich picture of the tensions within late socialism: on the one hand, the focus on a better future for new generations and a healthy society, but on the other a sense of technocrats' incompetence as well as negative sentiments towards what had earlier been seen as symbols of industrial progress.

Ecosystems, Environmental Education, and Individual Responsibility

In July 1989 a visitor to the exhibition *Ekoforum* in Ostrava, a coal-mining Moravian-Silesian city near the Polish border, could read:

> Millions of years before humans came into existence, a world like ours boasted of its beauty. The same laws governed its equilibrium, determining where on earth there would be glaciers and mountains, where steppes and forests. Human beings appeared like a worm in a fruit, like a moth in a ball of wool, and nibbled away at their habitat, forming theories to justify their short-sighted actions.[521]

These strong words opened the section of *Ekoforum* entitled 'Pillory', where a future stricken by environmental disasters was presented as a consequence of reckless technological progress:

[521] Martin Zajíček, 'Ekologie na talíři', *Květy* (27 July 1989), 5.

it showed, for instance, a couple watching TV among plastic waste in a room with black walls and unbearable sounds of cars and planes. The organisers were unhappy that a previous version of the exhibition, titled *For A Socialist Environment*, had understood the 'environment' too broadly as a living space, even offering furniture and other consumer goods for sale, and decided to give the exhibition a more pessimistic tone. They refused to see environmental protection as 'collective, that is, often nobody's responsibility', as an article in the magazine *Flowers* (*Květy*) put it.[522] Instead the new exhibition emphasised individual responsibility, access to accurate information about the state of the environment and understanding of the natural world as a biosphere that humans were part of. After going through what organisers called an 'ecological tunnel', consisting of water and flora, the visitors were presented with the government conception of environmental protection, followed by a section on humanity and the biosphere (Fig. 3.1).[523] The space imitated natural landscapes and included a symbolic 'tree of life', surrounded by blackboards with phylogenetic trees (Fig. 3.2). As a product of the optimistic criticism outlined in the first chapter, the exhibition presented some achievements of the Czechoslovak government while naming specific enterprises as culprits.

[522] Zajíček, 5.
[523] Pa, 'Ekofórum '89', *Propagace* 11 (1989), 4–5.

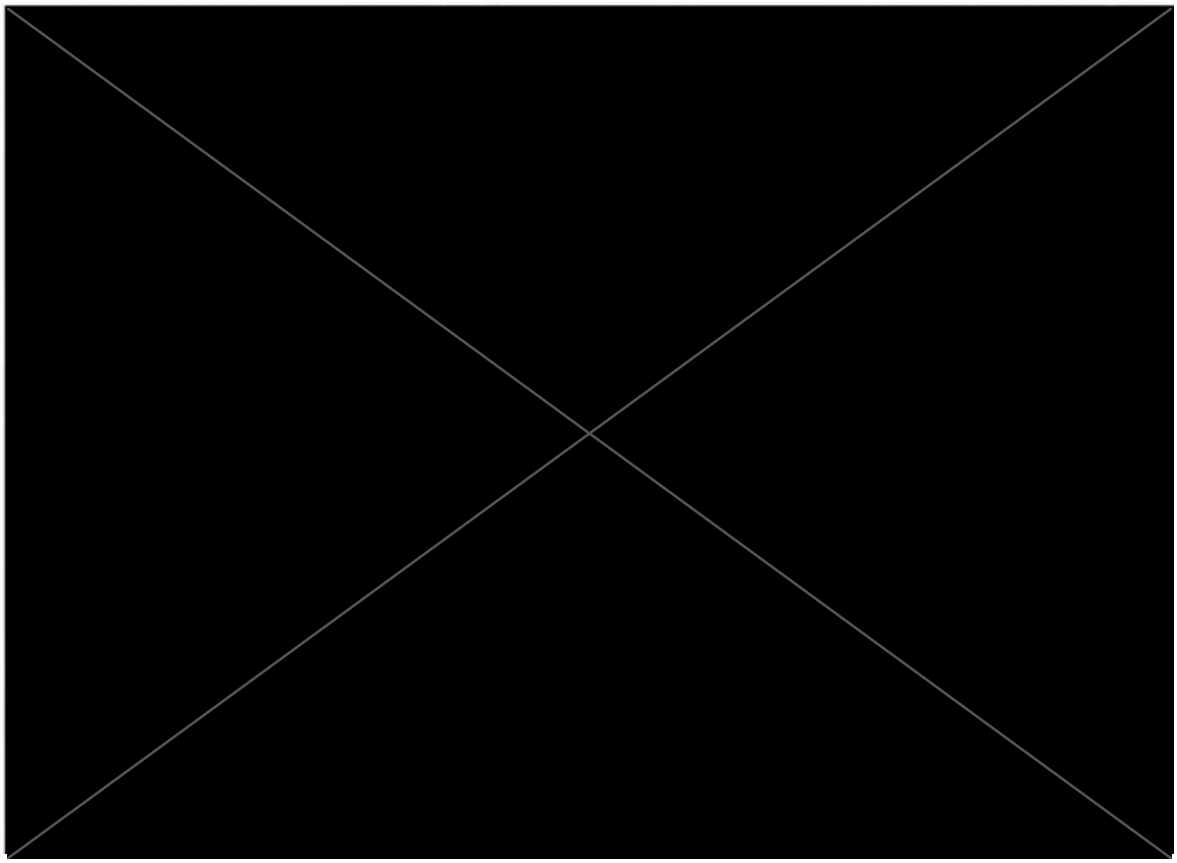


Figure 3.1. A pavilion of the 1989 *Ekoforum* exhibition, displaying the Earth, a human sculpture and various life forms.

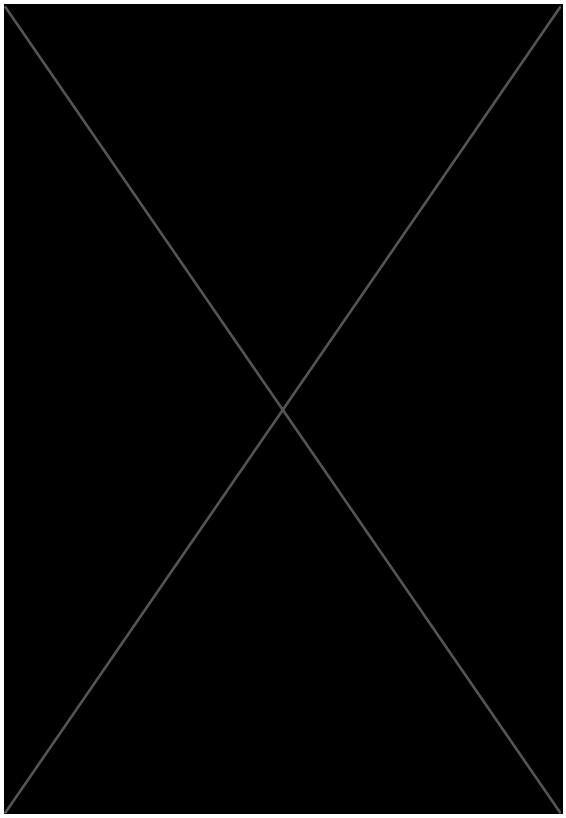


Figure 3.2. A ‘tree of life’ at the 1989 *Ekoforum* exhibition.

The exhibition also made it clear that ecological discourse had changed in the last twenty years, focusing increasingly on how individuals thought and acted. *Ekoforum's* leading author, Miroslav Martiš, blamed the bad state of the environment on lack of ecological thinking (*ekologické myšlení*).[524] Such events were supposed to teach people that nature had to be 'co-operated with' rather than just 'protected', suggesting a redefinition of the relationship between humans and nature. The interview with Martiš was conducted by Josef Velek, by then a well-known environmental journalist; they had known each other at least since their collaboration in the Brontosaurus Movement in early 1970s, when Martiš worked at the Department of Landscape Ecology of the Czech Academy of Sciences and Velek at the magazine *Young World* (*Mladý svět*).[525] They concurred that environmental issues had become less shocking since then, as people had become accustomed to hearing terrible news (a point that I will have to come back to later in this chapter). Therefore, it was not enough to spread information; people had to be taught, using both reason and emotion, about how to behave more ecologically.

The attempts to change how individuals thought and acted were informed by how ecologists, influenced by the cybernetic roots of their discipline and the development of new global environmental ethic, understood the world: as one system in which everybody was dependent on and responsible for the natural world. With intellectual roots in the 1960s, the development of environmental education in the 1970s resulted in, among others, the production of a television programme in the 1980s and the publication of new textbooks in the 1990s. The

---

[524] APFCT, IDEC 489 214 13214/0006, *Příroda pro zítřek*, ep. 6, 02:38–03:21. An author and a translator of several books on ecology, Miroslav Martiš was an ecologist who as an expert worked on ecological policy and popularisation, particularly under the *Ekoprogram* government initiative concerning landscape ecology and economy. Ďožkin and Fetisov, *Rovnováha v Přírodě*; Miroslav Martiš and Jan Šolc, *Země, Krajina, Člověk* (Praha: Horizont, 1977); Miroslav Martiš et al., *Ekoprogram : (Výsledky a Zkušenosti)* (Praha: SNTL - Nakladatelství technické literatury, 1987); Miroslav Martiš, *Člověk versus Krajina* (Praha: Horizont, 1988).

[525] Later, Martiš worked at the Department of Applied Ecology and Eco-technology (Czech University of Agriculture), along with Danuše Kvasničková.

ecologist Danuše Kvasničková's lifelong research in environmental education illustrates this shift from technical rationality to shared responsibility for the world. Kvasničková studied to be a biology and chemistry teacher and later worked as an educational researcher. [526] Her passion for teaching her subject in a less abstract, less encyclopaedic way in the late 1960s met in the following decade with a demand from the state and international bureaucrats to develop a way to teach ecology from preschool to adult education. In the early 1970s, originating as a workshop of the Ministry of Education in collaboration with the Krkonoše Mountains National Park, Kvasničková started a long-term research project on environmental education (*výchova k péči o životní prostředí*).[527] Around the same time, environmental education was becoming a global agenda, and textbooks from around the world, including the US ones, appeared on Czechoslovak Television as examples of good practice (Fig. 3.3). In 1977 Kvasničková's colleague from the Ministry of Education Jaroslav Kočí was sent as a delegate to Tbilisi, where the first world conference on environmental education, organised by UNESCO, took place, following the start of global environmental cooperation in the previous years.[528] The Tbilisi declaration that came out of the conference and a Czechoslovak government resolution of the same year were an opportunity for local ecologists to focus their forces on education.[529] Indeed,

[526] Kvasničková at first worked at the Pedagogical Research Institute, later at the Institute of Landscape Ecology and Eco-technology of the Czech University of Agriculture. She drafted the first ecological education curriculum in 1968 but due to the post-1968 political consolidation it took another few years before she started to work on the project: Dagmar Smolíková, 'Věřím v teorii kapající vody', *Sedmá generace*, 2 December 2006, accessed 30 Nov 2022, https://sedmagenerace.cz/verim-v-teorii-kapajici-vody/.

[527] Kvasničková explained the genesis of her project at a workshop that followed the Tbilisi Conference. Eva Nováková, ed., *Výchova k Péči o Životní Prostředí : Sborník Referátů z Konference Pořádané Správou Krkonošského Národního Parku a Její Vědeckou Radou, Špindlerův Mlýn-Svatý Petr, Září 1978* (Vrchlabí: Správa Krkonošského národního parku, 1978), 42.

[528] The 1978 Krkonoše workshop directly followed from the Tbilisi conference that was part of the UNESCO-UNEP Environmental Education programme, created after the 1972 UN Stockholm conference on the environment. In 1975 Belgrade charter was drafted at a meeting in Yugoslavia that heralded the 1977 Tbilisi declaration. Nováková, 14–19.

[529] They were the offical reasons for organising an enviromnetal education workshop in 1978. Nováková, *Výchova k Péči o Životní Prostředí*.

Kvasničková's project continued and was even listed among UNESCO pilot programmes.[530] In the 1980s Czechoslovakia also hosted a number of environmental education seminars.[531] In the 1990s, Kvasničková continued to be active, authoring an alternative set of biology textbooks with a unique ecological perspective for primary and secondary schools and founding the Club of Environmental Education to associate interested schools.[532] Kvasničková's case thus helps us understand how the transfer of environmental ideas met with a local demand for a more holistic approach to the relations between humans and the natural world and, consequently, between experts and laypeople.

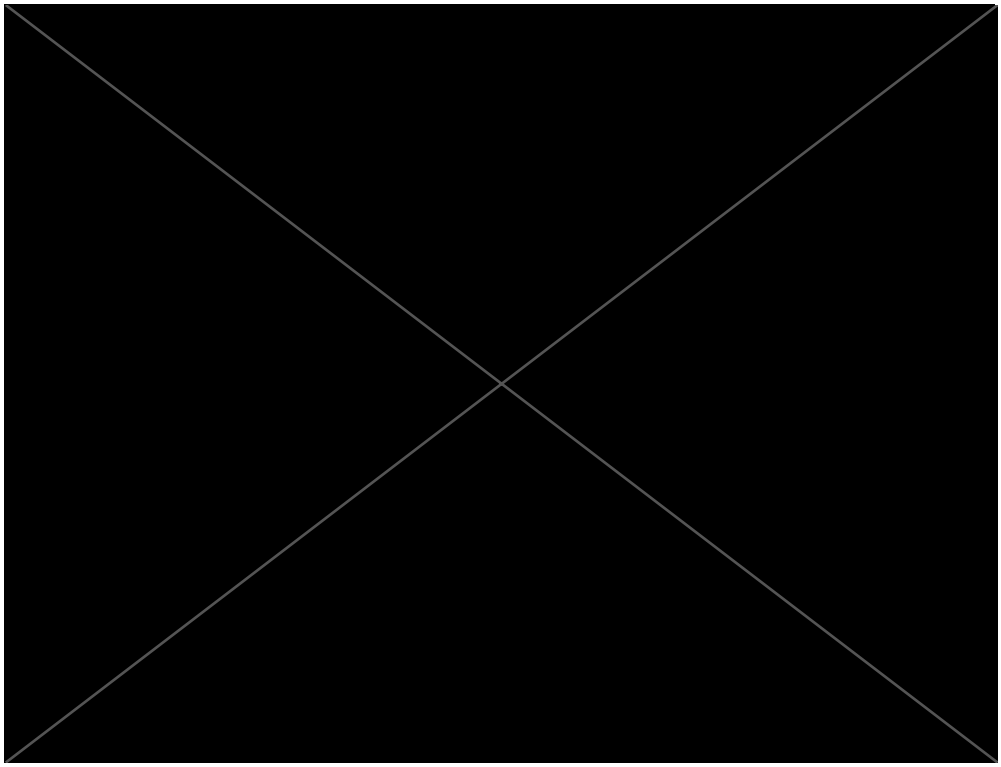


Figure 3.3. US textbooks, among others from around the world, were shown on the Czechoslovak Television as an example of environmental education.

530 'Activities of the UNESCO-UNEP International Environmental Education Programme: 1975-1983' (Paris: UNESCO, 1984).
531 E. g. International Training Course in Environmental Education organised on 1-28 September 1982, whose programme was prepared by Kvasničková: *International Training Course on Environmental Education : Organized by the Institute of Applied Ecology and Ecotechnology, University of Agriculture, Prague : In Cooperation with Unesco-UNEP International Environmental Education Programme : Czechoslovak Socialist Republic, 1-28 September 1982 : Final Report* (Unesco], 1982).
532 See, for example, a methods book that was a result of piloting alternative biology at schools: Danuše Kvasničková and Jiří Froněk, *V Přírodopise Nověji : Hrst Zkušeností a Rad z Ověřování Alternativního Učiva Přírodopisu* (Praha: Fortuna, 1992).

Following the ecologists' pushback against crude scientism, Kvasničková argued that the way nature was normally thought of was too utilitarian and technocratic, and this was also the reason why biology was seen as a boring school subject.[533] As she put it, the existing scientific approach to nature created a conviction about the 'omnipotence of technology' and did not 'allow understanding of the barriers constituted by the laws of biological reproduction'.[534] This conviction, according to Kvasničková, led to a false belief that nature had to be 'fought' or 'overcome'. She claimed that it was ever more apparent that a 'scientistic and technocratic approach' alone was not enough to overcome the contradictions between humanity and the natural world.[535] Kvasničková believed that more important than technical fixes, people had to be taught to think differently to be able to understand and themselves enact the changes in society needed to solve environmental problems.

Crucially, this environmental education project was founded on the assumption that scientists alone could not improve the dire ecological situation. From Soviet philosophical debates on nature came the view that scientists were supposed to disseminate ecological knowledge and promote this new ethic to the people.[536] Furthermore, a new 'global ethic' of environmentalism developed at international fora helped Kvasničková with her existing efforts to conceptualise environmental education as a matter for everyone and a task for educators rather than just technocrats and lawmakers.[537] According to the first United Nations

---

533 See how Kvasničková explained her initial interest in making biology textbooks more interesting: APFCT, IDEC 202 327 27424/0025, *Volejte učiteli* (2002), ep. 25, 3:42–4:12.
534 Kvasničková, *Systém Ekologické Výchovy*, 36.
535 Kvasničková, 4.
536 Kvasničková adopted that view mainly from Soviet philosophers of nature, such as Ivan Frolov. Kvasničková, 24–25; Ivan Timofejevič Frolov, *Věda a Budoucnost Člověka*, trans. Eteri Marešová (Praha: Mladá fronta, 1979). See also Ivan Adabashev (discussed in Chapter 2 and one of Kvasničková's references), who called for a greater popularisation of ecological knowledge, based on 1972 and 1973 Soviet laws on the expansion of ecological education at schools and the popularisation of nature protection: Adabašev, *Život Zítra - Tragédie Nebo Harmonie*, 158–159.
537 Charles Dorn, '"A New Global Ethic": A History of the United Nations International Environmental Education Program, 1975-1995', *Foro de Educación* 18, no. 2 (2020): 86. Kvasničková asserted that it was thus not enough to enact new environmental protection laws: Nováková, *Výchova k Péči o Životní Prostředí*, 163.

Environment Programme's director William Stapp, humans were, together with their culture and biophysical environment, part of one 'system'; the goal of environmental education was to develop a 'high-quality system' in which cultural interactions with nature would lead to human welfare.[538] In addition to fostering 'awareness' and 'knowledge', the 1977 Tbilisi declaration set as its goal the creation of 'new patterns of behavior of individuals, groups, and society as a whole towards the environment', stressing participation, interdisciplinarity and the 'totality' or wholeness of 'human environment', all of which later appeared in Kvasničková's writings.[539] Knowledge of ecology was thus just one part of the envisioned environmental education; people should be motivated by emotional concern and asked to change their behaviour.[540]

Furthermore, conceptualising care for nature as 'environmental protection' was supposed to signal that this no longer involved 'protection from' humans but protection of the 'total environment' of which humans were an inseparable part of.[541] As Kvasničková explained, 'environment' (*životní prostředí*) was everything that humans were in interaction with, seen as one whole; the distinctions made between its 'natural, artificial and social' components were only conceptual.[542] This notion of the environment was as anthropocentric as an earlier conception that saw humans as masters of nature, but the difference was that humans and the natural world were now seen as part of one whole.

---

538 William B. Stapp et al., 'The Concept of Environmental Education', *Journal of Environmental Education* 1, no. 1 (1969): 30–31.
539 'Intergovernmental Conference on Environmental Education, Tbilisi, USSR, 14-26 October 1977: Final Report' (Paris: UNESCO, 1977). Also see a 1973 TV programme on the need for educational education: APFCT, IDEC 273 531 21103, *Mládí a životní prostředí* (1973).
540 Stapp et al., 'The Concept of Environmental Education'. In the Czechoslovak context, it also mirrored the difference between *vzdělávání* and *výchova* that both mean 'education' in Czech. Whereas the former is associated with knowledge-based subjects such as biology, the latter can also be translated as 'upbringing' and is associated with subjects such as physical education or arts; environmental education was supposed to combine both. Kvasničková, *Systém Ekologické Výchovy*, 39. Of course, Kvasničková still took knowledge of ecology as fundamental for any behavioural change; thus, when surveying attitudes of schoolchildren, the questionnaire contained mostly factual question: Kvasničková, 77–97.
541 Kvasničková, *Systém Ekologické Výchovy*, 52.
542 Nováková, *Výchova k Péči o Životní Prostředí*, 44.

Kvasničková's holistic approach to nature was also based on ecology's cybernetic roots, combined with a Marxist perspective on the problem. By the 1960s American researchers had become attracted by cybernetics and the power of the concept of information feedback, which could explain anything from how a thermostat worked to how all living things were tied together.[543] Similarly, Soviet scientists found in cybernetics a new, interdisciplinary language that appeared to them to be more objective than the Stalinist science of the 1950s.[544] Furthermore, environmental thought was increasingly shaped by the advance of computer science, mainly mathematical modelling that required the emergence of global infrastructures and scientific cooperation.[545] These developments also influenced how ecologists thought about the world, which they now conceived of as an interconnected system on a 'planetary' scale.[546] And as I explored in the first chapter, besides their enthusiasm for automation enabled by computing machines, Czechoslovak Marxist philosophers who developed the theory of scientific-technological revolution were also allured by the conceptual power of cybernetics as a new ontology, which conceived of the world not in mechanistic terms but as an interconnected whole. Overall, then, Kvasničková's Marxist-cybernetic language was a combination of late socialist authoritative discourse celebrating technocracy and the conceptual power of ecology to criticise a purely technocratic approach.

In particular, the idea that ecological education should elicit a response in one's behaviour was rooted in the notion of information feedback.[547] With its focus on flow of

---

543 Kline, *The Cybernetics Moment, or, Why We Call Our Age the Information Age*.
544 Gerovitch, *From Newspeak to Cyberspeak*.
545 Paul N. Edwards, *A Vast Machine: Computer Models, Climate Data, and the Politics of Global Warming* (Cambridge, Mass. ; London: MIT Press, 2010).
546 Eglė Rindzevičiūtė, 'Toward a Joint Future beyond the Iron Curtain: East–West Politics of Global Modelling', in *The Struggle for the Long-Term in Transnational Science and Politics* (New York: Routledge, 2015), 115–120.
547 Cited in Hana Librová, *Sociální potřeba a hodnota krajiny* (Brno: Univerzita J. E. Purkyně v Brně, 1987), 76. Student and teacher were both considered subject and object of teaching: Nováková, *Výchova k Péči o Životní Prostředí*, 48. Kvasničková's ideas were based on contemporary learning theory that was also influenced by cybernetics: Josef Linhart, *Základy Psychologie Učení* (Prague: Státní pedagogické nakladatelství, 1986), 90.

information between organisms and other 'systems' (such as computers), cybernetics made it possible to conceptualise education in a new way that saw the person to be educated not as a passive object of learning but as an active participant. Kvasničková adopted that view from Jean Piaget, a Swiss psychologist directly influenced by Ludwig von Bertalanffy's general systems theory (discussed in the previous chapter), as well as Soviet psychologists such as Leo Vygotsky, an enthusiastic reader of Spinoza's holistic philosophy.[548] Furthermore, from the perspective of ecology, the learning process itself was part of the exchange between individuals and the environment.[549] In this vein, Kvasničková saw humans as 'open systems' that took part in metabolic exchange with their environment but also able to change their behaviour based on inputs of information. Providing correct information could change how society interacted with nature at a metabolic level. According to Kvasničková, the problem with a utilitarian, technocratic understanding of nature was that it always involved seeking a quick result, taking the shortest route from the first stimulus to completing a given task, regardless of side effects or future consequences.[550] The solution she suggested was to augment the intellectual process by putting in additional steps that ensured better-informed decisions (Fig. 3.4).

[548] Danuše Kvasničková, 'Přírodověda : Její Vzdělávací a Výchovný Systém' (1981), NK ČR Praha. On Piaget and systems theory, see: Bertalanffy, *General System Theory*, 192–194; Erich Hahn, 'Aktuelle Entwicklungstendenzen der soziologischen Theorie,' Deutsche Z Philos. 15 (1967), 178–191, cited in Bertalanffy, 6.

[549] Kvasničková sourced her knowledge of Norbert Wiener from Czechoslovak ecological literature: Alois Zlatník, Miroslav Stolina, and Jaroslav Pelikán, *Základy Ekologie* (Praha: Státní zemědělské nakladatelství, 1973), 23–32. See also Emil Hadač's explanation of how to fight entropy with information: Emil Hadač, *Ohrožená příroda: biosféra - člověk - technosféra* (Praha: Horizont, 1983), 134–139.

[550] Kvasničková, *Systém Ekologické Výchovy*, 36–37.

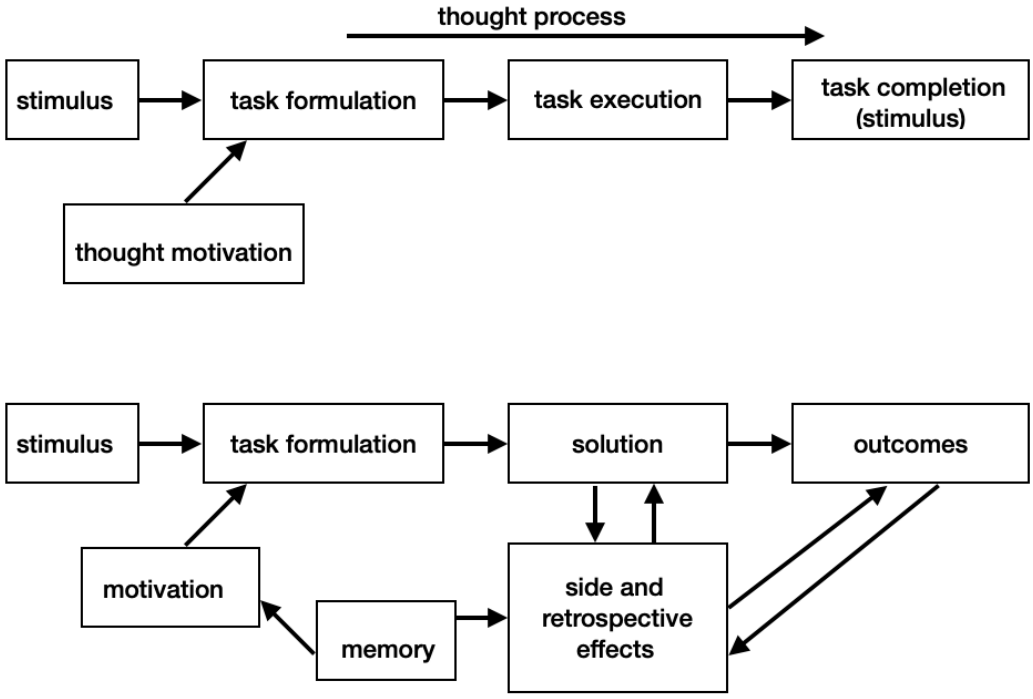


Figure 3.4. Above, Danuše Kvasničková's schema of the existing thought process that was linear and oriented towards immediate outcomes; below, a novel way of thinking that would take lessons from the side- and retrospective effects of human actions.

To fortify her argument, Kvasničková blended this cybernetic view with a Marxist understanding of the history of relations between humans and nature, proposing that ecological thinking was another qualitative step in the historical development of humankind.[551] She explained that prehistoric hunters had a predominantly biological relation to nature, whereas later in history humans became able to exploit natural resources ever more intensely through the process of socioeconomic adaptation and the industrial and scientific-technological revolutions.[552] The conflict between humans and nature was thus understood as a contradiction between human biological and socioeconomic reproduction.[553] Now, Kvasničková posited, it was time for an 'ecological revolution' or 'ecological phase of scientific-technological

[551] Kvasničková, 11–12.
[552] Kvasničková, 15.
[553] Kvasničková, 18.

development', which necessitated pursuing a new value orientation along with an even more 'rational' approach to environmental problems.[554] As I have discussed in the first chapter, the discourse of scientific-technological development was central to the legitimation of the late socialist regime, and here Kvasničková repurposed it to centre on ecology. As she maintained, 'positive feedback' prevailed in the history of humankind, which meant that people gained ever more profit from exploitation of nature. As it was undesirable to undo all that progress to return to the prehistoric primacy of nature's 'negative feedback', it was necessary to consciously put that negative feedback in people's minds. More than just 'ecologisation' of science and technology, Kvasničková's goal was thus to take into account, and literally 'into our reason', the existence of feedback mechanisms.[555] In other words, if humans came to live in a society so modern that they could not feel the immediate effects of their harmful behaviour towards the forces of nature, it was essential to make that society even more rational by prioritising long-term and invisible consequences over short-term profit. This could be achieved only through education.

As knowledge of ecology spread, the concept of 'feedback' became more commonly used in the 1980s to talk about the environment. For instance, one 1985 programme, scripted by Miroslav Martiš, talks about the 'feedback from our disregard for greenery', meaning that if children did not live in fine green spaces, they would not develop a good relationship with the environment.[556] Cybernetic vocabulary was acquired even by non-experts, such as Miroslav Brožík, a teacher from Litvínov, Northern Bohemia, who asked a question from the audience in a 1989 television programme that discussed the political aspects of ecology. Brožík underscored the role of education and personal example; citizens had to realise they all had

[554] Kvasničková, 28.
[555] APFCT, IDEC 488 224 17284/0009, *Ekologie všemi pády*, ep. 9, 1:07–2:20.
[556] APFCT, IDEC 285 531 18932, *Obhajoba zeleně* (1985), ep. 'Strom krásy', 19:18–20:42.

responsibility.[557] He also stressed the importance of a 'two-way information feedback' between citizens and local government mediated by ecologists, suggesting there should be an open day during which citizens could come to an ecologist with a problem who would then probe into, for instance, the actions of a local factory director.[558] This ecological-cybernetic language could thus also serve as a liberal political criticism of state socialism, which I will further elaborate in the next chapter in the case of ecologist Josef Vavroušek.

Particularly in the late 1980s, ecology's holistic approach was used to criticise the existing system. As ecology concerned 'relations and contexts' that necessitated the engagement of all parts of the system, scepticism arose towards the potential of a special bureaucratic body to solve Czechoslovakia's environmental problems.[559] Furthermore, the solution to environmental problems became more closely tied to a demand for information as it was argued that people could otherwise not make good decisions.[560] When Kvasničková appeared on a television chat show in 1987, the host introduced the night's topic by reading a headline from *The Economic News* (*Hospodářské noviny*): 'The Future Has Begun'.[561] The article did not announce a major technological step forward as the same title would perhaps have suggested in the 1960s. Rather it stated some terrifying facts about the state of the environment, such as that nearly two thirds of forests were endangered by pollution, a well-known reality of the time. Kvasničková reiterated in the programme that people had to learn to think differently, adding that practice was lagging behind theory.[562] She meant that although

---

[557] Brožík believed that if only people knew how harmful inversion was they would behave differently and take initiative. APFCT, IDEC 289 430 61362, *Máte slovo* (1989), ep. 'Ředitelé přes přírodu', 35:26–37:10.
[558] APFCT, IDEC 289 430 61362, *Máte slovo* (1989), ep. 'Ředitelé přes přírodu', 14:49–16:25.
[559] See, for instance, the debate between experts and bureaucrats at the Ekofilm festival in 1988: APFCT, IDEC 488 224 17014, *Ekofilm 88* (1988).
[560] In 1998, Kvasničková collaborated on the writing of the Right to Environmental Information Act. Danuše Kvasničková, *Environmentální Informace a Osvěta : Manuál k Zákonu č. 123/1998 Sb., o Právu Na Informace o Životním Prostředí* (Ministerstvo životního prostředí, 1998).
[561] APFCT, IDEC 287 430 41386, *Vysílá studio Jezerka* (1987), ep. 267, 0:01–1:00.
[562] APFCT, IDEC 287 430 41386, *Vysílá studio Jezerka*, ep. 267, Czechoslovak Television (1987), 17:10–17:50.

the argument for environmental education had been theoretically established, not enough had been done.

Merging Marxism, cybernetics and ecology was a way for Kvasničková to assert herself as an expert and to anchor ecological education as a discipline. That analytical language was a powerful tool to describe what was wrong with the existing way of thought that permeated all levels of decision-making and to explain why technocrats alone were not able to alleviate environmental problems. Kvasničková wanted people to understand ecology, but she also wanted them to change their behaviour. Putting ecology into practice therefore also meant engaging with existing beliefs to transform them.

Optimism and Irony

Looking at how scientific concerns were presented in (mostly children's) television programmes, it becomes obvious that environmentalism found foothold in the existing ideology while questioning some of its premises. Moreover, mobilising late socialist optimism to put forward the ecological cause went hand in hand with using irony and hyperbole to question the belief in science and technology. In 1988 Czechoslovak Television aired a ten-episode television programme *Ecology in a Nutshell* (*Ekologie všemi pády*), scripted by Kvasničková and aired in early evening, whose aim was to engender ecological awareness mainly among secondary school students but also adults. Indeed, criticising the ignorance of basic ecological concepts among adults, Kvasničková wrote about the crucial role of the media in providing comprehensive factual knowledge rather than just isolated coverage of environmental issues.[563] In the programme, ecology was first of all understood as a science about interactions between organisms and their environment; there would regularly appear various schemas, graphs and statistics on a board or a piece of paper that tried to explain the

[563] Nováková, *Výchova k Péči o Životní Prostředí*, 163.

science of ecology (Fig. 3.5).[564] The programme would also bring in other experts in the studio. Theoretical assertions were usually put in a specific context: for example, an explanation of the negative effects of chemicals on the ecosystem was followed by statistics on fertiliser usage in Czechoslovakia, pointing at its rapid growth.[565] Local concerns were interspersed with global news, such as desertification, decrease in biodiversity, erosion of ozone layer and the emissions of carbon dioxide.[566] The first episode declared that such knowledge would raise 'ecological literacy' and change people's behaviour.[567] Each episode of *Ecology in a Nutshell* ended with a set of guiding principles in the form of ten 'Ecological Commandments':

1. Think in context.
2. Respect and creatively use interactions in nature.
3. Recognise and understand the laws of the biosphere.
4. Love and respect life.
5. Know oneself.
6. Value health and life.
7. Value wisdom and work.
8. Stop and avoid further environmental threats.
9. Prevent the violation of the laws of the biosphere.
10. Feel responsible for our relationships with the environment.

564 APFCT, IDEC 488 224 13784/0001, *Ekologie všemi pády*, ep. 1, 11:28–13:40.
565 APFCT, IDEC 488 224 13794/0002, *Ekologie všemi pády*, ep. 2, 23:04–23:40.
566 APFCT, IDEC 488 224 13804/0003, *Ekologie všemi pády*, ep. 3, 29:35–30:27.
567 APFCT, IDEC 488 224 13784/0001, *Ekologie všemi pády*, ep. 1, 2:20–3:50.

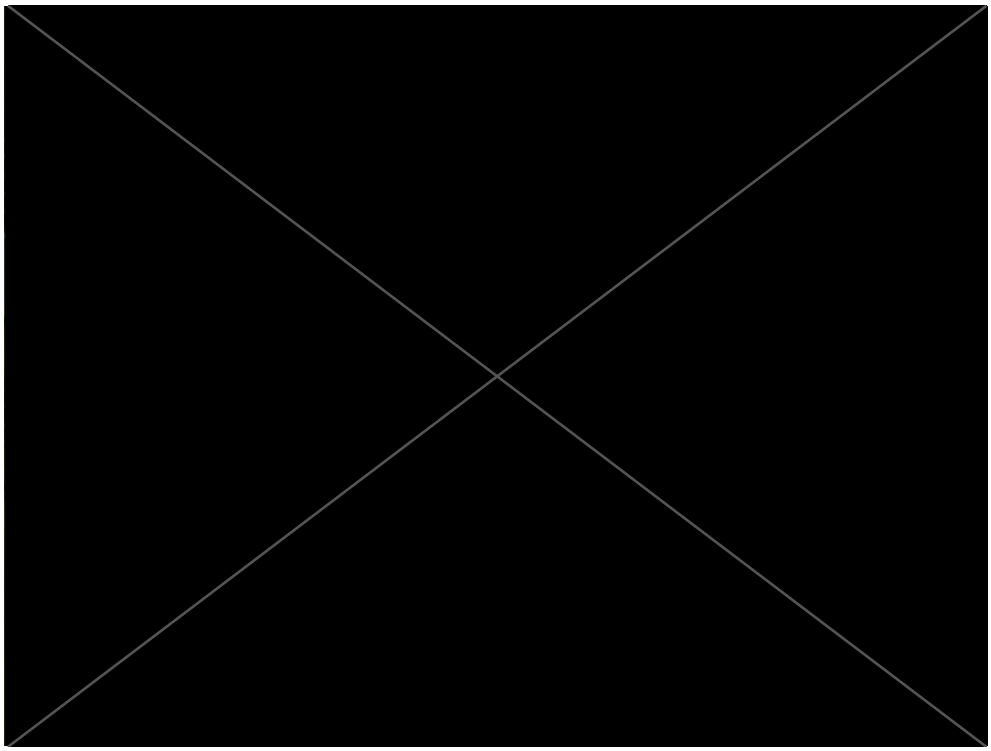


Figure 3.5. Danuše Kvasničková and Petr Amler, the programme's host, in the first episode of *Ecology in a Nutshell* (1988). Apart from the sign saying 'ECOLOGY' on the floor, there are also stylised diagrams in the backdrop that evoke ecological interconnectedness.

The Ecological Commandments combined some of the core values of late socialism with the new environmental ethic. Valuing life, health and work were particularly formulaic late socialist expressions that had roots in the Lessons from the Crisis Period from 1971, a party pamphlet that authoritatively interpreted the Prague Spring and the 1968 Warsaw Pact invasion, delineating the future development of society.[568] If the postwar Stalinist conception of nature as something to be conquered was part of the discourse of war, the late socialist vision of nature as something to be governed and cured linked the quality of the environment with the 'healthy development of society'.[569] In this way, metaphors of health and illness were linked with new environmental concerns.[570]

---

568 Komunistická strana Československa Ústřední výbor, *Poučeni z krizového vývoje va straně a společnosti po XIII. sjezdu KSČ* (Praha: Odděleni propagandy a agitace ÚV KSČ, 1971).
569 APFCT, IDEC 488 224 17284/0009, *Ekologie všemi pády*, ep. 9, 3:10–3:42. For a difference between discourses of war and health in Czechoslovak film and television, see: Kamil Činátl, 'Televizní Realita Normalizace a Její Ideologický Kód. Obrazy Zla v Normalizačních Seriálech a ve Filmu', in *Film a Dějiny 2 : Adolf Hitler a Ti Druzí - Filmové Obrazy Zla*, ed. Petr Kopal (Praha: Ústav pro studium totalitních režimů, 2009), 249.
570 APFCT, IDEC 488 224 13784/0001, *Ekologie všemi pády*, ep. 1, 5:16–5:53.

The analysis of a variety of media shows that on the one hand the late socialist value of a comfortable and materially secure life was upheld, but on the other, a purely technocratic approach to nature was questioned. Ecologists thus fulfilled the role that experts had played under technocratic socialism, using television as a tool to educate the public. At the same time, however, they helped to redefine the position of humans in a world understood as an interdependent system.[571] Danuše Kvasničková and Jaroslav Kočí were aware their project accorded well with the idea of a socialist state educating its citizens according to an objective ideal, using schools and the mass media for that purpose.[572] For instance, in the television programme *Kazeta* (1987-1989), a recurring afternoon television programme for schoolchildren about science and technology, value was given to preserving the current way of life (the need to 'have somewhere to go on holiday') rather than, it was asserted, utopian technocratic solutions such as living in 'artificial landscapes' under water, or on another planet, solutions which should remain a possibility but not become a necessity.[573] This was similar to how the relation between the socialist present and utopia in late socialist fiction was represented, with the former as imperfect yet superior to technologically advanced future, as I explored in the first chapter. In this case, however, the present day was celebrated in favour of fantasy, expert-led solutions to ecological crisis. Nature was no longer presented simply as a retreat or a resource governed by technocrats but as 'everyone's responsibility'.[574] *Kazeta* visualised this interdependence of the 'socioeconomic' and the 'natural subsystem', in a graphic depicting a figure whose hands are spread between an excavator and a tree (Fig. 3.6). The programme has two main characters: the host in the studio and his doppelgänger, a mad

[571] Other programmes had similar didactic goals, e. g. a four-episode long *Nature to Humans – Humans to Nature* showed the practice of ecological education in the first to fourth year of elementary school, e.g. pupils from Prachatice going to study in a natural reservation: APFCT, IDEC 488 224 13784/0001, *Příroda člověku – člověk přírodě* (1988).
[572] Nováková, *Výchova k Péči o Životní Prostředí*, 25–26, 45.
[573] APFCT, IDEC 487 222 11722/0004, *Kazeta* (1987), ep. 'Životní prostředí', 38:01–39:11.
[574] APFCT, IDEC 487 222 11722/0004, *Kazeta*, ep. 'Životní prostředí', 0:01–2:20.

scientist, who would for example catch rubbish instead of fish, give aspirin to a tree to regenerate it, or suggest wrapping nature in a protective foil against pollutants, using jokes akin to those typically seen in satirical comedies of that era.[575]

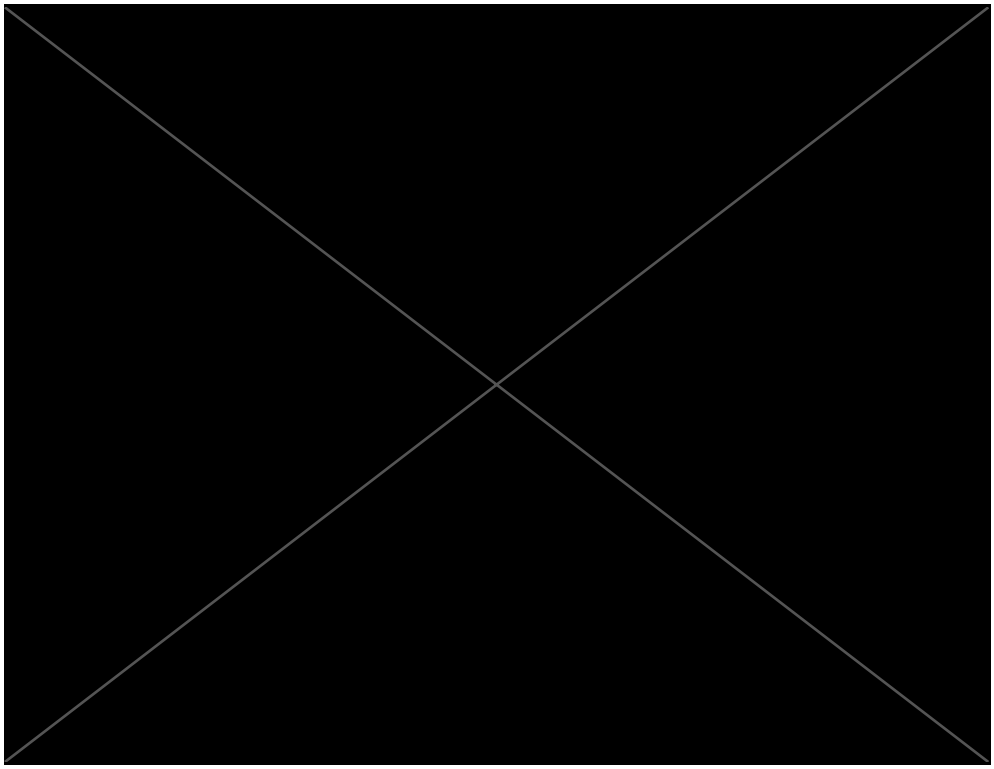


Figure 3.6. A figure of a man stretched between 'natural' and 'socio-economic subsystems'. Such educative illustrations were typical in the 1980s environmental TV programmes.

This middle ground between optimism and irony was mirrored in the cultural references used in *Ecology in a Nutshell*. Jaromír Tomeček, discussed in the previous chapter, appeared twice in the programme and the fourth principle of 'respecting life' was introduced after reading out from his works.[576] Tomeček represented the romantic turn that qualified technocratic socialism's fixation on material wellbeing but did not wish to resign on technological progress. Indeed, commenting on Tomeček, Kvasničková gave a sigh that people could appreciate the beauty of a new car but not 'the delicacy of a daisy or the majesty of a linden', stressing the aesthetic value of nature.[577] However, more sceptical voices also found

[575] APFCT, IDEC 489 222 12022/0007, *Kazeta* (1989), ep. 'Ekologie', 02:48–02:55, 36:04–36:47; APFCT, IDEC 487 222 11722/0004, *Kazeta*, ep. 'Životní prostředí', 27:00–27:40.
[576] APFCT, IDEC 488 224 13814/0004, *Ekologie všemi pády,* ep. 4, 27:56–29:01.
[577] APFCT, IDEC 488 224 13814/0004, *Ekologie všemi pády,* ep. 4, 27:56–29:01.

their way to television broadcasting. For example, a view quite different from Tomeček's was presented in a 1964 short story of writer Bohumil Hrabal, whose main hero revels in polluted air and cannot live without it; Kvasničková remarked that it was 'perhaps Hrabal's favourite [form of] irony'.[578] Indeed, Hrabal's literature was often characteristic of grotesque situations that ultimately revealed the absurdity of reality, without inviting moral condemnation.[579] Ecology again proved to carry various meanings, from a moral tale about people's corrupted relationship with nature to an absurd story about the clashing interests of modern society.

A good example of how ecology oscillated between optimism and irony was the widespread discussion of the milestone year 2000 among experts, politicians, fiction writers, and journalists in Czechoslovakia and globally. Ideas about what the year would bring reflected the changing expectations of society. In Czechoslovakia several popular science books were published in the 1980s as part of an edition 'Year 2000' that discussed what problems the society might face in the near future; the topics included 'the end of the age of waste' or 'what we will eat today and tomorrow'.[580] And as shown in the last episode of the popular science television programme *Nature Known and Unknown* (1986), there was a sense of urgency in unresolved global ecological problems. Simplified graphs were shown visualising future predictions, such as increasing energy consumption (Fig. 3.7), and global warming (Fig. 3.8). Even overpopulation was covered, although that issue was, as I discussed in the previous chapter, normally presented from the Marxist view as a false problem easily solvable by

---

578 APFCT, IDEC 488 224 13794/0002, *Ekologie všemi pády,* ep. 2, 17:39–19:12. Bohumil Hrabal, *Pábitelé: povídky* (Praha: Mladá fronta, 1964), 143–152.

579 On Hrabal, see: Roman Kanda, *Trhliny světa: kniha studií o Bohumilu Hrabalovi* (Praha: Ústav pro českou literaturu AV ČR, 2016).

580 I discussed the first book in the series in Chapter 1. Vavrinčík, *Rok 2000*; Josef Skácel, Oldřich Švarný, and Petr Zima, *Rok 2000 - Jazyk Jako Most i Propast* (Praha: Mladá fronta, 1982); Bedřich Moldan, Tomáš Pačes, and Rudolf Kolářský, *Rok 2000 - Konec Věku Plýtvání : Přírodní Zdroje - Nevratná Půjčka* (Praha: Mladá fronta, 1984); Moldan, *Přežije Technika Rok 2000?*; Jiří Hrubý, Vladimíra Křižanová, and Václav Kučera, *Rok 2000. Co Budeme Jíst Dnes a Zítra* (Praha: Mladá fronta, 1985); Josef Dvořák et al., *Rok 2000. Poznáme Tajemství Života?* (Praha: Mladá fronta, 1986); Zdeněk Matějka, Bedřich Skála, and Jiří Všetečka, *Rok 2000. Život s Počítači* (Praha: Mladá fronta, 1987).

redistribution and further technical advancement (Fig. 3.9). Nevertheless, in popular media, the proclaimed optimism was in fact often satirised. For example, in a television fairy tale, upon reading a column about species extinction and the year 2000, a dragon demands from an animal protection organisation to be protected from princes who would want to kill him, with an apparent visual and textual reference to the Brontosaurus Movement (Fig. 3.10).[581] And in another satirical sketch, a rabbit realises he is the only one left of his kind. To avoid ending up in a glass box as 'the last rabbit in Bohemia', the rabbit steals makeup from sunbathing women to disguise and survive 'even the year 3000', only in the end to be run over by a truck, as an ironical sign of a 'relentless civilisation'.[582] So although future science was believed to bring solutions, this was not necessarily the message people took from television.

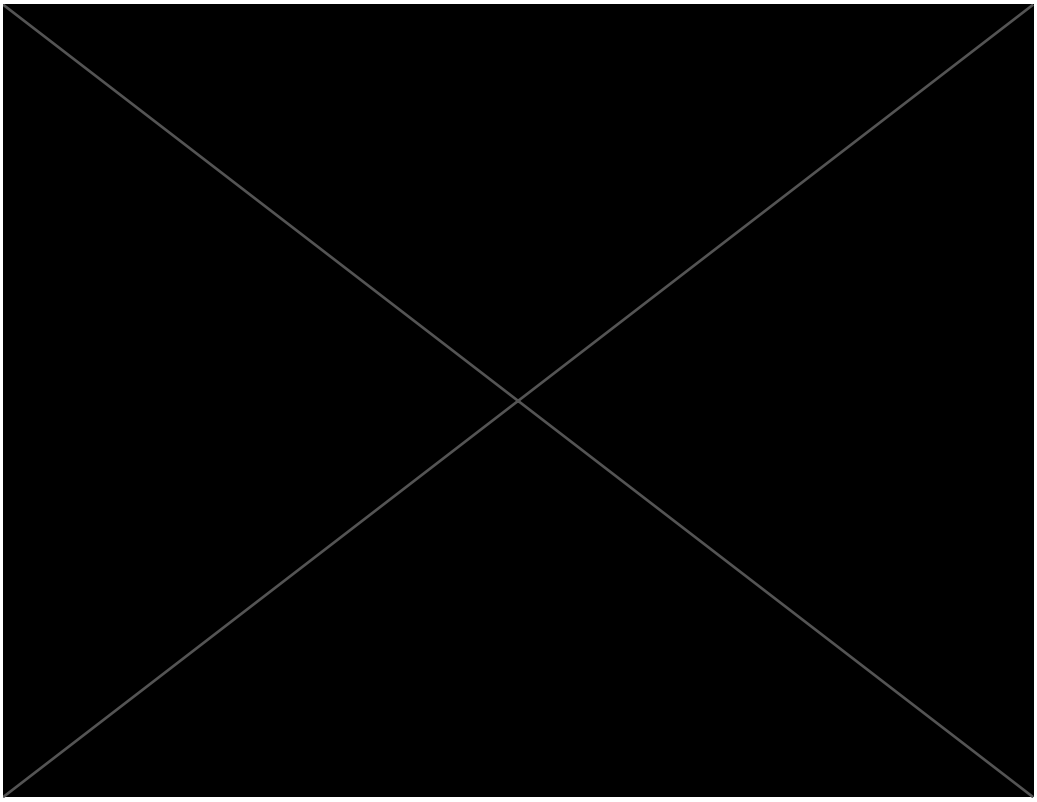


Figure 3.7. The unprecedented energy consumption of the last century that equalled the energy previously consumed in human history was illustrated as a comparison between a two-kilometre and one-centimetre-long road in the TV programme *Nature Known and Unknown* (1986).

[581] APFCT, IDEC 287 350 43264, *Pohádky pro zvířátka* (1987), ep. 'Draci jsou na vymření', 0:26–1:07, 2:30–3:30.
[582] APFCT, IDEC 281 350 53306, rec. 2V49024 (part II), *Televizní klub mladých*, (1981), 42:16–45:23.

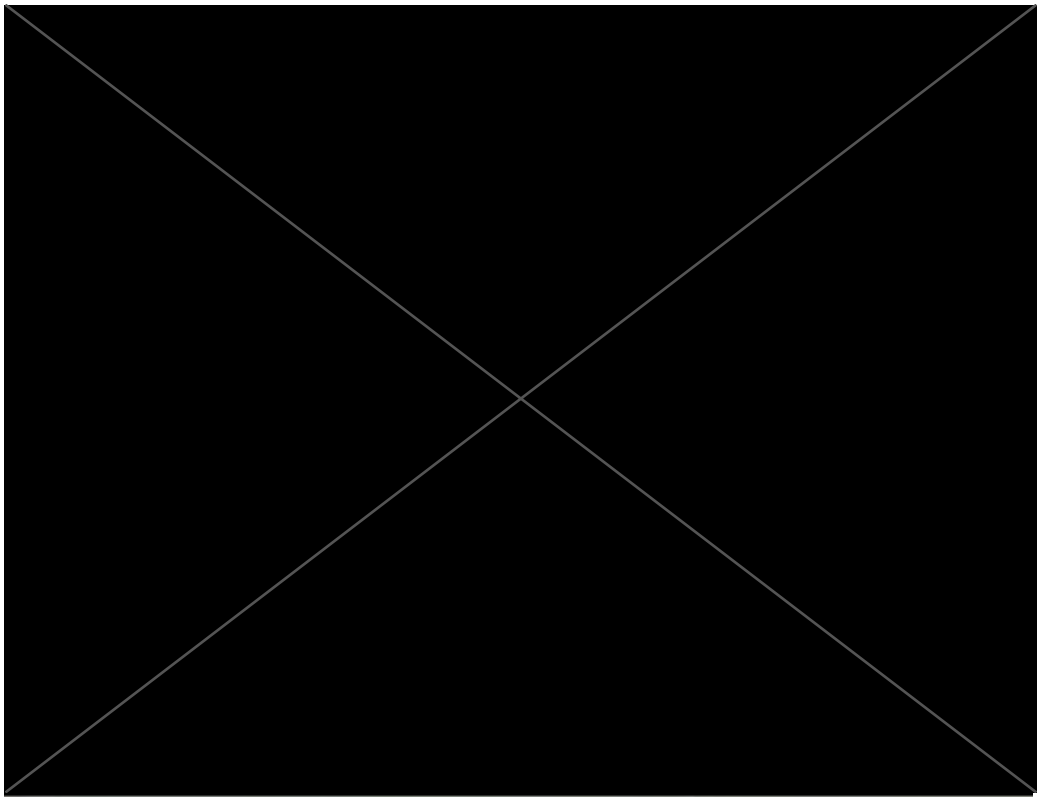


Figure 3.8. The programme *Nature Known and Unknown* (1986) visualised the danger of global warming caused by the industrial emissions of carbon dioxide.

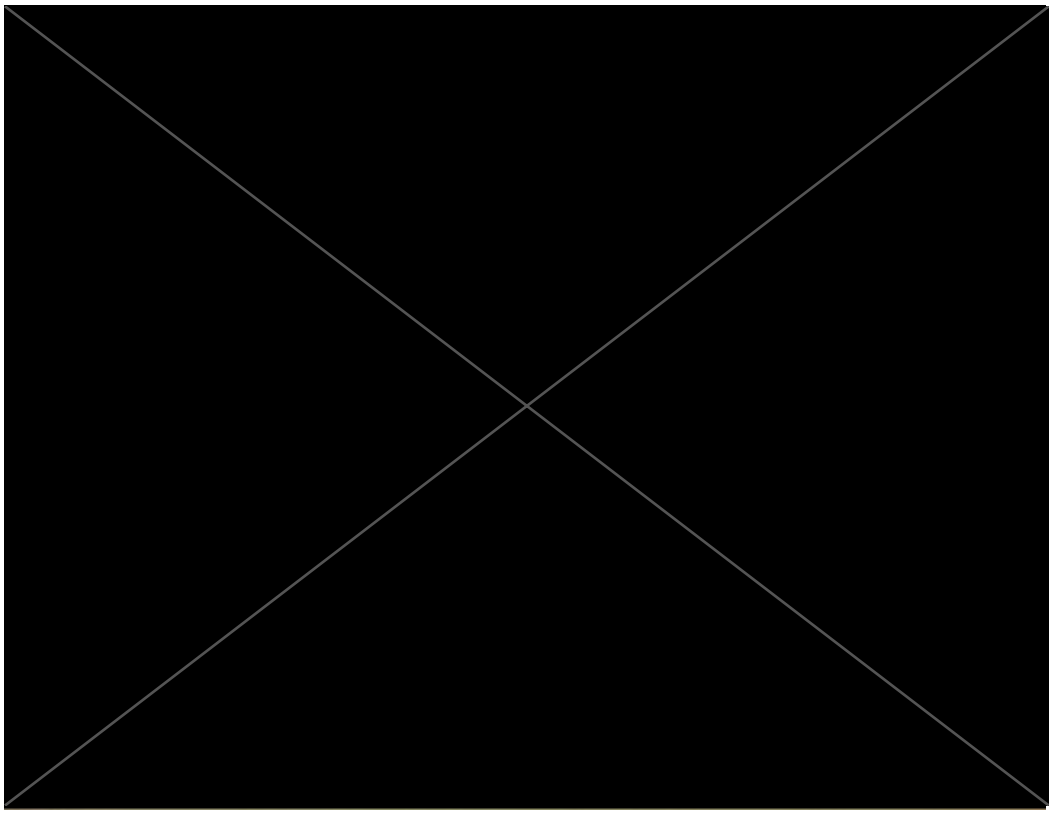


Figure 3.9. Future population growth as portrayed in *Nature Known and Unknown* (1986).

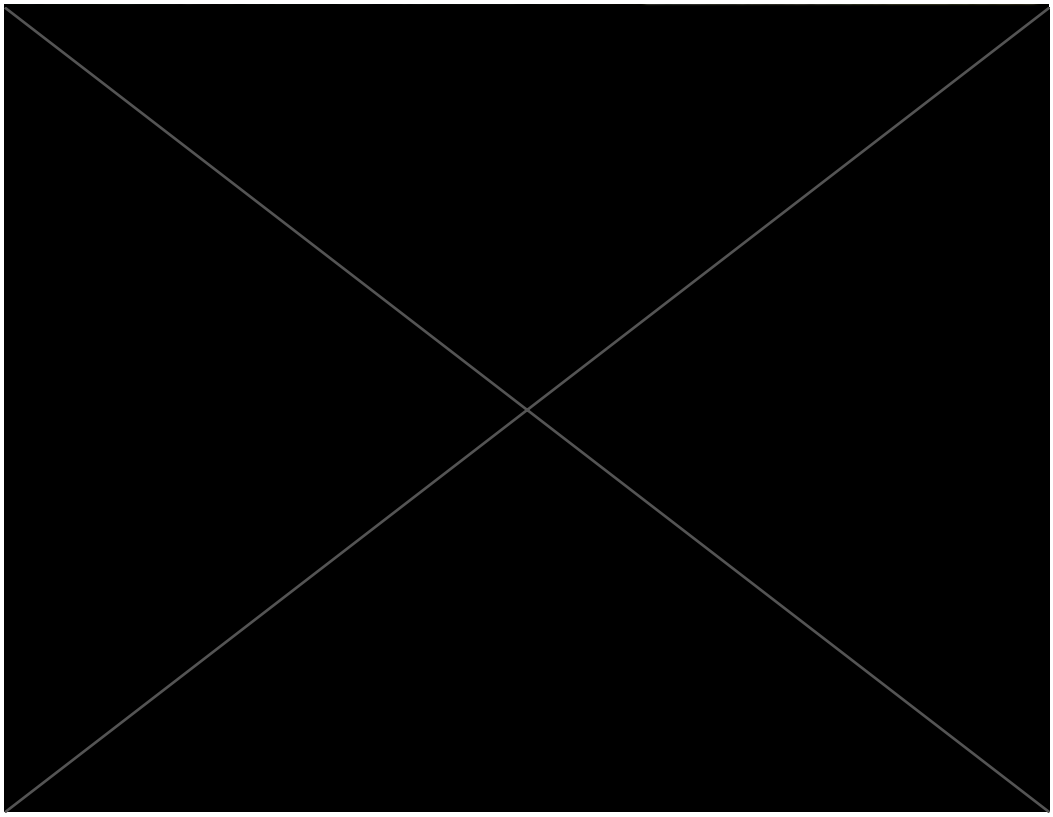
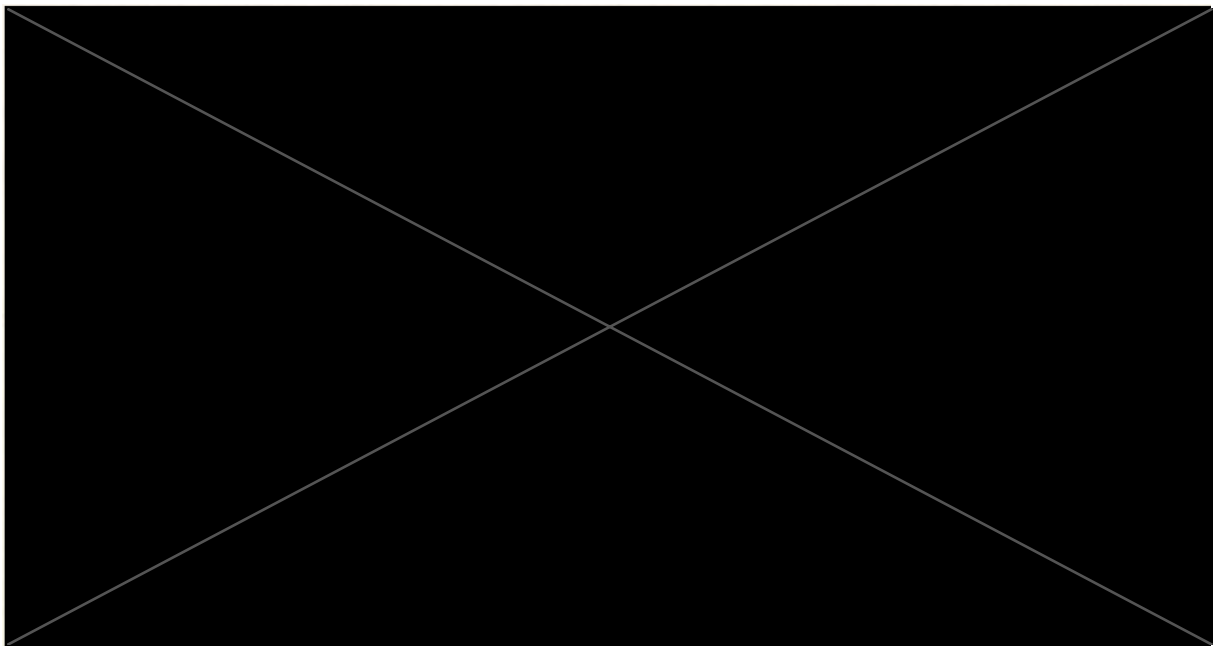


Figure 3.10. A dragon in a fairy tale reads an article titled 'Will They Survive the Year 2000?' about species extinction; the picture of a dinosaur refers to the Brontosaurus Movement.

These satirical programmes show not just how widespread environmental themes were but also that the idea of a healthy environment was often related to late socialist values of material wellbeing and childhood, akin to the portrayal of these issues in the era's fiction, as shown in the first chapter. For example, as part of the evening programme *Television Youth Club* in 1981, a short, animated film, 'The Tale of Travex the Dragon', was shown. The film retells the story of Dull Honza, a stock coming-of-age hero of Czech fairy-tale, a young lazy man from the countryside being sent off to the world by his parents where he has to overcome many obstacles, involving killing a dragon, and comes back home wealthy and with a princess as his wife.[583] In the parodic account shown in *Television Youth Club*, Honza's goal is to defeat a dragon and to live in a socialist housing block. This inversion of the traditional and the

[583] APFCT, IDEC 281 353 53253, *Televizní klub mladých* (1981), ep. 10, 13:57–17:55.

technocratic underpins most of the satirical content of the film.[584] In this account, the dragon remains a symbol of evil to be defeated, as in other fairy-tales, yet the evil is associated with environmental damage and diverging from the norms of an orderly socialist lifestyle. The dragon's name, Travex, is a brand name for sodium chlorate, herbicide lethal to humans. As an explosive, it became infamous after an incident when a 15-year-old who used it as a propellant for a toy boat (Fig. 3.11).[585] In contrast to Honza's aspirations to live a good socialist life, Travex is depicted as a lazy alcoholic. When Honza finally defeats the dragon by cutting all of its throats, there is green grass and fresh air everywhere. Honza happily moves to the new housing block and is employed in Czechoslovak Television in the Department of Fairy-Tales. In this story, ecology is associated with late socialist values – living a calm and materially secure life – while the negative aspects of technology, represented by the dragon, are associated with alcoholism. Yet depending on the perspective, late socialist values themselves were target of that satire.



584 For example, instead of a homemade cake, the character's usual attribute, Honza takes instant cake mix. Honza later meets magic grandma Vitana, named after a brand of instant food, who makes the cake mix for him.

585 The motif of Travex also appeared in *Boy With a Key*, a book about a boy and his everyday adventures: Vojtěch Cach, *Chlapec s Kl*íčkem (Praha: SNDK, 1965), 278, 315. Reprinted in 1967 and 1974.

Figure 3.11. A boy is depicted using the infamous herbicide Travex as a propellant for his toy boat.

Thus, ecologists presented ecological principles in accord with late socialist values while condemning harmful practices as antithetical to socialism. They benefitted from their position of experts legitimised by socialist technocracy. But they also used techniques more akin those of late socialist fiction, explored in the first chapter, questioning the current state of affairs in a comedic way. Overall, their goal was to teach people environmental responsibility, and socialist values were for them a means rather than an end in itself.

Childhood

The symbolic meaning of childhood perhaps demonstrates the best the affinities and tensions between ecological criticism and late socialist values, linking the issues of temporality, ideology, activism, and television. Childhood symbolised the progress to come as the political project appeared young and unfinished.[586] Furthermore, as the previous chapter suggested, childhood symbolised a social order centred around family values, and by linking the questions of material wellbeing of the future generation and energy politics, it tied together the materialist and idealist concerns of late socialism. A better future was projected onto a new generation, as the previous chapter showed in the case of nuclear power.[587] Yet, childhood did not evoke just future environmental dangers and their potential solutions, but also the need to act against existing health risks and build a more conscious relationship with nature. The 1987 television programme *Meeting with Brontosaurus* opened with a song whose first strophe evoked the beautiful sights and smells of forests and meadows, whereas the second read:

> Brontosaurus is a friend
> Year 2000 could be his end
> Take care about what he has to breathe

[586] See also Vladimír Macura, *Šťastný věk: symboly, emblémy a mýty 1948-89* (Praha: Pražská imaginace, 1992), 86.
[587] See an episode about new energy sources in a popular science TV magazine: APFCT, IDEC 487 222 11772/0009, *Kazeta* (Czechoslovak Television, 1987), ep. 9.

Where he has to drink and what he has to eat
Make sure he has a place to lay his head and sleep[588]

As the brontosaurus was a metonym not just for species extinction but environmental dangers in general, the song captured the urgency with which the environmental campaign appealed particularly to children and youth. The eleven-episode-long television programme, hosted by Josef Velek, showcased activities of young people – from observing nature in collaboration with experts to singing songs by a bonfire.[589] The official goal of the programme, aimed at secondary school children, was to develop 'a conscious relationship with nature' by showcasing the work of Pioneer collectives.[590] It reported on their activities and brought news about ecology. For example, the first episode looked at the harmful effects of a pesticide used against voles in Uherské Hradiště, Southern Moravia, and the involvement of young people in replacing a pesticide that harmed ravens with birds that hunted pests.[591] *Meeting with Brontosaurus* thus medialised concrete local actions taken by young people, informed by ecological expertise (Fig. 3.12).

[588] APFCT, IDEC 287 360 90518, *Setkání s Brontosaurem*, ep. 'Akce havran' (1987), 0:01–0:41.
[589] APFCT, IDEC 287 360 90518, 287 360 90519, 287 360 90520, 287 360 90521, 287 360 90522, 287 360 90523, 287 360 90524, 288 360 563, 288 360 90564, 288 360 565, 288 360 90566, *Setkání s Brontosaurem* (1987). 11 ep.
[590] APFCT, Red 434, inv. č. 3472, 7 Setkání s Brontosaurem, 'Dramaturgický podklad pořadu', 15 Oct 1986.
[591] APFCT, IDEC 287 360 90518, *Setkání s Brontosaurem*, ep. 'Akce havran'.

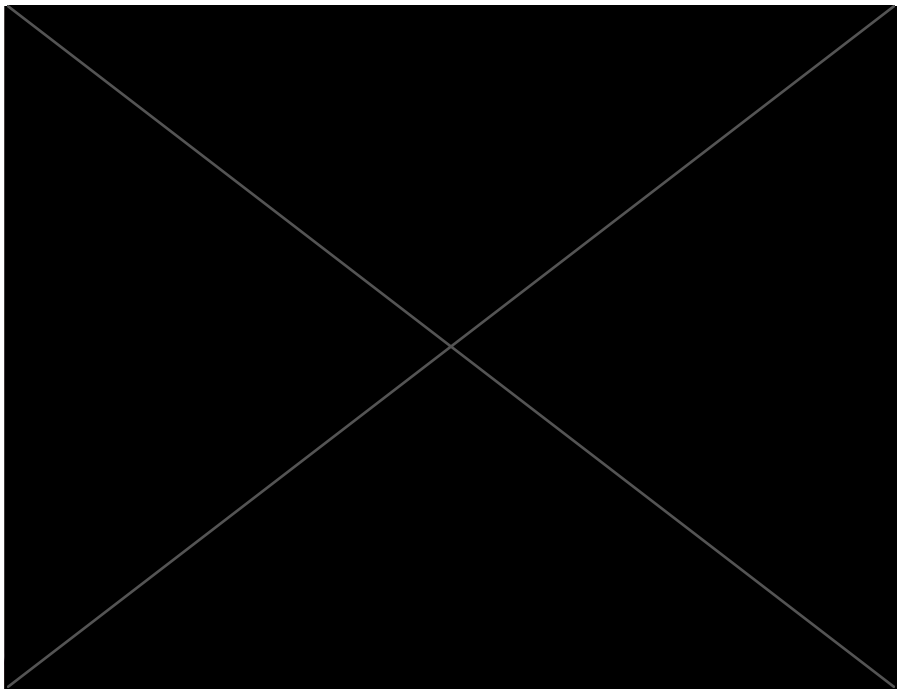


Figure 3.12. Presentation of local activities of the Brontosaurus Movement in the TV programme *Nature for Tomorrow* (1989).

The original idea behind the Brontosaurus Movement was to engage young people in collecting samples for the experts at the Czechoslovak Academy of Sciences.[592] The Brontosaurus Movement began in 1974, which was declared the Year of Environmental Protection and Creation by the Socialist Youth Union in collaboration with experts from the Czechoslovak Academy of Sciences. As Josef Velek argued, ecology, until then just a scientific discipline, was becoming a 'civilisational necessity'. Such use of the new scientific knowledge reframed the care for nature as 'everyone's duty'.[593] Velek's environmentalism linked present concerns with the future, mobilising everyone and young people in particular, with activities ranging from volunteer rubbish collection to summer nature protection camps and architectural competitions.[594] As part of the Environmental Year, articles appeared in various popular

[592] According to a 2006 interview with Jaroslav Stoklasa, who then worked at the Department of Landscape Planning and Protection, it was a way to fulfil the requirements for the department's political activity: 'V životě jsem měl obrovskou kliku', *Sedmá generace* 5 (2006), 23.
[593] Josef Velek, 'Akce Brontosaurus', *Mladý svět* (16 Jan 1974), 9.
[594] Josef Velek, *Jak jsem bránil přírodu* (Praha: Práce, 1980), 280–281; Josef Velek, *Životní Prostředí a Národní Výbory : Výsledky Devíti Let Soutěže Hledáme Dokonalé Projekty* (Praha: Tisková, ediční a propagační služba MH, 1985), 6.

science magazines as well as on TV and the radio, calling all young people who cared about the future to action.[595] Each month of 1974 was dedicated to a different issue. For instance, the first month concerned the atmosphere, giving young readers two tasks in two different magazines: collecting snow and lichen samples to detect airborne particles and the amount of sulphur dioxide, respectively.[596] Other monthly topics included, for example, water, transport, and waste. Indeed, the campaign had a lasting impact on environmental journalism; for instance, after 1974 there was a thematic section dedicated to the environment in the magazine *Science and Technology for Youth*. And the campaign also launched Velek's career in journalism as I discuss below. Nevertheless, the many activities organised by Brontosaurus did not combat the pervasive lack of interest among most people in taking active part in combatting environmental problems.[597] Although more research needs to be done on the everyday history of the movement, it appears that summer holiday camps were among the most popular, which would suggest that joining the Brontosaurus was motivated mostly by leisure activities.[598] All the same, Brontosaurus perhaps played a greater role in shaping the media discourse than forming a broad movement.

Ecological organisations used environmental science, including the limits to growth, to turn the youth into engaged and technically competent citizens, making environmental themes appear well suited to technocratic socialism. The Brontosaurus Movement was a prime example of how scientific worries about the future of the planet were turned into local action, using those institutional and discursive means available. The name Brontosaurus was chosen

---

595 ACR, *Meteor*, 26 Jan 1974, 14:20–15:50.
596 *Mladý svět*: 'Akce B', *Mladý svět* (16 Jan 1974), 5. The task was also promoted on the radio by Miroslav Martiš: ACR, *Meteor*, 6 Apr 1974, 10:25–11:34.
597 In 1978, Jarmila Kubíková from the Prague Centre for State Heritage Protection and Nature Conservation lamented there was not enough youth volunteer collectives and those who became involved often quitted soon after they started. On the other hand, as Brenner points out, in the 1980s, the interest in Brontosaurus summer camps exceeded their capacity, partly also as an attractive way of spending holidays in an organised manner, particularly for girls: Nováková, *Výchova k Péči o Životní Prostředí*, 164.
598 Brenner, 'Mnoho odstínů zelené', 72.

to represent a warning to human civilisation as a 'mighty organism' that had not been able to survive.[599] According to one theory often repeated at the time, brontosauri went extinct because they became too large and could no longer feed in their environment (Fig. 3.13).[600] The motto 'Brontosaurus didn't survive', sometimes followed by the additional phrase 'because it outgrew its limits', hints at the inspiration by *The Limits to Growth*. Introducing the Environmental Year in January 1974 in the newspapers, Velek reminded readers that the Club of Rome's computer model suggested that all five indicators – natural resource use, pollution, population, food production and industrial development – seemed to be growing exponentially. Together with the rapidly growing amount of carbon dioxide due to recent human activity, the knowledge of which came from Soviet science, these newly discovered limits to growth led Velek to argue that the need for 'clean' sources of energy had ceased to be a question of technology and had become a 'question of life'.[601] Thus, for example, the tree planting campaign as part of the Environmental Year 1974 was framed with a reference to Georgian climatologist Feofan Davitaia's data about the increase in global consumption of oxygen in recent decades – almost as much between 1920 and 1969 as in the previous history of the humankind.[602] On the one hand, the Brontosaurus Movement was optimistic, as it postulated that what made humans different from a brontosaurus was their conscious will to survive and remake the environment; on the other, it brought new worries about the future that the youngest generation was meant to overcome.[603]

---

599 Josef Velek, 'Akce Brontosaurus', *Mladý svět* (6 Jan 1974), 8.
600 The aphorism perhaps was not a new idea as it appears in Czech as early as the 1940s: Ctibor Mařan, *Dav, lid, osobnost: aforismy a náčrty* (Praha: Edice Rozprav, 1945), 12–13.
601 Josef Velek, 'Akce Brontosaurus', *Mladý svět* (6 Jan 1974), 8. For the emergence of the climate change discourse in Soviet science and media see: Anna Mazanik, 'Environmental Change and the Soviet Media before 1986: Dissident and Officially Sanctioned Voices', in *Climate Change Discourse in Russia* (Routledge, 2018), 32–49.
602 'Člověk není brontosaurus', *Květy* (8 Aug 1974), 62.
603 R. Čechura, 'Doly produkují ovoce', *Věda a technika mládeži* 16 (1974), 555.

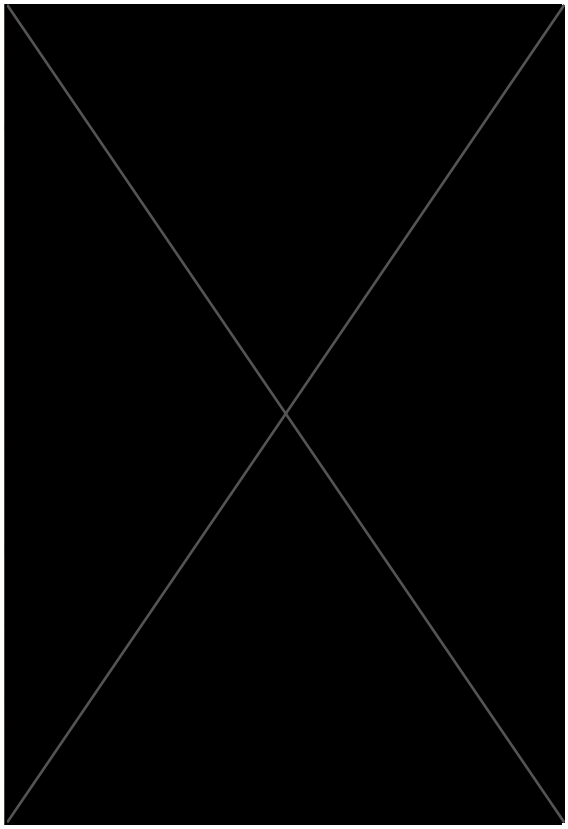


Figure 3.13. 'Brontosaurus Campaign Notes' and the logo of the Brontosaurus Movement published in the magazine *Young World*.

However, childhood did not always signify better tomorrows but could also be used to reflect what was spoiled about the world, presenting children as more caring about nature than adults. The link between childhood and ecology was emphasised, for instance, in the documentary *Casting for the Year 2000* (1979) that captured the selection of child actors for the film *Brontosaurus* (1979).[604] When asked questions such as where they would like to live, most children answered the countryside because they could go to the forest or fields where there were no cars.[605] Interviews alternated with images of beautiful or polluted landscapes, evoking the choices faced by the new generation. Director Olga Sommerová associated their

[604] The film was awarded Special Jury Award at the 1980 Ekofilm festival. APFCT, IDEC 279 532 34723, *Konkurs na rok 2000* (dir. Olga Sommerová, Czechoslovakia, 1979).
[605] APFCT, IDEC 279 532 34723, *Konkurs na rok 2000* (dir. Olga Sommerová, Czechoslovakia, 1979), 2:32–5:18.

longing for nature with a desire for good interpersonal relations and moral behaviour, which suggested that having a good relationship to nature was part of being a good person.[606]

The film *Brontosaurus* presented a founding myth of the movement, in which children came up with its name with the goal of promoting a change in individual behaviour and ensuring nature's 'survival'. Explaining the position of children, the film's director Věra Plívová-Šimková talked about the 'Apache law: attacking the confident and giving confidence to the attacked', using a popular comparison between ecologists and Native Americans, common in Czech hiking culture (*tramping*).[607] In her film, children rise up against the world of adults in the name of ecology. The film depicts a group of children who decide to clean up an illegal garbage dump in the forest after a doe is injured by a piece of broken glass. The school, at first depicted as an oppressive institution led by immoral authorities, appears as a metaphor of a society that punishes good behaviour; when the kids see the school inspector throwing out garbage in the forest, they tie it on the back of his car, for which they are punished by the headmaster. However, the film ends happily with children cleaning up the forest and the school management thanking them for it, arguably making children the good socialist citizens and nature protection a matter of individual wrongdoing, rather than a systemic issue.[608]

Rather than seeing children as unspoilt by civilisation, social ecologist Hana Librová in her 1987 study, on the other hand, interpreted children's ideas about nature as a 'reflection of social ideas about high-quality landscape'.[609] Somewhat like Sommerová in her documentary, Librová asked children to draw and describe a landscape in which they would like to live (Fig. 3.14).[610] Librová argued that children used phrases and clichés they read in

606 Other questions included who they liked the most or what they would like to become.
607 APFCT, IDEC 279 532 34723, *Konkurs na rok 2000,* 1:18.
608 When one of the children walks in on somebody picking protected flowers, it is the 'looter' who argues that nature protection should focus on acid rains and oil spills in the oceans instead of him. *Brontosaurus*, 1:02:32–1:03:13.
609 Librová, *Sociální potřeba a hodnota krajiny*, 79.
610 Librová, 77.

books and magazines and heard on TV. Librová observed that children's positive relation to nature, unlike other value orientations, was not affected by other social factors, such as gender or their parents' employment. Most would associate nature with the idea of an 'endangered nature', often voicing antipathy to technology and civilisation. Librová asserted that there had been a notable shift from celebration to aversion in children sentiment towards industrial symbols such as factories.[611] Nevertheless, unlike the affection for nature that was part of the culture consumed by children, Librová did not interpret their anti-technological sentiment as an influence of public discourse since it was not part of the ecological agenda. Librová believed it came through their individual observations or opinions they had heard in their families.

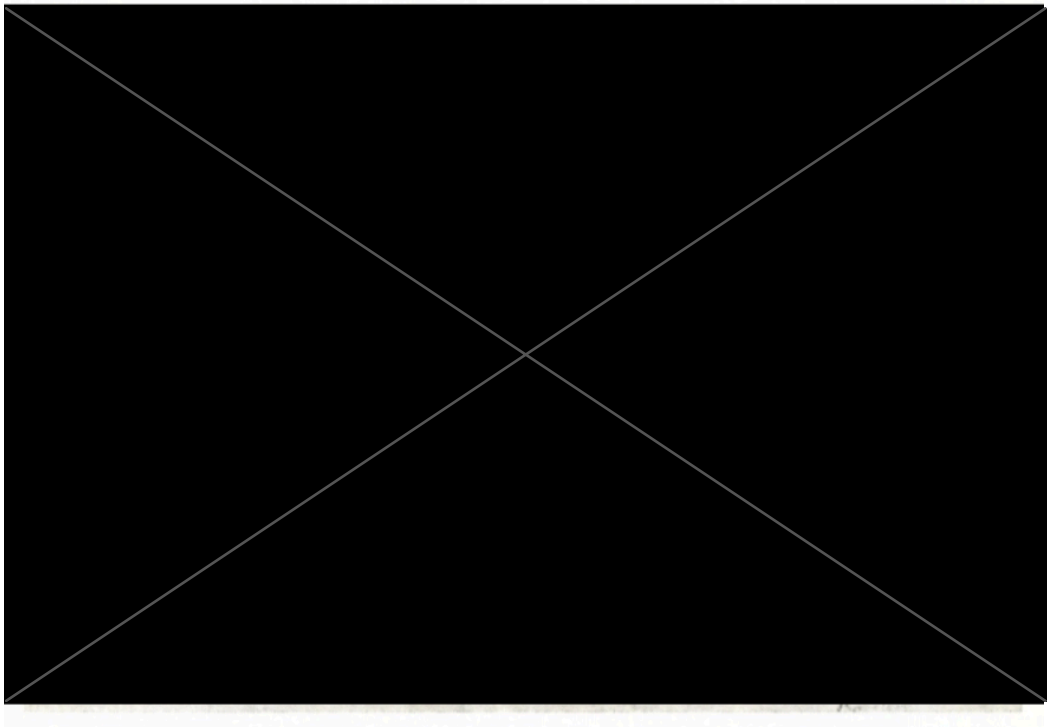


Figure 3.14. A child's drawing of an ideal landscape from Hana Librová's *Social Need and Value of the Landscape* (1987).

Although Librová's findings say something very important about the values ascribed to nature under late socialism, it is unlikely that such sentiments were just the result of family discussions, as images of dirty factories either in association with environmental destruction or

[611] Librová, 80.

in contrast with pristine nature often appeared in both satirical films and ecological television programmes. In fact, as I am about to discuss, around the time Librová was writing her book, some ecologists and filmmakers were concerned that people were oversaturated with images of environmental destruction.

Images of Environmental Destruction

In the summer 1986 Josef Velek travelled to Finland where he saw a film about a Finnish family enjoying the beautiful countryside:

> [T]he husband leaves for a business trip to central Europe and sends letters with photographs of streams and forests destroyed by industrial exhalations. In the colour shots from the land of a thousand lakes, the husband's black-and-white photographs come as a visual shock. The frightened wife prefers to go with the children to the familiar trails to enjoy the healthy and well-preserved nature of Finland; but when she looks more carefully, she finds rusty needles here and there, dead lichen on the trees, abandoned bird nests and fishless lakes. Later she reads in the newspaper about air currents carrying sulphur immissions from the European heartland into Scandinavia.[612]

The photographs that the man showed his family were from The Ore Mountains, Northern Bohemia. For Velek, the film demonstrated that environmental destruction knew no borders. The same thing had been discussed among intellectuals, ecologists, and diplomats all over Europe; cross-border pollution had become a subject of both international collaboration and conflict.[613]

However, as the photos from Czechoslovakia featured in the Finnish film illustrate, it was not just the circulation of environmental pollution and information about it but also the circulation of images, both within Czechoslovakia and to some extent transnationally, that was shaping how people thought of the ecological cause. Environmental problems were presented

---

612 Josef Velek, *Příběhy pro dvě nohy* (Praha: Práce, 1988), 260–261.
613 The second half of the 1980s saw the most avid East-West collaboration on the issue of pollution, see: Robert G. Darst, *Smokestack Diplomacy: Cooperation and Conflict in East-West Environmental Politics* (Cambridge, Mass.: MIT Press, 2001); Rindzevičiūtė, 'Toward a Joint Future beyond the Iron Curtain', 195–203.

in a variety of media – magazines, films, and television programmes. As in the late socialist fiction analysed in the first chapter, popular science contrasted environmental damage with positive images using irony as constructive criticism. Over the years, the longstanding visual presence of environmental destruction in the media even led some to talk about the need to focus on solutions rather than descriptions, while others grew sceptical of images' power to change people's perception of everyday reality.

The visual format made it possible to readily convey how much the contemporary landscape differed from the failed visions of the past or how much it diverged from canonical artistic depictions. Smokestacks were one such image that was contrasted with green landscapes in the opening to Josef Velek's television programme *Nature for Tomorrow*, premiered in 1983 (Figs. 3.15, 3.16). By the 1980s, smokestacks had lost their status as a symbol of prosperity in the eyes of many, and that theme appeared on television, in Librová's survey among children about their attitudes towards nature, as well as in the writing of dissident Václav Havel, as symbols of environmental destruction.[614]

Such contrasts sent a clear normative message about the negative effects of industrial pollution on the one hand and the positive value of nature on the other. The montage of video and sound easily popularised concerns of experts and expressed what journalists otherwise described at length in writing. Photographs of environmental damage also accompanied articles of the Brontosaurus Movement from their foundation in 1974 (Fig. 3.17). In the same year, the magazine *Young World* organised a photographic competition for their readers to gain an 'objective perspective' on the state of the environment, yet the editorial board was later surprised to receive only pictures documenting environmental problems, explaining they were also interested to see examples of pleasant areas.[615]

---

[614] Václav Havel, *Politics and Conscience* (Stockholm: Charta 77 Foundation, 1986), 5.
[615] Wedl, 'Green Volunteers in Czechoslovakia', 46.

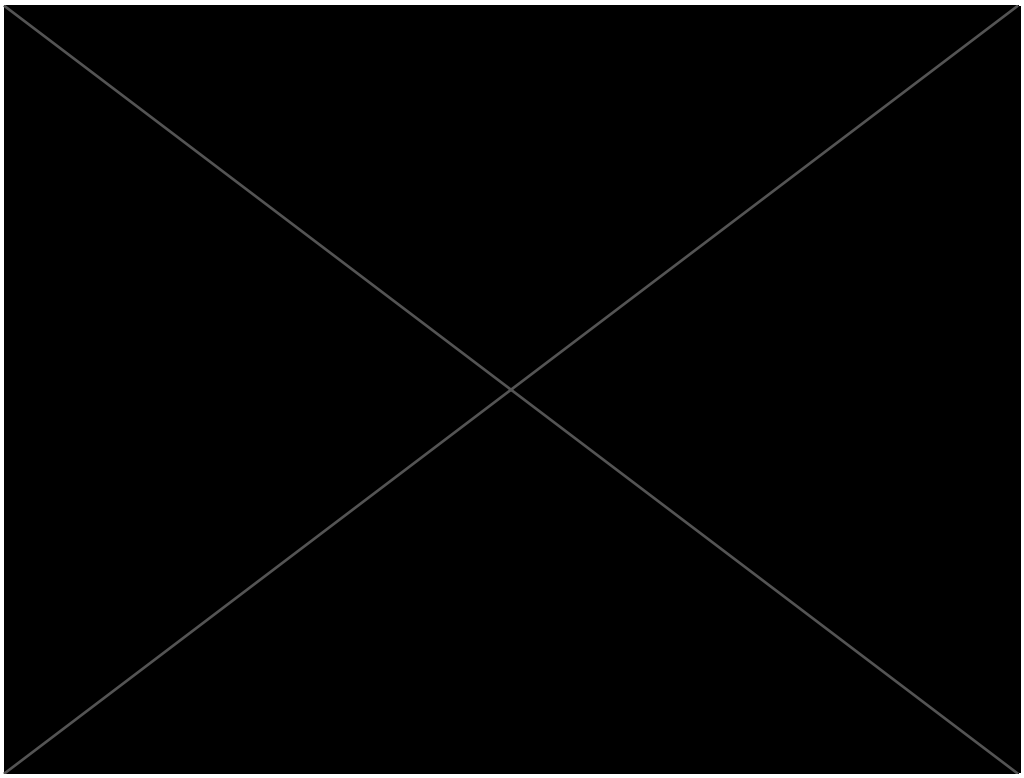


Figure 3.15. The opening theme of popular science television programme *Nature for Tomorrow* began with the image of Czech mountains before the image of the Earth gradually appeared from the centre.

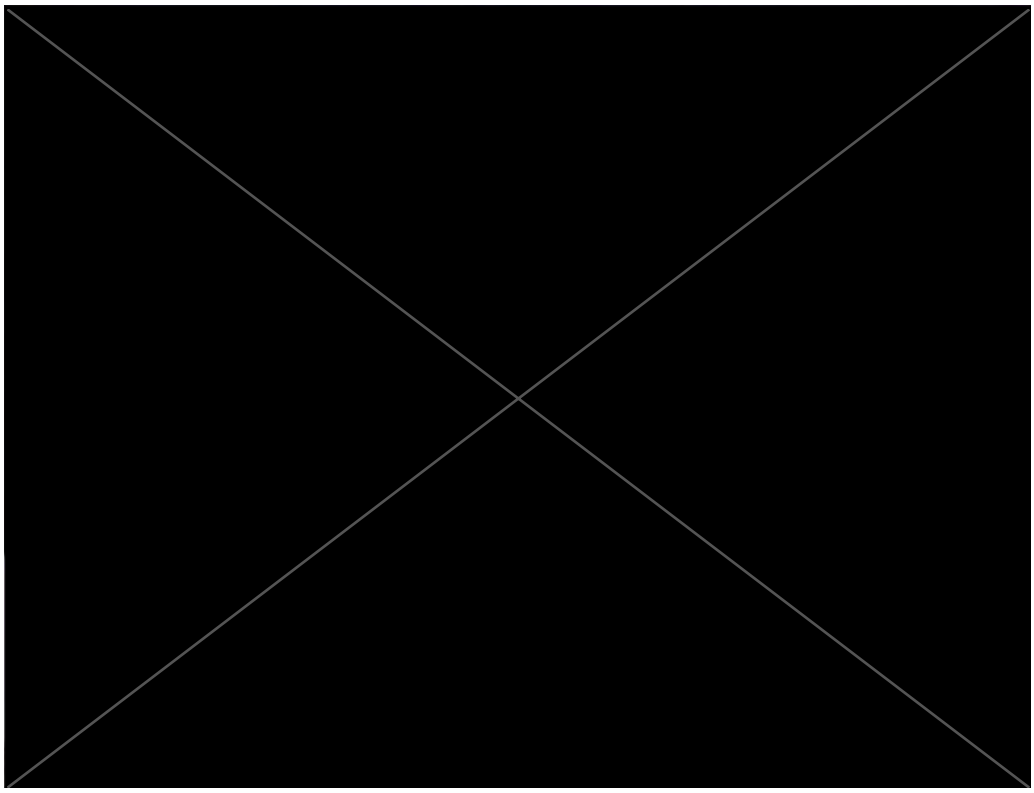


Figure 3.16. The opening theme of television programme *Nature for Tomorrow* contrasted the blue planet Earth and smokestacks.

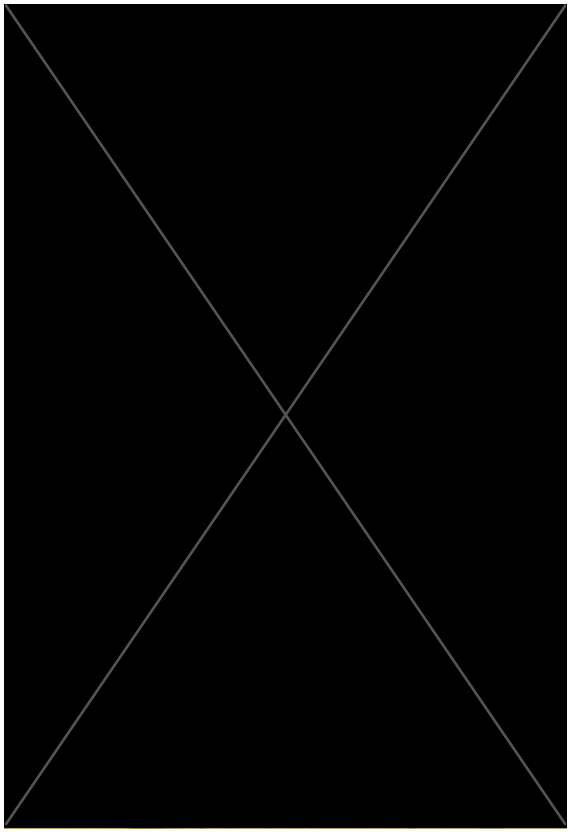


Figure 3.17. Visualising environmental destruction was an important part of the Brontosaurus campaign from its outset in 1974.

As the natural landscape carried a cultural value, one way to question technical achievements of the present was to show its destruction, which was a motif that appeared throughout the two decades. The protection of the natural landscape was guaranteed by the constitution, and this gave ecologists a solid argument for their cause. Furthermore, environmentalism was linked to nationalist sentiments: as one TV programme put it in 1973, environmental education involved an effort to live up to the lyrics of the national anthem, in which the natural motifs abounded.[616] The myth of pristine nature tied to national history was strong in Czech culture: for example, the 1977 programme *You Get What You Give*, which I will discuss in more detail in the following section, evoked the words of Cosmas, a mediaeval chronicler, to contrast the polluted waters of today with the pure waters of the mythical past.[617] Velek, in the programme, was jokingly labelled the Cosmas of today. Such references to

[616] APFCT, IDEC 273 531 21103, *Mládí a životní prostředí* (1973), 20:43–21:27.
[617] APFCT, IDEC 277 320 14153, *Jak se do lesa volá* (1977), ep. 2, 08:35–11:20.

national culture were ironic, contrasting the high culture and clean environment on the one hand with jokes and environmental pollution on the other.

Similarly, television programmes juxtaposed canonical literary depictions of the landscape and its current state. In 1988, a new weekly programme *The Probes* (*Sondy*) discussed critically current issues, including the environment.[618] One episode of *The Probes* entitled 'Forests Don't Sing Forever' contrasted the natural landscape of the past and the present, showing the destruction of forests by acid rain: the preserved landscape was accompanied by classical music and a poem about the beauty of the Krkonoše Mountains by Antonín Sova, a Czech realist writer active at the turn of the 19th and 20th centuries.[619] The programme then laments that this poem now belongs only to the past. Unpleasant electronic sounds open the following scene that shows destroyed forests and an immission measuring device (immissions describe the concentration of pollutants in the air, unlike emissions, which are released by a particular source).[620] Indeed, destroyed forests became one of the most common images associated with the environment (Fig. 3.18), although the discourse of engineering failures was not just about the natural but also the built environment.[621] When ecologist Emil Hadač came to *Ecology in a Nutshell* (1988) to talk about a 'catastrophe in the borderland forests', his arguments were accompanied by images of forests with leafless trees that earlier appeared in his book *Ecological Catastrophes* (1987) (Figs. 3.19, 3.20).[622] This cast

[618] Other episodes that dealt with environmental problems were, for instance, about landscape management and urban pollution: APFCT, IDEC 288 430 51574, IDEC 288 430 51585, IDEC 289 430 61310, *Sondy* (1988-1989), ep. 'Spor o Stropnici', 'Za jeden provaz', ep. 'Čistota jako hlavolam'.
[619] APFCT, IDEC 288 430 51588, *Sondy* (1988), ep. 'Lesy věčně nezpívají', 01:10–01:50.
[620] APFCT, IDEC 288 430 51588, *Sondy*, ep. 'Lesy věčně nezpívají', 01:58–02:04.
[621] Both problems were considered a part of landscape ecology. A television programme about the dirtiness of Prague – due to both pollution and unsatisfactory cleaning –contrasted ironically the visions of architects from early 1950s with the actual state of the city: instead of living in 'healthy and airy cities' the inhabitants began to avoid the urban space due to its inadequacies: APFCT, IDEC 288 350 53532, *Vlaštovka* (1988), 03:21–04:12. See also the shift in urban planning from towards preserving heritage and even a mistrust of planning as such in the 1980s: Petr Roubal, 'The Battle of Žižkov: Urban Planners' Transition from Heritage Protection to Neoliberal Discursive Planning', *Journal of Urban History* 47, no. 3 (May 2021): 495–510.
[622] APFCT, IDEC 488 224 13804/0003, *Ekologie všemi pády* (1988), ep. 3, 15:44–19:49.

doubt on technological progress not just on an intellectual but an emotional level, as was indeed the goal of environmental education.

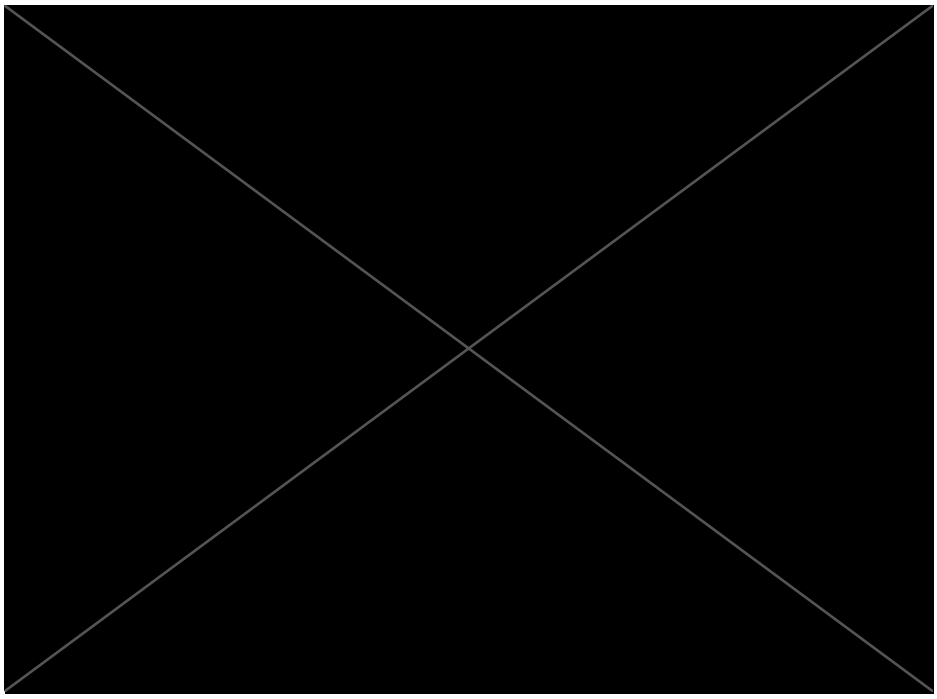


Figure 3.18. An episode of *The Probes* (1988) titled 'Forests Do Not Sing Forever' depicted the damaged forests due to immissions.

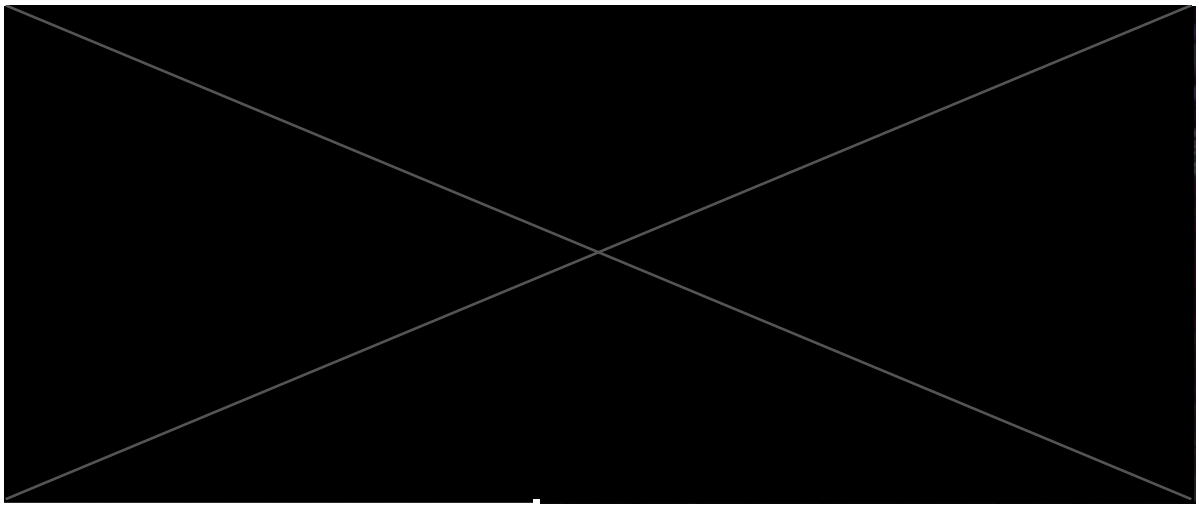


Figure 3.19. (on the left) 'Spruce forests on the ridges of the Ore Mountains died back due to air pollution' as shown in Emil Hadač's *Ecological Catastrophes* (1987)

Figure 3.20. (on the right) Image of a damaged forest illustrated Emil Hadač's argument in educational television programme *Ecology in a Nutshell* (1988)

In 1974, the film festival Ekofilm was founded, encouraging circulation of environmental knowledge and images in a variety of ways. It was the first festival dedicated

exclusively to ecology, which was not just an opportunity for an international meeting of experts and filmmakers, but an event that enticed further dissemination at various film screenings and in the media. It soon grew into an international event, and films from all over Europe and other parts of the world were shown there.[623] Ekofilm's debates and seminars served as an informal meeting of experts, interested governmental officials, environmental activists, and the public. In 1988, Miroslav Martiš appreciated the 'feedback loop' between film creators and ecologists that developed throughout the years at the film festival Ekofilm.[624] According to Bedřich Moldan, who became the festival's president in the 1990s, those encounters were the primary reason for organising the festival.[625] Ekofilm originated as an outgrowth of *Techfilm*, a film festival that showcased new films on science and technology, and the split illustrates a broader phenomenon: the human interaction with nature was becoming a concern of its own, one that went beyond the political and temporal programme of the advancement of science and technology, but which was nevertheless derived from it. Ekofilm was based on the idea – which started to gain momentum at the time – that the environment would be better preserved if more knowledge were disseminated to the public.

The reach of the festival is apparent not only from media coverage, but also from the various opportunities to screen the films in other cinemas and improvised screens around the country.[626] Moreover, Ekofilm organised a competition for amateur filmmakers with the telling title 'It's About You Too'. Additionally, it attracted the attention of journalists, often inspiring them to take a stance towards environmental issues. For instance, journalist Alena Čechová

---

623 For instance, in 1985, 99 out of 150 films at *Ekofilm* were foreign and came from different parts of the world, including China, India USSR, Finland, both Germanys, USA, and Mexico, among others. *Zpravodajství Ekofilm* 1 (1985), 4.

624 *Ekofilm '88 Ostrava : Vybrané Referáty k Panelovým Diskusím 15. Mezinárodního Festivalu Filmů a Televizních Pořadů o Životním Prostředí* (Praha: SZN, 1988), 5.

625 *25 Let Ekofilmu : Český Krumlov 1997-1999, Ostrava 1974-1995 : Mezinárodní Festival Filmů a Videopořadů o Životním Prostředí* (Praha: Ministerstvo životního prostředí, 1999), 4–6. The same was stated by the contemporary press, see, for instance: V. Šnýdr, 'Ekofilm. Pro budoucnost života', *Tvorba* 25 (1981), 4–5.

626 If one could not attend the festival, *Meteor* suggested that one can arrange to borrow a copy and project the film at a summer camp. ACR, *Meteor*, 7 Jun 1975.

wrote about how the festival educated her about the 'fragile links' in nature that could be saved only by changing people's thinking rather than saving individual animals, mirroring the shift from nature conservation to environmentalism.[627] The same was apparent from the use of the image of Planet Earth from space on the cover of the festival catalogue, symbolising the environment as a global problem and a matter of global cooperation (Fig. 3.21). At the same time, Ekofilm encouraged locals to think about how to visualise environmental problems: in 1984, it organised a local window dressing competition in Ostrava. The winner showed film stills of a traffic jam, smokestacks, and polluted waters, but also of active children (Fig. 3.22), while two other windows employed the recurring motifs of an 'ill' environment (Fig. 3.23) and happy children (Fig. 3.24); the shop windows thus reveal how environmentalism was indeed associated with the motifs discussed earlier, from joyful childhood and health to polluting industries. Furthermore, framing the photos in a filmstrip of course referred to the festival but also arguably highlighted that environmental imaginary was primarily conveyed through film and television. In that way, many of the Ekofilm activities went beyond a passive reception of images, encouraging their active reproduction.

[627] Alena Čechová, 'Ano, ale… aneb ekofilm vůbec a letošní zvlášť', *Věda a technika mládeži* 15 (1978), 456.

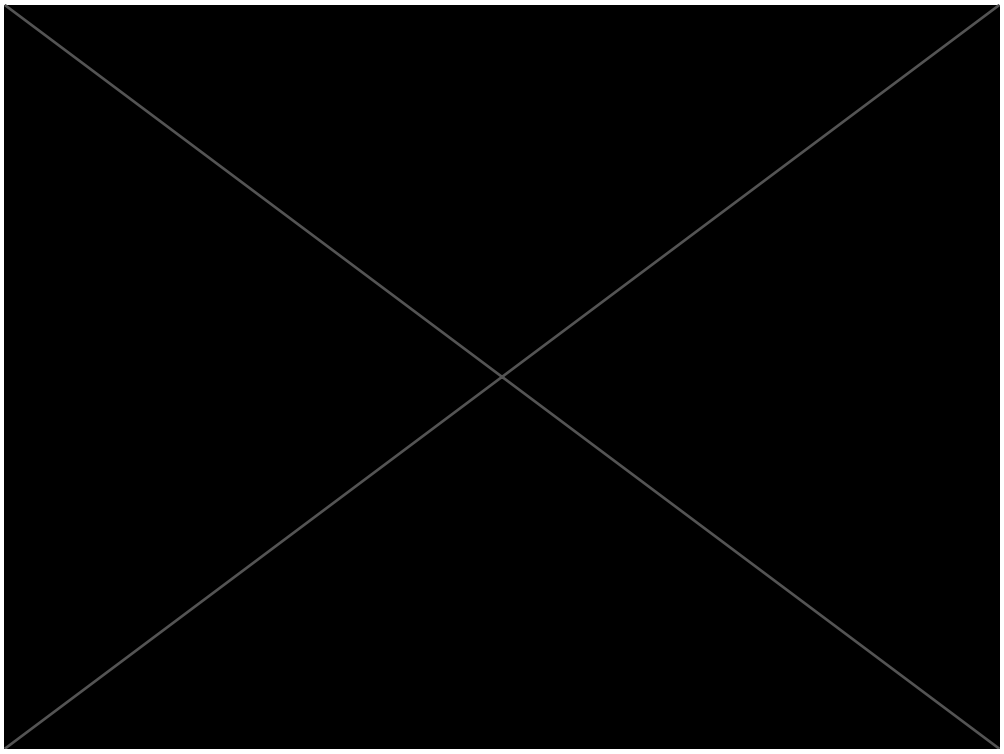


Figure 3.21. The 1986 Ekofilm catalogue.

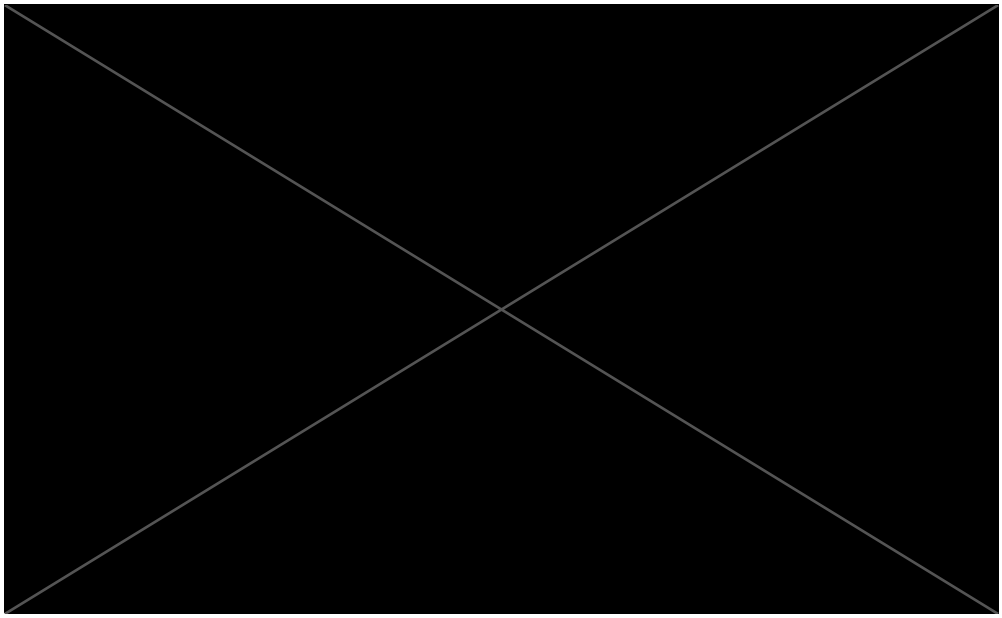


Figure 3.22. The shop window at Ostravanka shopping mall by Pavel Skuhra and Vítězslav Škuta, which won the 1984 Ekofilm window dressing competition.

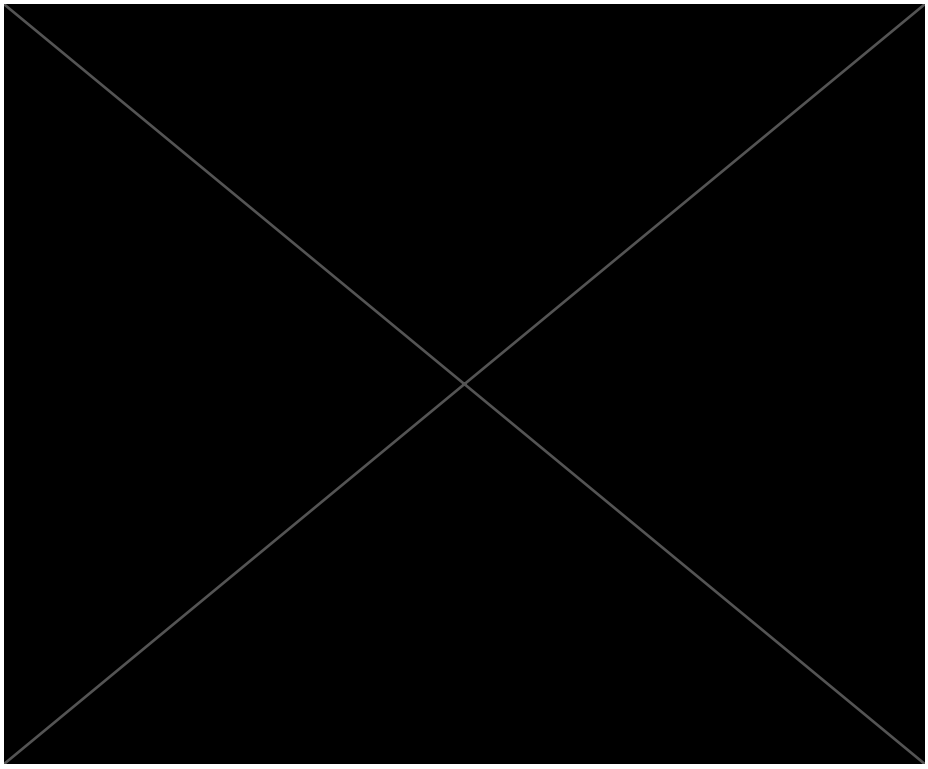


Figure 3.23. The second place in the 1984 Ekofilm window dressing competition was awarded to an ironmonger's shop window by Lubomír Wilk and Dagmar Jankielová, portraying a broken branch covered in a bandage.

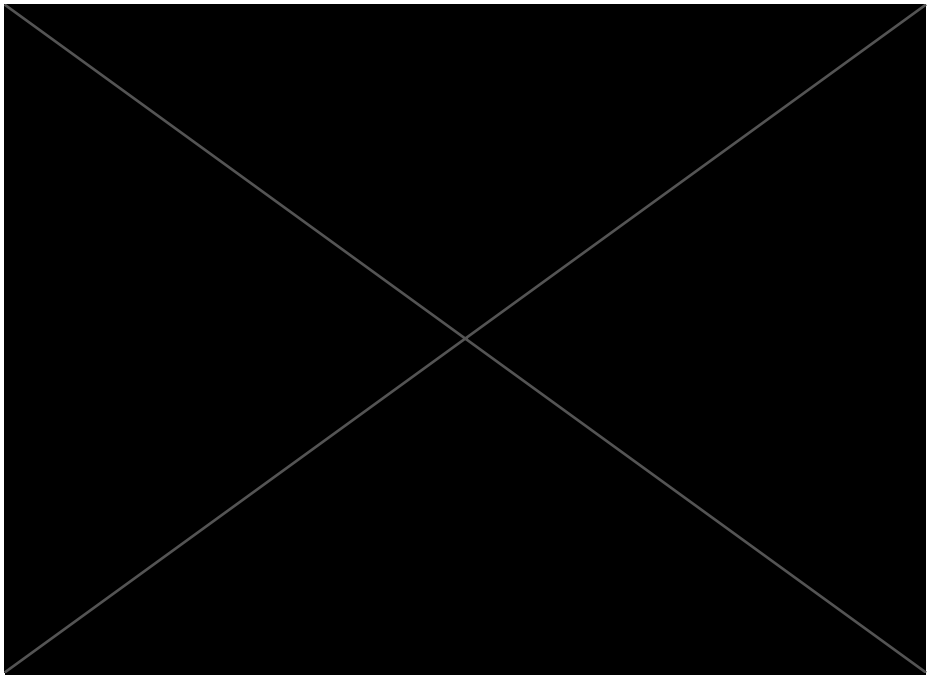


Figure 3.24. 'Let the sky be clean and the earth in full bloom' says the window at Lenin Avenue grocery shop in Ostrava, with figures of children playing cheerfully, winning the third place in the 1984 Ekofilm window dressing competition.

Documentary filmmakers reflected on their role in changing how people thought about nature. For example, in 1977 Czechoslovak Radio promoted the festival with the documentary *Saving the Groundwater of Rye Island* (*Záchrana podzemných vôd Žitného ostrova*) about the leakage of oil products from the Slovnaft oil refinery and other facilities in Southwestern Slovakia, potentially endangering the source of drinking water for 5 million people.[628] An article from the magazine *Science and Technology for Youth* saw it as a case of 'foolish humanity' with its accelerated rhythm of life and excessive production, and a 'matter of our choice'.[629] The film's director, Vojtech Andreánský, who had been famous among documentarists for films celebrating the postwar industrial boom, explained that he did not just want to inform the public but to make an emotional impact, describing it as 'sympathy, enthusiasm or indignation, righteous anger at sloppiness, incompetence or bureaucracy'.[630]. On the other hand, like others, Andreánský saw the proliferation of films about the environment to be an issue that made viewers indifferent to information of environmental destruction, however shocking.[631] According to him, the answer would be, in addition to naming the problem, to develop solutions and point to specific culprits.

Fears that the portrayal of environmental destruction was too abstract to make a difference led ecologists to use stronger emotional language along with calls for behavioural change. In *Endangered Nature* (1983), Emil Hadač considered the inverse effect of the film's portrayal of environmental destruction that potentially made the problem more intangible than the everyday consumerist reality.[632] He argued that consumer goods were always more evident

---

628 ACR, *Meteor*, 30 Apr 1977. The film won the main prize in the section on reducing the negative environmental impacts of industry, energy, and transport, see: hf, 'Ekofilm 1977', *Záběr: časopis filmového diváka* 10 (1977), 7.
629 Alena Čechová, 'Věc naší volby', *Věda a technika mládeži* 31 (1977), 514–516.
630 an, 'Nové filmy o životnom prostredí režiséra Vojtecha Andreáského', *Zpravodaj československého filmu* 3 (1977), 4. Two decades earlier, Andreáský worked on a propagandist film *The Machine Song* about the industrialisation of Slovakia: *Pieseň strojov* (dir. Vojtech Andreáský, Czechoslovakia, 1949); see also: Jozef Bobok, 'Jeden z radu zakladateľov', *Panoráma* 1 (1978), pp. 80–82.
631 an, 'Nové filmy o životnom prostredí režiséra Vojtecha Andreáského', 5.
632 Hadač, *Ohrožená příroda*, 112.

to the public than, for example, polluted water, which yet had not found its way to people's homes and was known only from television. According to Hadač, 'happy tomorrows' of greater material wellbeing seemed to be within closer reach than apparently theoretical environmental problems. He believed that films about environmental destruction created the illusion that it was happening elsewhere and was somebody else's responsibility – a view shared among ecologists like Miroslav Martiš, who opened the 1989 Ekoforum exhibition with the same doubts in mind.

In the 1980s, Ekofilm tended to accent the need to offer solutions and develop 'ecological thinking', mirroring the discourse of environmental education.[633] The shift from description to solution was perhaps best embodied by director Josef Císařovský. Having made almost 70 educational films in the fields of medicine, ecology and popular science, he was awarded several Ekofilm prizes for his films *Bomb Motoring* (*Bomba motorismus*, 1983, with 'bomb' as a word play, suggesting car usage is a danger but is seen as superb by many), *Mutagens* (*Mutageny*, 1984) and *Human versus Nature* (*Člověk versus příroda*, 1985).[634] *Bomb Motoring* was about the effects of and solutions to air pollution, showing X-ray images of the palms of Prague children, whose late bone development was a result of the city's bad environment. In *Mutagens*, Císařovský also used the trope of children in danger, as it was common in late socialist environmentalism (Fig. 3.25). *Human versus Nature* was an educational film for high school students about the human evolution until the contemporary era. Humanity, it argues, is failing to continue to adapt to environmental change and has to learn to find harmony with nature, and the young generation has a decisive role in tackling ecological problems. With the use of graphics such as colourful crystals and microscopic

633 'Prostředí pro budoucnost', *Zpravodajství : Ekofilm - Mezinárodní festival filmů a televizních pořadů o životním prostředí* 1 (1985), 3.
634 *Bomba motorismus* (dir. Josef Císařovský, Czechoslovakia, 1982); *Mutageny* (dir. Josef Císařovský, Czechoslovakia, 1984); *Člověk versus příroda* (dir. Josef Císařovský, Czechoslovakia, 1984).

structures, Císařovský believed that the film could mediate knowledge otherwise accessible only to experts.[635] As he put it, humanity was losing respect for nature and the scientific-technological revolution was destroying the human psyche.[636] People allegedly preferred to master technology than getting to know themselves, and the film was supposed to help counter that, forming a 'greater human responsibility for the world and nature' and 'limiting selfish and megalomaniac desires'.[637]

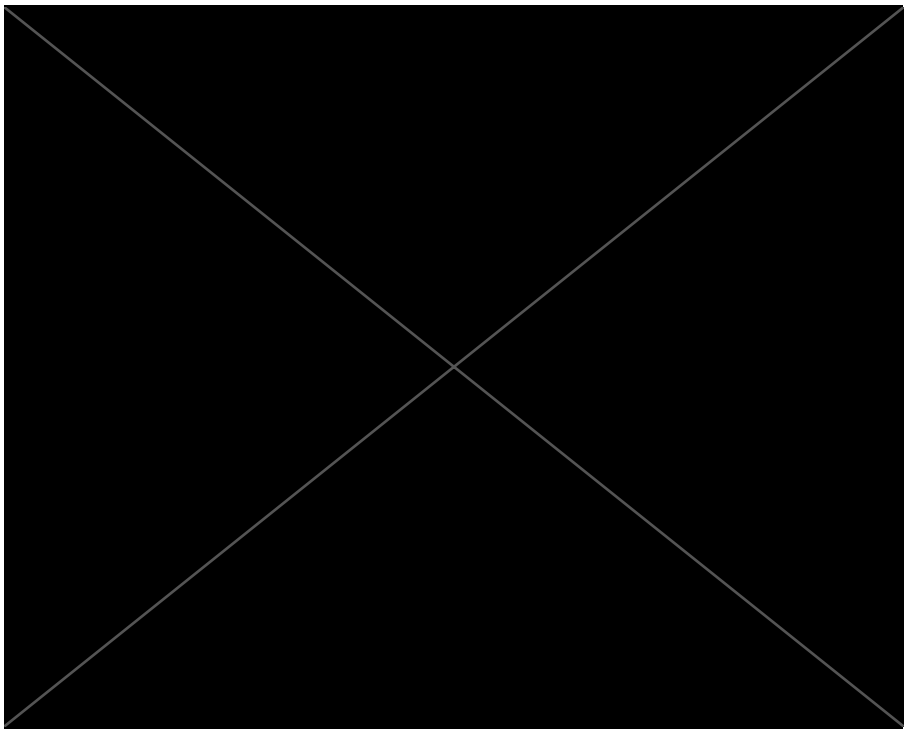


Figure 3.25. A photograph published in *Science and Technology for Youth* showing the director Josef Císařovský shooting his documentary film *Mutagens* (1984). Posing children close to white smoke evokes industrial health hazard.

Films also used ecology as a theme to investigate other issues, especially the moral and political state of modern society, and by extension of state socialism. They depicted experts as characters who embodied modernity, but also reflected the conditions of the late socialist era. In 1988 an award was given at Ekofilm to the film *Oil Gobblers* (*Ropáci*), written and directed

[635] Hana Kolářová, 'Věda ve filmu: rozhovor s režisérem Krátkého filmu Praha Josefem Císařovským (nejen) o tom, jak se filmuje věda', *Věda a technika mládeži* 39 (1985), 14.
[636] 'Dnes uvidíte', *Zpravodajství Ekofilm* 1 (1985), 4; Daniela Krupková, 'Seznamte se: Josef Císařovský režisér' *Mladý svět* 30 (14 Jun 1985), 23.
[637] Kolářová, 'Věda ve filmu', 13–14.

by Jan Svěrák, who was then a student at the Film Academy in Prague.[638] A year later, the film won the American Student Oscar. The film depicts a fictitious expedition of experts travelling to Northern Bohemia to research how nature had adapted to human activity. The expedition finds a new species 'petroleus mostensis', whose specific name refers to the Most Basin, Northern Bohemia, famous for its surface coal mining (Fig. 3.26). The species, an 'oil gobbler', feeds on carbon monoxide, having adapted to polluted air.[639] The experts want to transport the oil gobbler to Prague, where it would find a suitable living environment. However, it dies when it encounters fresh air. Clearly, the story of a creature adapted to the polluted environment is also a satire of experts' urge to explore and exploit nature. The film critic Jan Foll praised the short film for being more than another 'ironic agitprop on a notorious theme of ecology' (he perhaps had in mind documentaries such as those by Císařovský).[640] Rather, in Foll's view, it was a parable of modern scientists, depicted as over-specialised experts unaware of real life around them. Foll implied that such 'scepticism and sense of humour' was a defence against 'invisible substances harming the free spirit'. Foll carefully employed the metaphor of pollution to refer to the oppressive political atmosphere, one also used by dissidents, with whom Foll had connections. As Foll maintained, the film was not so much about ecology as about the bad moral state of society, exemplifying how environmental issues were becoming more closely linked with political criticism.

638 *Ropáci* (dir. Jan Svěrák, Czechoslovakia, 1988).
639 The motif was in the 1990s adopted by the Children of the Earth (Děti Země), an environmental organisation that since 1992 awards mocking awards for 'oil gobblers'.
640 Jan Foll, 'Ropáci Jana Svěráka' *Scéna* 13, no. 12–13, (27 Jun 1988), 7, cited in: Jan Dvořák, *Scéna 1980-1989 : Antologie Autorů Scény* (Praha: Pražská scéna, 2019), 346–347.

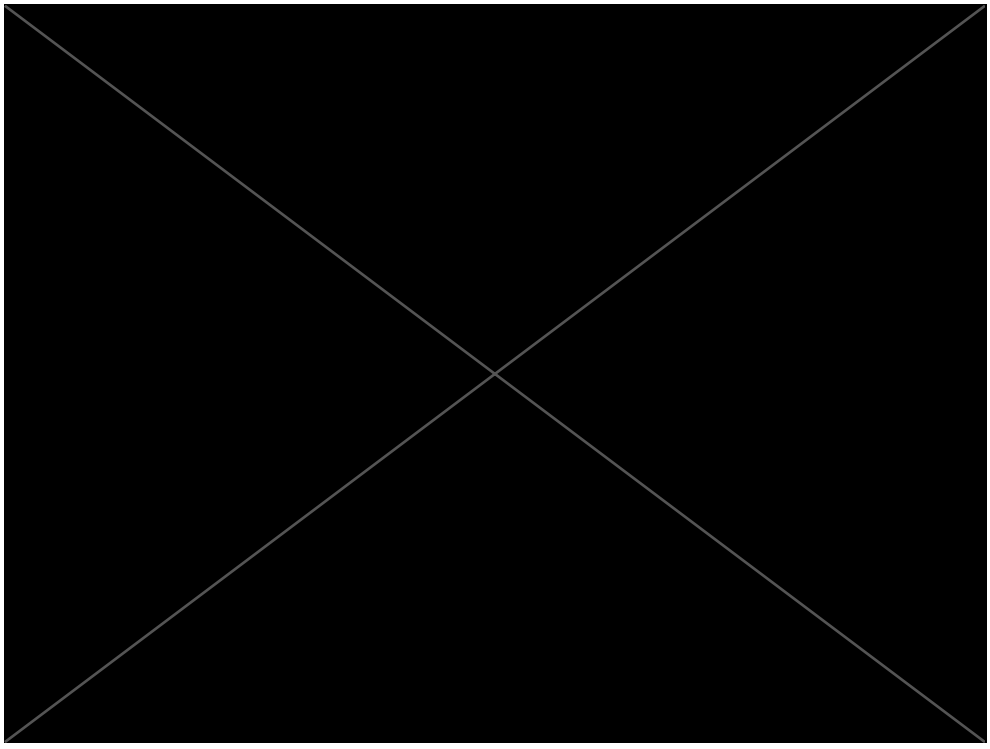


Figure 3.26. A fictive creature living off polluted air in *Oil Gobblers*, a 1988 short film.

Referring to values such as national landscape and childhood, films and other visual media showed the harmful effects of technocratic neglect on the environment. Although the filmmakers did not openly criticise systemic issues, they pointed to inner paradoxes and, sometimes, individual culprits, revealing tension between proclaimed ideals and practice. Ecology's uneasy relationship with socialist optimism was addressed in an attempt to improve the current order by questioning it. As ecology gained visual presence, ecologists and filmmakers abandoned abstract reflections of humanity and nature in favour of more concrete appeals to change. Ecology also became a distinct motif in criticism of modern society.

Laypeople and Technocrats

> Too bad we learned to fly into space before we learned to read the minds of animals. From the concerns of eagles, dolphins, trout, lynx, wolves, or pearl whales, we would probably more easily understand what it means to live and survive at the cost of adapting our most important life functions to disturbed and ever worsening conditions. We would also learn much that is essential for the future of our own species, which calls itself wise and intelligent.[641]

[641] Josef Velek, *Muž přes plot* (Praha: Středočeské nakladatelství a knihkupectví, 1989), 261.

Much like American writer Rachel Carson, discussed in the previous chapter, journalist Josef Velek juxtaposed big technological dreams and a foolish humanity. Velek thought, too, that humans were 'intoxicated' by their sense of intelligence that made them think that they could do anything they want, making it hard to accept that humanity was 'a mere part of the ecosystem'.[642] He was as well influenced by new scientific knowledge. Beginning his writing career about a decade later, he was aware of the debates on environmental limits and the predictions of computer models. But instead of Carson's apocalyptic stories of scientific hazard, Velek's stories were usually absurd, laughable encounters with incompetent people in power, as he wrote in the tradition of optimistic criticism of technology that developed in the late socialist culture.

Velek's journalism linked ecological matters with a scepticism towards technocratic knowledge, underpinned by appeals to socialist legality, and a turn towards laypeople's experience. His life story, as he told it, was one of a repentant scientist, who understood the repercussions of his discipline and wanted to tell the truth. As he explained, he became interested in nature through his work at a glassworks where he spent 12 years after studying electrical engineering.[643] Seeing the impact of industrial waste and the slow pace of change motivated him to start writing about environmental issues when he became a fulltime journalist after years of freelance journalism dedicated mostly to sport and technology.[644] His first articles were not yet investigative journalism but rather short essays that warned about environmental problems, using examples from Czechoslovakia and abroad that were found in foreign magazines, as apparent from occasional references, for instance, to American *Newsweek*, or from his colleagues in other countries, including the Soviet Union.[645] Velek travelled around

[642] Josef Velek and Dušan Pokorný, 'A do přírody vstoupil člověk', *Mladý svět* (19 Jun 1973), 10.
[643] He repeated the story several times, see e. g.: ACR, *Domino*, 20 May 1983.
[644] Velek, *Jak jsem bránil přírodu*, 20.
[645] Josef Velek, 'Myslete si, že jsme blázni', *Mladý svět* (29 May 1973), 11. Josef Velek, *Dva tisíce verst s Lenou* (v: Panorama, 1987), 83.

the world, to capitalist as well as state-socialist countries. From 1972 Velek published his articles in the magazine *Young World*, combining light-hearted writing and serious environmental problems.

Velek was influenced by contemporary ecological thought, writing about 'a complex system of relationships called nature', but he linked those to the 'contexts, connections and consequences' of decisions made by responsible individuals in his reports and stories, who were usually factory managers or local politicians.[646] Velek identified the responsibility of company managers who he believed should be removed if they did not follow the law.[647] One example Velek gave was of a company that prided itself on managing to postpone the construction of a sewage treatment plant, thus saving money and investing it elsewhere.[648] Writing about cases of 'invisible dangers', such as when food became poisoned by pesticides used in agriculture or waterways and air polluted by chemicals used in industry, Velek referred to examples from many parts of the world, identifying similar problems in, for instance, Ostrava, London and Moscow.[649] He told stories of individuals facing invisible dangers; in one case, Velek wrote about a boy who died in 1976 after helping his neighbour apply pesticide in the garden.[650] Several other people died that year from using organophosphates, prompting one newspaper to warn its readers to 'beware of fruit' and wash it properly before eating.[651] Velek thus turned abstract threats into concrete life stories that were happening in the present, making them part of the media agenda (Fig. 3.27). If the impact of Rachel Carson was limited in Czechoslovakia to a few mentions in books and specialist journals, as the previous chapter has shown, Josef Velek's environmental journalism made its way to the mainstream.

---

646 Velek, *Jak jsem bránil přírodu*, 20.
647 Josef Velek, 'Akce Brontosaurus', *Mladý svět* 3 (1974), 9.
648 Josef Velek, 'Zápisník akce Brontosaurus', *Mladý svět* 4 (1974), 3
649 Josef Velek and Dušan Pokorný, 'Neviditelné nebezpečí', *Mladý svět* 6 (1973), 11–13.
650 Velek, *Jak jsem bránil přírodu*, 41–50.
651 Josef Velek, 'Jed ve vašich rukách', *Mladý* svět (15 Jun 1976), 8–9.

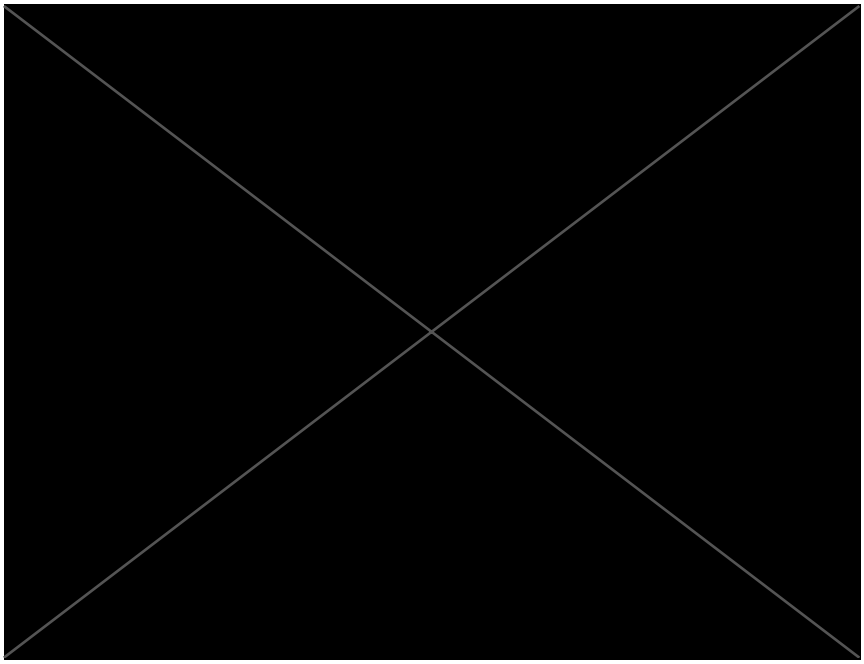


Figure 3.27. Velek's newspaper articles about the environment shown on TV in 1973. The top one is entitled 'Invisible Danger'.

Although historians sometimes see Velek's journalism as a sort of deviation from the socialist norm, his less well-known works make it clear that he was an established author, who wrote books for children about the work of chemists, steelworkers and other technical professions.[652] He also often travelled abroad, both in the West and the East, initially as part of his engineering job in State Research Institute of Glass Technology (1962–1974), before he became a full-time journalist. In his travelogues, Velek recounts his trips to scientific conferences in places like Paris, but also his admiration for the level of ecological debate in the Soviet Union when travelling across Siberia.[653]

The 1977 television programme *You Get What You Give* (*Jak se do lesa volá*), scripted by Josef Velek, brought to the screen examples of legal action against 'irresponsible' individuals as well as those of good practice. As historian Michal Kopeček has argued, under

[652] Josef Velek, *A Zvoní Ocel : Povídání o Hornických, Hutnických a Strojírenských Povoláních* (Praha: Albatros, 1978); Josef Velek, *Mistři Zkumavek : Povídání o Povoláních Chemického Průmyslu* (Praha: Albatros, 1980); Josef Velek, *Za Vůní Dřeva, Bavlny a Kůže : Povídání o Povoláních Dřevozpracujícího, Textilního a Kožedělného Průmyslu : Pro Čtenáře Od 12 Let* (Praha: Albatros, 1982).
[653] Velek, *Dva tisíce verst s Lenou*, 59, 75.

late socialism, law was almost as important a legitimation tool as moral and ideological claims.[654] Hosted by comedian Miroslav Horníček and produced by the Entertainment Department of the Czechoslovak Television, the programme sought to raise awareness of environmental laws using anecdotes and real cases. In one episode, Horníček explained that humans were part of a 'complex structure of their environment' where 'the law of action and reaction applies', thus translating the ecological notion of the existence feedbacks in the ecosystem.[655] He went on to state that such a connection to the environment made 'me, you, us, any of us' responsible for it.[656] In each episode, Horníček and Velek discussed cases that Velek had written about in the newspaper, interspersed with live music. Velek used the opportunity to explain certain environmental laws such as those protecting trees or animals, but also to promote his interest in hearing from people facing inattentive authorities. For example, in one case that appeared on the programme, Velek told a story of people complaining that a tree in Čerčany, a town near Prague, had been cut down by an energy company.[657] Although they had an expert opinion supporting them, the company's legal department ignored their letters until they reached the magazine *Young World*, seeking Velek's help and finally winning financial compensation. Appeals to law were thus chiefly concerned with pointing to individual culprits who failed in their responsibility for the environment.

Another case provided an example of enthusiasts making up for the alleged lack of technocratic oversight. *You Get What You Give* reported on the activities of an old fisherman, Otakar Prášil, who was concerned about water purity.[658] Velek described Prášil as an

---

654 Legal theorists saw eliminating contradictions between morality and law as an instrument of developing socialism: Michal Kopeček, 'Vládnout Právem. Česká Právní Věda Od „represivní Legality" k Právnímu Státu, 1969-1994', in *Architekti Dlouhé Změny: Expertní Kořeny Postsocialismu v Československu* (Praha: Argo, 2019), 61–63. See also: Scott Newton, *Law and the Making of the Soviet World: The Red Demiurge* (Abingdon: Routledge, 2015).
655 APFCT, IDEC 277 320 14153, *Jak se do lesa volá*, ep. 2, 6:53–7:12.
656 APFCT, IDEC 277 320 14153, *Jak se do lesa volá*, ep. 2, 7:31–7:41.
657 APFCT, IDEC 277 320 14065, *Jak se do lesa volá*, ep. 1, 16:14–18:01.
658 APFCT, IDEC 277 320 14153, *Jak se do lesa volá*, ep. 2, 13:59–22:16.

'enthusiast' and a 'good-hearted' man.[659] He was portrayed as an amateur inventor who developed a unique way of purifying water using sawdust, doing experiments in his apartment.[660] The way Velek described him, Prášil appeared to be a Czech handyman (*kutil*), who stood in contrast with engineering experts, as I discussed in the first chapter. So, as Velek tells us, when Prášil noticed that the river Vltava was affected by oil spills, he decided to investigate. Prášil brought a strudel to the watchman who oversaw the construction site of the Hotel Intercontinental in Prague who then told him that barrels with oil residue were emptied into a sewer and sold to passing drivers who made use of them at their cottages. Using his practical knowledge as a fisherman and a home experimenter, and making informal contacts with the watchman, an ordinary old man like him, Prášil bypassed technocrats, both ecologists and managers, to protect the environment. These ordinary men represented a wisdom unavailable to technocrats.

Apart from wise tinkerers, the heroes who uncovered technocratic wrongdoings were often young people interested in ecology. For example, television film *Emergency in Castle Park* (1983), scripted by Jaroslav Dietl, perhaps the era's most prolific television writer, portrays a highschooler Ivana, who notices that animals and plants are dying in a park.[661] Ivana first blames the director of a local factory, whom she meets at an opening of an exhibition 'Landscapes of Our Home'.[662] She accuses him of hypocrisy when he claims to admire the green landscapes lost to the pollution from his factory, but the director contradicts her, insisting they have invested a large sum of money to modernise filtration. Ivana soon finds out the real cause of the die-off is a new herbicide. The factory director helps Ivana contact the

659 Velek, *Jak jsem bránil přírodu*, 262.
660 Velek, 256–258.
661 APFCT, IDEC 285 350 23314, *Havárie v zámeckém parku* (dir. Vladimír Karlík, Czechoslovakia, 1983). For more on Dietl see: Bren, *The Greengrocer and His TV*, 130–158.
662 The event actually took place, displaying paintings of regional artist Pavel Poličanský, who connected the admiration of natural landscape and patriotism: Pavel Poličanský et al., *Pavel Poličanský Krajiny Domova : Městské Muzeum a Galerie ve Vodňanech 19 7. - 23. 8. 1987* (Vodňany: Městské muzeum a galerie, 1987).

environmental protection agency who is responsible for the herbicide's approval, but the inspector only laughs at Ivana's efforts. The film was inspired by Josef Velek's short story 'Deniers', based on true events.[663] Velek retold the story of Ivana Virtová who took part in an annual high school competition *Natura semper viva* ('Nature is always alive') founded in 1968 by Danuše Kvasničková. Ivana investigated the death of plants and animals in a park next to a chemical factory, Kaučuk, in Kralupy nad Vltavou near Prague. Winning third place, her short article was published in the magazine *Živa*.[664] In general, Velek's heroes were mostly ordinary men and women who possessed 'common sense', facing those who wrought environmental damage hidden behind anonymous technocracy.

Thus, Velek's journalism gave concrete shape to often rather theoretical concerns about the conflict between humanity and natural world, asserting that it was as much a conflict among humans themselves, particularly with those in power. His stories showed that environmental problems were often caused by irresponsibility and ignorance. Velek thus painted a picture of a society in which different people and institutions sometimes held opposing interests. In the next chapter, I will discuss how, in the late 1980s, this view was theorised by liberal ecologists like Josef Vavroušek. Velek criticised the fact that only a handful of these cases became known, as a common practice of factory managers was 'to deny, make excuses, disavow, and decline'.[665] He pointed at culprits who were responsible for disrupting the links between humans and the ecosystem in which they lived and at ordinary people who faced them. As shown in *Emergency in Castle Park* and other films (the good school director in the film *Brontosaurus* to name one more), there appeared to be good and bad technocrats and managers, and environmental problems were thus individualised rather than criticised systemically.[666]

---

663 Velek, *Jak jsem bránil přírodu*, 114–118.
664 Ivana Virtová, 'Negativní vliv Zeazinu 50 na keře a stromy v okrasném parku před koncernovým podnikem Kaučuk v Kralupech nad Vltavou', *Živa* 6 (1978): 238–239.
665 Velek, *Jak jsem bránil přírodu*, 114.
666 Another such example was the film *Section 224*, whose title refers to a law on national emergencies and that portrays a conflict between a company's economic interests and common

Even so Velek constructed the image of the technocrat in opposition and contrast to ordinary people.

Against this backdrop, Velek put himself in the position of an advocate who voiced the concerns of people who wrote to him, standing up against 'experts' who mistakenly thought they knew better.[667] In contrast to those in power, Velek wrote how he came to like, for example, porters, 'pensioners sitting in their grey and blue uniforms at the factory reception'. At first he took them simply for gatekeepers and despised filling in invitation forms and guest books that made him 'pretend to remember a made-up ID number and forge the signatures of people visited'.[668] But during one visit to a glass factory in Svor, Northern Bohemia, where he was supposed to meet company experts from a nearby town of Nový Bor who never came, he got into a conversation with a porter who told him: 'come over here for coffee and I'll tell you so much about the factory your head will spin'. They talked for five hours, finishing in a local pub. Velek ultimately thought of porters as possessing their own kind of experience and wisdom. In a similar fashion to the story about old fisherman Prášil, Velek learnt to do without technocrats and rely on common experience.

Indeed, Velek almost always portrayed failed technocratic projects with irony. As I have argued, irony was a way to question socialist values in an optimistic way. In a report about the leakage of liquid manure from a processing plant in Nový Svět (meaning 'New World'), a village in Southern Bohemia, he referred to Czech Romantic composer Antonín Dvořák's New World Symphony.[669] Furthermore, the story contrasted the 'old world' of the Šumava mountains and the 'new world' of Šumava agriculture, counterposing the ancient, natural purity with contemporary dirt and 'smell'. The New World Symphony was used as an extended

societal interests, when a company endangers landscape with chemicals. *Paragraf 224* (dir. Zdenek Sirový, Czechoslovakia, 1979).

667 In one case, for instance, an attempt to bend a river to fit under a new bridge in fact only represented somebody's economic interests. Velek, *Muž přes plot*, 11, 14.

668 Velek, *Jak jsem bránil přírodu*, 168.

669 Velek, *Příběhy pro dvě nohy*, 23.

metaphor that tied together the concrete place, national culture, and criticism of dysfunctional technocracy. The contrast between high and low motifs was also a way of portraying the failed technocratic projects and the resulting environmental problems as an outcome of optimistic engineering ambitions. So rather than pointing to a general conflict between humans and the natural world, Velek emphasised the conflict between farmers and bureaucrats that was taking place within institutions, which Velek ironically called a 'symphony of pressure and resistance'.[670] The issue was about an ill-conceived decision to place heifers where it was too cold for them, with liquid manure seeping through the ground to a peatbog, which was thus dying because of excessive nitrogen, and becoming frozen in winter. Heating coils were put around the frozen pipe that was supposed to take the manure away but instead fell to the ground. Velek likened the pipes to the engines of the US Challenger space shuttle that broke apart in 1986 soon after its start, making a point about failed engineering ambitions – and giving global imagery once again a local meaning.[671]

The celebration of lay experience in contrast to expert knowledge, as portrayed in Velek's journalism, is crucial in explaining understanding the turn from a belief in technocratic socialism to questioning the very ability of technocrats to govern the world. To be sure, Velek did not challenge socialist politics but rather found ways how to express environmental issues critically. Velek's style was literary, but not pessimistic like Carson's. But neither was it apologetic about technocratic ambitions in the way Jaromír Tomeček's literature, analysed in the previous chapter, was. It would, however, be wrong to see Velek and Tomeček as representing opposing views, as they both represent acceptable forms of late socialist environmentalism, yet Velek's writing was less forgiving.[672] Both believed they could improve

---

[670] Velek, 28–29.
[671] Velek, 26.
[672] Velek once gave Tomeček as a role model for young nature protectionists and an example of a 'great writer' who profited from careful observation of nature. Josef Velek, *Odznak Odbornosti. Ochránce Přírody : Rady a Návody k Plnění a Získání Odznaku Odbornosti Ochránce Přírody*, Odznak Odbornosti: Sv. 10 (Mladá fronta, 1978), 148.

society better through their writing, yet their purpose differed. While Tomeček attempted to reconcile socialism and ecology to preserve socialist progress, Velek was not a firm believer in socialism but cared about making the current system more ecological. To achieve that, Velek also adopted distinctive optimistic and ironical tone, which resembled satirical fiction, examined in the first chapter.

Technical Rationality Versus Pub Wisdom

The satirical elements in Velek's writing were highlighted by the cartoons of Vladimír Jiránek, whose illustrations often accompanied his articles. Jiránek became active as a cartoonist in the late 1950s, with some international exhibitions in the late 1960s and first solo exhibitions in Czechoslovakia in the 1970s.[673] He drew seemingly countless illustrations for magazines *Young World* and *Technical Magazine* (*Technický magazín*), for popular science books, and accompanied a wide range of books on ecology, including those by Josef Velek.[674] Jiránek also made several short animated films and collaborated on the feature film *Warm Greetings from Earth* (1983), discussed in Chapter 1. By that time, Jiránek was a famous cartoonist, and the film's animated scenes appeared too familiar some who criticised them for being insufficiently original.[675] As the drawings appeared in various genres, Jiránek and other cartoonists linked scientific and popular discourses and gave voice to a non-expert perspective on ecological debates (Fig. 3.28).[676]

---

673 The first solo exhibition was in Prague in 1973, followed by countless others in Prague and other regions. International competitions and exhibitions were in Brussels and Frankfurt am Main (1966), West and East Berlin (1967) and Warsaw (1987). Jiří Skalička, 'Kreslící filozof Vladimír Jiránek', in Alena Nádvorníková, *Film a Výtvarné Umění : Metodický Materiál pro Pedagogy a Organizátory Systému Mládež a Kultura* (Olomouc: Krajský pedagogický ústav, 1989), 27.See his early works in: Milan Kopřiva and Jiří Šalamoun, eds., *Být Či Nebýt* (Havlíčkův Brod: Krajské nakladatelství, 1961).His later books: Vladimír Jiránek, *Anekdoty o Civilizaci*, ed. Milan Albich (Praha: Lidové nakladatelství, 1977); Vladimír Jiránek, *Jak Je Tomu u Lidí* (Praha: Práce, 1983); Vladimír Jiránek, *Běžte - a Milujte Se!* (Praha: Mladá fronta, 1987).

674 Skalička, in Nádvorníková, 27.

675 NFA, IIf-3664 Srdečný pozdrav ze zeměkoule, M. Švagrová, "Komedie o naší civilizaci", *Svobodné slovo*, 15 Apr 1983.

676 Vladimír Jiránek was indeed the most prolific cartoonist who took ecology as their main topic, he was not the only one. See, for example, the work of Vladimír Renčín: Vladimír Renčín, *Renčín 99* (Praha: Lidové nakladatelství, 1982).

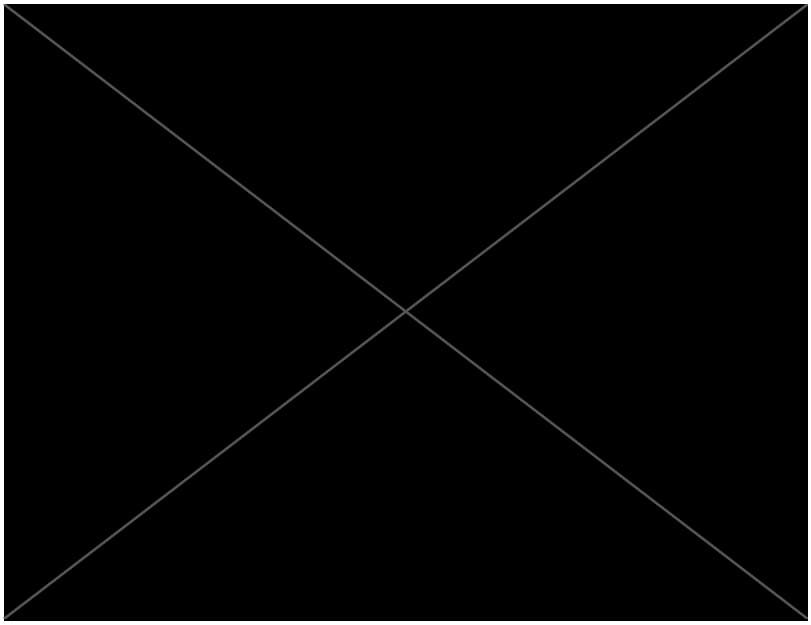


Figure 3.28. Cartoonist Jan Vyčítal draws environmentally-themed caricatures while journalist Josef Velek talks with a guest in the studio (*Nature for Tomorrow*, Czechoslovak Television, 1988).

These cartoons provided a distinct interpretation in ecological journalism and popular science, seeing nature was a way to escape technical civilisation and ecology was means to criticise modern society. In his drawings, Jiránek satirised the alienation of humans who lived in an overly technical world and their clashes with the natural world: for example, Velek's *How I Defended Nature* (1980) opens with a series of Jiránek's cartoons that depict a man who gets out of his car, strips naked and finds himself in the middle of the woods only to turn on the radio, showing that it is impossible to escape technical civilisation.[677] As Jiránek explained in a 1980 interview, his illustrations were 'a form of reflection' that stood 'independently' of the text they accompanied, carrying a meaning that could even contest the original text. As such, Jiránek considered his drawings a separate entity that 'confronted' the text with its own punchline.[678] As I investigate in the next chapter, this led Jiránek after 1989 to interpret his work as carrying a hidden, even anti-socialist meaning. Although the magazine *Young World* had good reviews from the authorities for their engaging yet not 'panicky' environmental

[677] Velek, *Jak jsem bránil přírodu*, 3–15.
[678] Miloš Skalka, 'Všudypřítomný smích. Vladimír Jiránek', *Květy* 24, 12 June 1980, 38. The same was suggested by Polish satirical writer Jerzy Wittlin who collaborated with Jiránek on several books: Jiránek, *Anekdoty o Civilizaci*, 10.

activities, it is true that Jiránek's cartoons appeared to them somewhat controversial for they allegedly lacked 'pedagogical subtext'.[679]

Jiránek' case highlights how mockery of technocracy and 'technical civilisation' in general was a central part of late socialist culture, particularly in association with ecological motifs. Yet in Jiránek's case, that mockery was not even framed in terms of socialist optimism. To be sure, in comparison to children's programmes analysed in the first chapter, Jiránek made no attempt to frame his works in terms of socialist optimism. Jiránek's wit lay in showing the discrepancy between technocrats' intentions and the consequences of their actions, which were depicted in the cartoon itself. Jiránek would typically combine a short text and a drawing. One, for example, showed 'leading experts' remotely controlling a flying pig (Fig. 3.29), thus portraying technocrats and engineers as foolishly attempting to control the natural world. Their work was depicted as absurd and nonsensical. Jiránek also drew moralising images of individuals who had lost contact with nature and were deluded by consumerist culture. Jiránek's cartoons were easy to understand and hard to miss in newspapers or on TV.

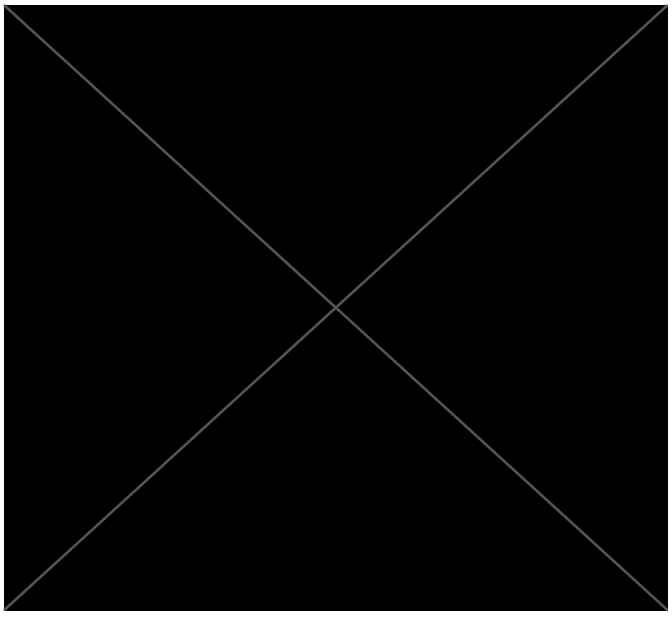


Figure 3.29. 'Our animals are controlled by leading experts', a cartoon by Vladimír Jiránek.

[679] Wedl, 'Green Volunteers in Czechoslovakia', 414. Adéla Kalousová, 'Postavení týdeníku Mladý svět v Československu v 70. a 80. letech' (MA thesis, Charles University, 2009), 86, cited in Wedl.

Interesting in this regard is Jiránek's encounter with State Security. Might it be that the secret police were interested in Jiránek because of his unflattering portrayal of technocratic socialism? The secret police documentation records mostly his contacts with the emerging political opposition in the early 1970s.[680] Yet, a report from 16 February 1973 noted that Jiránek's works were still covertly oppositional, portraying ordinary people in confrontation with the authorities.[681] The compromising material that the State Security used against Jiránek were mainly his cartoons from 1968 as well as the fact that a few of his drawings appeared in the exile magazine *Listy*.[682] They believed he took a reformist political stance in the 1960s, and suspected him of continuing oppositional activities. However, Jiránek declared his lack of interest in politics in a statement he gave to the police in June 1975, saying: 'I am more interested in those problems that allow me to make positive impact on society, or to which I can contribute to their solution in some way.' [683] Jiránek also claimed that his interests in 1968 were 'moral and philosophical' rather than 'political', and since then he became even less so interested in politics.[684]

Yet the polysemy of the ecological issue allowed Jiránek to give different interpretations before and after 1989. It is evident that Jiránek's claims to be apolitical were a defensive reaction, yet it suggests that making cartoons about ecology was in itself acceptable. What the police considered unacceptable was Jiránek's contacts with the opposition, threating him they would prevent him from working for the magazine *Young World*.[685] The agents even asked Velek, with whom they were in routine contact with because of his travels abroad, to

[680] ABS, O. a. k., sg. KR-689620 MV, Vladimír Jiránek. Most files are about contacts between Jiránek and the dissidents.
[681] ABS, O. a. k., sg. KR-689620 MV, 'JIRÁNEK Vladimír, výtvarný publicista – zpráva', 16 Feb 1973.
[682] This led to lasting pressure on Jiránek to write a letter of protest to *Listy*, which he eventually did. ABS, O. a. k., sg. KR-689620 MV, 'Návrh na provedení dílčích opatření v akci KORNOUT', 15 May 1976.
[683] ABS, O. a. k., sg. KR-689620 MV, 'Zápis o výpovědi', 3 Jun 1975, 2.
[684] ABS, O. a. k., sg. KR-689620 MV, 'Zápis o výpovědi' (3 Jun 1975), 1
[685] ABS, O. a. k., sg. KR-689620 MV, 'Návrh na opatření v akci "PAŘÍŽ"', 23 Jun 1976.

persuade Jiránek to cut off his contacts with the opposition.[686] Indeed, State Security were not so much concerned that Velek and Jiránek took interest in the environment; rather they were worried that, given Jiránek's connections, he might be helping the opposition, newly formed around the informal dissident movement Charter 77.[687] In other words, ecological issues, polysemic but with a potential to subvert the existing political order, were only seen by the authorities as problematic only when it was politicised by an openly oppositional group. Jiránek eventually gave in and signed the so-called 'Anti-Charter', a signature campaign organised by committees of the cultural unions among cultural workers to condemn Charter 77, in order to continue his work undisturbed – one oppositionist, according to police files, condemned him for this and called Jiránek a 'commercial buffoon'.[688] As I will discuss in the next chapter, a new liberal interpretation of anti-technocratic ideas emerged in the early 1990s. According to an interview Jiránek gave in 1993, his works carried supposedly hidden meanings; anonymous people in power indeed were the communists.[689]

In the 1970s and 1980s, Jiránek created several films critical of modern society, targeting consumerism, mass entertainment, industrial standardisation and alienation from nature, for which he received many prizes in Czechoslovakia and abroad.[690] In *Automatic* (1973), his first film on those themes, Jiránek criticised the issue of automation, showing machines as useless tools that make humans spend money until humans themselves become machines that require a coin to be inserted to function.[691] He further elaborated on this theme

---

686 ABS, O. a. k., sg. TS-771927 MV, Josef Velek, 'Zpráva k získání o spolupráci', 28 Oct 1977.
687 ABS, O. a. k., sg. KR-689620 MV, 'V. JIRÁNEK a J. VELEK spolupráce na koncepci publikační činnosti v akci BRONTOSAURUS – ochrana životního prostředí', 30 Jun 1978.
688 ABS, O. a. k., sg. KR-689620 MV, 'V. JIRÁNEK – reagence na jeho podpis pod prohlášením uměleckých svazů', 25 Feb 1977. For social history of dissidents' everyday life, see: Jonathan Bolton, *Worlds of Dissent: Charter 77, the Plastic People of the Universe, and Czech Culture under Communism* (Cambridge, Mass.: Harvard University Press, 2012).
689 Karel Hvížďala, 'Fenomén Jiránek', *Mladý svět* 20 (1993), 28.
690 Jiránek received prizes at international festivals in Berlin, New Delhi, Tehran, Varna, and Zagreb. 'Vladimír Jiránek', *Filmový přehled*, accessed 5 January 2023, https://www.filmovyprehled.cz/cs/person/5851/vladimir-jiranek.
691 *Automatic* (dir. Václav Bedřich, Czechoslovakia, 1973).

in a film *What Have We Done to Hens?* (1977), which was a commentary on the automation of production and life in general. When a hen is too tired to lay any more eggs, she is brought to a psychologist who teaches her how to have fun and dance, so she is finally able to return to automated egg-laying.[692] Another common motif in Jiránek's cartoons and films was excessive automobile use as an example of a technology that only made people's lives worse. For example in *A Beer across The Street* (1974), a man undergoes a lengthy and convoluted motorway ride just to get to a pub opposite his house only to forget his beer there on his way back; and *Thank You, Gentlemen* (1976) is a satirical history of the automobile industry that ends with an ironic thanks to the inventors of the car.[693] Moreover, in *Report on the State of Civilisation* (1981), he depicted a man's weekly cycle: commuting to work, leaving the city for the weekend, getting stuck in a traffic jam on the way back. Everybody looks the same and the crowd moves in unison. In this way Jiránek satirised the obsession with productivity, the idea that leisure time as a mere preparation for work as well as psychologisation of social problems.[694]

The Marxist (and in a broader sense modern) narrative of humans overcoming nature through technology was also the subject of Jiránek's satire. The satire was often based on absurd hyperbole of civilisational progress meeting the animal world. In *The Bear Report* (1983), human civilisation completely absorbs the animal world but instead of extinction, the bears are being assimilated with humans.[695] After a failed attempt to isolate the bears in a natural reserve, they are moved to the city and acculturated. The bears become part of human technical civilisation: smoking, rushing to working, getting inoculated, watching television, and even flying to space. Their acculturation is overseen by experts: one keeps an eye on a bear

[692] *Co jsme udělali slepicím* (dir. Josef Hekrdla and Vladimír Jiránek, Czechoslovakia, 1977).
[693] *Děkujeme, pánové!* (dir. Václav Bedřich, Czechoslovakia, 1976).
[694] For debates about leisure time in Czechoslovak sociology, see: Martin Franc, *Volný čas v českých zemích 1957-1967* (Praha: Academia, 2013), 50–74.
[695] *Zpráva o medvědech* (dir. Vladimír Jiránek and Růžena Brožková, Czechoslovakia, 1983).

watching television (Fig. 3.30). Furthermore, *Computerland* (1987) retells the story of humans 'overcoming the fear' of nature through the 'invention' of civilisation. Rational human beings invent robots, who surpass humans in their perfection. Humans then task robots to produce even better cars and airplanes that consume even more energy, leading to scarcity and war. In the end only robots survive on the planet, happily attending to their work the way humans used to do. Thus, Jiránek linked his view of ecologists' efforts with a criticism of life in contemporary society.

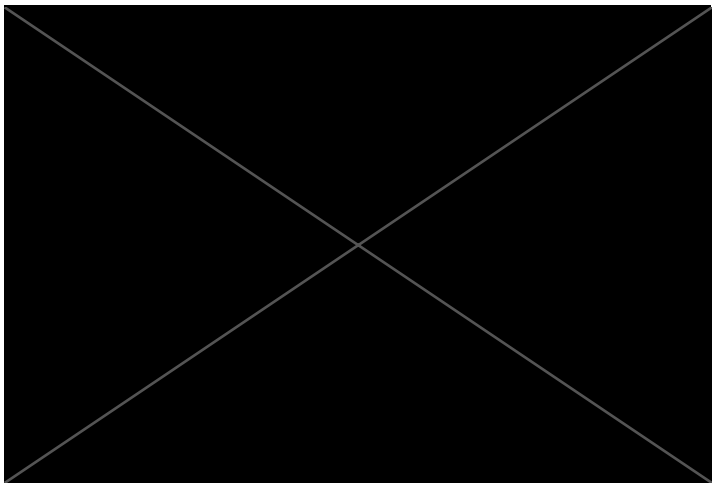


Figure 3.30. An expert oversees a bear becoming civilised by watching TV in the short film *The Bear Report*.

Like Velek, Jiránek set practical experience against expert knowledge, with the former presented as more authentic. In a 1980 interview, Jiránek explained that his intention was not to create 'pseudo-philosophical' drawings but to make people laugh.[696] However, this was not an end in itself, as Jiránek still wished to express an idea that would make one 'think about one's existence'.[697] Furthermore, he tried to capture the qualities of life through 'lived experience'.[698] Jiránek saw 'real life' as full of trials and errors as opposed to engineering precision, as also portrayed in *Pat & Mat*, a slapstick animated series that Jiránek co-scripted,

[696] Miloš Skalka, 'Všudypřítomný smích. Vladimír Jiránek', *Květy* 24, 12 June 1980, 38.
[697] kop, 'Udělejte si radost! (Dopřejte si Jiránkovy obrázky!)', *Květy*, 26 Dec 1985, 42–3.
[698] Miloš Skalka, 'Všudypřítomný smích. Vladimír Jiránek', *Květy* 24, 12 June 1980, 38.

about two clumsy but creative handymen.[699] If, as the cartoons suggested, it was false to believe that experts alone possessed knowledge about the world, Jiránek argued that true 'wisdom' was found in pubs, where he would go to listen to other people's stories.[700] He explained that he would skip university lectures to go to pubs and second hand book shops.[701] He thus preferred unsystematised, unanticipated knowledge over institutional expertise, authentic experience over technical rationality. A cartoon showing two old men cut off from the pub by a motorway, which later inspired Jiránek to produce the film *Beer across The Street*, illustrated such a clash between an old world with a human scale and a new world of engineered space – calculated but inhumane (Fig. 3.31).[702] This contrast between authentic wisdom and technical rationality largely had much in common with Josef Velek writings on experts.

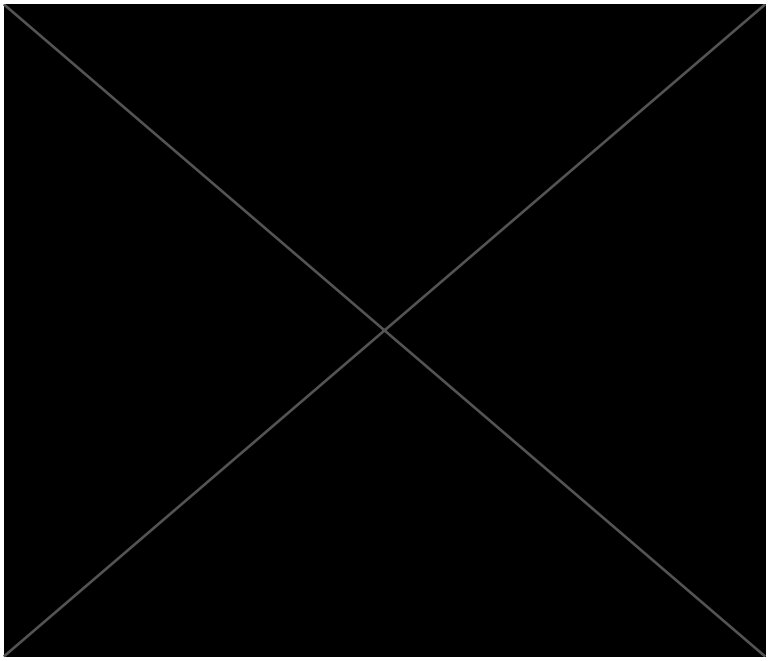


Figure 3.31. 'Now it's your turn to get the beer', a cartoon by Vladimír Jiránek.

Although the theme of an opposition between an expert and a layperson was common, Jiránek's approach differed from others presented in this dissertation. Unlike Velek, Jiránek

699 *Pat a Mat* (Czechoslovakia, dir. Lubomír Beneš, 1979), 28 episodes. APFCT, IDEC 293 383 93001/0009, *GEN*, ep. 9 (1993), 9:16–9:33.
700 Karel Hvížďala, 'Fenomén Jiránek', *Mladý svět* 20 (1993), 28.
701 Hvížďala, 28.
702 *Pivo přes ulici* (dir. Václav Bedřich, Czechoslovakia, 1974).

was not interested in ecology as a scientific discipline that could be put to use for the betterment of society. His quest for authentic stories also sharply contrasted with Jaromír Tomeček's efforts to imitate an expert eye and link rational and romantic approaches to nature, explored in the previous chapter. Whereas Tomeček fashioned himself as a poet who reconnected humanity and the natural world, Jiránek's identity was rather of a pub storyteller who revealed that technocracy was standing between humans and (their) nature, both the natural world and human character. The connection between pub narrative and ecological themes can also be found in Bohumil Hrabal's literature, featured, as I mentioned, in *Ecology in a Nutshell*.[703] But whereas Hrabal's absurdity questioned the very empirical reality and at once the ability ever to escape from its absurd character, other satires discussed here (Jiránek's cartoons, Svěrák's *Oil Gobblers*) had a clear moral message about the negative impact of technology.

Conclusion

This chapter has explained how diverse late socialist ecological discourses helped inform the shift from a vision of technocratically governed society with collectivist ideals towards new notions of environmental risk, individual responsibility, and the authentic life. Filmmakers, journalists, and experts had a shared interest in changing how people think about nature and, by extension, about themselves, yet their ideas about what nature actually meant differed considerably. In 1989 the Award for Ecology, founded that year by the Litvínov branch of the Brontosaurus Movement, was given to a variety of people and institutions, illustrating the range of activities and approaches to ecology.[704] Rather than marking the beginning of ecological thinking, this moment was the culmination of many years of academic research, journalism and filmmaking. The award was given, among others, to the ecologist Emil Hadač, documentarists Ivan Stříteský and Josef Císařovský, and the Ostrava branch of Czechoslovak

[703] APFCT, IDEC 488 224 13794/0002, *Ekologie všemi pády*, ep. 2, 17:39–19:12.
[704] kvá, 'Cena za ekologii', *Věda a technika mládeži* 14 (25 July 1989), 4.

Television for their programme *Ecology in a Nutshell*, scripted by Danuše Kvasničková.[705] The award was also given, jointly, to Josef Velek and Vladimír Jiránek. Even the Czech government was recognised for cancelling the construction of a pumped-storage hydroelectric power plant in the protected area of Křivoklátsko, Central Bohemia; journalists saw this decision as the product of their campaign to inform and mobilised citizens against the development.[706] Furthermore, Zdeněk Svěrák received an award as a scriptwriter for his film *What's up Doc?*, representing a 'sensitive and perceptive attitude towards the environment'. The numerous attempts of ecologists like Danuše Kvasničková and Emil Hadač to replace the dualistic view of nature and society with the notion of an intricately interconnected ecosystem remained largely obscured in the popular understanding of ecology as the defence of life unaffected by the advocates of technical civilisation, but there was a common message nonetheless: namely, that the blind application of technical rationality to the lives of humans and nature had adverse effects, demanding a far-reaching change in mentality.

Hence while ecology introduced a novel, holistic understanding of how humans should relate to the world, for most people it was associated with a critique of technical civilisation, that still stood in opposition to nature and thus appeared escapable. Environmental problems were associated with the dependence on technology and the pervasive influence of technocrats, rather than an idea that humans and the rest of the world were one. Ecology thus had a role as ironic counterpart to socialist optimism about technology – and as such was mostly the theme of comedy and satire, a way to make people laugh about the inadequacies of the present day, remaining at least formally optimistic. Nevertheless, as the next chapter will explain, scepticism towards technocratic governance eventually developed into a critique of the

[705] Furthermore, Ivan Makásek – who this chapter has not discussed – was recognised as the founder of the environmental magazine *Nika*, published since 1979. Lastly, nature protectionists in Bratislava were awarded for the project of a protected landscape Podunají.
[706] See journalist Dana Frantálová talk about it: APFCT, IDEC 489 214 13234/0008, *Příroda pro zítřek*, ep. 8.

Communist state's failed attempts to apply technical rationality to nature and people. For some it even legitimated neoliberal reforms, with markets understood as organic entities which did not need to be governed by central planners.

Chapter Four. The Nature of Markets: Neoliberalism, Ecology, and the Socialist Past

> Centrally planned economies suffered ecological damage not because they had a weaker ecological movement than market economies, but solely because every bit of our country has not been allotted to a clearly defined owner, who would have an eminent interest in taking good care of their bit, not letting it be environmentally damaged. Is it private gardens or 'public' spaces with no owner that are environmentally damaged?[707]

In December 1990, the Czech Minister of Finance Václav Klaus wrote about socialist public ownership as the single cause of environmental destruction. Thus, Klaus used the fact of environmental damage under state socialism as a case for neoliberal transformation. As I will investigate in more detail, neoliberals adopted the trope of the tragedy of the commons to argue for the benefits of private property on the environment. However, they were less interested in the idea that natural limits were better preserved under private ownership, which was the key argument of American environmentalist Garett Hardin who popularised the metaphor.[708] What they stressed was the causal link between private ownership and frugal use of resources, contrasted with supposedly inefficient socialist economy. As the quote above shows and this chapter will explore, the relationship between neoliberalism and environmentalism, let alone natural thought, was more complex. Looking at the intellectual and cultural understanding of ecology, this chapter will suggest that the ecological cause was not merely swept away by the neoliberal turn, but it also enabled it.

In this chapter, I argue that neoliberal and ecological discourses converged around an understanding of human knowledge as imperfect, based on a negative view of the state-socialist past, and promoting a moral transformation of postsocialist society. Neoliberals presented

[707] Václav Klaus, *O Tvář Zítřka*, ed. Libuše Šneková (Praha: Pražská imaginace, 1991), 76–77.
[708] For how US neoliberals adopted the tragedy of the commons in the 1970s, see: Fabien Locher, 'Les pâturages de la Guerre froide: Garrett Hardin et la "Tragédie des communs"', *Revue d'histoire moderne et contemporaine* 60–1, no. 1 (2013): 30–31.

neoliberalism as a set of economic principles and policies that, in contrast with Marxism, respected the natural order. They conceived of state socialism not just as undemocratic and repressive but also as overly 'engineered'. Socialist technocracy was accused of governing with no regard for the natural world and actual human needs.

That criticism had developed in the 1980s, and this chapter will study the discursive shift towards an explicit denunciation of state socialism in popular media and political thought framed by an environmental critique. As this chapter will show, satirical images of environmental destruction and journalism critical towards technocrats became explicitly linked with condemning state socialism. Meanwhile, former dissident thinkers developed a postmodern understanding of rationality and science, criticising socialist technocracy on the same grounds as they criticised European modernity, emphasising holism and authenticity in contrast to Cartesian dualism and modern alienation. These post-dissident liberals wished to replace technocratic structures, which operated with what they saw as imperfect human knowledge, with an unmediated contact with the world. Neoliberals, meanwhile, criticised socialist economic system for its inefficiency, allegedly leading to ecological crisis. They conceptualised socialism as a dysfunctional market economy, distorted beyond recognition by state interventions. Markets free of these intrusions, they suggested, would alleviate most environmental problems. At the same time, liberal ecologists shared with the former a negative view of the socialist past and an interest in a moral transformation, although their view of markets varied from the market as a solution to ecological crisis to the market as a necessary component of democracy. As everyone agreed on the criticism of socialist technocrats, a new conflict arose around mutual accusations of who represented the present-day technocrat: anti-environmental neoliberals began to accuse environmentalists of being the new technocrats and ideologues, while some ecologists opposed the new pro-market environmental politics as driven by a rationalistic, scientistic view of nature.

This argument provides a new explanation of the eclipse of ecology with the coming of neoliberalism. As environmental criticism gained traction in the 1980s and culminated in several protests in 1989, the subsequent sharp decline of political interest in ecology across Eastern Europe has left some scholars to think that environmental problems were suppressed by market reforms.[709] Another explanation is that environmentalists who had been active in the late socialist movement, either because they were newly employed by the state, or because they turned their expertise into a political career or joined Western-style non-governmental organisations.[710] Others have pointed to continuities with late socialism, namely a technocratic, 'apolitical' approach to environmental problems.[711] As they argue, in Czechia, ecological modernisation, an approach prevalent in Western Europe that advocated partial tweaks to production to make it more ecological while preserving growth, represented a continuity of technocratic solutions oriented towards production between socialist and market economies.[712] Notably, Matěj Spurný has asserted that this 'instrumental' form of ecology, compatible with capitalism's economising view of nature, marginalised after 1989 those who called for a profound value change.[713] Although this chapter does not wish to challenge the view that there was a division between radical and conformist ecologists, Spurný's definition obscures the fact

---

709 Tickle and Welsh, *Environment and Society in Eastern Europe*, 24.

710 See the collection of articles that cover general trends in East-Central Europe as well as country case studies: Susan Baker and Petr Jehlička, *Dilemmas of Transition: The Environment, Democracy and Economic Reform in East Central Europe* (London: Frank Cass, 1998).

711 Tickle and Welsh, *Environment and Society in Eastern Europe*, 24; Petr Jehlička, Philip Sarre, and Juraj Podoba, *Czech Environmental Discourse after a Decade of Western Influence: Transformation beyond Recognition or Continuity of the Pre-1989 Perspectives*, EUI Working Paper. RSC ; No. 2002/24 (San Domenico: European University Institute, 2002), 1–3.

712 Petr Jehlička and Joe Smith, 'Trampové, přírodovědci a brontosauři: Předlistopadová zkušenost českého environmentálního hnutí jako předzvěst ekologické modernizace', *Soudobé dějiny* XXIV, no. 1–2 (2017): 78–101. Yet as others have noted, a more radical, grassroots movement that opposed the state's technocratic approach to environmental problems developed alongside attempts to establish a green political party. Arnošt Novák, *Tmavozelený svět: radikálně ekologické aktivity v České republice po roce 1989.* (Praha: Sociologické nakladatelství, 2017); Matyáš Křížkovský, 'Tíživé Dědictví Nové Politiky v Česku: Zelení Jako Případ Neúspěšného Morálního Populismu', *Central European Journal of Politics* 5, no. 1 (2019): 30–54.

713 Matěj Spurný, 'Mezi Vědou a Politikou. Ekologie Za Socialismu a Kapitalismu (1975–1995)', in *Architekti Dlouhé Změny. Expertní Kořeny Postsocialismu v Československu.* (Praha: Argo, 2019), 291.

that 'instrumental ecology' was also heavily normative and founded on an assumption of a deep moral change, much like the whole neoliberal transformation.

Building on existing studies of Czech postsocialist discourse, I am therefore interested in how, in certain cases, ecological criticism as shorthand for condemnation of late socialist technocracy came to legitimise markets. Already in 1996, anthropologist Ladislav Holý argued that contemporary Czech environmental discourse was part of a broader critique of Communism as environmentally destructive. He noticed that problems such as pollution were seen primarily 'as an intrusion of the public domain into […] [the] private sphere and a violation of its sanctity'.[714] The environment thus became a 'symbol of the wider ills of the socialist system'.[715] Holý importantly identified crucial patterns in different, seemingly unrelated discourses: if the Communist relation to the environment was understood as an excess of human will interfering with the natural order, so was central planning as opposed to the market economy. Yet, Holý considers the ideas of 'naturalness' and 'artificiality' intrinsic to discourse, whereas this chapter follows the intellectual roots of this division against the backdrop of broader cultural developments.

One of the aims of the chapter is to historicize the postsocialist discourses on nature by connecting the literature on the socialist roots of neoliberalism with expert debates on environmental issues and liberal criticism of technical civilisation in popular media and philosophy.[716] As Gil Eyal and Johanna Bockman propose, Eastern European and American economists were in transnational dialogue about neoliberalism during socialist times, long before market reforms became the region's fate.[717] However, no one has addressed similar

---

[714] Ladislav Holý, *The Little Czech and the Great Czech Nation: National Identity and the Post-Communist Transformation of Society* (Cambridge: Cambridge University Press, 1996), 169.
[715] Holý, 171.
[716] On the other hand, this chapter does not explore the leftist critique of liberal environmentalism, but rather the contradictions and disagreements of a variety of liberal approaches.
[717] Václav Rameš's recent study of Czechoslovak economic thought has mapped in detail the lively debates among economists and politicians over what directions reforms should take. Johanna Bockman and Gil Eyal, 'Eastern Europe as a Laboratory for Economic Knowledge: The Transnational

encounters between neoliberal thought and environmentalism in that context. Neoliberals proposed that the environment was best taken care of by market forces. To promote economic reforms, neoliberals used anti-elitist, populist discourse, which posed an idea of technocracy, symbolised by the socialist past but now supposedly embodied by those who wished for tighter state regulation than neoliberal themselves.[718] Yet, as this chapter will show, neoliberalism also found ground in cultural meanings given to planning, including anti-authoritarianism in environmental journalism, the philosophical criticism of technocracy, and a particular construction of neoliberal tradition in the Czech nation's past. Neoliberal opposition to technocracy ultimately informed new anti-environmental arguments, which led to disagreements over what priority should ecology have in that transformation.

Defining themselves against state socialism, liberals advocated a moral transformation of postsocialist society in different spheres of life – political, economic, but, as will be the theme of this chapter, also ecological. Existing studies have characterised postsocialist liberalism as an elite political project and a 'pedagogical' exercise aimed at East-Central European societies.[719] Some have made the distinction between neoliberals and 'political' liberals in postsocialist politics that is helpful in contouring some political differences, although those did not always map onto environmentalism and anti-environmentalism. While neoliberals understood freedom as growing from the economic sphere and believed in philosophical individualism, 'post-dissident' liberals, who valued a notion of political community, rooted in views of society of moral individuals developed in anti-communist

Roots of Neoliberalism', *The American Journal of Sociology* 108, no. 2 (2002): 310–352; Bockman, *Markets in the Name of Socialism*; Václav Rameš, *Trh Bez Přívlastků, Nebo Ekonomickou Demokracii?: Spory o Podobu Vlastnické Transformace v Porevolučním Československu* (Praha: Ústav pro soudobé dějiny AV ČR, 2021).

[718] Martin Babička, '"The Future Is in Your Hands": Temporality and the Neoliberal Self in the Czech Voucher Privatization', *Journal of Contemporary Central and Eastern Europe* 30, no. 1 (2022): 83–99.

[719] Marta Bucholc, 'Law and Liberal Pedagogy in a Post-Socialist Society: The Case of Poland', *Journal of Modern European History* 18, no. 3 (2020): 324–334.

opposition.[720] As this chapter will show, post-dissident liberals were also prone to appreciating environmental limits and communitarian views, finding in ecological balance and holistic structure a pronouncement of their political ideas. However, they would also oppose those ecologists who they deemed too 'apocalyptic' and critical of liberal order. Former liberal dissidents drew from phenomenological resistance to technocratic rationality and a human rights critique of lack of information and rights violations.[721] Ecological problems were, for them, a part of moral criticism of state socialism, which made the environment mainly an ethical issue. They shared with neoliberalism scepticism towards technical rationality. However, a conflict remained between liberals over the extent and manner of moral regulation of the market when it came to environmental issues.

To understand the shifts in meaning given to nature and the environment, the chapter focuses on the period from 1985, while paying attention to the symbolic role of the regime change in November 1989 and subsequent crystallisation of liberal discourses in the 1990s.[722] In the following sections, I first explore an intellectual exchange between ecologists and economists in the late 1980s and the genealogy of liberal environmentalism. I also investigate how two postsocialist Czech environment ministers, Josef Vavroušek and Bedřich Moldan, made sense of the ecological crisis in relation to the regime change. To link developments in expert discourses, popular media, and liberal politics, I analyse the news stories and public image of environmental journalist Josef Velek around 1989. I also explore the interaction between cultural and philosophical criticisms of 'technology' and the support of neoliberalism.

---

[720] Michal Kopeček, 'The Rise and Fall of Czech Post-Dissident Liberalism after 1989', *East European Politics and Societies* 25, no. 02 (2011): 244–271; Jerzy Szacki, *Liberalism after Communism* (Budapest: Central European University Press, 1996).
[721] Kristina Andělová, 'Existoval Chartistický Environmentalismus? Charta 77 a Reflexe Životního Prostředí', *Soudobé Dějiny* 30, no. 2 (n.d.): 351–383.
[722] For 1989 as a period of meaning-formation and a the revolution as a symbolic event, see: James Krapfl, *Revolution with a Human Face: Politics, Culture, and Community in Czechoslovakia, 1989-1992* (Ithaca: Cornell University Press, 2013).

Finally, I investigate the domestication and naturalisation of neoliberal thought and neoliberal anti-environmentalism, as advocated by new Czech thinktank, the Liberal Institute.

Environmentalism and Neoliberalism

In a 1990 column, Klaus wrote that ecological problems were 'social' rather than 'natural'.[723] He argued against both 'dreamers' utopias' and the 'engineering positions of technicians and 'systems' scientists'. In doing so, Klaus argued against ecologists whom he deemed either too utopian or too technocratic and defended a purely market solution to environmental problems. He doubted the ability of science, and more generally the knowledge of central government, to manage the whole system better than the autonomous interaction of 'economic subjects'. The lack of proper pricing and a sense of ownership supposedly involved the devaluation of resources, and particularly natural ones as they were often not part of the market at all. For Klaus this explained why natural resources, seemingly free, were in excessive demand and used inefficiently.

Political conflicts over the environment after 1989 were a continuation of intellectual exchanges between ecological and economic experts in the mid-1980s, as the same experts became politicians in charge of privatisation and environmental reforms. The interaction with 'standard' neoclassical economy led future neoliberals like Klaus to base their argument against socialist economy on, among other things, the socialist economy's supposed inability to solve ecological problems.

At the same, neoliberals argued they were better suited than ecologists to solve environmental problems, mirroring a conflict between dualistic and holistic views of nature and society. Already in the late 1980s, Klaus opposed ecological holism, arguing that the environment was a 'social' rather than a 'natural' question. Klaus's 1990 newspaper article

[723] Klaus, 'Ekonomie, ekonomika a ekologie', *Týdeník Hospodářské noviny* 35 (1990): 3, cited in Miroslav Farský, *Vybrané Statě o Životním Prostředí : Environmentální Chrestomatie* (Ústí nad Labem: Univerzita Jana Evangelisty Purkyně, 2006), 10–13.

was heavily based (including long identical passages) on a paper that he presented at a 1986 seminar on the 'sociological and economic aspects of the ecological problem', where Czechoslovak ecologists, economists and sociologists met to exchange the views of their disciplines. The event was attended by, among others, ecologists Josef Vavroušek and Bedřich Moldan and economists Václav Klaus, Dušan Tříška and Tomáš Ježek who later became the main designers of neoliberal economic reform.[724] While the ecologist Josef Vavroušek presented a multifaceted theory of systems comprising biological and social phenomena from pollution to human values, to which I will return later in this chapter, Klaus plainly rejected systems theory as 'encompassing all and nothing', offering instead to return to the 'more sober' analysis provided by economics.[725] Without engaging with whatever ecologists were proposing, Klaus rhetorically discredited their approach in favour of what he plainly called 'economics'. What is more, by framing the ecological problem as a solely 'social' rather than 'natural' problem, Klaus argued that it had to be studied by social scientists, primarily economists. Klaus thus separated what systems ecologists had been painstakingly trying to put together, namely showing the interconnection of energetic exchange and social reproduction.[726]

The fact that growing neoliberal opposition against socialist economy used ecology as its argument in the late 1980s leads me to suggest that it was only in the early 1990s that some neoliberals began opposing environmental market regulations, framing them as a technocratic, socialist-like intervention. Czech economists were initially influenced by neoclassical economics, which allowed them to recognise 'externalities', drawing most their knowledge

[724] Other attendees included Jan Jeník, Alena Miltová, Miloslav Petrusek, Václav Mezřický, Lubomír Mlčoch, Jiří Musil, Michal Illner. The 1986 papers are reprinted in: Jiří Dlouhý, ed., *Sociologické a Ekonomické Souvislosti Ekologického Problému* (Praha: Univerzita Karlova, 2003).
[725] Dlouhý, 15–20, 26.
[726] On the other hand, another economist, Lubomír Mlčoch did not shy away from using the concepts of 'ecosystems' and 'value systems' (echoing ecologists influenced by systems theory) as 'exogenous variables' of macroeconomics. Dlouhý, *Sociologické a Ekonomické Souvislosti Ekologického Problému*, 41.

from Paul Samuelson and William Nordhaus's textbook *Economics: An Introductory Analysis*. This led them to contrast the image of a 'standard' economic theory with the economic practice they witnessed under state socialism.[727] The neoclassical economic paradigm was to Czech economists first and foremost an anti-socialist perspective on socialist economy.[728] In the late 1980s, Klaus and his colleagues were increasingly influenced by the work of Hayek, who argued that central authorities could hardly ever gather enough information to make better decisions than individuals. However, it took neoliberals some time to formulate their anti-ecological stance to an extent that opposed neoclassical solutions. While a neoclassical view, broadly speaking, included the notion of negative externality as a description and potential solution of environmental problems, Hayekian neoliberals saw it as threatening unnecessary intervention by government lacking necessary knowledge.[729] Neoclassicals believed in intervening to manipulate markets, in this case using taxation and sanctions to tackle environmental damage induced by economic activity, whereas neoliberals opposed such mechanisms on the grounds that the state was not equipped to make such decisions for individuals who were free to change their behaviour themselves. In the 1990s, these differences between neoclassical and Hayekian perspectives on the environment remained obscured in debates about economic priorities and the level of state intervention in environmental issues.

In the mid-1980s, economists proposed a neoclassical analysis as a solution to the environmental damage supposedly caused by socialist economy. At the 1986 seminar, future neoliberal economists proposed that it was impossible to introduce economic regulations of 'externalities' (such as pollution) due to the distortion of markets under state socialism. Tomáš Ježek argued that state intervention in the environmental impact of production in the form of

---

[727] As Klaus put, Samuelson was his 'biggest teacher'. Rudolf Kučera, 'Making Standards Work. Semantics of Economic Reform in Czechoslovakia, 1985–1992', *Zeithistorische Forschungen* 12, no. 3 (2015): 437; Václav Klaus, *Dopočítávání Do Jedné* (Praha: Management Press, 1995), 11.
[728] See Rameš, *Trh Bez Přívlastků, Nebo Ekonomickou Demokracii?*, 37–38.
[729] Troy Gabriel Wesley Vettese, 'Limits and Cornucopianism: A History of Neo-Liberal Environmental Thought, 1920–2007' (PhD Thesis, New York University, 2019), 22–23.

subvention and taxation was possible only after the creation of independent economic subjects.[730] He asserted that under central planning, 'externalities' between individual economic subjects could not be identified or even conceptualised as they were by definition part of one single subject, that is the state economy as a whole.[731] Therefore, in theory, the planner decided on both the economic output that caused pollution and the legal norms that would curtail it. Lubomír Mlčoch postulated that the neoclassical premises of profit maximisation and budget limitation for a company were weakened and replaced by plan fulfilment, and 'extensive growth' prioritised production volume instead.[732] As sanctions could be added as an additional expense to whatever profit the company would pay to the state, there was no clear budget limitation that would motivate the company management to avoid externalities.[733] According to the neoclassical paradigm as understood by Mlčoch, the ultimate problem was a lack of differentiation between the centre and individual companies:

> In the existing highly hierarchical economic mechanism, with a highly centralised and complicated structure in terms of powers and responsibilities, in which it is not even possible to effectively separate the 'centre' and the 'corporate sphere', imposing environmental sanctions and penalties is an ineffective transfer of money from one pocket to another. Thus, one and the same state ends up declaring the Krkonoše Mountains or another national park a nature reserve, while at the same time allowing its economic system to ravage it.[734]

Using economic vocabulary, Mlčoch expressed a sentiment that was also voiced by philosophers, ecologists, and creators of television programmes: the proclaimed omnipotent state failed to govern the country in a way beneficial to nature and its people due to dysfunctional management.

730 Dlouhý, *Sociologické a Ekonomické Souvislosti Ekologického Problému*, 30.
731 Dlouhý, 31–32.
732 Dlouhý, 38–39.
733 Dlouhý, 40.
734 Dlouhý, 41.

In the late 1980s, ecologists involved in the debates about economic reforms, considered the benefits of market mechanisms on the environment.[735] This was reflected in the theme of the May 1989 Ekofilm festival: 'Ecological economics – economical ecology'.[736] There, experts discussed, for instance, 'ecological economic growth' and the 'reduction of energy and material inputs in industrial technology'.[737] The urbanist Václav Kasalický even criticised the fact that the current economic system did not reflect the cost of natural resources: 'regulated prices can never replace the market', he believed, including markets for housing, land, and natural resources.[738] The free use of resources allegedly led to their degradation, since common property equalled 'nobody's property'. And although a close connection between ecology and economics was not new, as it underlay the assumptions of socialist technocrats as they sought to frame the environment as a governable problem, the turn to market solutions was unprecedented.

After 1989, neoliberals posited that ecological crisis in a country like Czechoslovakia was an outcome of a failed attempt by socialist planners to simulate market operations. In his talk at the 1990 meeting of Mont Pèlerin society in Munich, Klaus made a causal link between socialist economy and ecological crisis. Agreeing with neoliberal economists Milton Friedman and Thomas Sowell, Klaus viewed the existing socialist economy as a 'distorted' market rather than the central planning.[739] Instead of seeing the state as a single unit, Klaus considered the economy as composed of entities with competing interests, where socialist managers pursued narrow personal goals and lacked the incentives provided by private property relations.

---

[735] See, for example: ACR, *Sputnik*, 'Ekologie kontra ekonomika nebo ruku v ruce s ekonomikou', 10 Dec 1979.
[736] ACR, *Rozhlasové noviny*, 16 May 1989, 'Ekofilm 89'.
[737] *Ekofilm : Vybrané Referáty k Panelovým Diskusím 16. Mezinár. Festivalu Filmů a Televizních Pořadů o Životním Prostředí Ostrava 22.-26. Května 1989* (Praha: SZN, 1989), 10–20.
[738] *Ekofilm*, 29–30.
[739] Václav Klaus, *Cesta k Tržní Ekonomice : (Výběr z Článků, Projevů a Přednášek v Zahraničí) = A Road to Market Economy : (Selected Articles, Speeches and Lectures Held Abroad)*, trans. Zdeněk Hais (Praha: TOP Agency, 1991), 37; Milton Friedman, *Market or Plan?: An Exposition of the Case for the Market Mechanism* (London: Centre for Research into Communist Economies, 1984), 14; Thomas Sowell, *Knowledge and Decisions* (New York: Basic Books, 1980).

According to Klaus, this 'incompleteness of the market', including the existence of many 'territories' outside the market, allegedly led to 'a world full of negative externalities which are so dramatically demonstrated by the acute ecological crisis in the whole of Eastern Europe.'[740] Thus, at least up to 1990, Klaus used the ecological crisis to support a neoclassical argument against the socialist economy – the alleged need to create a true market economy and the promise to alleviate environmental problems by regulating externalities were presented side by side.

As a figure, the main proponent of Czech neoliberal reforms, Václav Klaus, became also synonymous with anti-environmentalism. An obscure economist of the State Bank in the 1980s where he became acquainted with neoliberal economic thought, Klaus was invited to join the Civic Forum, a political movement founded during the regime change in November 1989, later becoming Minister of Finance (1990–1992) and Prime Minister (1992–1998) as the leader of neoliberal Civic Democrats. When he served as Czech President (2003–2013), he became a famous climate denialist, along with others from Mont Pèlerin Society, the most prominent neoliberal thinktank.[741] Already in the early 1990s, his critics took issue with his treatment of ecology as secondary to economic reforms. In that era, he developed his view of environmentalism as a 'metaphysical ideology', akin to Marxism, erroneously replacing Hayekian spontaneous evolution with planning and prediction.

Although the environment had never been the core of Klaus's proto-neoliberal critique of socialist economy in the late 1980s, it was only when neoliberalism became dominant in postsocialist debates about economic reforms that Klaus began to attack the environmentalists.

---

[740] Klaus, *Cesta k Tržní Ekonomice*, 38.

[741] Vaclav Klaus, *Blue Planet in Green Shackles: What Is Endangered: Climate or Freedom?* (Washington, D.C: Competitive Enterprise Institute, 2008); Klaus, 'Current Global Warming Alarmism and The Mont Pelerin Society's Long-Term Agenda'. Klaus and other Mont Pèlerin Society members, prominently Deepak Lal, played an important role in transnational climate sceptic networks: Dieter Plehwe, 'Think Tank Networks and the Knowledge-Interest Nexus: The Case of Climate Change', *Critical Policy Studies* 8, no. 1 (2014): 101–115.

Klaus became famous for saying that, while the economy was like a cake, ecology was 'mere icing on the cake'.[742] What he meant was that whatever ecological regulations were secondary to neoliberal reforms, and the 'icing' included taxation.[743] Now Klaus asserted that all environmental regulations, including the taxation system supported by liberal environmentalists, attracted by neoclassical economics, were akin to socialist central planning.[744] He would therefore repeatedly state that the countries with a centrally planned economy only suffered from environmental damage only because they lacked property rights. According to Klaus, a strict application of neoliberal logic would in the long run solve all environmental problems.[745]

By arguing that environmental improvements would result from the action of individuals rather than the decisions of technocrats, Klaus also posited a conflict between individuals and technocratic elites.[746] In contrast to shared responsibility between technocrats and ordinary people, stressed by ecologists since the 1980s (and explored in the previous chapter), this was a complete shift from technocracy to individual decision-making of a neoliberal kind. It was also founded on anti-scientistic arguments; the experts were allegedly forgetting that what constituted a good life was an outcome of decisions and behaviours of individuals and could not be based on the 'dogmas of physics and biology'.[747] For Klaus, the political and economic elimination of socialist technocracy was the best recipe for a better environment and a better life more generally. Indeed, constructing ecology not as an overarching systemic issue but as a partial problem (or 'icing') and a matter of democratic choice, Klaus warned that enforcing such fractional issues would lead to technocratic centralism, when an 'entitled minority would hold power over others, in contrast to a Hayekian

[742] Klaus, *O Tvář Zítřka*, 76.
[743] Klaus, 135.
[744] Klaus, 77.
[745] Klaus, 78.
[746] Klaus, *Dopočítávání Do Jedné*, 37.
[747] Klaus, 35–36.

vision of market individualism.[748] Klaus also stood against those who saw ecology as a special kind of morality.[749] Klaus's anti-environmentalism was thus inseparable from his pursuit of privatisation.[750] The project of privatisation promised to abolish the state's monopoly on knowledge and was based not only on a rejection of state socialism as an oppressive regime that harmed people and nature, but as will be further explored, also on a widely shared scepticism of technocratic reason. The fast and radical privatisation Klaus drew legitimacy from that idea, against proposals to give the state a greater role and to proceed more slowly, ideas which were labelled as social engineering.

Sustainability and the Crisis of Spirit

Meanwhile, ecologists, particularly those working for the state, were attracted by the promises of 'sustainable development' as an antidote to Klaus's monetarism. A concept accepted by the World Bank already in the mid-1980s and following the publication of 'Our Common Future' (also known as the Brundtland Report, named after the former Norwegian Prime Minister) by the United Nations in 1987, 'sustainable development' became a new global environmental ethic in 1992 at the Earth Summit in Rio de Janeiro.[751] The concept had been familiar to Czech ecologists since the late 1980s.[752] The rather vague term encompassed both supporters of economic growth and those who preferred to talk about economic limits and the quality of life.[753]

Even those who opposed Klaus's neglect of the environment mostly opted for market solutions. At a panel themed 'Economy, Law, and Environment' at the 1990 Ekofilm Festival,

---

748 Klaus, 21–22.
749 Klaus, 27.
750 Klaus, 26.
751 Dorn, '"A New Global Ethic"'.
752 Simona Bouzková, "Naše společná budoucnost" *Památky a příroda: časopis státní památkové péče a ochrany přírody* 14., no. 3 (1989): 178–182; Gro Harlem Brundtland and World Commission on Environment and Development, *Our Common Future* (Oxford: Oxford University Press, 1987).
753 Elke Seefried, 'Rethinking Progress. On the Origin of the Modern Sustainability Discourse, 1970–2000', *Journal of Modern European History* 13, no. 3 (2015): 377–400.

somebody in the audience asked whether the economy would also have an ecological philosophy, or whether everything would be run 'according to Klaus', who by then clearly epitomised a neoliberal disregard for the environment. The panellists applauded but replied, diffidently, that the Environment Ministry had no direct influence on the Ministry of Finance. What they mostly suggested was a combination of value change and neoclassical tools under the banner of sustainable development.[754] For instance, taking inspiration from the USA, Tatiana Letková from the Central Institute of National Economic Research in Bratislava believed that environmental awareness would introduced into the economic sphere as a combination of economic tools (taxation, environmental charges) and business ethics.[755] A similar panel the following year ('Market, Ecology, Politics') concluded that environmental policies could be delivered by parliamentary politics and state institutions, susceptible as they were to public opinion.[756]

However, only a small circle of ecologists drew parallels between the obsession with economic productivism in both state socialism and capitalism.[757] A rare voice of scepticism about the markets in the 1990 Ekofilm debate was Hana Librová, a biologist and a sociologist sitting in the audience, who posited that ecology was not an essential part of economic liberalism. The only mechanisms available under liberalism were consumer choice and taxation, leading her to view the market economy as 'dangerous'.[758] At the same time, Librová criticised liberal capitalism for turning nature into property and placing its faith in the owner's responsibility and legislative mechanisms. On the contrary, she argued that a centralised and

---

754 For example. Jaroslav Stoklasa argued for sustainable development and value change in the economic sphere: APFCT, IDEC 490 224 14084, *Ekofilm 90 – panelová diskuse*, 'Ekonomika, právo a životní prostředí', 1:00–1:45.
755 APFCT, IDEC 490 224 14084, *Ekofilm 90 – panelová diskuse*, 1:55–4:15. Tatiana Letková, 'Výskum a hospodárska prax – nové formy spolupráce?', *Finance a úvěr* 40 (1990), no. 11: 792.
756 'Panelová diskuse: Trh – ekologie – politika', *Zpravodajství Ekofilm* (1991), no. 5: 2.
757 Critics would draw similarities between the two political 'regimes', as shown in a documentary film *Eco-History* (2000), directed by Tomáš Škrdlant. APFCT, IDEC 200 327 27231, *Ekohistorie* (dir. T. Škrdlant, Czechia, 2000).
758 APFCT, IDEC 490 224 14084, *Ekofilm 90 – panelová diskuse*, 'Ekonomika, právo a životní prostředí, 27:43–28:55.

politically passive society, with a parliamentary democracy and a growth-based economy, could not be the solution, as these were in reality the 'root cause of the current threat to the planet'.[759] She argued for decentralisation, encouraging an ecological way of life in local communities, and a search for a human relationship with nature in historically-anchored places.[760] Seeking alternative models of living, Librová also in the following years conducted ethnographic research among communities who lived a life of 'voluntary modesty', many of them religious.[761]

Although the anti-capitalist criticism shared with post-dissident liberals ideas about authentic life and cultural identity, the latter remained more optimistic, attaching their views to the global concept of sustainability.[762] One proponent of such views was Petr Pithart, a former dissident, who argued in a 1995 debate on politics and ecology that people did not want to be scared by an 'apocalyptic vision' of environmental decline, questioning those who thought market liberalism was incompatible with taking care of the environment.[763] Reacting to Pithart's criticism of 'apocalyptic visions' in 1995, Librová argued one should not refrain from them if they captured the current state of the world, just because it could supposedly demobilise someone.[764] Post-dissident liberals therefore shared with economic critics of neoliberalism the focus on a values change exercised as a turn to authentic community but did not agree with systemic critique of markets and 'pessimistic' views of environmental decline.

Similar calls for a global awakening of spirit and culture came in reaction to ecological crisis in the postsocialist region from politicians such as Mikhail Gorbachev, the last leader of

759 Hana Librová, *Pestří a Zelení : Kapitoly o Dobrovolné Skromnosti* (Brno: Veronica, 1994), 10.
760 APFCT, IDEC 490 224 14074, *Ekofilm 90 – panelová diskuse*, 15:58–17:30.
761 Librová, *Pestří a Zelení*.
762 APFCT, IDEC 495 214 10002/0003, *Příroda pro zítřek* (1995), ep. 3., 'Sestřih rozpravy na téma "Současný politický systém a ekologická krize"', 17:43–18:33.
763 APFCT, IDEC 495 214 10002/0003, 2:47–3:50.
764 APFCT, IDEC 495 214 10002/0003, 3:50–4:22.

the Soviet Union, and Václav Havel, the first Czechoslovak president.[765] In the USA, too, Al Gore, a presidential candidate (1992) and Vice-President (1993–2001), advocated 'sustainable growth', postulating that greater individual responsibility was a way out of what was chiefly a crisis of spirit.[766] Al Gore's market environmentalism was close to Josef Vavroušek, an ecologist who in July 1990 became the first Czechoslovak Minister of the Environment. Vavroušek wrote an afterword to Gore's *Earth in the Balance*, and they both proposed a spiritual renewal and strong global institutions as the solution to environmental crisis.[767] That convergence of ideas was not a coincidence as their thought derived from a transnational exchange between ecologists. Havel, Gorbachev, Gore and Vavroušek referred to various holistic conceptions of the world, such as Gaia and the noosphere, and associated them with the notion of ecosystems.[768] They also advocated for the principles of 'balance', 'humility', 'responsibility', 'modesty', and 'sensitivity', and against an omnipotent state that had allegedly been destroying both nature and people.

Liberal environmentalists therefore saw sustainable development as the main remedy for unhindered consumerism and rapacious markets. It was an optimistic vision used against neoliberals, but a vague one. The following sections will show the different attitudes towards neoliberalism, from moral quandary to conformism, of two of sustainable development's most prominent advocates, the postsocialist ministers Vavroušek and Moldan. They both believed primarily in a moral transformation. However, while Vavroušek never abandoned the mentality

---

765 Mikhail S. Gorbachev, 'Foreword', in *The Biosphere and the Noosphere Reader: Global Environment, Society and Change*, by Paul R. Samson and David Pitt (London: Routledge, 1999), ix–x; Václav Havel, 'Foreword', in *Environment and Society in Eastern Europe*, by Andrew Tickle and Ian Welsh (Harlow: Addison Wesley Longman, 1998), xi–xii.
766 Al Gore, *Earth in the Balance: Ecology and the Human Spirit* (Boston: Houghton Mifflin, 1992), 12.
767 Josef Vavroušek, 'Doslov', in *Země Na Misce Vah : Ekologie a Lidský Duch*, by Al Gore, trans. Jan Jařab (Praha: Argo, 1994), 347–348.
768 Jonathan D. Oldfield and Denis JB Shaw, 'VI Vernadskii and the Development of Biogeochemical Understandings of the Biosphere, c. 1880s–1968', *The British Journal for the History of Science* 46, no. 2 (2013): 287–310; Clarke, *Gaian Systems*.

of limits and challenged strictly neoliberal views, Moldan fully adopted the optimistic vision of green growth along the lines of the Brundtland Report.

Cybernetics and Liberal Environmentalism

At a demonstration on Wenceslas Square in Prague on 23 November 1989, Josef Vavroušek came to the microphone to talk about politics and nature which at that moment seemed to be linked more closely than ever.[769] The environmental destruction of the country was, for Vavroušek, the 'fundamental characteristic of the current crisis'. According to Vavroušek, people were losing their 'instinct for self-preservation', their ability 'to respond to a life-threatening danger'. Society was, as Vavroušek put it, 'losing its ability to govern itself' as it lacked 'effective feedback loops'. A cybernetician by profession, Vavroušek employed the metaphor of feedback to describe the exchange of communication between different entities. In this case, Vavroušek wished to describe a dysfunctional political system, which did not respond neither to citizens' problems nor to environmental damage, because it did not have appropriate mechanisms in place. In response the crowd chanted a rhetorical question: 'Who is to blame?' For Vavroušek, the answer was obvious: the only way out of 'ecological crisis' was a change of political system. During those days, on Wenceslas Square and elsewhere, thus far abstract, theoretical language, was acquiring new political meaning.

Vavroušek developed his criticism as an expert of the socialist state, but he was also in contact with the dissent movement. In early 1989 he published a short article in the samizdat magazine *Sociologický obzor* (*Sociological Horizon*), lamenting the opposition's lack of a political programme.[770] In contrast to the 1960s, he claimed, there was no vision to build political opposition on, as well as greater disillusionment, environmental damage, and a worse economic situation than in those times. Vavroušek perhaps remembered the times well. An engineering student in Prague in the mid-1960s, he was on the editorial board of a student

[769] ACR, 'Josef Vavroušek, Demonstrace na Václavském náměstí', 23 Nov 1989.
[770] jov, 'Potřebujeme program?', *Sociologický obzor* 3, no. 2 (1989): 26–28.

magazine *Buchar*, which was later shortly banned for its political openness.[771] In the 1960s, Vavroušek belonged to the younger generation that was not so much involved in debates about a communist reform, initiated by the party members, but rather aspired to some sort of political and social liberation.[772] In 1989, he was one of the founding members of the Civic Forum, a broad political platform established during the period of regime change. Taking part in writing its manifesto, Vavroušek's phrasing is apparent from the cybernetic language used to describe the situation:

> The ecological crisis requires an urgent solution. We see it in social self-regulation with functioning feedback loops, democratic mechanisms, effective state inspection and regulation, and above all, unrestricted public information.[773]

Originally cybernetic concepts, such as 'feedback', were adopted by ecology from systems theory; and now Vavroušek used them to analyse a political situation.

Earlier that year, Vavroušek had written a book called *The Environment and Self-Regulation of Society*, where he laid out a systemic, ecological theory of social organisation. He theorised a systemic model with three layers, showing how the destruction of the environment impacted individuals, the economy, and politics. The primary layer involved immediate phenomena like the quality of air; the secondary layer related to more complex ones like climate or hydrology; the third layer described 'deep links', which comprised biosphere, stability, and aesthetics.[774] Vavroušek argued that it was the third layer that explained the current state of the environment and society, pointing to social values and norms. This included a low level of 'ecological consciousness', mass consumption and waste, the pursuit of individual interests, and the disappearance of shared responsibility.[775] According to Vavroušek,

---

[771] He would also publish poems there, for example: Josef Vavroušek, "Nekrolog za pana X", *Buchar*, no. 2 (1964): 11–12.
[772] Kristina Andělová, 'Czechoslovak Generational Experience of 1968: The Intellectual History Perspective', *East European Politics and Societies* 33, no. 04 (2019): 881–898.
[773] Otáhal and Sládek, *Deset Pražských Dnů*, 513.
[774] Josef Vavroušek, *Životní prostředí a sebeřízení společnosti*, 86 (Praha: Institut řízení, 1990), 14.
[775] Vavroušek, 83.

the socialist price system could account neither for nature's inability to reproduce as fast as the economic plan envisioned, nor for that destruction of the environment or the depletion of unrenewable sources.[776] Moreover, what Vavroušek called the 'information system' did not allow people to access enough information and even concealed it, which hindered or prevented 'corrective feedback'. He meant that access to information would improve people's moral and political choices regarding the environment. This would include both respective authorities receiving information from citizens and well-informed citizens actively adjusting their behaviour or taking the political initiative. He suggested that it was necessary to find a system which would enable a 'harmonic development of humans and simultaneous restoration of dynamic equilibrium between society and its environment'.[777] An ecological notion of balance was mapped onto society. Other prerequisites of harmonic development included respect for human rights and social justice. He also criticised growing alienation between the individual and political representation.[778] Vavroušek thus used the language of cybernetics to articulate not only general links between nature and society, but also the specific failures of the state-socialist system.

In doing so, Vavroušek aligned cybernetics with liberal environmentalism. He saw in systems thought a paradigmatic shift in the Kuhnian sense (as he put it), following the reception of cybernetics by Czech Marxists in the 1960s. He took inspiration from the philosopher Miroslav Král, who in 1968 interpreted systems theory as a pinnacle of the history of science, in which a 'substantialist' approach was gradually replaced by a 'relational' approach.[779] Whereas modern physics always accounted only for a handful of variables, systems theory operated with complex interconnections. When it came to governance, cybernetics proved to Král that the centre could never hold 'unrestricted power to intervene in a directive manner',

[776] Vavroušek, 106.
[777] Vavroušek, 114.
[778] Vavroušek, 49.
[779] Král, *Věda a Civilizace*, 9–10.

but should allow for self-regulation of the system's parts.[780] Nevertheless, Král concluded with a vision of technocratic governance informed by democratic decision-making in which society would choose among various paths laid out by experts.[781] Taking this a step further, Vavroušek asserted that the self-regulating system should consist of various parts that controlled themselves and each other. He drew an analogy between the human body and society: the brain is at the top of the hierarchy only in terms of the organism's self-regulation but otherwise is equal with other vital parts of the body. Analogously, 'the most effective hierarchical system of control of a company or a state is not able to ensure long-term qualitative growth if at the same time there is not enough room for free decision-making of each individual.'[782] From that perspective, the liberal separation of powers was a version of a political structure with several 'power subsystems' that would keep each other in balance, supported by feedback mechanisms of participatory citizenship. Broadly speaking, Vavroušek drew political conclusions from statements that came from an existing scientific theory. In this sense, Vavroušek's political project remained technocratic, although his political vision did not give a central stage to experts alone.

Ultimately, cybernetics was, at least as Vavroušek saw it, just an analytical tool that uncovered the role of moral values in tackling ecological crisis. Indeed, Vavroušek took inspiration in the 1960s intellectual boom around cybernetics. However, Král's 1968 cybernetic vision of democracy still relied exclusively on scientific rationality; he argued that metaphysical ideas had to accommodate to technological progress as the only way to humanity's salvation.[783] Vavroušek, on the other hand, associated the belief in technocratic control with a disapproving image of paternalistic experts in power, seeing it as one of the

[780] Král, 132–134.
[781] Král, 148.
[782] Josef Vavroušek, *Modelování Biologických a Sociálních Objektů : Polystrukturní a Systémový Přístup* (Praha: Academia, 1989), 167.
[783] Král, *Věda a Civilizace*, 122.

causes of environmental problems. Instead, he emphasised modesty and humility, values that he felt had been suppressed under state socialism.[784] He believed that aesthetic and ethical principles should regulate human behaviour.

Given his scepticism towards omniscient planners, Vavroušek welcomed the abandonment of the centrally planned economy for the market, but he warned that this alone was not enough to solve moral and environmental problems.[785] It is apparent from Vavroušek's political engagement, first in the Liberal Club, a faction of the Civic Forum, which was a political movement established during the 1989 regime change, and later in the Civic Movement, a liberal political party with social-democratic and ecological leanings, that he was looking for pro-market alternatives to market radicalism.[786] While the Liberal Club declared that the market economy was a means to a better life, including environmental factors, rather than a goal in itself, the Civic Movement provided a political alternative to the more strictly neoliberal programme of the Civic Democrats.[787] In September 1992, Vavroušek founded the Society for Sustainable Life (*STUŽ*), promoting the idea of sustainable development in the Czech Republic. The platform was critical of 'monetarists', represented by radical neoliberal reformers uninterested in environmental issues, and included more radical voices than Vavroušek's.[788] The sustainability advocates believed in the need fight for 'human values', which those 'monetarists' allegedly lacked. For example, at their 1994 symposium, philosopher Milan Valach asserted that a 'value change' ought to mean a 'systemic change', advocating for

---

[784] APFCT, IDEC 490 224 14074, *Ekofilm 90 – panelová diskuse*, 17:30–18:21.
[785] Jiří Plos and Josef Vavroušek, eds., *Lidské Hodnoty a Společnost v Pohybu* (Praha: Kruh nezávislé inteligence, 1994), 4–5.
[786] For more on the party politics, see: Adéla Gjuričová et al., *Rozděleni Minulostí : Vytváření Politických Identit v České Republice Po Roce 1989* (Praha: Knihovna Václava Havla, 2011), 67–68, 80–81, 95–98.
[787] AKVH, ID 21861, "Ustavující prohlášení Liberálního klubu OF", https://archive.vaclavhavel-library.org/Archive/Detail/21861.
[788] Those views were voiced for example at the two symposia on 'human values' and sustainable development, in Olomouc (11–12 March 1993) and Prague (25–26 September 1993): *Lidské Hodnoty a Trvale Udržitelný Způsob Života* (Olomouc: Společnost pro trvale udržitelný život ve spolupráci s katedrou ekologie Přírodovědecké fakulty Univerzity Palackého, 1993); Plos and Vavroušek, *Lidské Hodnoty a Společnost v Pohybu*.

employee ownership and direct democracy.[789] In turn, 'sustainable development' became an umbrella term for alternatives to a neoliberal obsession with 'growth'. [790] In the 1990s Czechia, the two terms were often put against each other, although the former in fact was not a proposition to put an end to growth but only to restrain it. Vavroušek himself would therefore sometimes talk about a 'sustainable way of life' instead of 'development' to accent the primacy of moral values over 'economistic' views of the society.[791]

So while criticising the socialist system for a lack of responsibility, Vavroušek warned about the danger of a 'one-sided orientation toward short-term economic profit and a concurrent reduction of freedom to a freedom to make money'.[792] Although Vavroušek's political goals, such as democratic elections, were being realised, he believed that deep links between humans and nature largely remained broken.[793] When it came to neoliberal reforms, he criticised concrete policy measures or the lack thereof, such as the fact that liberalised energy prices did not sufficiently reflect the environmental impact of energy production.[794] He thought it was possible to introduce economic measures within the market system that would lead to more ecologically sensitive production. But he also believed that most economists ignored the non-economic aspects of society, including people's attitudes towards nature. They allegedly failed to see the environment as inseparable part of life, rendering it an externality. His argument was also ethical as he believed that money was mistakenly becoming the axiom of the new society rather than a means to democratic governance. Vavroušek thus shared with neoliberals' opposition to an omniscient leader, but he believed that markets alone were oblivious to the environment.[795]

---

789 Plos and Vavroušek, *Lidské Hodnoty a Společnost v Pohybu*, 38.
790 cam, "Trvalá udržitelnost versus růst", *Nová přítomnost*, no. 5 (1997): 20–21.
791 Mikuláš Huba, ed., *Josef Vavroušek : Na Cestě k Trvalé Udržitelnosti : Sborník k Nedožitým 60. Narozeninám* (Brno: Nadace Partnerství, 2005), 13–14.
792 Vavroušek, *Životní prostředí a sebeřízení společnosti*, 84.
793 Vavroušek, 115.
794 Martin Mrnka, 'Ekonomická reforma očima ekologa', *Reportér*, 21 Nov 1991, 12–13.
795 'Ekofilm zahájen', *Zpravodajství Ekofilm*, no. 2 (1991): 1.

Ecology and the Liberal Community

Ecological and economic criticism of the socialist past found common ground in the ideas developed in the dissident movement. Like Vavroušek, Havel saw environmental damage and economic problems as two sides of the same coin: 'incompetent' and 'authoritarian' rulers supressed critical views and subordinated an economy oriented only towards growth and lacking market mechanisms to the Soviet Union.[796] According to Havel, central planning ruined competition, lacked 'natural' market regulation, and created bureaucratic demands that were followed only on paper. Havel questioned the Communist reliance on scientific rationality, which was based on the idea that humans could master nature because of their access to truth about the world, epitomised by the figure of a central planner.[797] However, Havel's argument went beyond Hayek's distinction between centralised and diffused knowledge. He also asserted that the Communists prioritised immediate benefits over future risks: environmentally, underestimating energy savings and investment in better technologies, and fiscally, 'giv[ing] people decent wages [and decent social benefits] for the time being so that they d[id] not rebel'. Havel's postsocialist views were rooted in the dissident critique of crude materialism as the cause of a moral failure evident in the social and environmental decline.[798] According to this view, socialist engineering had destroyed 'natural' values, with nature implying authenticity, rootedness, and a connection between landscape and culture.[799] This understanding of natural values informed post-dissident liberalism, based on a notion of a political community connected to its surroundings.

Ecological understanding of the world also informed Vavroušek's political imagination of global integration as a liberal-communitarian endeavour. As Czechoslovak Minister for

[796] Václav Havel, 'The Environment for Europe', *Památky a příroda* 16, no 5. (1991): 291.
[797] Havel, 292.
[798] Eagle Glassheim, *Cleansing the Czechoslovak Borderlands: Migration, Environment, and Health in the Former Sudetenland* (University of Pittsburgh Press, 2016), 11.
[799] Glassheim, 150; Havel, *Politics and Conscience*.

Environment, Vavroušek initiated the first pan-European conference of environmental ministers, held in June 1991 in Dobříš near Prague. The conference was opened by Havel. First, echoing the Heideggerian philosophy developed in the dissident movement, Havel stressed that the environmental damage was due to 'something deeper and more substantial, namely a particular relation to the world, to nature, to man, to existence.' He proposed that Communism was an ideology that believed in the power of the human brain as the 'most perfect organisation of matter', overlooking 'much more complicated and more ingenious organisation' evading human comprehension – 'the order of being, the order of nature, the order of the universe'. Havel thus suggested that there was a natural order that eluded the rationalistic comprehension of the world proposed by the Marxists. Vavroušek was the first ecologist Havel met, at an underground seminar at Havel brother's flat, and Vavroušek's ideas had helped inform Havel's philosophy.[800] Ecological thought met with a search for a new kind of universalism in politics in the phenomenological criticism of technocratic governance and a view of nature as a complex set of entwined entities. As Havel put it in Dobříš, an ecological view of nature as a system represented a principle of integration that was, with some imagination, applicable to political institutions. In fact, an 'organic incorporation' of the country into larger political organisations was, for Havel, just 'another dimension' of ecology seeking an 'optimal' structure.[801] Therefore, Havel associated the cybernetic principles of ecology with the notion of political community, which he saw as authentic because it was based in natural order. In that way, cybernetics, once a rationalist theory in the hands of the Marxists wishing to explain every aspect of reality, became a way of veiling the world's complexity in mystery of nature.

Understanding 'systems' as an organising principle of the world, Vavroušek applied ecological principles to international politics. Vavroušek's speech in Dobříš stressed the

[800] AKVH, ID 37096, 'Rozhovor prezidenta republiky Václava Havla pro Českou televizi dokument o Josefu Vavrouškovi', 10 Oct 2002, https://archive.vaclavhavel-library.org/Archive/Detail/37096.
[801] Havel, 'The Environment for Europe', 292.

negative legacy of Communism and the existence of a historic opportunity to establish a pan-European environmental initiative alongside the political and economic transformation of East-Central Europe into democracies with social-market economies.[802] Vavroušek suggested creating a 'system' with a '"flat" network structure'.[803] This relational, systemic approach thus also meant a turn from top-down to supposedly less hierarchical and more flexible structures.[804] Such interconnected, planetary action, Vavroušek hoped, would coordinate often isolated efforts to tackle environmental problems. Criticising the lack of global coordination, Vavroušek proposed the formation of a 'UN World Environment Organisation' consisting of continental units. The United Nations as a whole would thus be responsible for four 'systems', which would be mirrored in their institutions: environmental, security, economic and social. He presented his proposal at the 1992 conference in Rio de Janeiro, but his proposal received little support. On the other hand, The Environment for Europe initiative, started in Dobříš, resulted in continued international cooperation among European countries.[805]

As posited already in his earlier works, Vavroušek stressed in Dobříš the change in human values as the single most important and, at the same time, the most difficult goal.[806] Vavroušek therefore combined a Cold War idea of the world order as a system and a phenomenological notion that humans were active agents with values; individual human values and political structure, together, comprised a system.[807] Therefore, alongside new institutions, 'new, less selfish ways of life' had to be found not just to preserve human life but also the 'immense intrinsic value' of nature. Specifically, Vavroušek wished to 'rediscover' Albert

802 Josef Vavroušek, 'The Environmental Dimension of European Integration', *Památky a příroda* 16, no 5. (1991): 293.
803 Vavroušek, 295.
804 Cf. Luc Boltanski and Eve Chiapello, *The New Spirit of Capitalism* (London: Verso, 2005).
805 European Environment Agency, David Stanners, and Philippe Bourdeau, *Europe's Environment: The Dobříš Assessment* (Luxembourg: OPOCE, 1995).
806 Vavroušek, 'The Environmental Dimension', 298.
807 Cf. Andersson, *The Future of the World*, 155, 189.

Schweitzer's 'respect for life', a moral corrective to an optimism rooted solely in science.[808] Schweitzer was a protestant missionary born in Alsace, who practiced his Christian humanist ethic in a hospital in Lambaréné, Gabon, a French territory at that time. In 1968, Vavroušek, then an engineering student, took part in the Lambaréné Expedition, whose goal was to bring medicines to Schweitzer's hospital, a performance of assistance to the 'developing world' by Czechoslovak youth. As with shifting understandings of cybernetics, Schweitzer's reverence for life flexibly transitioned between socialist and postsocialist eras. Schweitzer's laments about the modern world also appeared as epigraphs to Rachel Carson's *Silent Spring*, broadcast on Czechoslovak Radio in 1966: 'Man has lost the capacity to foresee and to forestall. He will end by destroying the earth. … Man can hardly ever recognise the devils of his own creation'.[809] The potential negative aspects of progress resonated well with Marxist considerations of the changing relations between humanity and nature in the age of scientific-technological revolution. In fact, Schweitzer's version of Christian humanism, which was optimistic about life and proposed a science backed by ethics, also matched well with the kind of ecology preached under late socialism (and explored in the second chapter), which used the idea of 'respect for life' to define itself against existentialism. Schweitzer's *Teaching of Reverence for Life* was published twice in Czech, in 1974 and 1993. As the 1974 afterword explains, Schweitzer's belief in human progress and love of living beings were also socialist values.[810] In addition, Schweitzer's ideas were drawn on by the Czechoslovak nature protection organisation TIS (Association for the Protection of Nature, Landscape and People).[811] And in Vavroušek's *Environment and Self-Regulation of Society*, Schweitzer's teaching served as a

[808] Albert Schweitzer, *Nauka Úcty k Životu*, trans. Věra Kovaříčková (Praha: Supraphon, 1974), 58.
[809] *Mlčící Jaro*, pt. I: 2, II: 2; Carson, *Silent Spring*, 1965, 24.
[810] Schweitzer, *Nauka Úcty k Životu*, 83–85.
[811] Petr Jehlička and Matthew Kurtz, 'Everyday Resistance in the Czech Landscape: The Woodcraft Culture from the Hapsburg Empire to the Communist Regime', *East European Politics and Societies* 27, no. 2 (2013): 321.

theoretical framing of the need to respect ecological processes.[812] Finally, both Schweitzerian humanism and the Lambaréné expedition were reference points in Vavroušek's postsocialist endorsement of a global environmental ethic. In Vavroušek's life narration, the journey to Africa represented a revelatory moment that profoundly changed him. As he put it, he realised that material misery did not equal moral misery.[813] That discursive shift perfectly illustrates how it was possible to use the language developed under late socialism to endorse liberal values.

The intellectual turn towards liberalism was mirrored in Vavroušek's public image. Already in *Hello, Africa!* (1971), a travelogue written by fellow traveller Petr Bárta, Vavroušek is portrayed as a 'honest' and 'sincere' man who 'hates suits' and is nicknamed Viki, the King of Africa (in Czech, it rhymes as *Viki, král Afriky*).[814] In postsocialist times, Vavroušek had the image of an 'informal minister, his casual style, contrasting with the image of a socialist technocrat: as one of his colleagues remembered, 'Anyone who met him in his green jacket and jeans wouldn't believe he was the minister'.[815] His experience and down-to-earth demeanour were complementary traits that defined him as a non-technocratic politician.

On a global level, Vavroušek continued to theorise ethical principles that would guide humanity towards an ecological future. For example, at the general meeting of International Union for Conservation of Nature in Buenos Aires in January 1994, Vavroušek described what he saw as the damaging aspects of contemporary values and charted an alternative.[816] Vavroušek argued for the need to replace a 'predatory' relation to nature with an 'awareness of belonging', 'quantitative growth' with 'qualitative development', 'hedonistic' consumption

---

[812] Vavroušek, *Životní prostředí a sebeřízení společnosti*, 13.
[813] For example: Libuše Koubská, 'Vavroušek z Assisi', *Nedělní Lidové noviny*, 5 Feb 1994, I. See also how his wife Eva Vavroušková remembered him after his death: Jan Keller, *Přemýšlení s Josefem Vavrouškem*, (Praha: G plus G, 1995), 8.
[814] Petr Bárta, *Dobrý Den, Afriko!: Expedice Lambaréné* (Středočeské nakladatelství a knihkupectví, 1971), 18–19.
[815] Huba, *Josef Vavroušek*, 9.
[816] Plos and Vavroušek, *Lidské Hodnoty a Společnost v Pohybu*, 43.

with ‘conscious modesty’, individual freedom with ‘mutual responsibility’, ‘pride of reason’ with ‘cautious intervention’ in nature and society, ‘alienation’ and ‘lack of negative feedback’ with ‘instinct for self-preservation’, ‘short-term interests’ with acknowledging ‘long-term consequences’, ‘intolerance’ of different opinions and other civilisations with ‘mutual tolerance’, and finally lack of shared decision-making with participatory democracy.[817] Perhaps most interestingly, he wished to surpass both socialist collectivism and economic individualism, the former represented by ‘real socialism’ and the latter by ‘Smith’s invisible hand’, with a balance between individual and collective.

The end of state socialism, then, was for Vavroušek an opportunity to establish a morally sound global cooperation.[818] The historical experience of state socialism meant that the West was an object not just of criticism but also of aspiration. On the one hand, Vavroušek contrasted ‘an enormous economic and social leap forward in some parts of the planet’ with ‘severe global environmental problems’ and the destruction of non-Western cultures.[819] But when he talked more concretely, about policy and values in practice, he saw the West, where ‘every businessman knows they must behave well towards the environment,’ as much more advanced than postsocialist countries.[820] He also believed that overpopulation was one of the causes of environmental problems, a controversial opinion at that time, and one that anti-environmental neoliberals, including the Czech Prime Minister Václav Klaus, used to their advantage in arguing against ecological measures.[821] In contrast, Vavroušek took issue with the postsocialist reforms led by Klaus, whose only goal was allegedly to lead the country to a condition that Western Europe was trying to escape.[822] Instead, he believed that the region

[817] Plos and Vavroušek, 46–50.
[818] Plos and Vavroušek, 4–5.
[819] Vavroušek, *Životní prostředí a sebeřízení společnosti*, 298.
[820] Mrnka, ‘Ekonomická reforma’, 13.
[821] Plos and Vavroušek, *Lidské Hodnoty a Společnost v Pohybu*, 4; Klaus, *Dopočítávání Do Jedné*, 64.
[822] Koubská, ‘Vavroušek z Assisi’, III.

should join the world in looking for global solutions to the crisis. What ministers Vavroušek and Moldan, then, brought to the discussion table, such as when they went to the 1992 Earth Summit, was a historical experience of state socialism, which they criticised on moral and economic grounds.

The Tragedy of the Commons

In 1990, Bedřich Moldan and his colleagues at the Environment Ministry published an official report on the current state of the environment in Czechoslovakia, building on expertise developed under state socialism. The first illustration in the report is a photograph of police violence near the National Theatre (Fig. 4.1).[823] Presenting the report in *Nature for Tomorrow* (a television programme discussed in the previous chapter, whose broadcasting continued after 1989), Deputy Environment Minister Václav Mezřický stressed that is primary goal was to show that the totalitarian notion of omnipotence aggravated environmental destruction.[824] Indeed, before assessing scientific data, the 1990 report begins with an analysis of the 'totalitarian system'.[825] An imprudent use of violence was allegedly the other side of misguided belief in rationality.[826] The totalitarian system was blamed for a 'deep moral crisis': the failures of science, deformation of values and lack of individual responsibility had led to ruthless exploitation of nature, seen only as a resource for a materialist lifestyle. According to the report, the three 'pillars' of the Communist system – lies, collective responsibility and departmentalism – all manifested in the ecological crisis as lack of information, irresponsibility, and the inability to cooperate and see beyond limited interests.[827] According to this view, not only socialist elites were blamed for the crisis, but the whole society was seen as pervasively broken, not fostering or even allowing individuals to be responsible. The report

[823] Herbert Slavík, a photograph in Bedřich Moldan et al., *Životní Prostředí České Republiky : Vývoj a Stav Do Konce Roku 1989* (Praha: Academia, 1990), 14.
[824] APFCT, IDEC 490 214 14004, *Příroda pro ztířek* (1990), 4:38–5:21.
[825] Moldan et al., *Životní Prostředí České Republiky*, 15.
[826] Moldan et al., 15.
[827] Moldan et al., 16–17.

assumed that a 'totalitarian' attitude towards individuals was paralleled by an exploitative view of nature.[828] The modern divide between humans and nature, from which environmental problems allegedly grew, was thus in the report ascribed specifically to state socialism.

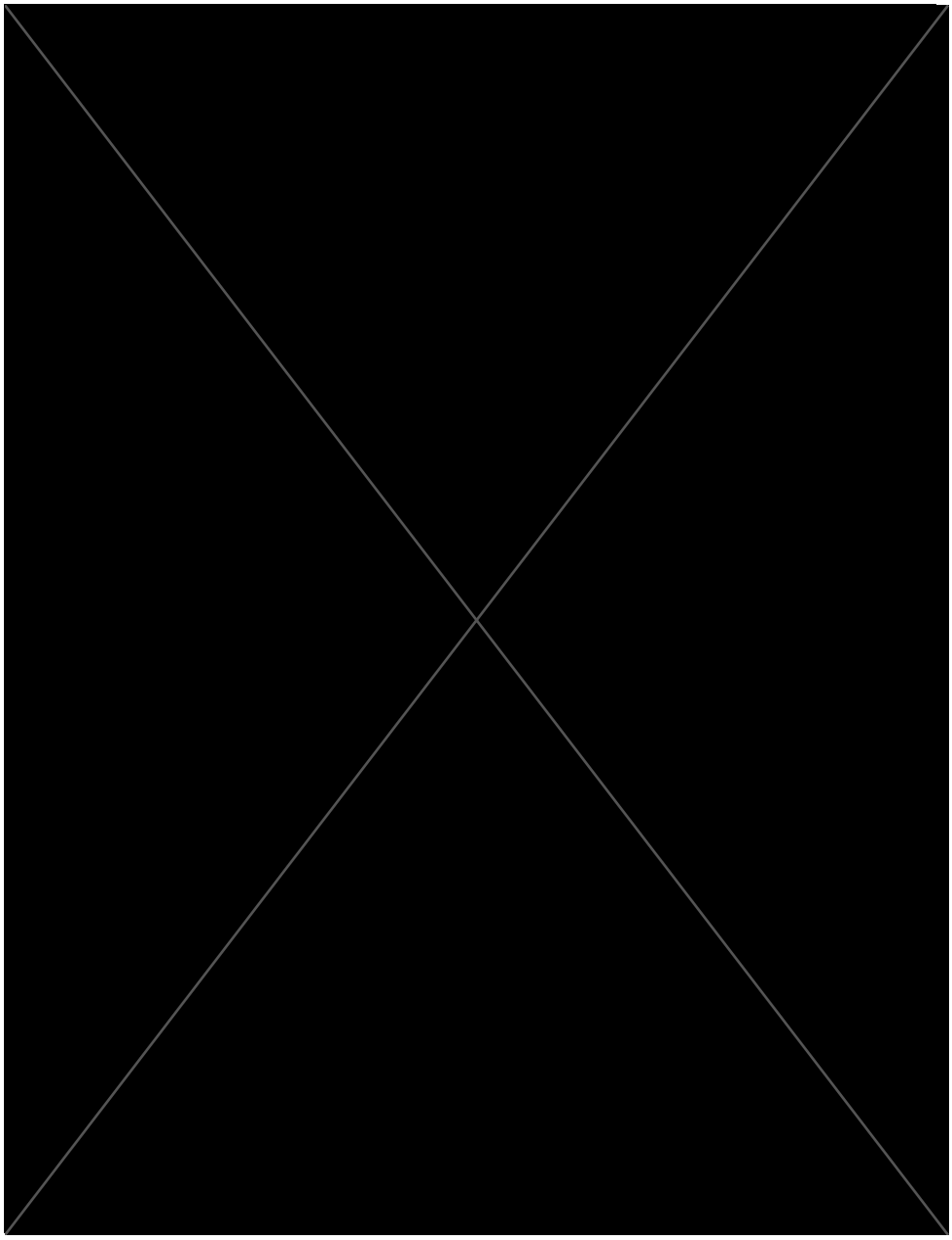


Figure 4.1. The first illustration in the 1990 government report on the state of the environment is a photograph of police violence on 17 November 1989.

The alleged lack of individual responsibility under state socialism substantiated calls for a moral awakening, underpinning the critique of socialist economy. The report was co-

[828] Moldan et al., 9.

authored by Bedřich Moldan, the First Czech Minister of the Environment (1990–1991), who had for three decades worked as an expert of the socialist state, monitoring the state of the environment. As discussed in the second chapter, Moldan was influenced by Western environmentalism, including intellectual ties with Kenneth Boulding and his 'Spaceship Earth' metaphor. As this section explores, Moldan also shared with Boulding a perspective on economics as a moral system, partly informed by religion. As Moldan said on Czechoslovak Radio in February 1990, the best everyone could do was to direct the revolution 'against ourselves', meaning people had to assume responsibility for the environment and change their behaviour according to environmental principles.[829] Two years later, Moldan lamented: 'We are still behaving as we did under the Communist regime, when it was all about "grabbing" whatever we could, knowing very well that the share we received had hardly anything to do with either real needs or expected benefits.'[830] He thus came to see the continued exploitation of nature as a sign of a ruthless and technocratic Communist mentality.

Moldan applied this outlook to his view of economic policy, arguing that ecological transformation had to be done concurrently with economic reforms.[831] This was partly motivated by international commitments. He served as Vice-President (1993–1994) and President (2000–2001) of the UN Commission on Sustainable Development and between 1998–2001 he was negotiating the harmonisation of environmental law with the European Union. He believed that the market economy was not only compatible with environmentalism but the only guarantee of sustainable development.[832]

Whereas the market supposedly operated with scarcity and had a moral core, socialist economy, according to Moldan, carelessly exploited nature and weakened responsibility. One example he gave was the state-socialist management of land:

---

829 ACR, *Rozhovor na sobotu*, 17 Feb 1990, 9:20–9:54.
830 Bedřich Moldan, *Ekologie, Demokracie, Trh* (Praha: Informatorium, 1992), 70.
831 Moldan, 7.
832 Moldan, 51.

> There used to be a long tradition of careful economy of space in our country, but like many other good traditions, it has been completely lost. The technocratic arrogance of the past regime, strengthened by the ideologically justified denial of property rights, and, consequently, the value and price of land, has resulted in countless absurdities, such as huge areas devasted by warehouses full of junk and building yards overgrown with weeds for decades. At the same time, however, we have witnessed the reprehensible 'densification' of high-rise buildings on housing estates based on nonsensical norms. The restitution of land and land ownership and the introduction of a normal property market will undoubtedly bring about change.[833]

Moldan thus juxtaposed a supposedly forgotten, authentic economy on the one hand with technocratic mismanagement on the other. Moldan combined the notion of economising natural resources with an image of ideal pre-communist past, both of which justified marketisation. The right to property, for Moldan, guaranteed a more ecological management that stood against bureaucratic 'non-sense'.

Thus, Moldan drew on the historical experience of state socialism to argue for a moral ecological transformation through marketisation. He saw the legacy of Communism as the worst symptom of the failures of Western civilisation and an argument for market-based sustainable development. Communism was characteristic of an 'ideological struggle with nature', subjugating it solely to human needs, exploiting its resources and transforming it at technocrats' will.[834] According to Moldan, Communist ideology was 'perhaps the worst outgrowth' of Western civilisation.[835] Under late socialism, ecological crisis had also been seen as the flip side of technological progress. But here, a more general criticism of 'civilisation' was updated as a condemnation of the Communist past, with a transformational agenda for the future. Importantly, Moldan believed that the negative traits of Western civilisation were surmountable, channelling his optimism into the market. Moldan was more optimistic in that regard than Vavroušek, as was apparent also during the first postsocialist debate at Ekofilm;

[833] Moldan, 77.
[834] Moldan, 9.
[835] Moldan, 10.

while Vavroušek talked mainly about modesty, not just in terms of frugality but also in terms of human knowledge, Moldan accented the shift from a 1970s limits-to-growth position to the contemporary idea of sustainable development as professed in the Brundtland report, which hoped to use markets to accelerate economic growth while observing ecological principles.[836]

Moldan believed that the markets were not just compatible with but indispensable for an ecological future. In his book *Ecology, Democracy, Market* (1992), Moldan drew from a number of major American ecological theories, such as Herman Daly's 'ecological economics', Donella Meadows's 'limits to growth' and Garett Hardin's 'tragedy of the commons'.[837] Hardin's theory resonated exceptionally well with the view that state socialism caused environmental damage due to its wastefulness and economic inefficiency and abandonment of individual responsibility. Moldan agreed that individuals overused the commons, as their only motivation was to exploit resources that did not belong to them, whereas if they were owners, they would use available resources more carefully.[838] Hardin believed that it was therefore necessary to 'explicitly exorcise the spirit of Adam Smith in the field of practical demography'. Hardin offers a thought experiment: when a herdsman is deciding whether to add more cattle to their pasture, benefitting from increased production and with the negative impact of overgrazing shared by all other herdsmen, one rationally decides to breed more animals. What did that thought experiment imply for the transformation of a state-socialist economy? There were individual companies that also benefitted from free access to land and other natural resources and were also often free to pollute their surroundings. Therefore, it was necessary to put a price tag on natural resources and create laws to regulate pollution. But instead of coercion, Hardin proposed the creation of society that would

836 APFCT, IDEC 490 215 13954/0003, *Příroda pro zítřek* (1990), ep. 3, 17:09–17:21, 17:47–22:47.
837 Moldan, *Ekologie, Demokracie, Trh*, 10–17; Daly, *Toward a Steady-State Economy.*; Meadows and Club of Rome, *The Limits to Growth*; Garrett Hardin, 'The Tragedy of the Commons', *Science* 162, no. 3859 (December 1968): 1243–1248.
838 Moldan, *Ekologie, Demokracie, Trh*, 51.

encourage responsibility and move from coercion by the 'arbitrary decisions of distant and irresponsible bureaucrats' to rules created by the mutual agreement of free individuals. In that rendering, the scarcity of resources as an environmental issue became an argument for neoliberalism. In the 1990s, Moldan was not as pessimistic as Hardin when it came to sustainable development - Hardin saw it as just another growth trap.[839] But like Hardin, Moldan posited that in contrast to the state-socialist past, the role of the state in the transformation had to be temporary and had to avoid any 'paternalism' of central authorities; the market would create conditions under which a moral change could happen. [840]

Moldan was thus believed that individuals freed by the market and guided by environmental ethics, would make better decisions than the state.[841] Ecologically educated citizens would act as consumers, replacing dysfunctional regulation by socialist bureaucrats.[842] Like Vavroušek, he believed in the power of information in fostering value change but had was was more confident about the market. Moldan thus countered those who were sceptical of market economy's ability to solve the environmental problems of planetary scale, driven by the power of technology.[843] For instance, he also hoped that the market forces would stop the expansion of nuclear power, viable only with the generous support of the state, and one area where neoliberals like Klaus (a fellow Civic Democrat) did not mind giving a state guarantee.[844] Addressing anti-capitalist criticism, Moldan considered selfishness, an indispensable part of how markets work, as a 'morally neutral' economic behaviour and an anthropological constant.[845] However, he also thought that people were free to cooperate and would often find cooperation economically beneficial. It was their free will informed by a dose

839 Garrett Hardin, *Living within Limits: Ecology, Economics, and Population Taboos* (New York: Oxford University Press, 1993), 191.
840 Moldan, *Ekologie, Demokracie, Trh*, 21.
841 Moldan, 47.
842 Moldan, 27, 32, 38, 96.
843 Moldan, 49.
844 Moldan, 86.
845 Moldan, 51.

of moral values that would take care of the rest. As a Civic Democrat, he remained a stern supporter of the markets, individual responsibility, and freedom of choice in tackling ecological problems.[846]

Therefore, Moldan believed that human nature, which he characterised as a mixture of competition and cooperation, supposedly supressed under state socialism, was best suited to a society that allowed individuals to take responsibility. He suggested that the morality needed to overcome a utilitarian view of nature could be found in the Christian notion of human responsibility for God's creation.[847] And whereas some, such as the philosopher Václav Bělohradský, saw Christianity as the origin of human's sense of superiority over nature, Moldan argued that the Christian subjugation of nature was in fact a positive call for stewardship.[848] For Moldan, according to Christian principles, nature was not a mere object of exploitation but a habitable and fertile land given to humans by God to take care of. Referring to John Paul II's 1991 encyclical *Centesimus Annus*, Moldan found in Christianity a morality that would encase markets in ecological values, while allowing for private property and free enterprise.[849] John Paul II suggested that markets should be regulated by a morality based on human dignity, making a case against too much state intervention and bureaucratic control. Like ecologists, John Paul II also criticised a mechanistic view of the world, associated with the rationalism of the Enlightenment and atheistic state socialism as its offspring. Christian ethics thus appealed to Moldan as a defence of market economy that replaced free-market materialism with Christian metaphysics.

---

[846] Jiří Papoušek, *Hovory o Ekologii : Cesty k Trvale Udržitelnému Česku* (Praha: Portál, 2000), 15, 28, 31, 33–34.
[847] Moldan, *Ekologie, Demokracie, Trh*, 52.
[848] Václav Bělohradský, *Kapitalismus a Občanské Ctnosti* (Praha: Československý spisovatel, 1992), 71; Moldan, *Ekologie, Demokracie, Trh*, 28.
[849] John Paul II, 'Centesimus Annus', May 1991, https://www.vatican.va/content/john-paul-ii/en/encyclicals/documents/hf_jp-ii_enc_01051991_centesimus-annus.html.

For both Moldan and Vavroušek therefore, the changing relationship between ecology and morality was part of the long process of transformation of state socialism into neoliberalism. They believed that a profound moral transformation not just of their country but of 'Western civilisation' and the whole world was essential for the continued human life on earth. Applying cybernetics and humanist ethics, Vavroušek, on the other hand, analysed the failures of technocratic socialism as a political system within a wider ecosystem. Inspired by Western market-oriented environmentalists and resorting to an idea of the Christian stewardship of nature, Moldan, on the other hand, saw state socialism mainly as a dysfunctional and irresponsible economy. At the same time, for both, environmentalism was a way to return the country to Europe and influence global politics. Vavroušek and Moldan hoped a set of laws and moral values, which were lacking under state socialism, would be enough to govern markets by the principles of sustainable development. They turned the scientific and moral language that they had acquired during late socialism into a political language that supported liberal transformation.

How to Hold a Crocodile

Like expert discourses, the media representations too shifted towards an open attack on the socialist past. The case of environmental journalist Josef Velek, whose pre-1989 work I explored in the previous chapter, shows how, after 1989, the belief that environmental damage caused by an unspecified group of technocrats became associated with the condemnation of socialism. Furthermore, Velek's engagement in November 1989 and his public image after 1989 show how his journalistic work came to be presented on television as opposing socialist technocracy and favouring liberal morality.

'A small crocodile or cayman can be controlled by grasping it just behind the head with one hand, with your thumb on the opposite side of the head from your fingers, and using your other hand to restrain its hind legs and support its body,' explained *How to Hold a Crocodile*,

an illustrated guide about what was 'not taught at school', published in the UK in 1981.[850] Presumably because the book was selling well, a British publisher ordered a reprint, contracting the Czechoslovak publisher *Our Army* (*Naše vojsko*). Because of a production error, however, thousands of defective book covers for *How to Hold a Crocodile* ended up on a landfill in the town of Buštěhrad near Prague in 1988. We can read what happened next in a January 1989 news report, with the same title as the book, by Velek.[851]

The case of the Buštěhrad landfill demonstrates the shift in media discourse from the *perestroika*-style criticism of early 1989 to a postsocialist perspective just a year later. Velek followed a story of children who were hospitalised after bringing the shiny book covers home:

> 'The solid covers with a glossy varnished finish were adorned with a colourful picture of a crocodile and an English text, promoting "several hundred amazing facts and practical instructions" on how to photograph fish, make yoghurt, recognise real gold, breed pigeons, play dominoes, attract birds. ... When the children uncovered a plastic sheet, smoke rose from the covers. They were hot and humid. Some [children] took five [covers], others took twenty.'[852]

Investigations showed that the covers were saturated with illegal toxic waste from several local factories. As Velek reported, while citizens were asking local authorities if they could grow vegetables in their gardens with wind and rain bringing the dust from the waste dump ever closer to their homes, astute managers were rewarded for their proposal to store the toxic waste cheaply: While Kladno Steelworks (located near Buštěhrad) offered to take care of the waste of two other enterprises, Hulín and Ždánice, South Moravia, for free, and the managers who submitted the proposal received a financial reward. The investigation was yet another of Velek's stories of innocent, ordinary people endangered by careless and opportunistic people in power; as described in the previous chapter, having written about dozens if not hundreds of similar cases in the previous 15 or so years, Velek often assumed a rhetorical stance of

[850] Diagram Group, *How to Hold a Crocodile* (London: Sidgwick & Jackson, 1981), 188.
[851] Josef Velek, 'Jak chytit krokodýla', *Mladý svět* (28 Jan 1989), 15–17.
[852] Velek, 15.

common-sense understanding for the problems of ordinary men and women facing incompetent and entitled technocrats.

Reading about the Buštěhrad landfill, people were seemingly becoming worried about their health, while questioning socialist optimism, when confronted with this concrete case of environmental neglect. In less than two months, Velek received 167 readers' letters, a selection of which appeared in *Young World*.[853] For example, Jaroslava H. asked: 'Why, in a society that is supposed to be the best that humanity has ever seen, are people treated in such a way? What are we to believe and what are we to teach our children?'. A group of secondary school students and teachers of chemistry also wrote a letter to the Poldi Kladno Steelworks director, Ivo Mírný, asking whether the toxic waste could have been recycled, whether the landfill would be disposed of, whether the danger persisted, who was responsible and whether the offenders would be punished. People expressed their dissatisfaction with the authorities, frequently speaking as parents and grandparents, and highlighting the importance of children's health. The letters published in *Young World* were accompanied by a photograph of a discarded teddy bear on a landfill, evoking children in danger (Fig. 4.2). As the previous chapter discussed, childhood was a common symbol in late socialist imagery often used by environmentalists. The readers seemingly felt that interfering with their health, and their children's in particular, was breaking socialism's ideological promise.

[853] Josef Velek, 'Jak chytit krokodýla II', *Mladý svět* (23 Mar 1989), 8–9.

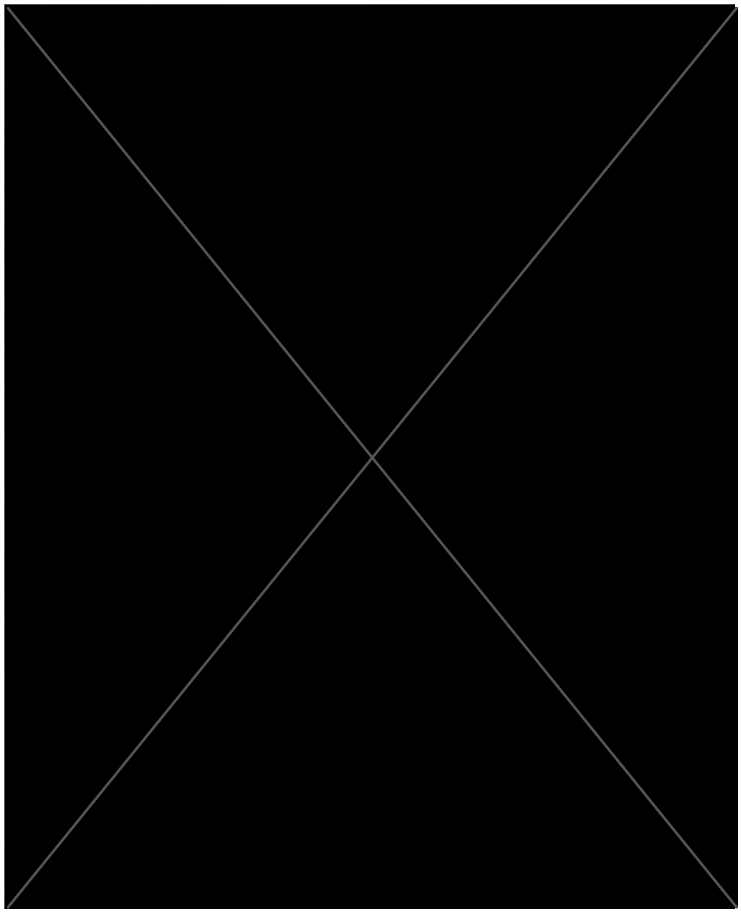


Figure 4.2. An image of a discarded teddy bear on a landfill illustrates an article about poisoned children written in March 1989 by Josef Velek.

However, only in 1990 was the case used explicitly to condemn state socialism. The television film *How to Hold a Crocodile* (*Jak chytit krokodýla*) premiered on Czechoslovak Television in 1990.[854] Although it was not the first TV drama based on Velek's story (see Chapter 3), it was the first to explicitly reflect on the Communist past.[855] The film focused on the parents of Kateřina, one of the children who had brought home the contaminated book cover. The first part of the film depicts the parents fighting in court against technocrats in power, both the director of the factory and the public health officers. But it seems that the company was too powerful to force it to respect ecological laws. In the second part of the film, however, the court scene is revealed to be a television film, where actors who play the judges

[854] APFCT, IDEC 290 310 73710, *Jak chytit krokodýla* (1990).
[855] In 1985, famous soap-opera director Jaroslav Dietl made a film about a heroic schoolgirl Irena uncovering the use of a dangerous pesticide in a park close to her school, as I write in Chapter 3.

discuss what has been said at the court in the backstage. An actress laments: 'Now it touches me deeply... how to express it in words... the people's helplessness and the indifference of those who make decisions about them.'[856] They take off their robes and step out of their character as judges. While the court fails to sentence anyone, the actors at the end of the film condemn the guilty, calling their decision a 'court of conscience'.[857] They agree that the landfill is a 'legacy of the last forty years', a 'symbol of the past' that calls for a condemnation of all socialist enterprises and officials. However, they also suggest that everyone shares the blame, as if 'some have never heard the word morality, lost conscience.'

There is an apparent continuity here with the moralising tone of late socialist television, discussed mainly in the first chapter, but here, instead of the earlier critiques that ended with optimistic resolutions and tended to legitimise systemic inadequacies, the early 1990s drama ended with a condemnation of the past in the name of a better future. Writing in 2000, Miloš Smetana, the screenwriter for *How to Hold a Crocodile,* claimed that audiences had always understood that ambiguous criticism carried an anti-Communist meaning.[858] More than two decades earlier, Smetana wrote (together with Lumír Dvořák) had written the television serial *Laws of Motion* (1978), which depicted a company plagued by incompetent managers and dysfunctional organisation. The first episode also has a similar ecological theme: a factory director and a public health officer clash over different priorities. The officer accuses the factory of polluting the air and waterways, while the factory director has to assure the company remains profitable and innovative, as required by the political plan.[859] The power of the show's criticism was in its legitimising effect, achieved through exposing the inadequacies and contradictions of social organisation and its conflicting interests, as discussed in the first chapter. The works that had been presented as promoting the values of socialism, could

[856] APFCT, IDEC 290 310 73710, 44:17–44:57.
[857] APFCT, IDEC 290 310 73710, 01:11:00–01:13:44.
[858] Miloš Smetana, *Televizní Seriál a Jeho Paradoxy* (Praha: ISV, 2000), 76.
[859] *Zákony pohybu* (dir. Evžen Sokolovský, Czechoslovakia, 1978), ep. 1, 9:32–11:20, 17:35–19:12.

therefore in the 1990s be reinterpreted as covert criticism of socialist technocrats precisely because they had portrayed of technocratic failures, making for a smooth discursive shift.

Thinking about his journalistic work and the dire environmental situation more generally, Velek criticised socialist authoritarianism, seeking a 'self-regulating' political system. In November 1989, Velek discussed the environmental problems facing the country, drawing on the ideas of psychoanalyst Wilhelm Reich to argue for democracy and self-determination. On Sunday 3 December 1989, Velek took part in a debate in the Czech National Theatre in Prague that was organised in place of a regular theatre performance as part of the revolutionary events.[860] Boris Rösner, an actor who hosted the evening, asked Velek to tell him 'something about the state of his soul'.[861] Velek replied that the state of his soul was informed by the air he had been breathing. Velek enumerated a host of environmental problems, including the illegal importation of waste from Western Europe. Velek also quoted Wilhelm Reich's *The Mass Psychology of Fascism*. Combining the thoughts of Karl Marx and Sigmund Freud, Reich saw authoritarianism as a way to impose on individuals a morality that stood in the way of self-determination. He believed a new social order had to be achieved 'organically' rather than by means of another set of imposed laws.[862] As a great influence on American counterculture and New Left ideas about individual autonomy, Reich's ideas, for Velek as well, articulated a critique of authoritarian politics.[863] Clearly, what Velek took from Reich was not the idea of sexual liberation for which Reich had become famous, but mainly the idea of democracy and criticism of authoritarian regimes. Reich understood democracy, as opposed to authoritarianism, as a never-ending process of political negotiation that had to take the form of

860 APFCT, IDEC 289 310 63834, *Národní divadlo, Praha 3. 12. 89*, 11:30–23:19.
861 Velek came to talk in the capacity of the chair of the recently formed Ecological Section of the Union of Czech Writers, which was in the process of dissolving into the Writers' Council (*Obec spisovatelů*).
862 Wilhelm Reich, *The Mass Psychology of Fascism* (London: Souvenir Press Educational & Academic, 1972), 207.
863 Magda Majewska, 'From Political Radicalism to Revolutionary Therapy: Wilhelm Reich and Freudo-Marxism in America', *Amerikastudien* 62, no. 4 (2017): 603–618.

natural self-regulation, rather than being imposed by government.[864] Having read an unpublished translation of Reich's work, Velek, who himself had written about incompetent technocrats and a need for a moral change, was clearly persuaded by Reich's critique of an authoritarian leadership that through the state imposes a dysfunctional order alien to true human desires. It appears that Velek was seeking a self-regulating system akin to those of contemporary cyberneticians and neoliberals.

Josef Velek died tragically on 30 April 1990 while scuba diving in the Red Sea. In 1990, Velek's colleagues attempted to give meaning to his journalistic work in the new, postsocialist conditions. The television programme *Nature for Tomorrow*, which began its broadcasting in the early 1980s with Velek as its host, featured a special episode to commemorate him.[865] A colleague of his from the magazine *Young World*, Rudolf Křesťan, saw Velek as a 'courageous' and 'enterprising man', which, as he put it, were 'the qualities of this time'.[866] As Křesťan put it, whereas he had been an 'organiser' in the Brontosaurus Movement, in 1990 Křesťan would call him a 'manager' (the word *menedžr* itself signalled the coming era). According to the ecologists Pavel Trpák, Velek 'worked in a Western way' as an 'advocate of the poor'.[867] They thus portrayed him as a figure who knew how to function within the system, but whose morality was rooted outside of it. After 1989 Velek was therefore turned from a socialist journalist into an ordinary man with extraordinary competencies– which in retrospect made him the herald of the new era - a proactive, entrepreneurial individual with a

[864] Velek had at his disposal an unpublished Czech translation of Reich's work, according to Velek ready to be publish but not approved since 1984; see the passages Velek quoted from *The Function of Orgasm* published later in 1993: Wilhelm Reich, *Funkce Orgasmu : Sex-Ekonomické Problémy Biologické Energie : Objevení Orgonu*, trans. Aleš Pech (Praha: Concordia, 1993), 20–21.
[865] The guests in the studio were: Petr Amler, Jana Velková, Rudolf Křesťan, František Urban, Karel Kříž, Pavel Trpák, Luděk Eliáš. For his wife, Jana Velková, he was a religious man who enjoyed going to the cottage.
[866] APFCT, IDEC 490 214 14054/0013, *Příroda pro zítřek* (1990), ep. 13, 21:04–22:38.
[867] APFCT, IDEC 490 214 14054/0013, 33:08–34:27.

moral compass, fighting for the right cause. In this way, the life trajectory of an environmentalist was reinterpreted alongside ecological theory and images of technocracy.

The Abuse of Reason

The shared scepticism towards socialist technocracy that developed in the 1980s helped to connect mainstream understandings of environmental problems with neoliberal politics. This shared understanding bridged the gaps between those liberals who believed that ecological crisis was a fundamental moral issue and those who disavowed ecology altogether. The reception of neoliberal thought was thus shaped by several concurrent phenomena: first, neoliberals evoked well-known negative literary and popular images of (socialist) modernity when criticising planning; second, liberal intellectuals read neoliberal theory alongside and through the lens of phenomenology; and third, neoliberals domesticated the intellectual tradition by relating it to both recent (socialist) and more distant (Austrian Empire and the First Czechoslovak Republic) intellectual and political traditions. What they had in common was a wish to overcome the rationality of state socialism with a critical reason that stood against 'metaphysical' truths detached from 'authentic' life.

A good case is the links between the cartoonist Vladimír Jiránek and the philosopher Václav Bělohradský. Jiránek's cartoons expressed the same kind of criticism of technology developed by Czech liberal intellectuals fascinated with phenomenology. In an interview with journalist Karel Hvížďala, Jiránek drew parallels between his vision of authentic life and that of Václav Havel. Moreover, Hvížďala associated that idea with philosopher Václav Bělohradský's sentiment towards pubs and second-hand bookshops, which evoked a different kind of knowledge than that held by experts – wisdom instead of technical rationality.[868] Bělohradský was an émigré philosopher who became a prominent liberal public intellectual in the 1990s. Following Czech Heideggerian philosopher Jan Patočka, Bělohradský criticised

[868] Karel Hvížďala, 'Fenomén Jiránek', *Mladý svět* 20 (1993), 28.

'technical world', associated with expertise, in which 'everything can be ordered by a push of a button', in favour of 'authentic life'.[869] For Bělohradský, the 'monumental stupidity of experts' disrupted humanness, the immediate understanding of the world.[870] Jiránek's cartoons link late socialist anti-technocratic satire and postsocialist anti-rationalism, on which neoliberal arguments were based as well.

Jiránek, who had made a name for himself during the previous two decades as an illustrator satirising the poor relationship between human civilisation and nature, started in the 1990s to work on political satire, which was more often laudatory than critical. As the previous chapter discussed, Jiránek's works from the 1970s and 1980s were full of naive technocrats trying to command nature and people lost in the world of hypermodern technology. Echoing the television producer Miloš Smetana, Jiránek suggested that the cartoons from the previous two decades had had a 'hidden' message. The polysemy of images allegedly allowed Jiránek to communicate 'between the lines', as he put it in 1993, letting the reader deduce the inferred meaning.[871] Jiránek clarified that illustration was for him an escape from writing literature, where he would not feel as free to say what he wanted.[872] According to Jiránek, the regime change made such communication no longer necessary, as the discursive rules had changed along with politics. Instead of drawing anonymous silhouettes, which sometimes supposedly represented communist politicians, Jiránek complained he now had to spend a lot of time in front of TV to get the right shape of politicians' heads. The bigger challenge, however, was how to make political cartoons in a new regime, that Jiránek largely supported.[873] His illustrations were sympathetic to the political cause, portraying, for example, minister Josef

869 Václav Bělohradský and Karel Hvížďala, *Myslet Zeleň Světa : Rozhovor s Karlem Hvížďalou* (Praha: Mladá fronta, 1991), 10; Václav Bělohradský, *Přirozený svět jako politický problém: eseje o člověku pozdní doby* (Praha: Československý spisovatel, 1991), 84.
870 Bělohradský and Hvížďala, *Myslet Zeleň Světa*, 27.
871 Karel Hvížďala, 'Fenomén Jiránek', 27.
872 Karel Hvížďala, 27.
873 APFCT, IDEC 293 383 93001/0009, *GEN* (1993), ep. 9, 'Vladimír Jiránek pohledem Jana Hřebejka', 5:21–6:03.

Vavroušek's new role as a European environmental leader (Fig. 4.3) or Bedřich Moldan's reliance on Christian morality facing natural limits (Fig. 4.4). And speaking about president Václav Havel, Jiránek explained that his goal was to 'demythologise' him, while also 'signalling to him in a coded way' that he supported him.[874] After 1989, Jiránek was not sceptical of the people in power but of Czech society as a whole, which he saw as immature and morally deficient.[875] The shift in focus suggested that times had changed – at least in Jiránek's cartoons, technocratic attitudes were no longer associated with the people in power but were the result of unchanged values.

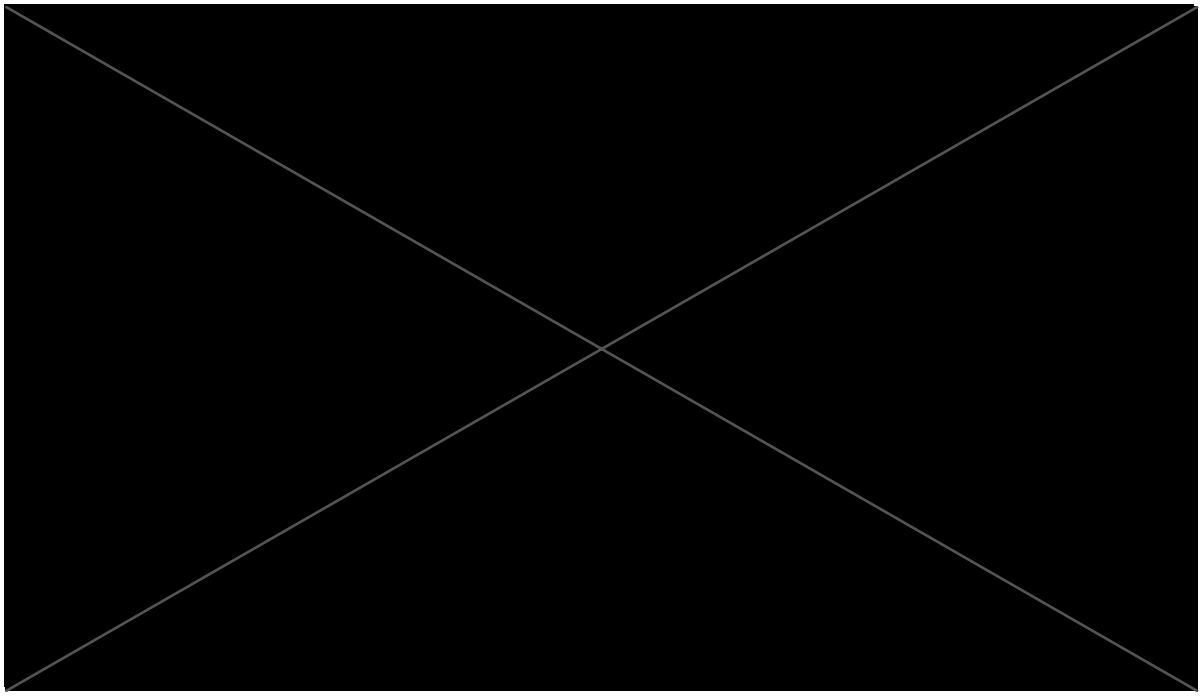


Figure 4.3. 'I'm telling this to you not only as a hare but also as a European!' Jiránek's cartoon depicts Environment Minister Josef Vavroušek.

[874] Karel Hvížďala, 'Fenomén Jiránek', 31.
[875] APFCT, IDEC 293 383 93001/0009, *GEN* (1993), ep. 9, 0:48–2:22, 12:57–13:19

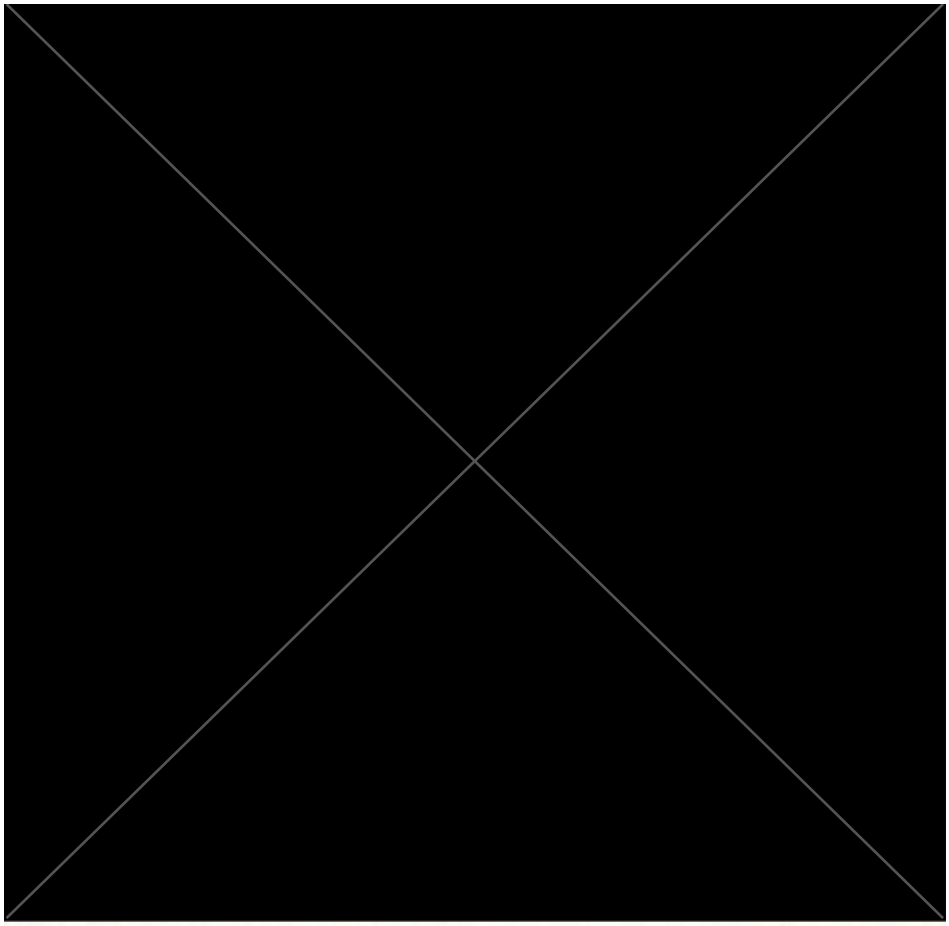


Figure 4.4. Jiránek's cartoon depicts God saying: 'It was said: all has its limits' in Moldan's *Ecology, Democracy, Market* (1992).

Jiránek's political support for the neoliberal-conservative party, the Civic Democrats, showed the intellectual and symbolic affinity between the neoliberal mainstream, on the one hand, and notions of authenticity and scepticism towards socialist hyper-rationalism on the other. Indeed, Jiránek continued to make cartoons for environmentally-themed books of various political leanings, including one from leftist thinker Jan Keller.[876] He also lamented that 'success' was generally discussed more than 'happiness', which he saw as a grave mistake of the 'whole civilisation'.[877] Yet, in 1998, Jiránek worked for the election campaign of the Civic Democrats, the neoliberal-conservative political party led by Václav Klaus (Fig. 4.5). When the *Mladá Fronta* daily refused to publish his cartoons before the 1998 elections as he

[876] Jan Keller, *Až Na Dno Blahobytu : (Ke Společenským Kořenům Ekologické Krize)* (Brno: Hnutí Duha, 1993).
[877] APFCT, IDEC 293 383 93001/0009, *GEN* (1993), ep. 9, 14:09–14:27.

worked for one the parties, Jiránek later published a book titled *Jiránek Banned* with a foreword by Klaus, praising Jiránek's talents.[878] The disjuncture between Jiránek's political support for the Civic Democrats and his environmental work was not about environmental issues, but rather about his opposition to social engineering.

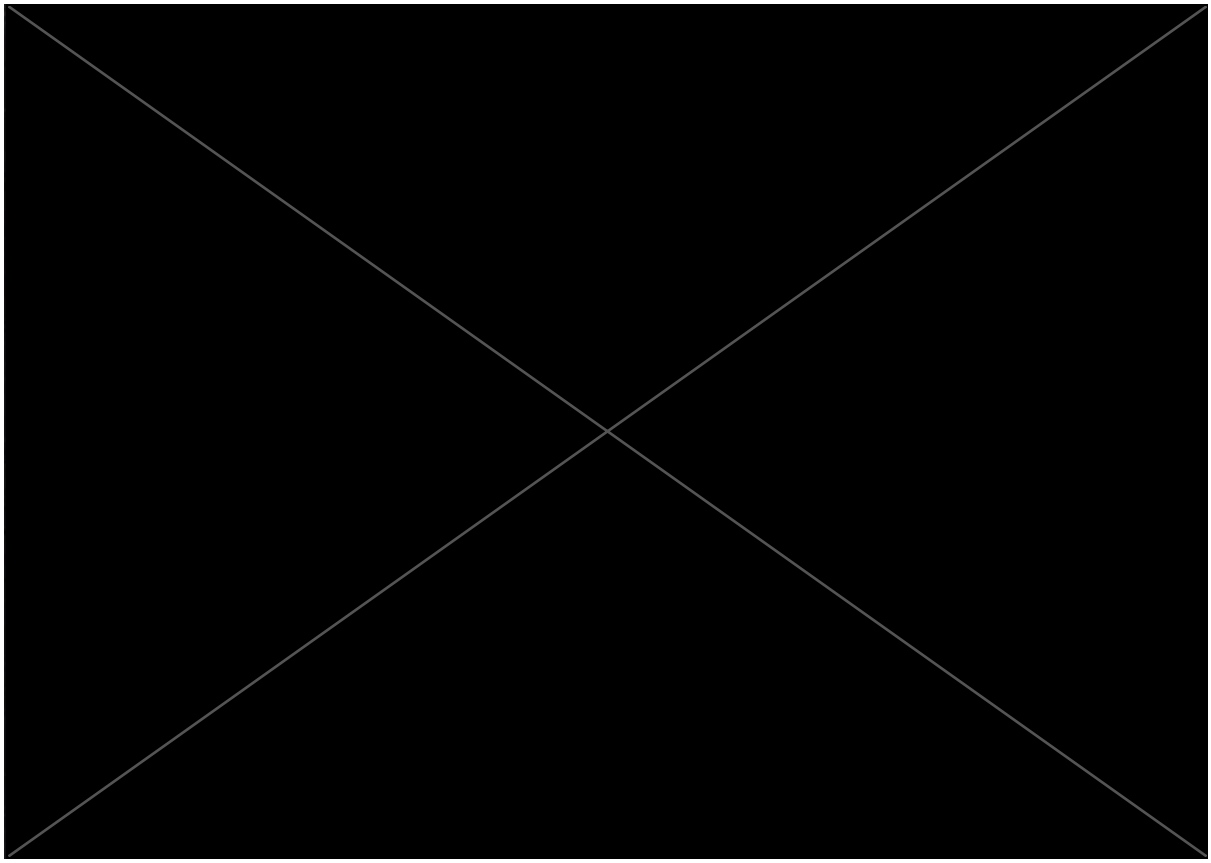


Figure 4.5. In 1998, Vladimír Jiránek made cartoons for the election campaign of the Civic Democratic Party: 'To the left – or with Klaus? It depends on you!'

Bělohradský's quest for authenticity and morality in a world supposedly dominated by technical rationality was also closely related to themes often depicted in Jiránek's cartoons. For Bělohradský, the problem was not 'how to triumph over the conspiracy of the privileged' alluding to communist political struggle, but 'how and where to escape from Western history', that is how to overcome modernity.[879] In one of the columns written during vigorous debates

[878] Although other newspapers happily printed his cartoons instead, the book framed the ban as a manifestation of the daily's anti-Klaus character. Vladimír Jiránek, *Zakázaný Jiránek* (Praha: Knihcentrum, 1998), 13–14, back cover.
[879] Bělohradský, *Kapitalismus a Občanské Ctnosti*, 109.

about economic reforms, Bělohradský sought to remind Czechs of the 'capitalist virtues' (independence, risk-taking, trustworthiness) required in ongoing economic transformation.[880] In contrast, he criticised anti-capitalist ecologists, such as Jaromír Šíbl, who argued that the 'present untenable state of affairs [was] convenient for a small group of people in power'. Bělohradský criticised this view as coming from a self-declared 'enlightened' minority only seemingly acting in the interest of the whole humankind. Bělohradský compared those ideas to the Marxists saving people from the false consciousness of capitalism.[881] In fact, society-wide lack of interest in ecology was not the result of corporate lobbying as some ecologists argued, Bělohradský explained, but the outcome of a Western humanist escape from 'incalculable' nature to scientific prediction and planning. For Bělohradský, even capitalism was part of that tradition, but 'it [was] not the corruption of the highest values by capitalists, but those highest values themselves that [were] the cause of ecological devastation'.[882] A better interpretation was provided, according to Bělohradský, by Jiránek's cartoon in which three managers walking past smoking factories ironically commented on the consequences of celebrating creative work (Fig. 4.6). For Bělohradský, this image encapsulated the problem of trying to make the world ever more human by making it more technologically advanced.[883] Once humankind gave up the value of using technical rationality for its advancement, the ecological crisis would be rectified.

[880] Bělohradský, 15.
[881] Bělohradský, 107.
[882] Bělohradský, 107.
[883] Bělohradský, 108.

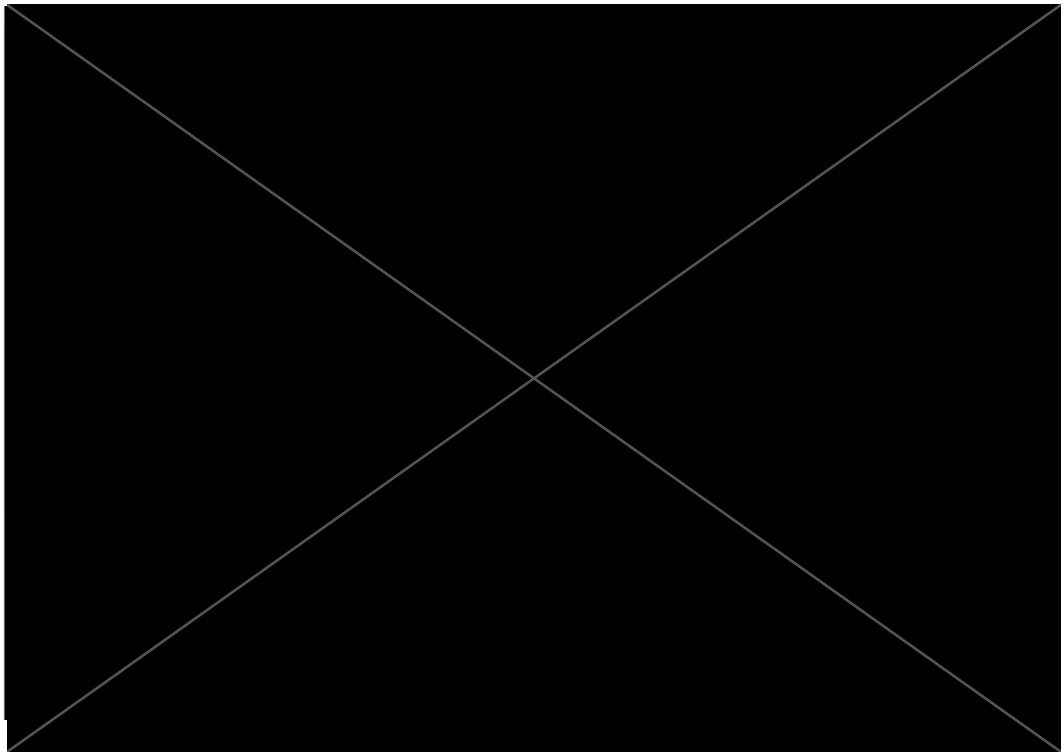


Figure 4.6. 'A few more years of joyful, creative work and we are lost.' A cartoon by Vladimír Jiránek.

For Bělohradský, ecology was about balancing powers and seeking liberal morality, rather than launching a radical attack on existing power structures. When Bělohradský discussed 'ecology', he presented a phenomenological criticism of Western attitudes towards technology and used ecology as a political metaphor. According to Bělohradský, liberal democracy was characteristic of an 'ecological conception of reason'. It allegedly comprised four areas – the market, public opinion, political representation, and individual self-expression – in which ideas could be communicated and compete with one another, keeping themselves in 'ecological' balance.[884] The analogies between politics and ecology were similar to Vavroušek and Havel.

Yet, although Bělohradský's thinking drew from Václav Havel, and from phenomenological criticism of technocracy more generally, he also adopted a neoliberal critique of welfare state and defended Klaus from left-wing ecologists. Bělohradský argued that Hayek's conception of rationality as dispersed knowledge and his rebuttal of the planned

[884] Bělohradský, 90.

economy was just another way of saying that opinion held primacy over knowledge or *episteme*.[885] The 'welfare state', which Bělohradský called a 'terrible monster', was for him a form of socialism, destroying civil liberties with its 'charitable gesture'.[886] In that view, neoliberalism was part of a struggle of 'critical' against 'metaphysical' reason, the latter represented by the ideology of state socialism.[887] Bělohradský saw in Klaus's neoliberalism the fulfilment of a greater principle of freedom, contrasted with an Enlightenment rationality that led to alienation through its sanctifying of technology. He explained that Klaus represented an opportunity to bring back 'autonomy' and 'rationality' by focusing on transforming the system rather than telling people how to live.[888] For Bělohradský, Klaus was a relativist, who was able to reflect his own position while uncovering others' ideological preconceptions. Klaus supposedly defended spontaneity, individualism, and choice against bureaucracy and elite, 'enlightened' expertise. This included, according to Bělohradský, Klaus's assertation that ecology should remain a matter of individual choice rather than a technocratic problem.[889] The political circumstances of the 1980s led the opposition to develop a Heideggerian criticism of state socialist as a monstrous enlightenment project, which united them with neoliberal critiques of state intervention, including anti-neoliberal ecologists.

Neoliberal economists, meanwhile, presented their lives under socialism as blighted by a monstrous rationalist state, allegedly like the one described by Hayek and Kafka. Economist and politician Tomáš Ježek, Czech Privatisation Minister (1990–1992), expressed his agreement with Friedrich Hayek in a 1994 foreword to the book *Counter-Revolution of Science: Studies on the Abuse of Reason*, in which, according to Ježek:

---

[885] In Czech, Bělohradský spoke of *mínění* (opinion) and *poznání* (knowledge). In philosophy, the ancient Greek terms *doxa* and *episteme* are often used. Bělohradský and Hvížďala, *Myslet Zeleň Světa*, 72.
[886] Bělohradský and Hvížďala, 69.
[887] Bělohradský, *Kapitalismus a Občanské Ctnosti*, 88.
[888] Klaus, *Dopočítávání Do Jedné*, 179.
[889] Klaus, 176–177.

> Hayek showed rather irrefutably (at least to me) that the ambitions of engineers, mathematicians, physicists, biologists, and others, intoxicated by their success in harnessing steam or making objects heavier than air fly, in guiding society according to a preconceived plan must end in failure or outright disaster.[890]

In his book, Hayek criticised the application of engineering principles on the social world.[891] Social organisation, for Hayek, comprised knowledge dispersed among individuals, which could not be possessed in the same way an engineer controlled a delimited, self-contained domain. Such an engineering mentality stood in contrast to that of a merchant who reacted to market prices as bits of information about society's needs, influencing scarcity of resources. Ježek called himself a 'victim of the counter-revolution of science', as he believed he had experienced under state socialism what Hayek had warned about. Hayek's analysis of the futile attempt of 'engineers of the soul' to turn the world into a machine resonated with economists like Ježek, looking for a different model to reform the socialist economy. Hayek's anti-rationalism met with a scepticism of modern science, which he shared with many postwar intellectuals on the left and right, and which was successfully mobilised by neoliberals in the Czech privatisation.

In one of his newspaper columns that legitimised the course of economic reforms and attacked demands of environmentalists, Václav Klaus associated Kafka's literature with neoliberalism as an anti-ideological project. He remembered the 1960s enthusiasm among Czechoslovak intellectuals for Kafka as a modernist writer who eluded the era's ideologues; and, he found Kafka's depiction of bureaucracy akin to the experience of living under socialism.[892] He did so by comparing his own struggle with that of the organisers of the 1967 Kafka conference in Liblice, which sparked an intellectual interest in the writer. A part of the post-Stalinist pluralisation of the cultural sphere, the fascination with modernist literature was

---

890 Tomáš Ježek, 'Předmluva Jedné Oběti Kontrarevoluce Vědy', in *Kontrarevoluce Vědy: Studie o Zneužívání Rozumu*, by Friedrich A. von Hayek (Praha: Liberální institut, 1995), 7.
891 Friedrich A. von Hayek, *The Counter-Revolution of Science: Studies on the Abuse of Reason* (Glencoe, Ill: Free Press, 1952), 94–102.
892 Klaus, *Dopočítávání Do Jedné*, 23–24.

opposed by the late socialist communists, as shown in the second chapter. Apart from the Kafka scholars, Klaus also drew parallels with economic reformers in the 1960s Czechoslovakia and later in Poland and Hungary, who supposedly paved way for marketisation. All of these, like him, were supposedly uncompromising fighters against 'power', struggling for a world without '-isms of all kinds' (which meant anything 'ideological', that is opposing neoliberalism, including environmentalists or any attempts at somewhat leftist politics), all were supposedly uncompromising fighters against 'power'.[893] Neoliberals therefore drew on a broad repertoire of anti-technocratic imagery, which allowed them to forge coalitions even with those who were concerned about ecological problems and did not share their focus on the continuous growth of the economy.

Like Klaus's evocation of Kafka, Bělohradský considered neoliberalism to be part of the broader intellectual tradition of Austrian writers. In 1981 Bělohradský joined the ranks of Czech anti-communist intellectuals who revived the idea of Central Europe in an effort to construct a cultural tradition in opposition to politics supposedly imposed from the outside with an essay on Central European anti-rationalism.[894] Bělohradský saw in the writings of Hayek and Kafka but also philosophers Ludwig Wittgenstein and Edmund Husserl, and other Austrian writers, such as Robert Musil and Joseph Roth, a reaction to the tragedy of European rationalism as they all lived through the decaying Habsburg Empire.[895] According to Bělohradský, the historical experience of the Austrian Empire's bureaucracy, detached from people's lives, made Central European intellectuals realise early on that rationalism was a great historical threat to humanity.[896] Bělohradský saw the same motif in Husserl's criticism of mathematical description of the world and crisis of science, Wittgenstein's assertion of the

[893] Klaus, 24.
[894] Peter Bugge, 'The Use of the Middle: Mitteleuropa vs. Střední Evropa', *European Review of History = Revue Européene d'histoire* 6, no. 1 (1999): 15–35, doi:10.1080/13507489908568219.
[895] The essay 'Mitteleuropa: Austrian Empire as a Metaphor' was originally published in Czech in 1981. Bělohradský, *Přirozený svět jako politický problém*, 39.
[896] Bělohradský, 41–42.

impossibility of uttering meanings, Kafka's conflict between life and legal rules, Sigmund Freud's analysis of instinctual desires, Jaroslav Hašek's anti-hero Švejk and, ultimately, Hayek's 'complete rejection of centrally planned economics as negation of finitude and limitations of human knowledge that characterises the economic theory of the Austrian School.'[897] All were an inquiry into the alienation and absurdity of modern society materialised in state rationality and its suspension of the meaning of life.[898]

Like Bělohradský, Ján Pavlík, translator of Hayek into Czech and co-founder of the Liberal Institute (which I will return to in the next section), constructed neoliberalism as a continuation of a broad Austrian intellectual tradition. For Pavlík, rejecting 'totalitarianism' was an extension of the conflict between Austrian and German philosophical traditions'.[899] While Marxism-Leninism was, for Pavlík, a continuation of German idealism, Hayek was a follower of the Austrian tradition. The German (Prussian) philosophical tradition, for Pavlík, pursued 'the establishing and preserving of the centralised state as a unifying totality' as 'the highest moral and political ideal'.[900] That ideal was, in Pavlík's view, preserved in the Marxist-Leninist centrality of the state and its materialisation in the case of socialist Czechoslovakia.[901] By contrast, the 'philosophy of the Danube monarchy' developed as a critique of the established centralist state and the Catholic Church.[902] Ultimately, for Pavlík, the events of 1989 represented a triumph of the 'Austrian' school of thought over the 'German' approach.

Embedding (neo)liberalism in nationalist discourse became a common strategy of its advocates. Pavlík even placed the 'birthplace' of Austrian liberalism in Bohemia, in the figure

---

[897] Bělohradský, 146–147.
[898] Bělohradský, 46.
[899] Ján Pavlík, 'Philosophy, "Parallel Polis" and Revolution: The Case of Czechoslovakia', in *Philosophy and Political Change in Eastern Europe*, by János Kristóf Nyíri and Barry Smith (LaSalle, Ill.: Hegler Institute, 1993), 69.
[900] Pavlík, 70.
[901] Pavlík argued that Kantian transcendental subjectivity creating universal validity of objective knowledge was turned by Hegel into a 'totalitarian state entity' and thereafter by Marx into collective class consciousness. Pavlík, 70.
[902] Pavlík, 73.

of Bernard Bolzano, a Bohemian German-speaking mathematician and liberal Catholic theologian. Similarly, the Minister of Privatisation Tomáš Ježek called Hayek 'the second Austrian after Mozart, who [was] understood better by Prague than by Vienna.'[903] In Czech national memory, the myth that the Austrian composer Mozart felt more welcomed in Prague was seen as a proof national superiority, of the Czechs' cultured and goodhearted attitude. Similarly, when Milton Friedman visited Prague in 1997, Jiří Schwarz, the director of the Liberal Institute, constructed a historical link between him and Czechoslovakia. His parents came from 'humble origins' in Subcarpathian Ruthenia, which was during the interwar period part of Czechoslovakia. Schwarz claimed that 'while Milton Friedman's views remained consistent', the countries of the region had changed many times.[904]

This is not the place to reconstruct the entirety of Pavlík's philosophical treatise, in which he goes all the way back to the Ancient Greeks, but it is important to understand how creating that philosophical tradition explicitly legitimised the neoliberal transformation as an extension of the 1989 revolt of 'moral consciousness'.[905] Pavlík saw in Havel's phenomenology a 'rejection of the idea of the universal achievability of all goods and projects and thus the preserving of the mystery (and non-calculability) of the world'.[906] And while he appreciated this turn to 'authenticity', he believed that Havel's moral revival was too optimistic, as privatisation was 'necessarily accompanied' by the 'putatively immoral features of early capitalism'.[907] However, according to Pavlík, in place of politicians who sought to change people's ethics from above, it was the invisible hand that could transform egoism into public welfare. The invisible hand in the market economy, Pavlík promised, would do the same

---

903 Ján Pavlík, ed., *Gary Becker in Prague : March 6-12, 1995* (Prague: Centre for Liberal Studies, 1996), 17.
904 Ján Pavlík, ed., *Milton Friedman v Praze : Myšlenky, Názory, Komentáře* (Praha: Grada Publishing, 1998), 21.
905 Pavlík, 'Philosophy, "Parallel Polis" and Revolution', 94.
906 Pavlík, 87.
907 Pavlík, 95–97.

as liberal democracy in politics. According to Pavlík, Havel's criticism of a mathematical approach to the world was therefore similar Hayek rejecting the use of reason to design a better economic system. However, Pavlík lamented that Havel did not accept Hayek's idea of a 'spontaneous order' under the influence of Heideggerian criticism of impersonal social structures.[908] To prove that neoliberalism would accomplish the 'moral revolution' of 1989 against 'impersonal' state socialism, Pavlík argued that markets 'reproduce[d] themselves through personal interests and preferences'.[909]

Pavlík was therefore fascinated with the markets as self-organising systems, in which he saw a merger of cybernetic circularity and modern historical causality.[910] Pavlík therefore made a similar intellectual effort to those who wished to bring together Marxism and systems theory (see Chapters 2 and 3), preserving the positive orientation towards the future while emphasising the organic evolution of the system.[911] In an effort to reconcile the Cartesian dualism between nature and society – a goal shared among ecologists and other contemporary thinkers – Pavlík identified the Hayekian spontaneous order as the missing connection between the two.[912] He saw Hayek as a cultural evolutionist, who made use of Darwinism to explain the emergence of institutions and norms, rather than a social Darwinism of struggle between individuals.[913] It was crucial for Pavlík to demonstrate theoretically that although the market order was spontaneous, spontaneous order would not in and of itself establish a democratic society.[914] According to Pavlík, the transformation had to be guided by philosophical ideas, which was also a motivation behind founding the Liberal Institute.

---

908 Pavlík, 87–88.
909 Pavlík, 97–98.
910 Pavlík co-translated Hayek's *The Counter-Revolution of Science*: Friedrich A. von Hayek, *Kontrarevoluce Vědy : Studie o Zneužívání Rozumu*, trans. Ján Pavlík and Danica Slouková (Praha: Liberální institut, 1995).
911 Pavlík even claimed that it was Hayek, not Marx, who brought Hegel on his feet. Jiří Schwarz, ed., *Hayek Semper Vivus : Texty Ke Kolokviu Právo a Svoboda Pořádanému Liberálním Institutem Při Příležitosti 100. Výročí Narození Friedricha Augusta von Hayeka* (Praha: Liberální institut, 2000), 43.
912 Schwarz, 32.
913 Ján Pavlík, *F.A. Hayek a Teorie Spontánního Řádu* (Praha: Professional Publishing, 2004), 18.
914 Pavlík, 'Philosophy, "Parallel Polis" and Revolution', 68.

Spontaneous Markets

Although most neoliberals did not prioritise ecology and many even opposed it, they still were concerned about relationships between nature and society. Their anti-environmentalist arguments were often based on their own propositions of 'free market environmentalism', which in the postsocialist context had particularly eager audience. Throughout the 1990s, neoliberals emphasised the naturalness of a spontaneous order of the markets contrasted with the planning and control of state socialist economies. They firmly opposed interventions in markets, including the solutions to ecological crisis proposed by environmentalists. They argued against the perceived neo-Malthusianism of the limits-to-growth argument and the allegedly technocratic approach of some environmentalists. At the same time, they were also looking for ways to restore the natural order, presenting neoliberalism not as one of many economic doctrines but as a scientific analysis of cultural evolution akin to natural processes. A new neoliberal thinktank, the Liberal Institute, established in 1990 to promote liberal thought, endorsed a vision of neoliberalism as an organic social order.

In March 1995, the neoliberal economist Gary Becker came to Prague at the invitation of the Liberal Institute, which celebrated its 5th anniversary. Gary Becker was president of the Mont Pèlerin Society until 1992, when he also received the Nobel Prize for Economics. Becker had become famous for his microeconomic analysis of individual interests, seeing all human behaviour and relations from marriage to racial discrimination in economic terms.[915] During his visit, Becker opened their anniversary celebration, met with students of the University of Economics President Václav Havel and Prime Minister Václav Klaus, and appeared on television. Friedrich Naumann Foundation for Freedom, a German liberal foundation of the

[915] Gary S. Becker, *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education* (New York: National Bureau of Economic Research; distributed by Columbia University Press, 1964).

Free Democratic Party that supported the Liberal Institute in Prague, ordered a documentary film about Becker's visit, *Homo Economicus* (1996). The film showed how Becker and Jiří Schwarz, cofounder of the Liberal Institute, brought their theoretical insights to life for the public, observing the spontaneous markets on the Charles Bridge in Prague (Fig. 4.7):

> Jiří Schwarz:
> We are on the Charles Bridge that was built in 1348, and I think that from the beginning there was a market here that has developed very spontaneously, and you can see the market was here in the Middle Ages, and the market was here also under communism, and the market survived communism here, so that is something very interesting.
>
> Gary S. Becker:
> That is how markets work. Markets grow up spontaneously, they are not organized by governments, they grow on their own. If individuals are given freedom, they will help to develop markets for products that one cannot imagine in advance. What we see on this beautiful and old bridge is a small example of that.[916]

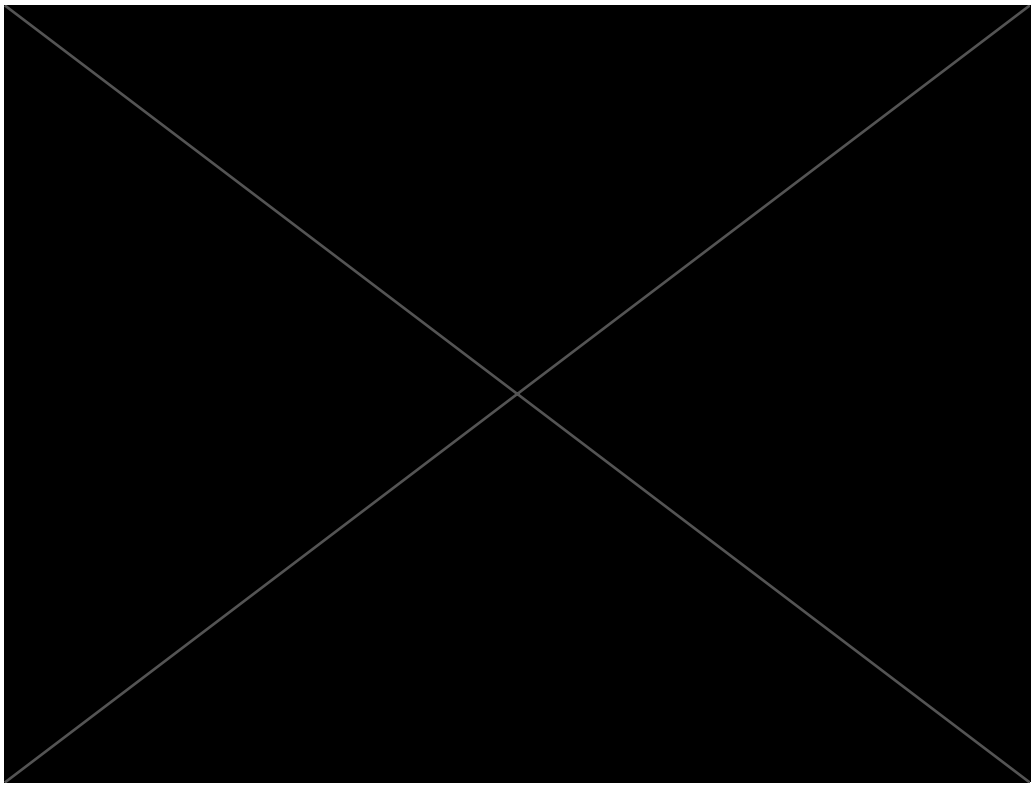


Figure 4.7. Musicians at Charles Bridge as an example of spontaneous emergence of market behaviour in the film *Homo economicus* (1995) about the visit of neoliberal economist Gary Becker in Prague.

[916] Pavlík, *Gary Becker in Prague*, 75.

The visits of neoliberal economists Gary Becker and Milton Friedman to Prague in the 1990s had a significant impact on Czech society and politics in reanimating, in the postsocialist context, arguments for accelerating economic growth as opposed to imposing environmental limits. They appealed to the public by criticising technocratic elites and arguing for free market policies that promised rapid development. In that way, they challenged ecological attempts to exercise governmental control and put limits to growth. They argued, on the contrary, that ecologists wished to apply reason beyond the neoliberal limits of the knowable, likening them to socialists. For Becker, as he reminded his audience in his opening speech, market regulation and environmental efforts to put limits to production and population growth were two sides of the same coin.[917] Becker made the case against 'excessive' governmental control on the grounds of the historical experience with Communism, suggesting that socialism was not dead but just dozing and it was the environmentalists who posed the new danger. Stripping the government of the legitimacy to intervene, Becker gave agency to individual people, who were ultimately supposed to decide in the political process, guided by information 'provided by think tanks, by interest groups, by business organizations, by labour organizations, by politicians, and by the media.'[918] This was a prime example of neoliberal populism, wherein the government was presented as an incompetent technocratic institution and moral decision-making by individuals was supposed to direct business behaviour.

Apart from ovations from local neoliberals, an unusual intellectual confrontation took place between Becker and a local ecologist. The documentary film *Homo Economicus*, about Becker's visit, was directed by Tomáš Škrdlant, who normally made films about ecology. Although paid by the Friedrich Naumann Foundation, the film was produced by *Film & Sociologie* production group founded in 1991 with the vision of reflecting on postsocialist

[917] Pavlík, 16.
[918] Pavlík, 64.

transformation. In 1996, Škrdlant even wrote *The Democracy of Nature*, a book that explored the links between politics and ecology on the grounds of Batesonian systems thinking, which grouped him with postmodernist intellectuals and former dissidents like Zdeněk Neubauer.[919] Škrdlant had the opportunity to interview Becker at length at the Liberal Institute. He asked Becker, for example, how to ensure businesses acted on future environmental risk if their only interest was profit; Becker replied that people were surely concerned about improving the life of their children and that many businesses could make money clearing up the environment.[920] It was the government that did greater damage, 'as you saw under communism', Becker added.[921] Only slight regulation, in terms of taxes, subsidies and saleable quotas, was acceptable; more important was to 'extend private property as much as possible'.[922] Becker also pointed out to Škrdlant that the environmental damage to the forests caused by the Communists was still visible when one visited Northern Bohemia (a well-known image discussed in the previous chapter).[923] Arguments about efficiency of the markets in contrast to the government's control of natural resources were by that time well-known not only among Czech economists, who had pursued that narrative since the mid-1980s, but in the last few years also to the public, and they were spread by both environmentalist neoliberals (Moldan) and anti-environmentalist neoliberals (Klaus).

The neoliberal promise was also underpinned by a vision of further economic growth. Becker accused environmentalists of a 'naïve attitude towards the scarcity of natural resources'.[924] For neoliberals like Becker, resources were by definition inexhaustible because

---

919 Škrdlant later also co-authored with Zdeněk Neubauer a mystical interpretation of natural elements as archetypes of ecological thought. Tomáš Škrdlant, *Demokracie Přírody : Ekologická Hra Systémových Podobností* (Praha: Originální Videojournal, 1996); Zdeněk Neubauer and Tomáš Škrdlant, *Skrytá Pravda Země : Živly Jako Archetypy Ekologického Myšlení* (Praha: Mladá fronta, 2004).
920 Pavlík, *Gary Becker in Prague*, 62, 66.
921 Pavlík, 63.
922 Pavlík, 64.
923 Pavlík, 66.
924 Pavlík, 65.

they believed markets (unlike non-market economies) were able to indicate scarcity. As also seen also in Škrdlant's film, Becker argued that resources were there 'to make people happier' and that society's function was to 'make people happy and not to protect natural resources'.[925] Although 'neo-Malthusians' had been allegedly 'proved to be totally wrong', Becker conceded that some limits might emerge 'perhaps in one hundred years', but that was not something the current generation should worry about; rather they should invest in 'human capital'.

Neoliberals commonly portrayed ecologists as technocrats, capitalising on anti-technocratic sentiment, while presenting themselves as holding common-sense views. To defend the market from environmentalists, Becker used the anti-Malthusian argument, which in the Czech case had been, as the second chapter explored, mostly associated with techno-optimistic Marxists who rejected the efforts of Western environmentalists to stop the growth of the standard of living as neo-colonial and backward-looking. In the neoliberal reframing of technocracy, it no longer meant the exploitation of nature in the name of socialist progress but rather efforts by environmentalists to change the current economic system. Yet the promise of material wellbeing based on economic growth and productivism was a common feature of both state socialism and neoliberalism. During his visit to Prague, Becker declared that 'constant growth may or may not be possible', stating that 'no one can answer that' because nobody would 'live long enough' to see for themselves.[926] Similarly, when Milton Friedman visited Prague at the invitation of the Liberal Institute two years after Becker, in 1997, he joked about environmentalists in his debate with the students of the Prague University of Economics: 'I'm not aware of the Earth's capacity in terms of population, but it looks mostly empty from a plane'.[927] Expressing such 'common-sense' doubts at the expense of ecologists was an exercise of the supposed 'humility' that Friedman argued was the core of liberalism as a 'faith' that one

[925] APFCT, IDEC 295 322 22250, *Homo Economicus* (Czechia, dir. Tomáš Škrdlant, 1995), 19:46–20:02.
[926] Pavlík, *Milton Friedman v Praze*, 54.
[927] APFCT, IDEC 297 322 22338, *Zrozeni sobě rovni* (1997), 11:44–14:10.

was fallible.[928] According to that view, the most effective approach for society would be to allow markets to function within the supposed boundaries of human knowledge, rather than attempting to devise engineered solutions.

The contacts between American and Czech neoliberals reinforced their respective attitudes towards the environment. The visits and public appearances sponsored by the Liberal Institute are just one case of a phenomenon that calls for a detailed exploration. For example, the Civic Institute, another post-1989 thinktank with a more conservative leaning than the Liberal Institute, published, among others, the writings of Virginia Postrel and Fred L. Smith. Postrel was the editor-in-chief of *Reason*, a US libertarian magazine. Smith, who also came to Prague to speak at the seminar on 'market instruments and environmental protection', was founder and president of the Competitive Enterprise Institute, promoting free-market environmentalism and involved in climate change denial lobbying.[929] Smith also argued against 'neo-Malthusians', suggesting expanding capitalism and property rights and reducing 'political interference'. In line with neoliberal reasoning, Smith thus understood the market relations, contrary to political mechanisms, as a noninterventionist form of managing resources. 'Free market environmentalists', as he called his position, supposedly strove for a world 'in harmony' between humans and the environment, whereas other environmentalists allegedly wanted to protect nature from human influence. He thus turned the anti-modernist reasoning of some ecologists on its head, repurposing it to argue for the expansion of the market.

US neoliberals who attacked environmentalists challenging economic growth thus found support in postsocialist rejection of technocracy. At the same time, they claimed to be environmentalists themselves, suggesting using technology as remedy to environmental problems. Postrel's 'Green Road to Serfdom' was a paraphrase of Hayek and constructed

---

928 Pavlík, *Milton Friedman v Praze*, 14.
929 Riley E. Dunlap and Aaron M. McCright, 'Organized Climate Change Denial', in *Oxford Handbook of Climate Change and Society*, ed. John S. Dryzek, Richard B. Norgaard, and David Schlosberg (Oxford: Oxford University Press, 2011), 145–161.

environmentalists as the new socialists.[930] Postrel, in turn, warned that environmental opposition to 'destructive central planning … may sound … Hayekian' but, in fact, it concealed an imposition of their own will. Bedřich Moldan wrote an afterword to Postrel's book, in which he defended 'sustainability', arguing that the term was in mainstream use and meant growth rather than stasis. However, he also conceded that 'green ideology' could become a political danger in the future. Throughout the 1990s, Moldan opposed environmental activism from the position of neoliberal environmentalism. In 2000, he accused those who doubted that environmental transformation was being fulfilled through using efficient technology of peddling 'communist propaganda'.[931] Neoliberal attitudes towards nature in the postsocialist context were therefore much more complex than the simple denial of environmental problems.

Conclusion

In the late 1980s, a variety of intellectual and cultural traditions came together to dismantle the primacy of technical rationality, which they believed was manifested in state socialism. Images of engineers, planners and bureaucrats attempting to control nature under state socialism merged with scepticism towards a big, interventionist state that based its rationality on the perfectibility of human knowledge and the control of nature. This scepticism was shared by postmodern thinkers influenced by a phenomenological relation to the 'natural order of things' and drawing from many other intellectual traditions; environmentalists who, following the rise of cybernetics, conceived of the world holistically as a self-regulating system; and neoliberals who despised planning in the name of a spontaneous order.

The rejection of the belief that world is completely knowable through science was not specific to East-Central Europe, but what made it different from postmodern thought in the capitalist West was its direct negation of state socialism, seen as a failed attempt to manage

930 Virginia Postrel, 'The Green Road to Serfdom', *Reason*, 1990; Virginia I. Postrel, *Zelená Cesta k Nevolnictví*, trans. Jaroslav Kučera (Praha: Občanský institut, 1993).
931 Papoušek, *Hovory o Ekologii*, 10.

rationally both people and the natural world. The neoliberal market conceived as an aggregate of selfish individuals without need of an omniscient leader thus found support in a much broader scepticism towards the possibility of controlling the world rationally, supported by the historical experience of state socialism.

Most neoliberals and environmentalists agreed that markets should be regulated by a shared morality rather than state intervention, which was also why they called for a moral transformation of society. Instead of technocratic oversight and planning, they sought a self-regulating order. As the power in such self-regulating order was dispersed among individuals and institutions, moral values in some form appeared to be necessary. However, hidden disparities between the different views – mainly, the fact that postsocialist neoliberals still thought of natural resources as endless and generally shared the modern view of the economy with socialist technocrats – led to new disagreements.

New arguments about environmental politics emerged from this ontological reordering of politics, which shared an anti-technocratic view of the world and a longing for a natural social order. Neoliberals believed that the mystery of nature materialised in the spontaneous evolution of markets, which went along with their optimism about economic growth. However, others saw in the markets the continuation of an invisible, modern machinery with its technical rationality that had to be tamed by a transcendental relation to the world, although superior to central planning insofar as there seemed to be no omniscient elite to tell people how to behave. But most saw in the markets themselves the reaction to modernity's impossible promise to emancipate humans through rational control, which gave them an argument against environmentalists, whose politics they considered yet another modern emancipatory project doomed to failure.

Conclusion

In this dissertation, I have revealed the ambiguous nature of ideas and images of nature and technology in the Czech case from the post-Stalinist to the neoliberal era. By challenging both the anti-communist and anti-neoliberal interpretations of environmentalism, I have argued that state socialism and neoliberalism were rather characterised by their shifting capacity to accommodate anti-technocratic sentiments while themselves claiming to be ecological.

I have cautioned from an 'anti-communist' interpretation of these discourses by engaging with the legitimising power of ecology under late socialism. Building on existing historiography on socialist experts, I have challenged the view that sees ecological discourses as purely oppositional to state socialism. Using so far unexploited sources, I have instead analysed how cultural elites reconciled the care for nature and late socialist values. Drawing on existing studies of late socialist discourse and television, the first three chapters revealed, among other things, that supporting technocratic socialism in the media often meant exposing its flaws. This ambiguity was used by liberals who, as the last chapter concludes, recontextualised existing ecological criticism and scepticism towards technocracy to fit the new political situation. However, as I have argued, the strictly anti-communist interpretation of ecological and anti-technocratic discourses was a view adopted from the liberal opposition and became a part of its legitimation narrative after 1989.

Therefore, although it became one of the defining features of postsocialist politics, scepticism towards technocracy was, as I demonstrated in Chapter One, a core aspect of late socialist culture. When the idea of scientific-technological revolution became a legitimation tool of the new government that came to power after the Warsaw Pact invasion, filmmakers continued to work on comedies that showed the contradictions and failings of technocratic socialism. On late socialist television, the political investment in scientific-technological revolution was balanced by a celebration of practical knowledge. In environmental journalism,

the style of which was in many ways similar to that of late socialist fiction, these handymen, confronting cases of abuse of nature, outwitted incompetent technocrats. Although they represented a different kind of knowledge than the one formed by technical rationality, these practical and wise socialist citizens did not challenge the legitimacy of late socialism. In fact, their activities confirmed positive ideas about the socialist present.

Moreover, although some saw the fall of state socialism as signalling the end of a modern rationalistic view of the world, dividing humanity from nature, the had been attempts under state socialism, as well, to identify and address this issue. As I showed in Chapter Two, during late socialism, one way of overcoming the conflict between the alleged technocratic abuse of nature and the need for material advancement was a cultural appreciation of nature's value combined with new technocratic solutions. On a philosophical level, this meant reconciling a progressive Marxist view of history with a cybernetic view of nature as a circular system of feedback loops and a humanistic emphasis on the value of the individual human past. This new form of optimism developed in late socialist literature in reaction to both Western 'apocalyptic' environmentalists and the 'pessimistic' culture of the 1960s, acknowledging sadness in response to the exploitation of nature as a new precondition of socialist progress.

Apart from reconciling the goals of technocratic socialism and ecology, 1980s environmental discourses also pointed to the numerous inadequacies of technocratic management. Yet, as demonstrated in Chapter Three, the meanings given to ecology varied, from new holistic conceptions of the world to local concerns about the environment and fears of alienation in too technological a world. For instance, environmental education research linked Marxist views of progress, cybernetic feedback, and late socialist values of calm and healthy life with a new emphasis on behavioural change to alleviate environmental problems. Although quite different in their level of trust in technical rationality, all of these approaches considered technocracy as deficient, failing, or outright destructive.

In the 1990s, environmental issues found new ground in liberal calls for a moral transformation. As I have argued, in this regard, the discourse on nature and technocracy in the state media had some commonalities with ideas of dissident thinkers, influenced by phenomenological critique of alienation. What differed was their assumption that the contradiction between technocracy and ordinary life was irreconcilable. In the 1990s, then, rather than inventing a new language around nature and technocracy, there was a kind of subversion of ideas about the flaws of technical knowledge and the celebration of environmental criticism from the late socialist discourse. However, although some cases, such as late socialist caricature's morphing into political support for neoliberalism, illustrate a direct link between these different discourses, I do not draw a line of causality between late socialist environmental discourses and neoliberal transformation. Rather, I reconstruct the discursive transformation of late socialist criticisms while highlighting the internal dynamics of state socialism itself.

By reconstructing neoliberal engagement with environmental discourses in Chapter Four, I challenged the 'anti-neoliberal' line of argumentation in existing scholarship that postulates that ecology was simply marginalised by the triumph of the market after 1989. I suggest that that view obscured how neoliberals used discourses about nature for their own cause. For some, in fact, neoliberalism appeared as a potential solution, as it supposedly stood against the Enlightenment rationality that they blamed as the ultimate cause of technology's harmful impact. Neoliberals promised to replace instrumental rationality of state socialism with supposedly spontaneous market relations without the need for a central planner, a figure associated with environmental damage. Indeed, the new 'standard' economic discourse that emerged to the public in the early 1990s was familiar to many ecologists, as neoliberals had developed their anti-socialist arguments in the late 1980s partly in response to the problems posed by ecologists. The exploratory analysis in the last chapter showed, among other things,

that the discourse of ecological crisis was used as an argument for postsocialist privatisation. Nonetheless, to counter ecological attempts to curb economic growth, neoliberals postulated the environment firmly as a social, and thus economic problem, opposing ecology's holistic view of the world. Moreover, in the 1990s, neoliberals began to discredit anti-neoliberal environmentalists by arguing that these were the new 'socialist technocrats', while themselves adopting a previously socialist argument against the limits to growth. They asserted their own view of markets as the best solution for environmental problems. Liberal environmentalists, in response, gave a moral critique of economic 'one-sidedness', but otherwise supported the market transition.

Broadly speaking, the dissertation thus adds to the scholarship on neoliberal takeover after 1989 and its socialist roots. I have expanded existing historiography on continuities between late socialism and postsocialism by analysing how postsocialist liberals mobilised ideas and images that had circulated in late socialist mainstream culture prior to postsocialist reform debates. What existing literature has described as a liberal transformation of socialist technocratic elites, this dissertation has expanded by exploring the relation between media, expert, and political discourses. I have demonstrated that liberals who came to power after 1989 were able to reuse and reshape existing anti-technocratic and ecological discourse to argue for an economic, political, and moral transformation. I have thus also shed light on intellectual reasoning of liberal environmentalists who supported the market transition as well as anti-environmental neoliberals by engaging with the evolution of dominant Czech ideologies rather than focusing on the environmental movement as such.

List of Figures

Figure 1.1. The host of the television programme *Cybernetics* (1965) Jiří Hurta and Antonín Prokop, an invited expert, discuss the application of cybernetic modelling in agriculture. APFCT, IDEC 265 531 15851, *Kybernetika* (1965), 9:49.

Figure 1.2. The cow in *Who Wants to Kill Jessie?* (1966) dreams of relaxing in a hammock, orchestra playing, after being given a dose of an experimental anti-nightmare drug. *Kdo chce zabít Jessie?* (dir. Václav Vorlíček, Czechoslovakia, 1966), 10:40.

Figure 1.3. The Monument to a Ploughed Furrow in Rybitví, Czechia. The plaque says: 'Here the first furrow was ploughed by the cousins Veverkas in 1827'. Photograph by Václav Sixta, 28 July 2018.

Figure 1.4. The topic of the second episode of *Six Urgent Disputations* was 'the Age of Abundance and Decay', portraying the technological achievements of the 'developed' world, here cars and a motorway, accompanied by a voiceover: 'The world of abundance honours technology, speed and comfort'. *Šest naléhavých disputací*, ep. 2, 13:08.

Figure 1.5. A black box, a magician's hat and a wand in the popular science programme *Cybernetics* (1965). APFCT, IDEC 265 531 15797, *Kybernetika* (1965), ep. 1, 11:46.

Figure 1.6. Hamlet holding a computer instead of a skull, drawn by Jiří Jirásek, shown to philosophers in the television programme *Six Urgent Disputations*.
Šest naléhavých disputací, ep. 3, 2:45.

Figure 1.7. Mathematicians' workplace as portrayed in the film *The Most Ordinary Profession* (1963). *Nejvšednější povolání* (Czechoslovakia, 1963), 2:59.

Figure 1.8. The schematic drawing by the director Rudolf Krejčík shows how he was thinking about his film *The Most Ordinary Profession* (1963), portraying the emotional side of mathematics. NFA, Josef Kořán, sg. 23, Nejvšednější povolání', f. 39.

Figure 1.9. Transfer of information illustrated on a case of a football match in the television programme *Cybernetics*. APFCT, IDEC 265 531 15787, *Kybernetika* (1965), ep. 5, 32:51.

Figure 1.10. After promising the viewers to show a picture of a beautiful woman, the host discusses why one embryo 'grows into a tortoise' while another grows 'into Sophia Loren', the famous Italian actress. APFCT, IDEC 265 531 15851, *Kybernetika* (1965), ep. 3, 20:49.

Figure 1.11. 'Is that to say that a woman would always triumph over cybernetics under all conditions?' a philosopher comments on a cartoon shown in *Six Urgent Disputations*. *Šest naléhavých disputací*, ep. 3, 4:18.

Figure 1.12. A thought-making machine in *A Case for a Novice Hangman* (1969). *Případ pro začínajícího kata* (dir. Pavel Juráček, Czechoslovakia, 1969), 31:39.

Fig 1.13 In the 7th episode of *Arabela*, princess Xenia contrasts the human and fairy-tale world, adding: 'Just look. There's not a single skyscraper, not a single factory, not a single car, just nothing. The backwardness makes me angry.', *Arabela* (dir. Václav Vorlíček, Czechoslovakia, FRG, 1980), ep. 7, 2:49–2:58.

Figures 1.14, 1.15. With his magic ring, Petr turns a modern building back into a baroque castle. *Arabela* (dir. Václav Vorlíček, Czechoslovakia, FRG, 1980), ep. 13 1:58, 2:02.

Figure 1.16. The Central Brain of Humanity featuring in the late socialist sci-fi *Visitors*

(1983). *Návštěvníci*, (dir. Jindřich Polák, Czechoslovakia, FRG), ep. 1, 4:08.

Figure 1.17. A female nude and 'secret calculations' in the notebook of Adam Bernau, the protagonist of *Visitors* (1984). *Návštěvníci* (dir. Jindřich Polák, Czechoslovakia, FRG), ep. 3, 14:46.

Figure 1.18. In *Warm Greetings from the Earth* (1984), two aliens land on a dump near newly built housing blocks, through which runners are running, the first of many ironies shown in the film. *Srdečný pozdrav ze zeměkoule* (Czechoslovakia, dir. Oldřich Lipský, 1982), 7:46.

Figure 1.19. The building of 'pristine nature' as a parody of technocratic attempts at regulating the natural world in *Warm Greetings from the Earth* (1982). *Srdečný pozdrav ze zeměkoule*, 1:05:23 (Czechoslovakia, dir. Oldřich Lipský, 1982).

Figure 2.1. Vladimír Jiránek's cartoon in the magazine *Young World* (1986) that illustrated Adabashev's book *Tomorrow's Life: Tragedy or Harmony* (in Czech 1978) depicts tree trunks and a man, perhaps a politician or a bureaucrat, standing in place of the cut trees with a tree trunk in his legs' place. The cartoon suggests ironically that all there will be left are perhaps politicians and bureaucrats in place of nature. *Mladý svět*, 21 Oct 1986, 29.

Figure 2.2. The harvest of chlorella algae from the seabed as depicted in popular science book *Will Our Planet Sustain Humanity?* (1978). Jan Bauer, *Uživí Naše Planeta Lidstvo? : O Zemědělství v Blízké Budoucnosti* (Prague: Albatros, 1978), 159.

Figures 2.3, 2.4. Front and back cover of a Czech translation of Soviet popular science book *Balance in Nature* (1975, orig. 1972). Ďožkin, Vadim Vasiljevič, and Tom Iosifovič Fetisov. *Rovnováha v Přírodě*. Translated by Miroslav Martiš (Horizont, 1975).

Figure 2.5. 'Let us love the book – source of knowledge and beauty.' A poster for a talk with Jaromír Tomeček in his hometown Kroměříž, 1956. APNP Jaromír Tomeček, sg. 32/A/5, box 61, unsorted.

Figure 2.6. Pupils of Pavlovice u Přerova elementary school to Jaromír Tomeček for Christmas 1976. APNP Jaromír Tomeček.

Figure 2.7. Tomeček as a poet among animals. *Stadion* (24 May 1961), 12.

Figure 2.8. A grandfather with his grandson walking near a nuclear power plant. *Pilgrims to Light* (1985). APFCT, IDEC 385 451 62675, *Poutníci za světlem*, (1985), 14:06.

Figure 2.9. A new atomic power plant and a church in harmony. APFCT, IDEC 384 451 52626, *Příběh světla* (1984), 12:23.

Figure 3.1. A pavilion of the 1989 *Ekoforum* exhibition, displaying the Earth, a human sculpture and various life forms. *Propagace* 11 (1989), 5.

Figure 3.2. A 'tree of life' at the 1989 *Ekoforum* exhibition. *Propagace* 11 (1989), 10.

Figure 3.3. US textbooks, among others from around the world, were shown on the Czechoslovak Television as an example of environmental education. APFCT, IDEC 273 531 21103, *Mládí a životní prostředí* (1973), 16:22.

Figure 3.4. On top, Danuše Kvasničková's schema of the existing thought process that was linear and oriented towards immediate outcomes; below, a novel way of thinking that would take lessons from the side- and retrospective effects of human actions. Adopted from Danuše Kvasničková, *Systém Ekologické Výchovy* (Prague: Videopress MON, 1986), 38, 41.

Figure 3.5. Danuše Kvasničková and Petr Amler, the programme's host, in the first episode of *Ecology in a Nutshell* (1988). Apart from the sign saying 'ECOLOGY' on the floor, there are also stylized diagrams in the backdrop that evoke ecological interconnectedness. APFCT, IDEC 488 224 13784/0001, *Ekologie všemi pády*, ep. 1, Czechoslovak Television (1988), 4:42.

Figure 3.6. A figure of a man stretched between 'natural' and 'socio-economic subsystems'. Such educative illustrations were typical in the 1980s environmental TV programmes. APFCT, IDEC 489 222 12022/0007, *Kazeta* (1989), ep. 'Ekologie', 4:34.

Figure 3.7. The unprecedented energy consumption of the last century that equalled the energy previously consumed in human history was illustrated as a comparison between a two-kilometre and one-centimetre-long road in the TV programme *Nature Known and Unknown* (1986). APFCT, IDEC 286 360 32753, *Příroda známá neznámá* (1986), ep. 'Přežije člověk rok 2000?', 6:55.

Figure 3.8. The programme *Nature Known and Unknown* (1986) also visualized the danger of global warming caused by the industrial emissions of carbon dioxide. APFCT, IDEC 286 360 32753, *Příroda známá neznámá* (1986), ep. 'Přežije člověk rok 2000?', 17:48.

Figure 3.9. Future population growth as portrayed in the programme *Nature Known and Unknown* (1986). APFCT, IDEC 286 360 32753, *Příroda známá neznámá* (1986), ep. 'Přežije člověk rok 2000?', 13:23.

Figure 3.10. A dragon in a fairy tale reads an article titled 'Will They Survive the Year 2000?' about species extinction; the picture of a dinosaur refers to the Brontosaurus Movement. APFCT, IDEC 287 350 43264, *Pohádky pro zvířátka*, ep. 'Draci jsou na vyměření', Czechoslovak Television (1987), 0:28.

Figure 3.11. A boy is depicted using infamous herbicide Travex as a propellant for his toy boat. Karel Friml and Jaroslav Veverka, *Děti, Silnice, Paragrafy* (Prague: Nadas, 1978), 165.

Figure 3.12. Presentation of local activities of the Brontosaurus Movement in the TV programme *Nature for Tomorrow* (1989). APFCT, IDEC 489 214 13194/0004, *Příroda pro zítřek* (1989), ep. 4, 02:01.

Figure 3.13. 'Brontosaurus Campaign Notes' and the logo of the Brontosaurus Movement published in the magazine *Young World*. *Mladý svět* (16 Jan 1974), 3.

Figure 3.14. A child's drawing of an ideal landscape from Hana Librová's *Social Need and Value of the Landscape* (1987). Hana Librová, *Sociální potřeba a hodnota krajiny* (Brno: Univerzita J. E. Purkyně v Brně, 1987), 83.

Figure 3.15. The opening theme of popular science television programme *Nature For Tomorrow* began with the image of Czech mountains before the image of the Earth gradually appeared from the centre. APFCT, IDEC 489 214 13234/0008, *Příroda pro zítřek* (1989), ep. 8, 0:06.

Figure 3.16. The opening theme of television programme *Nature For Tomorrow*, contrasted the blue planet Earth and smokestacks. APFCT, IDEC 489 214 13234/0008, *Příroda pro zítřek* (1989), ep. 8, 0:13.

Figure 3.17. Visualizing environmental destruction was an important part of the Brontosaurus campaign from its outset in 1974. Petr Sikula, *Mladý svět* (16 Jan 1974), 8–9.

Figure 3.18. An episode of *The Probes* (1988) titled 'Forests Do Not Sing Forever' depicted the damaged forests due to immissions. APF CT, IDEC 288 430 51588, *Sondy* (1988), ep. 'Lesy věčně nezpívají', 3:14.

Figure 3.19. 'Spruce forests on the ridges of the Ore Mountains died back due to air pollution' as shown in Emil Hadač's *Ecological Catastrophes* (1987). Emil Hadač, *Ekologické Katastrofy* (Prague: Horizont, 1987), 173.

Figure 3.20. Image of a damaged forest illustrated Emil Hadač's argument in educational television programme *Ecology in a Nutshell* (1988). APFCT, IDEC 488 224 13804/0003, *Ekologie všemi pády* (1988), ep. 3, 16:20.

Figure 3.21. The 1986 Ekofilm catalogue. *Ekofilm 1986 : Katalog Filmů 19.-23.5.1986 Ostrava* (Ostrava: Ekofilm, 1986), frontpage.

Figure 3.22. The shop window at Ostravanka shopping mall by Pavel Skuhra and Vítězslav Škuta, which won the 1984 Ekofilm window dressing competition. *Propagace* 11 (1984), 9.

Figure 3.23. The second place in the 1984 Ekofilm window dressing competition was awarded to an ironmonger's shop window by Lubomír Wilk and Dagmar Jankielová, portraying a broken branch covered in a bandage. *Propagace* 11 (1984), 9.

Figure 3.24. 'Let the sky be clean and the earth in full bloom' says the window at Lenin Avenue grocery shop in Ostrava, with figures of children playing cheerfully, winning the third place in the 1984 Ekofilm window dressing competition. *Propagace* 11 (1984), 9.

Figure 3.25. A photograph published in *Science and Technology for Youth* showing the director Josef Císařovský shooting his documentary film *Mutagens* (1984). Posing children close to white smoke evokes industrial health hazard. *Věda a technika mládeži* (9 Sep 1985), 13.

Figure 3.26. A fictive creature living off polluted air in *Oil Gobblers*, a 1988 short film. *Ropáci* (dir. Jan Svěrák, Czechoslovakia, 1988), 14:57.

Figure 3.27. Velek's newspaper articles about the environment shown on TV in 1973. The top one is entitled 'Invisible Danger'. APFCT, IDEC 273 531 21103, *Mládí a životní prostředí* (1973), 14:18.

Figure 3.28. Cartoonist Jan Vyčítal draws environmentally-themed caricatures while journalist Josef Velek talks with a guest in the studio (*Nature for Tomorrow*, Czechoslovak Television, 1988). APFCT, IDEC 488 241 10003/1001, *Příroda pro zítřek* (1988), 18:23.

Figure 3.29. 'Our animals are controlled by leading experts', a cartoon by Vladimír Jiránek. Velek, *Příběhy pro dvě nohy*, 18.

Figure 3.30. An expert oversees a bear becoming civilized by watching TV in the short film *The Bear Report*. *Zpráva o medvědech* (dir. Vladimír Jiránek and Růžena Brožková, Czechoslovakia, 1983), 3:17.

Figure 3.31. 'Now it's your turn to get the beer', a cartoon by Vladimír Jiránek. Vladimír Jiránek, *Anekdoty o Civilizaci*, ed. Milan Albich (Prague: Lidové nakladatelství, 1977), 64–65.

Figure 4.1. The first illustration in the 1990 government report on the state of the environment is a photograph of police violence on 17 November 1989. Herbert Slavík, a photograph in Moldan et al., 14.

Figure 4.2. An image of a discarded teddy bear on a landfill illustrates an article about poisoned children written in March 1989 by Josef Velek.· a photograph, *Mladý svět* (23 Mar 1989), 9.

Figure 4.3. 'I'm telling this to you not only as a hare but also as a European!' Jiránek's cartoon depicts Environment Minister Josef Vavroušek. Vladimír Jiránek, a cartoon, *Památky a příroda: časopis státní památkové péče a ochrany přírody*, 16, no 5. (1991), 294.

Figure 4.4. Jiránek's cartoon depicts God saying: 'It was said: all has its limits' in Moldan's *Ecology, Democracy, Market* (1992). Moldan, *Ekologie, Demokracie, Trh*, 25.

Figure 4.5. In 1998, Vladimír Jiránek made cartoons for the election campaign of the Civic Democratic Party: 'To the left – or with Klaus? It's only up to you!' Vladimír Jiránek, a postcard, accessed 20 Aug 2023, https://aukro.cz/politika-volby-1998-ods-doleva-nebo-s-klausem-jiranek-pohlednice-6968743410,.

Figure 4.6. 'A few more years of joyful, creative work and we are lost.' A cartoon by Vladimír Jiránek. Vladimír Jiránek, *Události* (Prague: Československý spisovatel, 1990), 31.

Figure 4.7. Musicians at Charles Bridge as an example of spontaneous emergence of market behaviour in the film *Homo economicus* (1995) about the visit of neoliberal economist Gary Becker in Prague. APFCT, IDEC 295 322 22250, *Homo Economicus* (Czechia, dir. Tomáš Škrdlant, 1995), 0:40.

Bibliography

Primary Sources

Archives

Litoměřice, Archiv Památníku národního písemnictví (Archive of the Museum of Czech Literature, APNP)

Jaromír Tomeček:
boxes 61-71.

Prague, Archiv bezpečnostích složek (State Security Archive, ABS)

Operativní agenda kontrarozvědky:
sg. KR-689620 MV, Vladimír Jiránek, https://www.ebadatelna.cz/?id=f58767,
sg. KR-813946 MV, Pavel Juráček, https://www.ebadatelna.cz/?id=f80347,
sg. TS-771927 MV, Josef Velek, https://www.ebadatelna.cz/?id=f67697.

Prague, Archiv Knihovny Václava Havla (Václav Havel Library Archive, AKVH)

ID 24875, Václav Havel and Miloš Macourek, 'Nejlepší rocky paní Hermanové', Nov 1962, https://archive.vaclavhavel-library.org/Archive/Detail/24875.

ID 21861, "Ustavující prohlášení Liberálního klubu OF", https://archive.vaclavhavel-library.org/Archive/Detail/21861.

ID 37096, 'Rozhovor prezidenta republiky Václava Havla pro Českou televizi dokument o Josefu Vavrouškovi', 10 Oct 2002, https://archive.vaclavhavel-library.org/Archive/Detail/37096.

Prague, Národní filmový archiv (National Film Archive, NFA)

Collections

Krejčík Rudolf:
Sg. 51, Kybernetika (1958–1967).

Kořán Josef:
sg. 23, Nejvšednější povolání,
sg. 45, Vědecko-technická revoluce – 1. část (1967),
sg. 46, Vědecko-technická revoluce – 2. část (1967),
sg. 47, Vědecko-technická revoluce – 3. část (1967),
sg. 48, Vědecko-technická revoluce – 4. část (1967).

Clippings

IIf-3664, Srdečný pozdrav ze zeměkoule
IIf-3918, Atomová katedrála.

Prague, Archiv a programové fondy České televize (Archives and Programme Collections of Czech Television, APFCT)

Collections

HR VDM

sg. Red 381/2867, Zprávy a protokoly,
sg. Red 305/2297, Arabela,
sg. Red 385/2875, Návštěvníci,
Red 434, Setkání s brontosaurem.

Audio-visual material

IDEC 200 327 27231, *Ekohistorie* (dir. T. Škrdlant, Czechia, 2000).
IDEC 202 327 27424/0025, *Volejte učiteli* (2002), ep. 25.
IDEC 262 531 24453, *Zrození atomového věku* (1962), ep. 5, 'Kouzla automatizace'.
IDEC 263 531 13940, *Zrození atomového věku* (1962), ep. 4, 'Chléb a růže pro všechny'.
IDEC 265 531 1576, *Kybernetika* (1965), ep. 2.
IDEC 265 531 15797, *Kybernetika* (1965), ep.1.
IDEC 268 531 18806, *O botách a houslích* (1968), 13:48–16:42.
IDEC 271 531 04009, *Filosofický a sociologický kongres v Karlových Varech* (1971).
IDEC 273 531 21103, *Mládí a životní prostředí* (1973).
IDEC 274 531 18063, *Rozhovor s Radovanem Richtou k plénu ÚV KSČ* (1974).
IDEC 277 320 14065, *Jak se do lesa volá* (1977), ep. 1,
IDEC 277 320 14153, *Jak se do lesa volá* (1977), ep. 2
IDEC 279 532 34723, *Konkurs na rok 2000* (dir. Olga Sommerová, Czechoslovakia, 1979).
IDEC 281 350 53306, rec. 2V49024 (part II), *Televizní klub mladých*, (1981).
IDEC 281 353 53253, *Televizní klub mladých* (1981), ep. 10.
IDEC 283 430 61457, *Kde je pravda?*, ep. 'Rok 2000 – člověk nebo stroj?' (1983).
IDEC 285 310 23805/0003, *Literární klub*, ep. 'Vztah krajiny a tvorby' (1985).
IDEC 285 350 23314, *Havárie v zámeckém parku* (dir. Vladimír Karlík, Czechoslovakia, 1983).
IDEC 285 531 18932, *Obhajoba zeleně* (1985), ep. 'Strom krásy'.
IDEC 287 350 43264, *Pohádky pro zvířátka* (1987), ep. 'Draci jsou na vymření'.
IDEC 287 360 90518, 287 360 90519, 287 360 90520, 287 360 90521, 287 360 90522, 287 360 90523, 287 360 90524, 288 360 563, 288 360 90564, 288 360 565, 288 360 90566, *Setkání s Brontosaurem* (1987) 11 ep.
IDEC 287 430 41386, *Vysílá studio Jezerka* (1987), ep. 267.
IDEC 288 350 53532, *Vlaštovka* (1988), 03:21–04:12.
IDEC 288 430 51574, IDEC 288 430 51585, IDEC 289 430 61310, *Sondy* (1988-1989), ep. 'Spor o Stropnici', 'Za jeden provaz', ep. 'Čistota jako hlavolam'.
IDEC 288 430 51588, *Sondy*, ep. 'Lesy věčně nezpívají'.
IDEC 289 310 63834, *Národní divadlo, Praha 3. 12. 89*, 11:30–23:19.
IDEC 289 430 61362, *Máte slovo* (1989), ep. 'Ředitelé přes přírodu'.
IDEC 290 310 73710, *Jak chytit krokodýla* (1990).
IDEC 293 383 93001/0009, *GEN* (1993), ep. 9, 'Vladimír Jiránek pohledem Jana Hřebejka'
IDEC 293 383 93001/0009, *GEN* (1993), ep. 9, 9:16–9:33.
IDEC 295 322 22250, *Homo Economicus* (Czechia, dir. Tomáš Škrdlant, 1995)
IDEC 297 322 22338, *Zrozeni sobě rovni* (1997)
IDEC 384 451 52626, *Příběh světla* (1984).

IDEC 384 451 62653, *Dukovany před startem* (1984).
IDEC 385 451 62675, *Poutníci za světlem* (1985).
IDEC 487 222 11722/0004, *Kazeta* (1987), ep. 'Životní prostředí'.
IDEC 488 224 13784/0001, *Ekologie všemi pády* (1988), ep. 1
IDEC 488 224 13784/0001, *Příroda člověku – člověk přírodě* (1988).
IDEC 488 224 13794/0002, *Ekologie všemi pády* (1988), ep. 2
IDEC 488 224 13804/0003, *Ekologie všemi pády* (1988), ep. 3.
IDEC 488 224 13814/0004, *Ekologie všemi pády* (1988), ep. 4
IDEC 488 224 17014, *Ekofilm 88* (1988).
IDEC 488 224 17284/0009, *Ekologie všemi pády* (1988), ep. 9
IDEC 488 241 10003/1001, *Příroda pro zítřek* (1988),
IDEC 489 214 13214/0006, *Příroda pro zítřek* (1989), ep. 6.
IDEC 489 214 13234/0008, *Příroda pro zítřek* (1989), ep. 8.
IDEC 489 222 12022/0007, *Kazeta* (1989), ep. 'Ekologie'
IDEC 490 214 14004, *Příroda pro ztířek* (1990).
IDEC 490 224 14074, *Ekofilm 90 – panelová diskuse*.
IDEC 490 224 14084, *Ekofilm 90 – panelová diskuse*
IDEC 495 214 10002/0003, *Příroda pro zítřek* (1995), ep. 3, 'Sestřih rozpravy na téma "Současný politický systém a ekologická krize"
IDEC 85 430 21717, *Majáky budoucího věku* (1985), ep. 1.

Prague, Archiv Českého rozhlasu (Czech Radio Archive, ACR)

A léta běží ... - Jaromír Tomeček (1986).
Domino, 20 May 1983.
'Josef Vavroušek, Demonstrace na Václavském náměstí', 23 November 1989.
Meteor, 26 Jan 1974, 6 Apr 1974, 7 Jun 1975, 14 Mar 1979,
O čem se hovoří, 20 Mar 1985.
Okénko do světa přátel – tragédie, nebo harmonie (1978), ep. 1–3.
Rada moudrých, 'O přírodě' (1967).
Rozhlasové noviny, 16 May 1989, "Ekofilm 89".
Spisovatel Dr. Jaromír Tomeček provází děti přírodou (1970)
Spisovatel Jaromír Tomeček hovoří o svém životě (1969).
Sputnik, "Ekologie kontra ekonomika nebo ruku v ruce s ekonomikou, 10 Dec 1979.
Technická výzva dneška a zítřka (1966).

Printed Sources

1st International Festival of the Science Fiction Films (Trieste, 1963).
4. Sjezd Svazu Československých Spisovatelů (Protokol) : Praha 27. - 29. Června 1967 (Praha: Československý spisovatel, 1968).
25 Let Ekofilmu : Český Krumlov 1997-1999, Ostrava 1974-1995 : Mezinárodní Festival Filmů a Videopořadů o Životním Prostředí (Praha: Ministerstvo životního prostředí, 1999).
'Activities of the UNESCO-UNEP International Environmental Education Programme: 1975-1983' (Paris: UNESCO, 1984).
Adabašev, Igor' Ivanovič. *Život Zítra - Tragédie Nebo Harmonie* (Praha: Svoboda, 1978).
Ashby, W. Ross. *Kybernetika*. Translated by Karel Berka (Praha: Orbis, 1961).
Bareš, Gustav. 'Cesta a Směr'. *Sociologický Časopis / Czech Sociological Review* 1, no. 4 (1965): 451–454.
———. *Možnosti a meze: úvahy o budoucím vývoji naší společnosti* (Praha: Svoboda, 1968).

———. *Zrození Atomového Věku : Obavy a Naděje* (Praha: Mladá fronta, 1958).
———. *Zrození Atomového Věku : Obavy a Naděje* (Praha: Mladá fronta, 1961).
Bárta, Petr. *Dobrý Den, Afriko! : Expedice Lambaréné*. Praha vols (Středočeské nakladatelství a knihkupectví, 1971).
Bartůšková, Sylva. *Jaromír Tomeček* (Praha: Československý spisovatel, 1981).
Bauer, Jan. *Uživí Naše Planeta Lidstvo? : O Zemědělství v Blízké Budoucnosti* (Praha: Albatros, 1978).
Becker, Gary S. *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education* (New York: National Bureau of Economic Research; distributed by Columbia University Press, 1964).
Běljajev, S. *Desátá planeta: fantastická reportáž o cestě do vesmíru* (v: Rudé právo, 1951).
Bell, Daniel. *The Coming of Post-Industrial Society: A Venture in Social Forecasting* (New York: Basic Books, 1973).
Bělohradský, Václav. *Kapitalismus a Občanské Ctnosti* (Praha: Československý spisovatel, 1992).
———. *Přirozený svět jako politický problém: eseje o člověku pozdní doby* (Praha: Československý spisovatel, 1991).
Bělohradský, Václav, and Karel Hvížďala. *Myslet Zeleň Světa : Rozhovor s Karlem Hvížďalou* (Praha: Mladá fronta, 1991).
Bernard, Jan, ed. *Václav Havel a Film : Scénáře, Analýzy a Úvahy z Let 1957-1989* (Praha: Knihovna Václava Havla, 2018).
Bertalanffy, Ludwig von. *Člověk-Robot a Myšlení : Psychologie v Moderním Světě*. Translated by Jan Kamarýt (Praha: Svoboda, 1972).
———. *General System Theory: Foundations, Development, Applications.* (New York: Braziller, 1968).
Biebl, Konstantin. *Bez obav: básně z let 1940-1950* (Praha: Československý spisovatel, 1951).
Blahynka, Milan. *Pozemská poezie: kapitoly k české poezii (1945-1975)* (Praha: Československý spisovatel, 1977).
Blažek, Bohuslav. *Venkov, Města, Média* (Praha: Sociologické nakladatelství, 1998).
Bloch, Ernst. *The Principle of Hope* (Oxford: Basil Blackwell, 1986).
Boháček, Ivan. *Elixíry Života a Smrti : O Chemii a Chemicích* (Praha: Albatros, 1977).
Boulding, Kenneth E. 'The Economics of the Coming Spaceship Earth'. In *Environmental Quality in a Growing Economy*, edited by H. Jarrett (Baltimore: Johns Hopkins University Press, 1966), 3–14.
Brundtland, Gro Harlem and World Commission on Environment and Development. *Our Common Future* (Oxford: Oxford University Press, 1987).
Budil, Ivo. *Hlásí se Meteor: populárně vědecký magazín Českého rozhlasu* (Praha: Horizont, 1993).
Cach, Vojtěch. *Chlapec s Klíčkem* (Praha: SNDK, 1965).
Carson, Rachel. *Silent Spring* (Boston: Houghton Mifflin, 1962).
———. *Silent Spring* (Harmondsworth: Penguin in association with Hamilton, 1965).
Činčera, Radúz, ed. *Krátký Film 1962-1963* (Praha: Ústřední půjčovna filmů, 1963).
Člověk - Věda - Technika : K Marxisticko-Leninské Analýze Vědeckotechnické Revoluce (Praha: Svoboda, 1973).
Commoner, Barry. *The Closing Circle: Confronting the Environmental Crisis* (London: Cape, 1972).
Císařovská, Blanka and Vilém Prečan, *Charta 77: Dokumenty 1977-1989*, vol. 1, 3 vols (Praha: Ústav pro soudobé dějiny AV ČR, 2007).
Daly, Herman E. *Toward a Steady-State Economy.* (San Francisco: W. H. Freeman, 1973).

Diagram Group. *How to Hold a Crocodile* (London: Sidgwick & Jackson, 1981).
Dlouhý, Jiří, ed. *Sociologické a Ekonomické Souvislosti Ekologického Problému* (Praha: Univerzita Karlova, 2003).
Dorst, Jean. *Ohrožená Příroda* (Praha: Orbis, 1974).
Dvořák, Jan. *Scéna 1980-1989 : Antologie Autorů Scény* (Praha: Pražská scéna, 2019).
Dvořák, Josef, Ivan Dvořák, Václav Kučera, Vladimíra Křižanová, Marie Suchardová, and Vlastimil Liebl. *Rok 2000. Poznáme Tajemství Života?* (Praha: Mladá fronta, 1986).
Ďožkin, Vadim Vasiljevič, and Tom Iosifovič Fetisov. *Rovnováha v Přírodě*. Translated by Miroslav Martiš (Horizont, 1975).
Ehrlich, Paul. *The Population Bomb* (New York: Ballantine Books, 1968).
Ekofilm '88 Ostrava : Vybrané Referáty k Panelovým Diskusím 15. Mezinárodního Festivalu Filmů a Televizních Pořadů o Životním Prostředí (Praha: SZN, 1988).
Ekofilm : Vybrané Referáty k Panelovým Diskusím 16. Mezinár. Festivalu Filmů a Televizních Pořadů o Životním Prostředí Ostrava 22.-26. Května 1989 (Praha: SZN, 1989).
Ekologické Podmínky a Bariéry Společenského Rozvoje ČSSR : Sborník Přednášek Ze Semináře : Jánské Lázně, 4.-8.10.1983 (Janské Lázně: Ekologická sekce Československé biologické společnosti při ČSAV, 1983).
European Environment Agency, David Stanners, and Philippe Bourdeau. *Europe's Environment: The Dobříš Assessment* (Luxembourg: OPOCE, 1995).
Farský, Miroslav. *Vybrané Statě o Životním Prostředí : Environmentální Chrestomatie* (Ústí nad Labem: Univerzita Jana Evangelisty Purkyně, 2006).
Filipcová, Blanka. *Člověk, Práce, Volný Čas* (Praha: Svoboda, 1966).
Franc, František. *Zítřek Nastal Již Dnes : Metodický Text Ke Knize Gustava Bareše 'Zrození Atomového Věku'* (Jihlava: Kraj. lid. knihovna, 1960).
Franz Kafka: Liblická Konference 1963 (v: Nakladatelství Československé akademie věd, 1963).
Friedman, Milton. *Market or Plan?: An Exposition of the Case for the Market Mechanism* (London: Centre for Research into Communist Economies, 1984).
Frolov, Ivan Timofejevič. *Věda a Budoucnost Člověka*. Translated by Eteri Marešová (Praha: Mladá fronta, 1979).
Gebhartová, Vladimíra. *Čeští a Slovenští Spisovatelé Knih pro Malé Děti* (Praha: Albatros, 1980).
Gorbachev, Mikhail S. 'Foreword'. In *The Biosphere and the Noosphere Reader: Global Environment, Society and Change*, by Paul R. Samson and David Pitt, ix–x (London: Routledge, 1999).
Gore, Al. *Earth in the Balance: Ecology and the Human Spirit* (Boston: Houghton Mifflin, 1992).
Gottlieb, Miroslav. *Poznámky k Pojmu 'Ekologie Člověka'* (Praha: Ústav krajinné ekologie ČSAV, 1976).
Hadač, Emil. *Ekologické Katastrofy* (Praha: Horizont, 1987).
———. *Ohrožená příroda: biosféra - člověk - technosféra* (Praha: Horizont, 1983).
Hardin, Garrett. *Living within Limits: Ecology, Economics, and Population Taboos* (New York: Oxford University Press, 1993).
———. 'The Tragedy of the Commons'. *Science* 162, no. 3859 (December 1968): 1243–1248.
Havel, Václav. *Dopisy Olze*. Edited by Michael Špirit (Praha: Torst, 1999).
———. 'Foreword'. In *Environment and Society in Eastern Europe*, by Andrew Tickle and Ian Welsh, xi–xii (Harlow: Addison Wesley Longman, 1998).

———. *Letters to Olga : June 1979-September 1982*. Translated by Paul R. Wilson (New York: H. Holt, 1989).
———. *Politics and Conscience* (Stockholm: Charta 77 Foundation, 1986).
Hayek, Friedrich A. von 'The Use of Knowledge in Society'. *The American Economic Review* 35, no. 4 (1945): 519–530.
———. *Kontrarevoluce Vědy : Studie o Zneužívání Rozumu*. Translated by Ján Pavlík and Danica Slouková (Praha: Liberální institut, 1995).
———. *The Counter-Revolution of Science: Studies on the Abuse of Reason* (Glencoe, Ill: Free Press, 1952).
Hermach, Jiří. *Filosofie a řízení: několik základních problémů řízení vývoje socialismu* (Praha: Nakladatelství politické literatury, 1965).
Hrabák, Josef. *Život s Literaturou* (Brno: Blok, 1982).
Hrabal, Bohumil. *Pábitelé: povídky* (Praha: Mladá fronta, 1964).
Hrubý, Jiří, Vladimíra Křižanová, and Václav Kučera. *Rok 2000. Co Budeme Jíst Dnes a Zítra* (Praha: Mladá fronta, 1985).
Huba, Mikuláš, ed. *Josef Vavroušek : Na Cestě k Trvalé Udržitelnosti : Sborník k Nedožitým 60. Narozeninám* (Brno: Nadace Partnerství, 2005).
'Intergovernmental Conference on Environmental Education, Tbilisi, USSR, 14-26 October 1977: Final Report' (Paris: UNESCO, 1977).
International Training Course on Environmental Education : Organized by the Institute of Applied Ecology and Ecotechnology, University of Agriculture, Prague : In Cooperation with Unesco-UNEP International Environmental Education Programme : Czechoslovak Socialist Republic, 1-28 September 1982 : Final Report (Unesco], 1982).
Ježek, Tomáš. 'Předmluva Jedné Oběti Kontrarevoluce Vědy'. In *Kontrarevoluce Vědy : Studie o Zneužívání Rozumu*, by Friedrich A. von Hayek, 7–10 (Praha: Liberální institut, 1995).
Jiránek, Vladimír. *Anekdoty o Civilizaci*. Edited by Milan Albich (Praha: Lidové nakladatelství, 1977).
———. *Běžte - a Milujte Se!* (Praha: Mladá fronta, 1987).
———. *Jak Je Tomu u Lidí* (Praha: Práce, 1983).
———. *Zakázaný Jiránek* (Praha: Knihcentrum, 1998).
Jirásek, Jiří. *72 Drawings* (Newcastle upon-Tyne: Stand, 1969).
John Paul II. 'Centesimus Annus', May 1991. https://www.vatican.va/content/john-paul-ii/en/encyclicals/documents/hf_jp-ii_enc_01051991_centesimus-annus.html.
Judin, Pavel Fedorovič, and Mark Moisejevič Rozental'. *Stručný Filosofický Slovník* (Praha: SNPL, 1955).
Jungwirth, Josef. *Ruchadlo. Vynález Bratranců Veverkových* (Praha: Ministerstvo zemědělství, lesnictví a vodního hosp., 1964).
Juráček, Pavel. *Deník. III., 1959-1974*. Edited by Marie Kratochvílová (Praha: Torst, 2018).
———. *Případ pro Začínajícího Kata : (Podobenství 1966-1968)* (Praha: Knihovna Václava Havla, 2020).
Keller, Jan. *Až Na Dno Blahobytu : (Ke Společenským Kořenům Ekologické Krize)* (Brno: Hnutí Duha, 1993).
———. *Přemýšlení s Josefem Vavrouškem* (Praha: G plus G, 1995).
Klaus, Vaclav. *Blue Planet in Green Shackles: What Is Endangered: Climate or Freedom?* (Washington, D.C: Competitive Enterprise Institute, 2008).
Klaus, Václav. *Cesta k Tržní Ekonomice : (Výběr z Článků, Projevů a Přednášek v Zahraničí) = A Road to Market Economy : (Selected Articles, Speeches and Lectures Held Abroad)*. Translated by Zdeněk Hais (Praha: TOP Agency, 1991).

———. ‘Current Global Warming Alarmism and The Mont Pelerin Society’s Long-Term Agenda’. *Economic Affairs (Harlow)* 29, no. 1 (2009): 45–48.
———. *Dopočítávání Do Jedné* (Praha: Management Press, 1995).
———. *O Tvář Zítřka*. Edited by Libuše Šneková (Praha: Pražská imaginace, 1991).
Kolman, Arnošt. *Kybernetika : O Strojích Vykonávajících Některé Duševní Funkce Člověka* (Praha: Státní nakladatelství politické literatury, 1957).
Komunistická strana Československa Ústřední výbor. *Poučeni z krizového vývoje va straně a společnosti po XIII. sjezdu KSČ* (Praha: Odděleni propagandy a agitace ÚV KSČ, 1971).
Kopřiva, Milan, and Jiří Šalamoun, eds. *Být Či Nebýt* (Havlíčkův Brod: Krajské nakladatelství, 1961).
Kosmas. *Kosmův letopis český s pokračovateli* (Praha, 1874).
Král, Miloslav. *Věda a Civilizace* (Praha: Svoboda, 1968).
Křenek, Jiří, ed. *Sklizeň Světla : Kniha Reportáží, Próz a Veršů o Stavbě Jaderné Elektrárny v Dukovanech* (Brno: Blok, 1983).
Kubíček, Jaromír, ed. *Přírodní Tematika v Literatuře.* (Brno: Státní vědecká knihovna, 1987).
Kvasničková, Danuše. *Environmentální Informace a Osvěta : Manuál k Zákonu č. 123/1998 Sb., o Právu Na Informace o Životním Prostředí* (Ministerstvo životního prostředí, 1998).
———. ‘Přírodověda : Její Vzdělávací a Výchovný Systém’ (Praha, 1981). NK ČR Praha.
———. *Systém Ekologické Výchovy* (Praha: Videopress MON, 1986).
Kvasničková, Danuše, and Jiří Froněk. *V Přírodopise Nověji : Hrst Zkušeností a Rad z Ověřování Alternativního Učiva Přírodopisu* (Praha: Fortuna, 1992).
Lacina, Jan, and Jiří Poláček. *Odkaz Jaromíra Tomečka* (Brno: Veronica, 2008).
Lewis, Sinclair. *Arrowsmith* (Praha: Státní nakladatelství krásné literatury a umění, 1963).
Librová, Hana. *Pestří a Zelení : Kapitoly o Dobrovolné Skromnosti* (Brno: Veronica, 1994).
———. *Sociální potřeba a hodnota krajiny* (Brno: Univerzita J. E. Purkyně v Brně, 1987).
Lidské Hodnoty a Trvale Udržitelný Způsob Života (Olomouc: Společnost pro trvale udržitelný život ve spolupráci s katedrou ekologie Přírodovědecké fakulty Univerzity Palackého, 1993).
Mališ, Oskar. *Bratranci Veverkové, Vynálezci Moderního Pluhu* (Praha: Osvěta, 1952).
Mařan, Ctibor. *Dav, lid, osobnost: aforismy a náčrty* (Praha: Edice Rozprav, 1945).
Marcuse, Herbert. *One Dimensional Man : Studies in the Ideology of Advanced Industrial Society* (London: Routledge and Kegan Paul, 1964).
Martiš, Miroslav. *Člověk versus Krajina* (Praha: Horizont, 1988).
Martiš, Miroslav, and Jan Šolc. *Země, Krajina, Člověk* (Praha: Horizont, 1977).
Martiš, Miroslav, Jan Štěpán, Antonín Buček, Jan Vaněk, Martin Culek, Igor Míchal, Josef Durdil, Olga Vidláková, and László Miklós. *Ekoprogram : (Výsledky a Zkušenosti)* (Praha: SNTL - Nakladatelství technické literatury, 1987).
Matějka, Zdeněk, Bedřich Skála, and Jiří Všetečka. *Rok 2000. Život s Počítači* (Praha: Mladá fronta, 1987).
Meadows, Donella H. and Club of Rome. *The Limits to Growth: A Report for the Club of Rome’s Project on the Predicament of Mankind* (London: Earth Island, 1972).
Merchant, Emily Klancher. *Building the Population Bomb* (New York: Oxford University Press, 2021).
Mlčící Jaro (Praha: Československý rozhlas, 1966).
Moldan, Bedřich. *Ekologie, Demokracie, Trh* (Praha: Informatorium, 1992).
———. *Přežije Technika Rok 2000? : Hledání Ekotechniky* (Praha: SNTL, 1985).

Moldan, Bedřich, Jarmila Kocourková, Jiří Cibulka, Vladimír Lammer, Ota Prášil, Petr Molt, Luděk Prošek, Herbert Slavík, and Božena Procházková. *Životní Prostředí České Republiky : Vývoj a Stav Do Konce Roku 1989* (Praha: Academia, 1990).
Moldan, Bedřich, Tomáš Pačes, and Rudolf Kolářský. *Rok 2000 - Konec Věku Plýtvání : Přírodní Zdroje - Nevratná Půjčka* (Praha: Mladá fronta, 1984).
Nádvorníková, Alena. *Film a Výtvarné Umění : Metodický Materiál pro Pedagogy a Organizátory Systému Mládež a Kultura* (Olomouc: Krajský pedagogický ústav, 1989).
Nejedlý, Zdeněk. *Komunisté : Dědici Velikých Tradic Českého Národa* (Praha: Český spisovatel, 1951).
Neubauer, Zdeněk, and Tomáš Škrdlant. *Skrytá Pravda Země : Živly Jako Archetypy Ekologického Myšlení* (Praha: Mladá fronta, 2004).
Nezval, Vítězslav. *Edison* (Praha: Rudolf Škeřík, 1928).
Nováková, Eva, ed. *Výchova k Péči o Životní Prostředí : Sborník Referátů z Konference Pořádané Správou Krkonošského Národního Parku a Její Vědeckou Radou, Špindlerův Mlýn-Svatý Petr, Září 1978* (Vrchlabí: Správa Krkonošského národního parku, 1978).
Olbracht, Ivan. *Nikola Šuhaj Loupežník* (Praha: Melantrich, 1921).
———. *Země Bez Jména: Reportáže z Podkarpatska* (Praha: Otto Girgal, 1932).
Olbracht, Ivan, and Jindřich Fleischner. *Básník a Inženýr : Diskuse o Naší Sociální Revoluci Mezi Ivanem Olbrachtem a Jindřichem Fleischnerem* (Plzeň: Omladina, 1921).
Otáhal, Milan, and Zdeněk Sládek, eds. *Deset Pražských Dnů : (17.-27. Listopad 1989) : Dokumentace* (Praha: Academia, 1990).
Ovid. 'Metamorphoses, I: 1-162'. Accessed 2 November 2022. http://knarf.english.upenn.edu/EtAlia/ovidmeta.html.
Papoušek, Jiří. *Hovory o Ekologii : Cesty k Trvale Udržitelnému Česku* (Praha: Portál, 2000).
Pavlík, Ján. *F.A. Hayek a Teorie Spontánního Řádu* (Praha: Professional Publishing, 2004).
———, ed. *Gary Becker in Prague : March 6-12, 1995* (Prague: Centre for Liberal Studies, 1996).
———, ed. *Milton Friedman v Praze : Myšlenky, Názory, Komentáře* (Praha: Grada Publishing, 1998).
———. 'Philosophy, "Parallel Polis" and Revolution: The Case of Czechoslovakia'. In *Philosophy and Political Change in Eastern Europe*, by János Kristóf Nyíri and Barry Smith, 67–101 (LaSalle, Ill.: Hegler Institute, 1993).
Pěnkava, Jaroslav, Miroslav Gottlieb, and Milan Šimek. *Volný Čas Pražanů : Dílčí Úkol č. VIII-4-5/2 : Státní Program Základního Výzkumu č. VIII-4-5 : Závěrečná Zpráva* (Praha: Ústav pro výzkum kultury, 1973).
Peterka, Josef. *Autobiografie Člověka: Poetické Divadlo pro Několik Hlasů Jednoho Muže* (Praha: Československý spisovatel, 1984).
———. *Autobiografie Vlka* (Praha: Československý spisovatel, 1980).
———. *Metamorfózy tradice: k ideologickým aspektům působení literárního dědictví* (Praha: Československý spisovatel, 1983).
———. *Principy a tendence* (Praha: Český spisovatel, 1981).
———. 'Téma Paměť'. *Česká Literatura* 33, no. 2 (1985): 97–111.
———. *Teoretické otázky rozvoje socialistického realismu* (Praha: Československý spisovatel, 1986).
Petrus, Jan. *Pro Blaho Lidstva : Osudy Vynálezců* (Praha: Kropáč a Kucharský, 1947).
Plos, Jiří, and Josef Vavroušek, eds. *Lidské Hodnoty a Společnost v Pohybu* (Praha: Kruh nezávislé inteligence, 1994).

Poličanský, Pavel, Oldřiška Tylová, Karel Sýs, Milan Kincl, and Karel Poličanský. *Pavel Poličanský Krajiny Domova : Městské Muzeum a Galerie ve Vodňanech 19 7. - 23. 8. 1987* (Vodňany: Městské muzeum a galerie, 1987).
Postrel, Virginia. 'The Green Road to Serfdom'. *Reason*, 1990.
———. *Zelená Cesta k Nevolnictví*. Translated by Jaroslav Kučera (Praha: Občanský institut, 1993).
Reich, Wilhelm. *Funkce Orgasmu : Sex-Ekonomické Problémy Biologické Energie : Objevení Orgonu*. Translated by Aleš Pech (Praha: Concordia, 1993).
———. *The Mass Psychology of Fascism* (London: Souvenir Press Educational & Academic, 1972).
Renčín, Vladimír. *Renčín 99* (Praha: Lidové nakladatelství, 1982).
Richta, Radovan. *Civilizace Na Rozcestí : Společenské a Lidské Souvislosti Vědeckotechnické Revoluce* (Praha: Svoboda, 1967).
Rudolf, Stanislav. *Běh Znaveného Koně* (Praha: Československý spisovatel, 1983).
Schwarz, Jiří, ed. *Hayek Semper Vivus : Texty Ke Kolokviu Právo a Svoboda Pořádanému Liberálním Institutem Při Příležitosti 100. Výročí Narození Friedricha Augusta von Hayeka* (Praha: Liberální institut, 2000).
Schweitzer, Albert. *Nauka Úcty k Životu*. Translated by Věra Kovaříčková (Praha: Supraphon, 1974).
Skácel, Josef, Oldřich Švarný, and Petr Zima. *Rok 2000 - Jazyk Jako Most i Propast* (Praha: Mladá fronta, 1982).
Skálová, Dita. *Rada moudrých: záznam besed, které se nikdy nekonaly : rozhlasová pásma z myšlenek velikánů lidského rodu : 1964-1967* (Praha: Svoboda, 1968).
Skarlant, Petr. *Kdo jde po dně budoucího jezera: básně ze svatební cesty* (Praha: Melantrich, 1973).
Škrdlant, Tomáš. *Demokracie Přírody : Ekologická Hra Systémových Podobností* (Praha: Originální Videojournal, 1996).
Smetana, Miloš. *Televizní Seriál a Jeho Paradoxy* (Praha: ISV, 2000).
Smetana, Miroslav, ed. *Hovory o budoucnosti* (Praha: Symposium, 1969).
Snow, C. P. *The Two Cultures and the Scientific Revolution* 1959 (New York: Cambridge University Press, 1959).
Sova, František Vratislav. *Vynálezci ruchadla: slavnostní upomínka Hosp. spolku pro okresy pardubický, holický a přeloučský při odhalení pomníku bratranců Veverků v Pardubicích* (Pardubice: Hospodářský spolek pro okresy pardubický, holický a přeloučský, 1883).
Stapp, William B., Dean Bennett, William Bryan, Jerome Fulton, Jean MacGregor, Paul Nowak, James Swan, Robert Wall, and Spenser Havlick. 'The Concept of Environmental Education'. *Journal of Environmental Education* 1, no. 1 (1969): 30–31.
Suchý, Jaroslav. *Jak Se Mění Člověk : Základy Vývojové Antropologie* (Praha: Státní pedagogické nakladatelství, 1972).
Štoll, Ladislav. 'Věda jde s lidem'. In *Marxisticko-leninskou ideovostí a stranickostí proti kosmopolitismu a objektivismu ve vědě: sborník dokumentů I. ideologické konference vysokoškolských vědeckých pracovníků v Brně 27. února - 1. března 1952* (Praha: Naše vojsko, 1952).
Štrba, Jozef, ed. *Jaderná Energetika a Životní Prostředí : Sborník Přednášek z Konference, Žďár Nad Sázavou, Duben 1979* (Zbraslav: Ústřední informační středisko pro jaderný program, 1979).
Sus, Oleg. *Cesty k dnešku. [2]* (Brno: Blok, 1966).

Svojsík, Antonín Benjamin. *Základy Junáctví* (Praha: Merkur ve spolupráci s Junáckou edicí Ústřední rady Českého Junáka, 1991).
Tesár, Ivan, ed. *Televizní Výkladový Slovník*. Vol. 2. K-P (Praha: Československá televize, 1978).
Thomayer, Josef. *Příroda a Lidé* (Praha: Militký a Novák pomocí Lumíra, 1880).
Thomson, George. *Aeschylus and Athens: A Study in the Social Origins of Drama* (London: Lawrence & Wishart, 1941).
Tomeček, Jaromír. *Hora Hoří: Balada o Křížovém Králi* (Praha: Československý spisovatel, 1984).
———. *Lovy Beze Zbraní : Výbor Próz* (Praha: Albatros, 1976).
———. *Neklid* (Praha: Československý spisovatel, 1965).
———. *Stříbrný Lipan : (Román o Rybě.)* (Praha: J. Lukasík, 1944).
———. *Věčný hvozd: obrazy z hor* (Praha: Státní nakladatelství dětské knihy, 1956).
———. *Vuí Se Směje : Obrazy z Hor* (Brno: Průboj, 1944).
———. *Živly a Osudy* (Brno: Blok, 1985).
Touraine, Alain. *The Post-Industrial Society: Tomorrow's Social History: Classes, Conflicts and Culture in the Programmed Society* (New York: Random House, 1971).
Továrek, František. *Hory a Lidé : Reportáže Ze Zakarpatska* (Hradec Králové: Kruh, 1985).
Turing, Alan. 'Computing Machinery and Intelligence'. *Mind* 59, no. 236 (1950): 433–460.
Ulver, Stanislav, ed. *Film a Doba : Antologie Textů z Let 1962-1970* (Praha: Sdružení přátel odborného filmového tisku, 1995).
Ustavující Sjezd Svazu Českých Spisovatelů ve Dnech 31.5. - 1.6. 1972 (Praha: Svoboda, 1972).
Vaculík, Ludvík. *Nepaměti (1969-1972)* (Praha: Mladá fronta, 1998).
Vavrinčík, Kornel. *Rok 2000 : Spor o Budoucnost Člověka* (Praha: Mladá fronta, 1980).
Vavroušek, Josef. 'Doslov'. In *Země Na Misce Vah : Ekologie a Lidský Duch*, by Al Gore, 347–348. translated by Jan Jařab (Praha: Argo, 1994).
———. *Modelování Biologických a Sociálních Objektů : Polystrukturní a Systémový Přístup* (Praha: Academia, 1989).
———. *Životní prostředí a sebeřízení společnosti* 86 (Praha: Institut řízení, 1990).
Velek, Josef. *A Zvoní Ocel : Povídání o Hornických, Hutnických a Strojírenských Povoláních* (Praha: Albatros, 1978).
———. *Dva tisíce verst s Lenou* (v: Panorama, 1987).
———. *Jak jsem bránil přírodu* (Praha: Práce, 1980).
———. *Mistři Zkumavek : Povídání o Povoláních Chemického Průmyslu* (Praha: Albatros, 1980).
———. *Muž přes plot* (Praha: Středočeské nakladatelství a knihkupectví, 1989).
———. *Odznak Odbornosti. Ochránce Přírody : Rady a Návody k Plnění a Získání Odznaku Odbornosti Ochránce Přírody* Odznak Odbornosti: Sv. 10 (Mladá fronta, 1978).
———. *Příběhy pro dvě nohy* (Praha: Práce, 1988).
———. *Za Vůní Dřeva, Bavlny a Kůže : Povídání o Povoláních Dřevozpracujícího, Textilního a Kožedělného Průmyslu : Pro Čtenáře Od 12 Let* (Praha: Albatros, 1982).
———. *Životní Prostředí a Národní Výbory : Výsledky Devíti Let Soutěže Hledáme Dokonalé Projekty* (Praha: Tisková, ediční a propagační služba MH, 1985).
Vrabec, Jan. *Základy Tvorby a Výroby Televizních Pořadů* (Praha: Státní pedagogické nakladatelství, 1968).
———. *Základy Tvorby a Výroby Televizních Pořadů* (Praha: SPN, 1983).
Vrbka, Pavel. *Jaderná Elektrárna Dukovany* (Brno: Průmyslové stavby, 1987).
Výhledy čs. kinematografie do r. 1985, unpublished manuscript (Prague: Český filmový ústav, 1972).

Warnkeová, Camilla. *'Abstraktní' Společnost : Systémové Vědy Jako Poselství Spásy ve Společenských Modelech Parsonse, Dahrendorfa a Luhmanna* (Praha: Academia, 1977).
Wiener, Norbert. *Cybernetics or Control and Communication in the Animal and the Machine* (Cambridge, Mass: MIT Press, 1948).
Zlatník, Alois, Miroslav Stolina, and Jaroslav Pelikán. *Základy Ekologie* (Praha: Státní zemědělské nakladatelství, 1973).

Periodicals, Journals, and Magazines (selected issues)

Buchar
Čtenář: měsíčník pro práci s knihou
Czechoslovak Film
Duha
Filmové informace
Finance a úvěr
Ikarie
Kulturní tvorba
Květy
Literární noviny
Mladý svět
Nedělní Lidové noviny
Nová přítomnost.
Památky a příroda
Pokroky matematiky, fyziky a astronomie
Propagace
Reportér
Rudé právo
Sedmá generace
Sociologický obzor
Svět sovětů
Tvorba
Věda a technika mládeži
Veronica
Vesmír
Záběr: časopis filmového diváka
Živa
Zpravodajství Ekofilm

Films

Atomová katedrála (dir. Jaroslav Balík, Czechoslovakia, 1984).
Automatic (dir. Václav Bedřich, Czechoslovakia, 1973).
Bomba motorismus (dir. Josef Císařovský, Czechoslovakia, 1982).
Brontosaurus (dir. Věra Plívová-Šimková, Czechoslovakia, 1979).
Byla jednou jedna přítomnost. Reportáž z podivuhodné události (dir. Jaroslav Dudek, Czechoslovakia, 1965).
Chobotnice z II. patra (dir. Jindřich Polák, Czechoslovakia, FRG, 1986).
Člověk versus příroda (dir. Josef Císařovský, Czechoslovakia, 1984).
Co je vám, doktore? (dir. Vít Olmer, Czechoslovakia, 1984).
Co jsme udělali slepicím (dir. Josef Hekrdla and Vladimír Jiránek, Czechoslovakia, 1977).
Což takhle dát si špenát? (dir. Václav Vorlíček, Czechoslovakia, 1977).

Děkujeme, pánové! (dir. Václav Bedřich, Czechoslovakia, 1976).
Dukovany – vroucí kotel (dir. Drahomíra Vihanová, Czechoslovakia, 1987),
Hauři, (dir. Július Matula, Czechoslovakia, 1987).
Ikarie XB1 (dir. Jindřich Polák, Czechoslovakia, 1963).
Jáchyme, hoď ho do stroje! (dir. Oldřich Lipský, Czechoslovakia, 1974).
Kdo chce zabít Jessie? (dir. Václav Vorlíček, Czechoslovakia, 1966).
Konec velké epochy (dir. Antonín Moskalyk, Czechoslovakia, 1965).
Kybernetická babička (dir. Jiří Trnka, Czechoslovakia, 1962).
Mutageny (dir. Josef Císařovský, Czechoslovakia, 1984).
Muž z prvního století (dir. Oldřich Lipský, Czechoslovakia, 1964).
Nejvšednější povolání (dir. Josef Kořán, Czechoslovakia, 1963).
Paragraf 224 (dir. Zdenek Sirový, Czechoslovakia, 1979).
Pivo přes ulici (dir. Václav Bedřich, Czechoslovakia, 1974).
Případ pro začínajícího kata (dir. Pavel Juráček, Czechoslovakia, 1969).
Ropáci (dir. Jan Svěrák, Czechoslovakia, 1988).
Rozhovory (dir. Drahomíra Vihanová, Czechoslovakia, 1983).
Slunce, seno, jahody (dir. Zdeněk Troška, Czechoslovakia, 1983).
Srdečný pozdrav ze zeměkoule (Czechoslovakia, dir. Oldřich Lipský, 1982)
Zpráva o medvědech (dir. Vladimír Jiránek and Růžena Brožková, Czechoslovakia, 1983).

Theatre Performances
Slunce, seno, jahody, dir. Antonín Procházka, The Karlin Theatre, Prague, 24 Jun 2022.

Television Programmes
Arabela (dir. Václav Vorlíček, Czechoslovakia, FRG, 1980), 13 ep.
Dnes v jednom domě (dir. František Filip, Czechoslovakia, 1980), 9 ep.
Návštěvníci (dir. Jindřich Polák, Czechoslovakia, FRG), 15 ep.
Pan Tau (dir. Jindřich Polák, Czechoslovakia, FRG, Austria, 1971–1977), 33 ep.
Pat a Mat (Czechoslovakia, dir. Lubomír Beneš, 1979), 28 ep.
Pokračování příště: Návštěvníci (Czech Television, Prague, 2003).
Rumburak (dir. Václav Vorlíček, Czechoslovakia, FRG, 1984), 2 ep.
Zákony pohybu (dir. Evžen Sokolovský, Czechoslovakia, 1978), 13 ep.
Šest naléhavých disputací (dir. Josef Kořán, Czechoslovakia, 1967), 6 ep.

Secondary Works

Books

Amberger, Alexander. 'Post-Growth Utopias from the GDR: The Ecosocialist Alternatives of SED Critics Wolfgang Harich, Rudolf Bahro, and Robert Havemann from the 1970s'. *Kontradikce* 5, no. 2 (2021): 15–29.

Andělová, Kristina. 'Czechoslovak Generational Experience of 1968: The Intellectual History Perspective'. *East European Politics and Societies* 33, no. 04 (2019): 881–898.

———. 'Existoval Chartistický Environmentalismus? Charta 77 a Reflexe Životního Prostředí'. *Soudobé Dějiny* 30, no. 2 (n.d.): 351–383.

Andersson, Jenny. *The Future of the World: Futurology, Futurists, and the Struggle for the Post-Cold War Imagination* (Oxford: Oxford University Press, 2018).

Andreas, Petr. 'Polistopadový Konsensus a Porozumění Historii'. *Kontradikce* 1, no. 1 (2017): 11.

Appel, Hilary, and Mitchell A. Orenstein. *From Triumph to Crisis: Neoliberal Economic Reform in Postcommunist Countries* (Cambridge: Cambridge University Press, 2018).
Babička, Martin. '"The Future Is in Your Hands": Temporality and the Neoliberal Self in the Czech Voucher Privatization'. *Journal of Contemporary Central and Eastern Europe* 30, no. 1 (2022): 83–99.
Baker, Susan, and Petr Jehlička. *Dilemmas of Transition: The Environment, Democracy and Economic Reform in East Central Europe* (London: Frank Cass, 1998).
Baskin, Jeremy. *Geoengineering, the Anthropocene and the End of Nature* (Cham: Palgrave Macmillan, 2019).
Beck, Ulrich. *Risk Society: Towards a New Modernity* (London: Sage, 1992).
Benson, Etienne. *Surroundings: A History of Environments and Environmentalisms* (Chicago: The University of Chicago Press, 2020).
Bess, Michael. *The Light-Green Society: Ecology and Technological Modernity in France, 1960-2000* (Chicago: University of Chicago Press, 2003).
Bockman, Johanna. *Markets in the Name of Socialism: The Left-Wing Origins of Neoliberalism* (Redwood City: Stanford University Press, 2011).
Bockman, Johanna, and Gil Eyal. 'Eastern Europe as a Laboratory for Economic Knowledge: The Transnational Roots of Neoliberalism'. *The American Journal of Sociology* 108, no. 2 (2002): 310–352.
Boltanski, Luc, and Eve Chiapello. *The New Spirit of Capitalism* (London: Verso, 2005).
Bolton, Jonathan. *Worlds of Dissent: Charter 77, the Plastic People of the Universe, and Czech Culture under Communism* (Cambridge, Mass.: Harvard University Press, 2012).
Bren, Paulina. *The Greengrocer and His TV: The Culture of Communism after the 1968 Prague Spring* (Ithaca, N.Y.: Cornell University Press, 2010).
Brenner, Christiane. 'Mnoho odstínů zelené: Hnutí Brontosaurus v Socialistickém svazu mládeže Československa'. *Historie, otázky, problémy* 10, no. 2 (2018): 72–84.
———. *'Zwischen Ost und West': tschechische politische Diskurse 1945-1948* (München: Oldenbourg, 2009).
Brick, Howard. 'Optimism of the Mind: Imagining Postindustrial Society in the 1960s and 1970s'. *American Quarterly* 44, no. 3 (1992): 348–380.
Brown, Geoffrey. 'Blaming the Bourgeoisie: The Czech Left-Wing Response to Perceived Czech Imperialism in Subcarpathian Ruthenia, 1931-1935'. *New Zealand Slavonic Journal* 46 (2012): 71–90.
Bucholc, Marta. 'Law and Liberal Pedagogy in a Post-Socialist Society: The Case of Poland'. *Journal of Modern European History* 18, no. 3 (2020): 324–334.
Bugge, Peter. 'The Use of the Middle: Mitteleuropa vs. Střední Evropa'. *European Review of History = Revue Européene d'histoire* 6, no. 1 (1999): 15–35. https://doi.org/10.1080/13507489908568219.
Burke, Peter. *What Is the History of Knowledge?* (Cambridge: Polity Press, 2016).
Burkett, Paul. *Marx and Nature: A Red and Green Perspective* (Basingstoke: Macmillan, 1999).
Carvounas, David. *Diverging Time: The Politics of Modernity in Kant, Hegel, and Marx* (Lanham, Md.: Lexington Books, 2002).
Charbonnier, Pierre. *Affluence and Freedom: An Environmental History of Political Ideas* (Cambridge: Polity Press, 2021).
Činátl, Kamil. 'Televizní Realita Normalizace a Její Ideologický Kód. Obrazy Zla v Normalizačních Seriálech a ve Filmu'. In *Film a Dějiny 2 : Adolf Hitler a Ti Druzí - Filmové Obrazy Zla*, edited by Petr Kopal (Praha: Ústav pro studium totalitních režimů, 2009), 241–271.

Činátl, Kamil, and Jaroslav Pinkas. *Dějiny ve Filmu : Film ve Výuce Dějepisu* (Praha: Ústav pro studium totalitních režimů, 2014).
Činátlová, Blanka. 'Invaze Barbarů Do České Kultury: Antropologický Rozměr Domácího Umění'. In *Tesilová Kavalérie : Popkulturní Obrazy Normalizace*, edited by Petr A. Bílek and Blanka Činátlová (Příbram: Pistorius & Olšanská, 2010), 154–159.
Čížová, Júlia, and Michal Ďurčo. 'Pozitívna Deviácia v Československu v 80. Rokoch: Prípad Bratislavského Environmentálneho Hnutia'. *Historický Časopis* 70, no. 3 (2022): 461–486.
Clarke, Bruce. *Gaian Systems: Lynn Margulis, Neocybernetics, and the End of the Anthropocene* (Minneapolis: University of Minnesota Press, 2020).
Clavin, Patricia. 'Defining Transnationalism'. *Contemporary European History* 14, no. 4 (2005): 421–439.
Colla, Marcus. 'The Politics of Time and State Identity in the German Democratic Republic'. *Transactions of the Royal Historical Society* 29 (2019): 223–251.
Corry, Olaf. 'The Green Legacy of 1989: Revolutions, Environmentalism and the Global Age'. *Political Studies* 62, no. 2 (2014): 309–325.
Cysařová, Jarmila. *Česká Televizní Publicistika : Svědectví Šedesátých Let* (Praha: Česká televize, 1993).
Darst, Robert G. *Smokestack Diplomacy: Cooperation and Conflict in East-West Environmental Politics* (Cambridge, Mass.: MIT Press, 2001).
Davies, William. *Economic Science Fictions* (London: Goldsmiths Press, 2018).
Dawson, Jane I. *Eco-Nationalism: Anti-Nuclear Activism and National Identity in Russia, Lithuania, and Ukraine* (Durham, N.C: Duke University Press, 1996).
DeBardeleben, Joan. *The Environment and Marxism-Leninism: The Soviet and East German Experience* (Boulder: Westview Press, 1985).
Dobos, Corina. '"For a More Just World": Population and Politics at the World Population Conference, Bucharest 1974'. *Romanian Journal of Population Studies* 9, no. 1 (2015): 152–164.
Dobrowolska, Anna. '"Why Don't They Display Male Nudes?": Nude Photography, Women's Art, and the Redefinition of Socialist Morality in 1970s Poland'. *Aspasia* 17, no. 1 (2023): 164–182.
Donert, Celia, Ana Kladnik, and Martin Sabrow. *Making Sense of Dictatorship: Domination and Everyday Life in East Central Europe after 1945* (Budapest: Central European University Press, 2022).
Dorn, Charles. '"A New Global Ethic": A History of the United Nations International Environmental Education Program, 1975-1995'. *Foro de Educación* 18, no. 2 (2020): 83–108.
Dougherty, Carol. *Prometheus* (London: Routledge, 2006).
Dryzek, John S. *The Politics of the Earth: Environmental Discourses* (Oxford: Oxford University Press, 1997).
Dunlap, Riley E., and Aaron M. McCright. 'Organized Climate Change Denial'. In *Oxford Handbook of Climate Change and Society*, edited by John S. Dryzek, Richard B. Norgaard, and David Schlosberg (Oxford: Oxford University Press, 2011), 145–161.
Dunlap, Thomas R. *DDT: Scientists, Citizens, and Public Policy* (Princeton: Princeton University Press, 1981).
Edwards, Paul N. *A Vast Machine: Computer Models, Climate Data, and the Politics of Global Warming* (Cambridge, Mass. ; London: MIT Press, 2010).
Elveson, Hans. 'The Rural Ocherk in Russian Literature after the Second World War' Commentationes Slavicae Gothoburgenses 1 (Inst. f. slaviska språk, Göteborgs univ., 1975).

Engerman, David C. ‘The Romance of Economic Development and New Histories of the Cold War’. *Diplomatic History* 28, no. 1 (2004): 23–54.
Engerman, David C., Nils Gilma, and Mark H. Haefele. *Staging Growth: Modernization, Development, and the Global Cold War* (Amherst, Mass.: University of Massachusetts Press, 2003).
Eyal, Gil. *The Crisis of Expertise* (Cambridge: Polity, 2019).
Eyal, Gil, and Larissa Buchholz. ‘From the Sociology of Intellectuals to the Sociology of Interventions’. *Annual Review of Sociology* 36 (2010): 117–137.
Eyal, Gil, Iván Szelényi, and Eleanor R. Townsley. *Making Capitalism without Capitalists: Class Formation and Elite Struggles in Post-Communist Central Europe* (London: Verso, 1998).
Fischer, Frank. *Technocracy and the Politics of Expertise* (Newbury Park: Sage, 1990).
Fiske, John. *Understanding Popular Culture* (Boston: Unwin Hyman, 1989).
Fleck, Richard. ‘Mikhail Prishvin: A Russian Thoreau’. *The Concord Saunterer* 9, no. 2 (1974): 11–13.
Foster, John Bellamy. *Marx’s Ecology: Materialism and Nature* (New York: Monthly Review Press, 2000).
———. *The Return of Nature: Socialism and Ecology* (New York: Monthly Review Press, 2020).
Franc, Martin. *Volný čas v českých zemích 1957-1967* (Praha: Academia, 2013).
French, Hilary F. *Green Revolutions: Environmental Reconstruction in Eastern Europe and the Soviet Union* (Washington, D.C., 1990).
Gerovitch, Slava. *From Newspeak to Cyberspeak: A History of Soviet Cybernetics* (Cambridge, Mass.: MIT, 2002).
Geyer, Michael, and Sheila Fitzpatrick. *Beyond Totalitarianism: Stalinism and Nazism Compared* (New York: Cambridge University Press, 2008).
Gille, Zsuzsa. *From the Cult of Waste to the Trash Heap of History: The Politics of Waste in Socialist and Postsocialist Hungary* (Bloomington: Indiana University Press, 2007).
Gjuričová, Adéla, Michal Kopeček, Petr Roubal, Jiří Suk, and Tomáš Zahradníček. *Rozděleni Minulostí : Vytváření Politických Identit v České Republice Po Roce 1989* (Praha: Knihovna Václava Havla, 2011).
Glassheim, Eagle. ‘Building a Socialist Environment. Czechoslovak Environmental Policy from the 1960s to the 1980s’. In *Nature and the Iron Curtain: Environmental Policy and Social Movements in Communist and Capitalist Countries, 1945–1990*, edited by Astrid Mignon Kirchhof and John R. McNeill (Pittsburgh: University of Pittsburgh Press, 2019), 137–150.
———. *Cleansing the Czechoslovak Borderlands: Migration, Environment, and Health in the Former Sudetenland* (University of Pittsburgh Press, 2016).
Golema, Martin. ‘Medieval Saint Ploughmen and Pagan Slavic Mythology’. *Studia Mythologica Slavica* 10 (2007): 155–177.
Grove, Richard. *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600-1860* (Cambridge: Cambridge University Press, 1995).
Gumbert, Heather L. *Envisioning Socialism: Television and the Cold War in the German Democratic Republic* (Ann Arbor: University of Michigan Press, 2014).
Guth, Stefan. ‘One Future Only. The Soviet Union in the Age of the Scientific-Technical Revolution’. *Journal Of Modern European History* 13, no. 3 (2015): 355–376.
Hanáková, Petra. ‘First Contact or Primal Scene. Communism Meets Real Socialism Meets Capitalism in Early Czechoslovak Science Fiction Cinema’. In *Red Alert: Marxist*

Approaches to Science Fiction Cinema, by Ewa Mazierska and Alfredo Suppia, 25–47 (Detroit: Wayne State University Press, 2016).
Havelková, Hana, and Libora Oates-Indruchová, eds. *The Politics of Gender Culture under State Socialism: An Expropriated Voice* (London: Routledge, 2014).
Hecht, Gabrielle. *The Radiance of France: Nuclear Power and National Identity after World War II* Inside Technology (Cambridge, Mass.: MIT Press, 1998).
Hill, John M. *The Cultural World in Beowulf* (Toronto: University of Toronto Press, 1995).
Hoffmann, Erik P. *Technocratic Socialism: The Soviet Union in the Advanced Industrial Era* Duke Press Policy Studies (Durham, N.C: Duke University Press, 1985).
Holý, Ladislav. *The Little Czech and the Great Czech Nation: National Identity and the Post-Communist Transformation of Society* (Cambridge: Cambridge University Press, 1996).
Hulík, Štěpán. *Kinematografie Zapomnění : Počátky Normalizace ve Filmovém Studiu Barrandov (1968-1973)* (Praha: Academia, 2011).
Imre, Anikó. *TV Socialism* (Durham: Duke University Press, 2016).
Jarausch, Konrad H. *Dictatorship as Experience: Towards a Socio-Cultural History of the GDR* (New York: Berghahn Books, 2009).
Jehlička, Petr, and Matthew Kurtz. 'Everyday Resistance in the Czech Landscape: The Woodcraft Culture from the Hapsburg Empire to the Communist Regime'. *East European Politics and Societies* 27, no. 2 (2013): 308–332.
Jehlička, Petr, Philip Sarre, and Juraj Podoba. *Czech Environmental Discourse after a Decade of Western Influence: Transformation beyond Recognition or Continuity of the Pre-1989 Perspectives* EUI Working Paper. RSC ; No. 2002/24 (San Domenico: European University Institute, 2002).
Jehlička, Petr, and Joe Smith. 'Out of the Woods and into the Lab: Exploring the Strange Marriage of American Woodcraft and Soviet Ecology in Czech Environmentalism'. *Environment and History* 13, no. 2 (2007): 187–210.
———. 'Trampové, přírodovědci a brontosauři: Předlistopadová zkušenost českého environmentálního hnutí jako předzvěst ekologické modernizace'. *Soudobé dějiny* XXIV, no. 1–2 (2017): 78–101.
Jemelka, Martin. '"The Miracle of Slušovice". The Municipality and the United Cooperative Farm–Slušovice Agrocombine as the Pilgrimage Site of the Czechoslovak Consumerism at the Dawn of the Socialist State Era.' *Przegląd Historyczny* 109, no. 4 (2018): 739–756.
Jiřiště, Jakub. 'Optimisté a skeptici. Dramaturgické konfrontance sci-fi filmu Ikarie XB 1'. In *Zpět k českému filmu: Politika, estetika, žánry a techniky*, by Michal Večeřa, 167–199 (Praha: Národní filmový archiv, 2017).
Jonsson, Fredrik Albritton. 'The Origins of Cornucopianism: A Preliminary Genealogy'. *Critical Historical Studies* 1, no. 1 (2014): 151–168.
Kalter, Christoph. *The Discovery of the Third World: Decolonization and the Rise of the New Left in France, c. 1950-1976* (Cambridge: Cambridge University Press, 2016).
Kanda, Roman. *Trhliny světa: kniha studií o Bohumilu Hrabalovi* (Praha: Ústav pro českou literaturu AV ČR, 2016).
Kelley, Donald R. 'Economic Growth and Environmental Quality in the USSR: Soviet Reaction to "The Limits to Growth"'. *Canadian Slavonic Papers* 18, no. 3 (1976): 266–283.
Kennedy, Michael D. *Cultural Formations of Postcommunism. Emancipation, Transition, Nation, and War* Contradictions 15 (Minneapolis: University of Minnesota Press, 2002).

Kline, Ronald R. *The Cybernetics Moment, or, Why We Call Our Age the Information Age* (Baltimore: Johns Hopkins University Press, 2015).
Kolář, Pavel. *Der Poststalinismus: Ideologie und Utopie einer Epoche* (Köln: Böhlau Verlag, 2016).
Kopeček, Michal. 'The Rise and Fall of Czech Post-Dissident Liberalism after 1989'. *East European Politics and Societies* 25, no. 02 (2011): 244–271.
———. 'Vládnout Právem. Česká Právní Věda Od „represivní Legality" k Právnímu Státu, 1969-1994'. In *Architekti Dlouhé Změny: Expertní Kořeny Postsocialismu v Československu* (Praha: Argo, 2019), 41–102.
Kopeček, Michal, Adéla Gjuričová, Václav Rameš, Petr Roubal, Matěj Spurný, and Tomáš Vilímek. *Architekti dlouhé změny: expertní kořeny postsocialismu v Československu* (Praha: Argo, 2019).
Kopeček, Michal, and Pavel Kolář. 'Projekt „Socialistická diktatura jako myšlenkový svět"'. *Soudobé dějiny* XIX, no. 2 (2012): 189–195.
Kott, Sandrine. 'Everyday Communism: New Social History of the German Democratic Republic'. *Contemporary European History* 13, no. 2 (May 2004): 233–247.
Kouba, Karel, and Vít Schmarc. '„Tank Míru". Traktor Jako Popkulturní Emblém Československého Socialistického Realismu'. *Slovo a Smysl* 3, no. 6 (2006).
Krapfl, James. *Revolution with a Human Face: Politics, Culture, and Community in Czechoslovakia, 1989-1992* (Ithaca: Cornell University Press, 2013).
Krivý, Maroš. 'Quality of Life or Life-in-Truth? A Late- Socialist Critique of Housing Estates in Czechoslovakia'. In *Re-Framing Identities*, edited by Torsten Lange and Ákos Moravánszky (Berlin: De Gruyter, 2016), 3:303–318.
Křížkovský, Matyáš. 'Tíživé Dědictví Nové Politiky v Česku: Zelení Jako Případ Neúspěšného Morálního Populismu'. *Central European Journal of Politics* 5, no. 1 (2019): 30–54.
Křížkovský, Matyáš, Michael Polák, and Ondřej Slačálek. 'The Anti-Authoritarianism of the Movement of Revolutionary Youth?: Three Contextualisations'. *Kontradikce* 5, no. 2 (2021): 31–55.
Kůželová, Michaela. 'Příroda Na Prahu Atomového Věku : Obraz Jaderné Energetiky a Životního Prostředí v Publicistice Socialistického Československa', Soudobé dějiny, 24, no. 1/2 (2017): 102–126.
Lajus, Julia. 'Soviet Official Critiques of the Resource Scarcity Prediction by Limits to Growth Report: The Case of Evgenii Fedorov's Ecological Crisis Rhetoric'. *European Review of History: Revue Européenne d'histoire* 27, no. 3 (2020): 321–341.
Lane, David. *The Legacy of State Socialism and the Future of Transformation* (Lanham, Md.: Rowman & Littlefield, 2002).
Lane, David, and Martin Myant. *Varieties of Capitalism in Post-Communist Countries* (Basingstoke: Palgrave Macmillan, 2007).
Latham, Michael E. *Modernization as Ideology: American Social Science and 'Nation Building' in the Kennedy Era* (Chapel Hill: University of North Carolina Press, 2000).
Lindenberger, Thomas, and Zentrum für Zeithistorische Forschung Potsdam. *Herrschaft Und Eigen-Sinn in Der Diktatur : Studien Zur Gesellschaftsgeschichte Der DDR* (Köln: Böhlau, 1999).
Linhart, Josef. *Základy Psychologie Učení* (Prague: Státní pedagogické nakladatelství, 1986).
Locher, Fabien. 'Les pâturages de la Guerre froide: Garrett Hardin et la "Tragédie des communs"'. *Revue d'histoire moderne et contemporaine* 60–1, no. 1 (2013): 7–36.
Lüdtke, Alf. *Eigen-Sinn: Fabrikalltag, Arbeitererfahrungen und Politik vom Kaiserreich bis in den Faschismus* (Hamburg: Ergebnisse Verlag, 1993).

Macekura, Stephen J. *The Mismeasure of Progress: Economic Growth and Its Critics* (Chicago: University of Chicago Press, 2020).
Macura, Vladimír. *Šťastný věk: symboly, emblémy a mýty 1948-89* (Praha: Pražská imaginace, 1992).
Majewska, Magda. 'From Political Radicalism to Revolutionary Therapy: Wilhelm Reich and Freudo-Marxism in America'. *Amerikastudien* 62, no. 4 (2017): 603–618.
Major, Patrick. 'Future Perfect? Communist Science Fiction in the Cold War'. In *Across the Blocs*, by Patrick Major and Rana Mitter, 71–96 (London: Routledge, 2004).
Mark, James. *1989: A Global History of Eastern Europe* (Cambridge: University Press, 2019).
Marsh, Rosalind J. *Soviet Fiction since Stalin: Science, Politics, and Literature* (London: Croom Helm, 1986).
Mazanik, Anna. 'Environmental Change and the Soviet Media before 1986: Dissident and Officially Sanctioned Voices'. In *Climate Change Discourse in Russia* (Routledge, 2018), 32–49.
Mazower, Mark. *Governing the World: The History of an Idea* (New York: The Penguin Press, 2012).
McDermott, Kevin, and Matthew Stibbe, eds. *The 1989 Revolutions in Central and Eastern Europe: From Communism to Pluralism* (Manchester: Manchester University Press, 2013).
McNeill, John R. 'The Environment, Environmentalism, and International Society in the Long 1970s'. In *The Shock of the Global: The 1970s in Perspective* (Cambridge, Mass: Belknap Press of Harvard University Press, 2010), 263–278.
Mervart, Jan. 'Czechoslovak Marxist Humanism and the Revolution'. *Studies in East European Thought* 69, no. 1 (2017): 111–126.
———. *Kultura v karanténě: umělecké svazy a jejich konsolidace za rané normalizace* (Praha: Nakladatelství Lidové noviny, 2015).
———. *'Rehabilitovat Marxe!': Československá stranická inteligence a myšlení poststalinské modernity* (Praha: Nakladatelství Lidové noviny, 2020).
———. 'Shaping "Real Socialism": The Normalised Conception of Culture'. In *Czechoslovakia and Eastern Europe in the Era of Normalisation, 1969–1989* (Cham: Palgrave Macmillan, 2022), 195–214.
Mirowski, Philip. *More Heat than Light: Economics as Social Physics, Physics as Nature's Economics* (Cambridge: Cambridge University Press, 1989).
———, ed. *Natural Images in Economic Thought: Markets Read in Tooth and Claw* (Cambridge: Cambridge University Press, 1994).
Mirowski, Philip, and Dieter Plehwe. *The Road from Mont Pèlerin: The Making of the Neoliberal Thought Collective* (Cambridge, Mass.: Harvard University Press, 2009).
Mitchell, Timothy. *Carbon Democracy: Political Power in the Age of Oil* (London: Verso, 2011).
Morris, Brian. 'Ernest Thompson Seton and the Origins of the Woodcraft Movement'. *Journal of Contemporary History* 5, no. 2 (1970): 183–194.
Müller, Jaroslav. *Lovy Beze Zbraní* (Ostrava: Profil, 1967).
Nečasová, Denisa. *Nový socialistický člověk: Československo 1948-1956* (Brno: Host, 2018).
Nelson, Arvid. *Cold War Ecology: Forests, Farms, and People in the East German Landscape, 1945-1989* (New Haven, Conn.: Yale University Press, 2005).
Newton, Scott. *Law and the Making of the Soviet World: The Red Demiurge* (Abingdon: Routledge, 2015).
Nordblad, Julia. 'The Future of the Noosphere'. In *Forum Interdisziplinäre Begriffsgeschichte*, 2014, 3:33–42.

Nordblad, Julia, and Troy Vettese. ‘European Histories of the Economic and Environmental: Introduction’. *Contemporary European History* 31, no. 4 (2022): 481–490.
Novák, Arnošt. *Tmavozelený svět: radikálně ekologické aktivity v České republice po roce 1989.* (Praha: Sociologické nakladatelství, 2017).
Novikoff, Alex J. *The Medieval Culture of Disputation: Pedagogy, Practice, and Performance* (Philadelphia: University of Pennsylvania Press, 2013).
Nye, David E. *Technology Matters: Questions to Live With* (Cambridge, Mass.: MIT, 2006).
Oldfield, Jonathan D., and Denis JB Shaw. ‘VI Vernadskii and the Development of Biogeochemical Understandings of the Biosphere, c. 1880s–1968’. *The British Journal for the History of Science* 46, no. 2 (2013): 287–310.
Olšáková, Doubravka. ‘Environmental Journalism? Radio Free Europe, Charter 77 and the Making of an Environmental Agenda’. *Environment and History* 28, no. 2 (2022): 203–227.
———. ‘The International Biological Program in Eastern Europe: Science Diplomacy, Comecon and the Beginnings of Ecology in Czechoslovakia’. *Environment and History* 24, no. 4 (2018): 543–567.
Olšáková, Doubravka, and Jiří Janáč. *The Cult of Unity : The Stalin Plan for the Transformation of Nature in Czechoslovakia, 1948-1964* (Praha: Academia, 2021).
Olsen, Jon Berndt. *Tailoring Truth: Politicizing the Past and Negotiating Memory in East Germany, 1945-1990* (New York: Berghahn Books, 2015).
Parfianowicz, Weronika. ‘Limits to Socialist Growth: The Question of Economic Growth and Environmental Crisis in Polish Discussions of the 1970s’. *Kontradikce* 6, no. 2 (2022): 41–66.
Parrott, Ray J. ‘Questions of Art, Fact, and Genre in Mikhail Prishvin’. *Slavic Review* 36, no. 3 (1977): 465–474.
Pehe, Veronika. ‘Privatization Comedies as Media of Memory of the Czech(Oslovak) Economic Transformation’. In *Remembering the Neoliberal Turn: Economic Change and Collective Memory in Eastern Europe after 1989*, edited by Veronika Pehe and Joanna Wawrzyniak (London: Routledge, 2023), 201–216.
———. *Velvet Retro: Postsocialist Nostalgia and the Politics of Heroism in Czech Popular Culture* (New York: Berghahn Books, 2020).
Plaggenborg, Stefan. *Experiment Moderne: der sowjetische Weg* (Frankfurt/Main: Campus, 2006).
Plehwe, Dieter. ‘Think Tank Networks and the Knowledge-Interest Nexus: The Case of Climate Change’. *Critical Policy Studies* 8, no. 1 (2014): 101–115.
Pryde, Philip R. *Conservation in the Soviet Union* (Cambridge: Cambridge University Press, 1972).
Pullmann, Michal. *Konec experimentu: přestavba a pád komunismu v Československu* (Praha: Scriptorium, 2011).
———. ‘The Ideological Face of Normalisation: Socialist Modernity and the “Quiet Life”’. In *Czechoslovakia and Eastern Europe in the Era of Normalisation, 1969–1989*, edited by Kevin McDermott and Matthew Stibbe (Springer, 2022), 53–71.
Rákosník, Jakub, Matěj Spurný, and Jiří Štaif. *Milníky Moderních Českých Dějin : Krize Konsenzu a Legitimity v Letech 1848-1989* (Praha: Argo, 2018).
Rameš, Václav. *Trh Bez Přívlastků, Nebo Ekonomickou Demokracii? : Spory o Podobu Vlastnické Transformace v Porevolučním Československu* (Praha: Ústav pro soudobé dějiny AV ČR, 2021).
Reifová, Irena. ‘Kryty Moci a Úkryty Před Mocí: Normalizační a Postkomunistický Televizní Seriál’. In *Konsolidace Vládnutí a Podnikání v České Republiace a Evropské Unii.*

Díl II. Sociologie, Prognostika a Správa: Média. (Praha: Matfyz Press, 2002), 354–371.
Rindzevičiūtė, Eglė. *The Power of Systems: How Policy Sciences Opened up the Cold War World* (Ithaca: Cornell University Press, 2016).
———. 'Toward a Joint Future beyond the Iron Curtain: East–West Politics of Global Modelling'. In *The Struggle for the Long-Term in Transnational Science and Politics* (New York: Routledge, 2015), 115–143.
Robertson, Thomas. *The Malthusian Moment: Global Population Growth and the Birth of American Environmentalism* ¨ (New Brunswick: Rutgers University Press, 2012).
Robinson, Sam. 'Scientific Imaginaries and Science Diplomacy: The Case of Ocean Exploitation'. *Centaurus* 63, no. 1 (2021): 150–170.
Roubal, Petr. *Spartakiads: The Politics of Physical Culture in Communist Czechoslovakia* (Prague: Karolinum Press, 2020).
———. 'The Battle of Žižkov: Urban Planners' Transition from Heritage Protection to Neoliberal Discursive Planning'. *Journal of Urban History* 47, no. 3 (May 2021): 495–510.
Rudolf Kučera. 'Making Standards Work. Semantics of Economic Reform in Czechoslovakia, 1985–1992'. *Zeithistorische Forschungen* 12, no. 3 (2015): 427–447.
Saharov, Juhan. 'From Future Scenarios to Sovereignty Declarations: Estonian Cyberspeak and the Breakup of the Soviet Union'. *Europe-Asia Studies*, 2022, 809–831.
Satterwhite, James H. *Varieties of Marxist Humanism: Philosophical Revision in Postwar Eastern Europe* (Pittsburgh: University of Pittsburgh Press, 1992).
Schulze Wessel, Martin. *Der Prager frühling: aufbruch in eine neue welt* (Ditzingen: Reclam, 2018).
Seefried, Elke. 'Rethinking Progress. On the Origin of the Modern Sustainability Discourse, 1970–2000'. *Journal of Modern European History* 13, no. 3 (2015): 377–400.
Siddiqi, Asif A. 'Competing Technologies, National(Ist) Narratives, and Universal Claims: Toward a Global History of Space Exploration'. *Technology and Culture* 51, no. 2 (2010): 425–443.
Slobodian, Quinn. *Globalists: The End of Empire and the Birth of Neoliberalism* (Cambridge, Mass: Harvard University Press, 2018).
Sommer, Vítězslav. *Řídit Socialismus Jako Firmu : Technokratické Vládnutí v Československu, 1956-1989* (Praha: Ústav pro soudobé dějiny AV ČR, 2019).
———. 'Scientists of the World, Unite! Radovan Richta's Theory of Scientific and Technological Revolution'. In *Science Studies during the Cold War and beyond: Paradigms Defected*, edited by Elena Aleksandrovna Aronova and Simone Turchetti (New York: Palgrave Macmillan, 2016), 177–204.
———. 'The Economics of Everyday Life in "New" Socialism'. *History of Political Economy* 51, no. S1 (2019): 52–72.
Soper, Kate. 'Greening Prometheus: Marxism and Ecology'. In *The Greening of Marxism*, by Ted Benton, 81–99 (London: Guilford Press, 1996).
———. *What Is Nature?: Culture, Politics and the Non-Human* (Oxford: Blackwell, 1995).
Sowell, Thomas. *Knowledge and Decisions* (New York: Basic Books, 1980).
Spurný, Matěj. *Making the Most of Tomorrow: A Laboratory of Socialist Modernity in Czechoslovakia* (Praha: Karolinum Press, 2019).
———. 'Mezi Vědou a Politikou. Ekologie Za Socialismu a Kapitalismu (1975–1995)'. In *Architekti Dlouhé Změny. Expertní Kořeny Postsocialismu v Československu.* (Praha: Argo, 2019), 267–314.
Spurný, Matěj, Doubravka Olšáková, Vítězslav Sommer, and Jiří Janáč. 'Technokratischer Sozialismus in Der Tschechoslowakei'. *Bohemia* 57, no. 1 (2017): 12–24.

Srubar, Helena. ‘Ambivalenzen Des Populären: Pan Tau Und Co. Zwischen Ost Und West’ (PhD Thesis, Konstanz: UVK-Verl.-Ges., 2008).
Szacki, Jerzy. *Liberalism after Communism* (Budapest: Central European University Press, 1996).
Szulecki, Kacper. ‘Hijacked Ideas: Human Rights, Peace, and Environmentalism in Czechoslovak and Polish Dissident Discourses’. *East European Politics and Societies* 25, no. 2 (2011): 272–295.
Těšínská, Emilie, and Jan Janko, eds. *Technokracie v Českých Zemích (1900-1950)* (Praha: Archiv Akademie věd České republiky, 1999).
Ther, Philipp. *Europe since 1989* (Princeton University Press, 2016).
Tickle, Andrew, and Ian Welsh. *Environment and Society in Eastern Europe* (Harlow: Addison Wesley Longman, 1998).
Třeštík, Dušan. *Mýty Kmene Čechů. Tři Studie Ke ‘Starým Pověstem Českým’. (7.-10. Století)* (Praha: Nakladatelství Lidové noviny, 2003).
Turner, Fred. *From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism* (Chicago, Ill. ; London: University of Chicago Press, 2006).
Vaněk, Miroslav. *Nedalo se tady dýchat: ekologie v českých zemích v letech 1968 až 1989* (Praha: Maxdorf, 1996).
Vogt, Kristoffer Chelsom. ‘The Post-Industrial Society: From Utopia to Ideology’. *Work, Employment and Society* 30, no. 2 (2016): 366–376.
Waddell, Craig. *And No Birds Sing: Rhetorical Analyses of Rachel Carson’s Silent Spring* (Carbondale: Southern Illinois University Press, 2000).
Wagner, Peter. *A Sociology of Modernity: Liberty and Discipline* (London: Routledge, 1994).
Walker, Jeremy. *More Heat than Life: The Tangled Roots of Ecology, Energy, and Economics* (Basingstoke: Palgrave Macmillan, 2020).
Warde, Paul, Libby Robin, and Sverker Sörlin. *The Environment: A History of the Idea* (Baltimore: Johns Hopkins University Press, 2018).
Wedl, Alexandra. ‘Green Volunteers in Czechoslovakia: The Youth Magazine Mladý Svět and Its Environmental Campaign, 1970s–1980s’. *Labour History Review* 86, no. 3 (2021): 397–423.
Weijers, Olga. *In Search of the Truth: A History of Disputation Techniques from Antiquity to Early Modern Times* (Turnhout: Brepols, 2013).
Weiner, Douglas R. *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachëv* (Berkeley: University of California Press, 1999).
Worster, Donald. *Nature’s Economy: A History of Ecological Ideas* (Cambridge: Cambridge University Press, 1994).
Yurchak, Alexei. *Everything Was Forever, until It Was No More: The Last Soviet Generation* (Princeton: Princeton University Press, 2005).

Conference presentations

Rohozińska, Zofia. ‘Transforming the Polish Field of Art by Changing the Memory of Socialist Realism over the 1980s’ (Warsaw, 2022).

Unpublished Theses

Sanchez, Andrew. ‘Cyber-Nations: The Cold War Contest for Cybernetics and Automation in the US, USSR, and Divided Germany’ (PhD Thesis, University of Oxford, 2022).

Vettese, Troy Gabriel Wesley. ‘Limits and Cornucopianism: A History of Neo-Liberal Environmental Thought, 1920–2007’ (PhD Thesis, New York University, 2019).