CATALYST
feminism, theory, technoscience

Corruption, Șmecherie, and Siliconization: Retrospective and Speculative Technoculture in Postsocialist Romania

Erin McElroy
AI Now Institute, New York University
erinmcelroy@nyu.edu

Abstract

This article explores socialist and postsocialist technoculture in postsocialist Romania, focusing upon both retrospective and speculative accounts of what did, and what could have, transpired beyond the purview of the state and of capitalism. Upon a backdrop of postsocialist Siliconization and Western anticorruption politics, it looks to queer, corrupt, and deviant technological practices that pervert normative and Western accounts of socialism and its transition. In particular, this article sifts through speculative and retrospective accounts of hackers, computer cloners, and political artists and organizers, many of whom narrate technocultural practices of *șmecherie*—a Romanian word with Romani roots inferring cunningness and cleverness. These narrations, imaginations, and speculations, I suggest, corrupt postsocialist Siliconization and anticorruption politics through practices of cloning, play, excess, and kinship.

Introduction

There are about a dozen of us hovering around a table in the Macaz Cooperative Bar in downtown Bucharest on Moșilor Street, where the artists Veda Popovici and Mircea Nicolae are convening one of several workshops as part of their project *Istoria (Nu) Se Repetă [History Does (Not) Repeat Itself]*. As workshop participants, we are tasked with devising objects that can be used to depict a future past from Romania's postsocialist transitional period—one that could have happened after 1989, but that never did. The artists describe their project:

McElroy, Erin (2020). Corruption, *Șmecherie*, and Siliconization: Retrospective and Speculative Technoculture in Postsocialist Romania. *Catalyst: Feminism, Theory, Technoscience, 6*(2), 1–25.
http://www.catalystjournal.org | ISSN: 2380-3312

> From darkness to light, from authoritarianism to freedom, from communism to capitalism—these tropes form the greatest narrative of recent history. This narrative casts collective experiences of solidarity and resistance in the footnote of history. The dreams and projections of the 1990s and 2000s, the post-revolutionary desires of a truly better world for all, remain buried under financial pyramid schemes, the Mineriads,[1] and migration. In *Istoria (Nu) Se Repetă*, these are returning fragments and imperfections in the narrations of possible but lost worlds: feminist trade unions, radical housing movements, collaborative economic projects or awareness raising campaigns on the dangers of capitalism.

These counterfactual stories encompass an array of sites, from the Coop Bank and public information campaign entitled "Money Is Not Made through Work," to the Union of Women Workers of Romania, who occupied their Suveica factory and who now own their own homes in Floarea Albă. There are the small shop owners at the Obor and Vitan Markets, unscathed by the "mallification" and techno-urbanism that mark 2018 gentrifying topographies upon which disproportionately Roma residents are evicted (as is the case surrounding Macaz).[2] And the list goes on, filled with places and stories that could have been, but due to the decimating impacts of Romania's transition to capitalism, never were.

As *Istoria (Nu) Se Repetă* project participants, we are convened in order to imagine these critical fabulations and to fabricate their materialities. A few of us are excited about one space in particular: the building on Calea Victoriei that in the mid-1990s headquartered both the Roma rights organization, Romani Criss, and the LGBT organization, Accept. During the 1990s, these two groups did indeed share space, forging what could have been rich and sustained space of decolonial, antiracist, anticapitalist, and queer futurity had liberal NGO-ization and capitalist imperatives not severed them. But in Popovici and Nicolae's future past, the two groups continue to grow together and build a Free School. As workshop participants, we opt to draft a syllabus for the school. Amongst other topics, we decide that hacking should be included in the curriculum. As one participant offers, "Yes, we all learned computer programming during the 1990s, and before that during socialism. And everyone hacked or knew someone who did. What would have happened if hacking could have really kept Romania from getting swallowed up by global capital?" Another bemoaned, "Romania had such a strong informatics program during socialism, and DIY tech stuff too—but it all got cannibalized by the West after 1989." "Look around, it's like Silicon Valley has taken over," another muttered. "*Șmecherie* [a Romanian word with Romani roots inferring cunningness, or a sort of street-smart cleverness][3]—is alive and well in hacking here," another suggested. "Shouldn't it have been able to help us keep from being Siliconized?" As many of us begin to question, why was it that

Siliconization transpired, and why wasn't Romanian computing culture able to better resist Western incursion? Might it still be able to?

By Siliconization, workshop participants here refer to the practice of *becoming* Silicon Valley, through cooptation and absorption of Romanian technoculture and infrastructure into Silicon Valley and Western tech companies. They also refer to modes in which aspirations of Western recognition and desires to *become* Western in the aftermath of 1989 transform local onto-epistemologies. Critiques of Siliconization and processes of becoming Silicon Valley align with a growing body of literature that has called for decolonial approaches to theorizing postsocialist transition in Eastern Europe (Boatcă, 2006; Karkov & Valiavicharska, 2018; Koobak & Marlin, 2014; Țichindeleanu, 2010; Tlostanova, 2018). This body of work understands post-1989 capitalist transition as a violent process of privatization and predation, one that resulted in novel forms of economic and racial dispossession (Atanasoski & Vora, 2018; Chari & Verdery, 2009; Chelcea & Druță, 2016; Popovici, 2020a; Vincze & Zamfir, 2019).

At the same time, *Istoria (Nu) Se Repetă* also converses with a body of work by those invested in queer, decolonial, and antiracist practices of speculation and future making, which engages in speculative narrative work in order to dream up futures that didn't yet, but that still might, manifest (Bahng, 2017; Eshun, 2018; Keeling, 2019; Lothian, 2018; Muñoz, 2009; Rifkin, 2019). Aligned with what Saidiya Hartman describes as "critical fabulation"—or the writing of speculative histories marked by violence and institutions on one hand, but also "desire and the want of something better" (2018, p. 470)—*Istoria (Nu) Se Repetă* fabricates a postsocialist transitional culture that could have been more emancipatory than acculturation into capitalism. This mode of fabrication can be understood as queer, in that it refuses Francis Fukuyama's (2006) "end of history" inevitability. Western technology and its postsocialist imposition here are read as normative, with homebrewed *șmecherie* beyond Western capital circuits of reproduction. *Șmecherie* practices in this way align with Bogdan Popa's theorization of queer postsocialist politics, whereby queerness "emerges from desires that constitute a surplus in relation to the normal circuit of exchange value" (2018, p. 30). This does not mean that *șmecherie* infers queerness; rather, it relates to a form of deviancy and excess antithetical to the normativity of Western capitalism. In this sense, *șmecherie* works against what Elizabeth Freeman (2010) describes as "chrono-normativity," or the temporality that capitalism inheres in order to reproduce its futurity. By engaging with *șmecherie*, postsocialist dreamers of anticapitalist, antiracist, and decolonial futures past and yet-to-come queer Siliconization imperatives by attempting to *unbecome* Silicon Valley.

In this article, I draw upon fieldwork conducted in the Romanian cities of Bucharest, Cluj, and Râmnicu Vâlcea between 2016 and 2018, during which I collaborated with and learned from queer, decolonial, and anticapitalist activists,

dreamers, and visionaries, particularly in the realm of anti-gentrification organizing. Much of this entailed attending organizing meetings and conducting research with the housing justice collective, Frontul Comun pentru Dreptul la Locuire (FCDL / Common Front for Housing Rights),[4] housed in Macaz, and also frequenting art events, lectures, workshops, parties, protests, and more. Bucharest-based artist, political worker, and theorist, Veda Popovici, who co-created *Istoria (Nu) Se Repetă* and who organizes with the FCDL and Macaz, served as my primary intellectual partner and teacher in many of these spaces. Her work thereby informs my theoretical arguments and ethnographic observations throughout this article. During my research, I also studied Romania's socialist and postsocialist cybercultures, learning from and interviewing those involved in official state and underground computing worlds alike. While these flourished during and after socialism, they were rendered corrupt and "dark" by proponents of Westernization post-1989—a common ascription of postsocialist Eastern European culture, technological and otherwise (Atanasoski & McElroy, 2018; Popovici, 2020b).

Here I weave these worlds together, studying their differences and historical contexts, as well as their entanglements. In this way, I take up Alexei Yurchak's (2013) methodological practice of attending to *retrospective* accounts of socialism and transition, or accounts produced in their aftermaths. In particular, I focus upon how desires of both becoming and unbecoming Siliconized render differential retrospective, and also at times, speculative, technocultural accounts. Inspired by Yurchak's project, I am interested in the differences between state tech projects and those produced in "deterritorialized milieus" outside, yet in relationship to, those of the state (Yurchak, 2013, p. 128). I am also invested in better understanding why visions of cyber deviancy remain a dream amongst speculative future makers. By neither taking "the West" nor the state as origin points in technocultural sociality, yet by tracing their role in Siliconization, this research contributes to postsocialist studies and the anthropology of non-Western technoculture. These contributions align with the ongoing political work of collectives such as Macaz, committed to decolonizing Western relationality and uncovering deviant relationships whitewashed in narratives of socialist and transitional corruption.

Indeed, as *Istoria (Nu) Se Repetă* workshop participants agreed, socialist and transitional Romania did maintain a rich cyber culture—one often erased in normative computing narratives. During the 1970s and '80s, the state cloned Western licenses in order to produce unique Romanian models such as the Felix and CoBra. Meanwhile, underground, trained and untrained technologists, hackers, and playful youth alike cloned and produced their own unique computers and networks, a practice that continued and even flourished after socialism's demise (Fiscutean, 2018). Throughout Eastern Europe, such practices bestowed new modes of piracy, play, sharing, and kinship (Gutfrański, 2019; Haigh, 2007;

Imre, 2016; Jakić, 2014; Kind-Kovács & Labov, 2013; Stachniak, 2015; Švelch, 2018; Wasiak, 2014). Similar (yet also different) technological projects and imperatives can be seen throughout the globe, often having to do with entanglements of empire, the state, peripherality, making do, and subversion (Chan, 2018; Rai, 2019; Rosas, 2010). This is not to fetishize all of these projects and practices as inherently deviant and decolonial, nor to suggest that deviancy de facto bears queer, antiracist, and/or decolonial ethos (Coleman, 2017). Rather, I suggest, they offer inspiration to those encumbered by the onslaught of Siliconization. In the words of Anita Say Chan, in the face of growing national and Western-centered calls to technologically "ensure a reproduction of the familiar" (2018, p. 2), it is high time for decolonial approaches to computing. As she puts it,

> Decolonial computing frameworks highlight another potential, not only in recognizing the diverse vibrancy of existing challenges to "digital universalist" models that problematically elevate narrow versions of Western and elite digital practice and innovation as the only relevant pathway to the future, but in cultivating knowledge practices that indeed foster a decentering of the self as a generative asset towards the creative co-production of alternative futures. (Chan, 2018, pp. 2–3)

As Chan, along with *Istoria (Nu) Se Repetă* participants, accord, there is value in imagining and materializing technofutures beyond reproduction of the familiar.

Today, while many former hackers recount their exploits as *șmecher,* proponents of Siliconization frame socialist and transitional cloning practices as corrupt. Conversely, workshop participants understand these corrupt technological pasts as rife with decolonial, queer possibility. In what follows, I trace these retrospective and speculative accounts, sifting through narratives of *șmecherie,* socialist-era computing, and postsocialist technoculture. These, while often not explicitly queer, do nevertheless pervert (and perhaps help decolonize) postsocialist Siliconization through practices of cloning, play, and kinship.

Corruption

Today in and beyond Romania, cyber deviancy often is rendered as antithetical to capitalist processes of postsocialist Westernization. Deviancy and *șmecherie* can be understood as thwarting assimilationist dreams of becoming "the Silicon Valley of Eastern Europe," a toponymy that has grown over the last decade in part due to the high concentration of Western outsourcing firms and fast internet. Colossal glass IT offices and co-working spaces gentrify Romanian urban centers, where it is often difficult to see that today's Silicon infrastructure sits upon the ruins of socialist-era factories (McElroy, 2019; Vincze & Zamfir, 2019). Upon this landscape, socialist and transitional cyber deviancy is often framed as "corrupt" by those aspiring Westernization. Yet elided is that this deviancy in fact laid the

groundwork for the Siliconized present. Here I further explore corruption as a retrospective narrative form.

Corruption has been front and center as of late in Romania, particularly in the anticorruption street protests interpellated as "the Light Revolution." Since 2017, these have risen to fame through demonstrators' use of "light technology" in order to chastise government corruption. Supported by big banks, tech firms, and neoliberal politicians, these protests purport that for Romania to overcome the specters of socialism currently plaguing its Social Democratic ruling party (a neoliberal party painted as "still socialist" by its also neoliberal opponents), disavowal with the socialist past is requisite (Atanasoski & McElroy, 2018; Deoancă, 2017; Florea, 2015; Popovici, 2020b). Embracing Siliconization is one way to do this, as embracing Western Europe had been before socialism (also a time of extreme fascism). It was then, in the pre-socialist interwar period, that Bucharest had been rendered "Little Paris of the East" (perhaps a precursor to today's Little Silicon Valley). This aspirational fantasy, long familiar in postsocialist and postcolonial geographies alike, manifests in perpetual quests "become Western" (Amrute, 2016; Bhabha, 1997; Chakrabarty, 2008; Irani, 2019; Liu, 2019; Rofel, 2007; Yurchak, 2013). In postsocialist Romania, this transpires in the streets, but also in technology itself. Take the following scenario from *Black the Fall,* a Bucharest-based, Japanese-backed, game:

Everyone is watching. It's dark—it's always dark—and Black is trying to escape unnoticed from the repressive regime that is socialist Romania. Black, a nuts and bolts factory worker, has to deceive guards, smuggle goods, and manipulate people—all without getting caught in the cold, industrial never-ending dystopia. Black, a video game character in *Black the Fall*, has only one friend—an abandoned robot. On screen, Black, a humanoid perhaps more machine than human himself, is hard to make out against rows of identical figures. These are either bicycling to power the machine that was state-socialism or listening to the censored Radio Free Europe—a Cold War US-backed media propaganda machine designed to instill anticommunist sentiment within the Eastern bloc (Petrovszky & Țichindeleanu, 2011). As Black sneaks past a sea of coffins arranged in a half-collapsing building, an overseer blocks a forgotten room filled with old portraits, a vestige from the good old pre-socialist days when Bucharest was the Little Paris of the East. To the game designers, writing code in the Silicon Valley of Eastern Europe, this aristocratic era is a fond historical memory, a time when kings still meant something—a time before socialism and its aftermaths corrupted promises of Western enlightenment. In the game, even after "the wall" comes down in what is understood to be 1989, blackness persists. According to game creator, Cristian Diaconescu, this is due to the dark specters of corrupt socialism. Thus, if one makes it to the game's end, a photo of Diaconescu's design team at a Light Revolution protest appear, thereby disavowing the "illiberalism" of socialist technology and its corrupt aftermaths.

While corruption in computer programming and data storage refers to processes in which errors and malware alike compromise data integrity and lead to system crashes, in postsocialist Siliconized contexts, socialism and its remnants are rendered as corrupt. In the game, Black's robot friend is coded as clumsy, tired, and dark, nothing like the Siliconized clean, light technology of today. In this way, Siliconization reproduces its future by straightening temporally corrupt cyberculture. Shannon Woodcock suggests, "Just as the homosexual is born into his/her closet and needs to develop in order to 'come out' into the world of heterosexuals, the 'post-socialist' East exists in Western capitalist discourse in order for EUrope to benevolently bestow recognition on its other" (2011, p. 66). This framework of recognition understands that to escape its socialist-era ghosts, Eastern Europe must become Silicon Valley. This can be seen in the co-optation and erasure of socialist and transitional technology, as well as in the anticorruption framing of socialist and transitional technoculture.

For instance, in 2018, the Romanian-German television series *Hackerville* made headlines as HBO Europe's first co-international production. The series features a German Romanian detective who returns to her Romanian hometown of Timișoara to track down a ring of dangerous cybercriminals. As is revealed, some of these "criminals" are just kids having fun and trying to make quick money, and some are part of a nefarious international network. Created by Ralph Martin and Jörg Winger, the series also explores repressive socialist histories in Romania. However, "Hackerville" as a geographic descriptive generally refers not to Timișoara, but rather to the smaller mountain city of Râmnicu Vâlcea, which in 2011, *Wired* famously described as "Cybercriminal Central" (Bhattacharjee, 2011).

Perhaps as a precursor to HBO's *Hackerville*, and perhaps inspired by the *Wired* article, in 2015, the Silicon Valley cybersecurity firm Norton Security also made a film about dangerous Romanian hackers. In it, they rendered Râmnicu Vâlcea as "The Most Dangerous Town on the Internet." Similar to *Hackerville*, Norton depicts Romanian cybercriminals in socialist-era decrepit buildings, threatening to hack the entire planet. But unlike HBO's series, Norton's video features actual hackers, many of whom have since been apprehended, some of whom were offered plea deals to work for cybersecurity firms. There is Guccifer (who famously hacked Hillary Clinton, George W. Bush, Colin Powell, and more), Iceman (who hacked NASA), and Tinkode (the most wanted hacker of 2012), along with anonymous scammers. These figures are juxtaposed by harrowing police narratives, the ramblings of a somber priest, and the authoritative voice of Norton's all-knowing head of security, Kevin Healy. As captions ominously warn in the beginning, "Last year, over a billion dollars was stolen by Romanian hackers. Everyone knows what is happening, but *omerta,* the code of silence, is the norm" (Dunn, 2015). As is inferred, the Silicon Valley

cybersecurity company is here to save innocent Americans from the most dangerous town on the internet and its code of silence.

In Norton's film, Nicolae Stănculescu, a Râmnicu Vâlcean former communist authority figure, attempts to contextualize the city's proliferation of hackers. "The legacies of communism are complex," he warns. "Many of the burdens from that regime still dominate aspects of people's lives. Important changes took place, especially in the 1980s and 1990s when Romania went crazy resulting in the creation of the so-called new human" (Dunn, 2015). Mădălin Dumitru, a Romanian IT security specialist and founder of Cyber Smart Defense, offers, "Because under communism, we were quite limited. We didn't have so many gadgets. We didn't have so much access to technology. And since 1989, since the Romanian revolution, Romanians started to have access to this technology, and they started to develop more and more. They were hungry for IT and for technology" (Dunne, 2015). While these narratives do attempt to contextualize postsocialist-era hacking upon a socialist-era palimpsest, they, like Western Cold War narratives, reify socialism and the transitional period as technologically bleak and underdeveloped. Such stories feed Light Revolution protests and Siliconization processes, both of which hinge upon a retrospective anticommunist timeline. This timeline erases socialism by shuttling "The Little Paris of the East" into "The Silicon Valley of Eastern Europe"—both periods of Western aspiration and mimicry.

Yet it was during socialism that mimicry was materially practiced in the realm of computer cloning. As I have found, many former hackers, scammers, and DIY technologists alike recall these past exploits not as a means of "catching up," but rather as practices of *șmecherie*. This is not to suggest that these hackers themselves identified as Roma, but rather that they were enmeshed in the deviant and cunning worlds that *șmecherie* (as it has been popularized in Romanian poor and working-class culture) gestures towards. While state-sanctioned cloning can be linked to Romania's own desires to catch up and simultaneously feed the machinery of state surveillance (Verdery, 2018), underground *șmecher* cloning, hacking, and cabling were rather implemented to instantiate kinship and connectivity amidst conditions of rampant austerity and disconnection.

As *Istoria (Nu) Se Repetă* seeks to investigate, what would it mean to queer these anticorruption accounts, and also dream of futures past that could have kept post-1989 Siliconization at bay. By queering, and aligned with queer theory, this inquiry diverges from reading queerness as a simple identarian code or sexuality descriptive (Barad, 2015), but rather as a field of inquiry and set of interpretative strategies to elucidate the relationality of socialist and transitional technoculture. This is in part what Popovici gets at with her analytic of "queer as corrupt," in which corruption inheres queerness within postsocialist contexts (2020b, p. 70).

Regarding postsocialist cyberculture specifically, queering illuminates computational coding acts that transpired beyond, and in excess of, official state histories and Cold War victory narratives alike (Popa, 2018). In this way, queerness perverts imaginaries of a reified postsocialist, Siliconized "common time" (Starosta, 2014). As Neda Atanasoski and Kalindi Vora put it, "Postsocialism marks a queer temporality, one that does not reproduce its social order even as its revolutionary antithesis" (2018, p. 141). Queer, corrupt, and *șmecher* practices of speculation thus facilitate anticapitalist, decolonial future-making despite the onslaught of Siliconization.

While such speculative and retrospective narratives of cyberculture are important in understanding postsocialist contradictions, also significant are accounts of those who engaged in these practices. In going on to explore these, I continue to think with and through queer, speculative analytics. These, I find, pair well with retrospective accounting practices of official and underground *șmecher* cloning worlds. Many of such accounts, while not explicitly queer, do nevertheless queer Siliconization by disrupting notions that contemporary cyberworlds in postsocialist Romania are simply a result of the West alone. As work by media scholars such as Tung-Hui Hu (2015) and Shannon Mattern (2017) have well illustrated, across the globe, present-day infrastructures often build upon those of prior eras. The novelty of the most recent wave of technological development is thus simply a Silicon fantasy. Applying this to Romania, it becomes clear that neither postsocialist *șmecherie* nor Siliconization are unfolding upon a *tabula rasa.* This is why it is crucial to look outside of Siliconized narratives. In other words, postsocialist technoculture hasn't just become the property of Silicon Valley and its anticorruption narratives; there are other stories circulating in and out of transitional materiality and fantasies.

State Cloning

Technological development was a crucial part of the state socialist project in Romania, as it was in other Eastern bloc nations. The figure of the engineer itself was understood as a cyborg of sorts, intended to propel the country into socialist modernity, while socialist projects of electrification and industrialization spread regionally. These projects did not inhere assimilatory drives into liberal democracy, but rather the sustenance of a dialectical post-Enlightenment future, one premised upon industrialization, urbanization, and centralization (Buck-Morss, 2002; Collier, 2011). People were moved into cities undergoing rapid development, while dormitories were built around new factories to house workers—the cyborgs of socialist futurity. Here I briefly map this landscape so that I can later chart what transpired below its surface.

Technological growth in socialist Romania in part developed due to the country's maverick status with both the West and the Soviet Union. Romania had refused to

fully align with the socialist economic bloc, COMECON, which had stipulated that each nation have economic specialties, and that Romania's would be agriculture (Mureșan, 2008). But with futurist visions of technological growth and collectivization as precondition for industrialization, Romania, rather than exist only as food supplier, wanted to develop technology. Scientists at the Atomic Physics Institute built Romania's first computer in 1957, CIFA-1, making Romania the eleventh country to manufacture a computer. After CIFA-1, an array of models erupted, from MARICA, DACICC, and CET in Cluj to MECIPT in Timişoara. These early machines were made to further scientific inquiry and to advance techno-urban centralization, for instance the optimizing of sugar beet harvesting and public transportation timetables (Popoviciu, 1969). Over twenty-five official computer models were crafted during socialism, many of which were exported to the People's Republic of China, the Czechoslovak Socialist Republic, the German Democratic Republic, the Polish People's Republic, Syria, Egypt, and Iran (Baltac, 2015).

Having spoken with computer scientists involved in these early endeavors, nostalgia and wistfulness characterize their memories, as does a form of paternalism for having been the first or best at this or that. Vasile Baltac, one of the early makers of the MICEPT models, today is a professor at Bucharest's National School of Political Science and Public Administration, and the CEO/cofounder of software companies Softnet.ro and Novatech. These are headquartered in the same building on Floreasca Boulevard that centralized national computer research during socialism. In winter of 2017, he met with me there, eager to share photographs of times past, when he and his colleagues led some of the country's most valorized technological missions. Unlike software company headquarters in Silicon Valley, the building is old and cracked, worn but filled with technological futures past, entangled in concrete and cables.

It was in 1967, Baltac recounted, that the government launched a program to promote computational industrial development and to introduce computers into the national economy. Although third-generation computers were imported from the West, Romania successfully produced and exported its own by cloning Western models. France offered Romania the license for IRIS-50 medium-sized computers, which Baltac and his team transformed into the FELIX C-256. An entire FELIX family was cloned, with over 650 mainframes and many HCs (home computers) such as PRAE and CoBra. While the Communist leader Nicolae Ceauşescu determined HCs to contravene Party ideology for being too consumerist, their manufacturing continued regardless, beyond his purview (Kovacs, 1991). Industrial robots too threatened Ceauşescu, who worried that they would replace the working-class labor force. While the word "robot" was banished from the press, robotics research continued, supported by local authorities who decided to turn their heads (Kovacs, 1991). These researchers were just some of many dissident forces in the underground of a maverick state. Yet this is not the

sort of dissidence that *Istoria (Nu) Se Repetă* imagined nourishing a queer, decolonial technofuture. Of more interest are the histories that took place further underground, and those that still might come to be.

Socialist *Șmecherie*

Donna Haraway suggests, "The main trouble with cyborgs, of course, is that they are the illegitimate offspring of militarism and patriarchal capitalism, not to mention state socialism. But illegitimate offspring are often exceedingly unfaithful to their origins. Their fathers, after all, are inessential" (1987, p. 4). In other words, cyborgs bear lives that have little to do with their makers' intentions. If we read computers and computer makers as cyborgs of the socialist period, it becomes clear that some of the most interesting cyborgian practices transpired beyond the pale of the state. It is this that I continue to explore here.

Tibi, who now lives in the US, where he works in a software company, grew up in Bucharest in the 1980s, where he learned programming from his cloned Spectrum. The ZX Spectrum was built in Britain in 1982, and soon copied and produced throughout Eastern Europe, he explained to me one morning over a Skype call when I was living in Bucharest, and he in the US. The 8-bit HC ran a BASIC interpreter, making it relatively easy to use as long as you had a TV set and an audiocassette for external program memory, he recalled. "If you pressed 'i' it would be 'if,' 'e' it would be 'else,' so you could type BASIC pretty quickly." Most people that he knew with computers in the 1980s had Spectrum clones, he grinned. Although the Party cloned the Spectrum to create the CoBra, these were enormously expensive and difficult to obtain, inspiring the proliferation of underground DIY hardware assemblage.

While Tibi doesn't remember where his family bought their computer, he does recall it being an unusual purchase. In the 1980s, CoBras cost 35,000 lei, about half the price of a Dacia car.[5] Black market clones were much cheaper (and therefore more popular), sometimes going for 12,000 lei. That said, clones were still five to six times the cost of the average Romanian salary at the time (Fiscutean, 2017). Tibi recounts having to buy Russian audiocassette tapes so that he could store information and load programs on his computer, since it, like its contemporaries, lacked storage. Underground markets emerged, with people trading cassettes and parts. Rather than playing games like his peers, Tibi used these to learn software and programming. "I remember that at one point I was using my computer to read a very precise scale that was measuring the input of a drop of water to show how it evaporates—even with 32k of memory," he reminisced. Tibi joined his high school's computer club, unofficially organized by two professors who were into computers. There was one computer class taught in his school, but it was very simple, based on FORTRAN, a fast and efficient computer language developed by IBM in the 1950s. "You can still see traces of the past today," he

explained, referencing how FORTRAN and BASIC are still used. Specters from Spectrum times.

Bogdan, a retro-computing expert, is trying to archive these Spectrum times by creating a computer museum in Cluj. One rainy afternoon, we sat down in an old bar and he told me about how every Thursday midnight during socialism, the Party-sanctioned TV station would pause broadcasting normal programming to instead emit an hour of code. It sounded like a fax machine, he described, mimicking its mechanical buzz. Bogdan's brother would fight the family for use of the television during this time, so that he could record the code on one of his floppy disks plugged into his cloned computer. He would then spend the week decoding it. "It wasn't some fancy key to some government secret—nothing like that. Sometimes it was just information about the airport, sometimes an announcement from a big shop, sometimes games and free software. This how we began to learn BASIC programming," he smiled. His friends would come over to play the games, resulting in ten adolescents hovering around one computer.

This sort of techno community became prolific amongst youth of late socialist period. Bucharest's Polytechnic University became a hotbed of cloning, with students engendering all sorts of deviant computer practices, sometimes creating entire supply chains. As Andrada Fiscutean (2018) has well documented, sometimes parts were scrapped from other computers; sometimes they were flown in with the help of airline pilots. Dealers would come to campus with electronics, parts, LEDs, and resistors, selling them at bulk to the students. Often, they would meet at a nearby campus pub. There was even this guy they called "The American" who sold transistors right in front of legitimate electronics stores, somehow getting away with it. Soon, everyone at the university had these *șmecherie* homemade machines, each made with about two thousand solder joints and a sea of wires. About 90 percent of the Romanian computer industry was built on reverse engineering in the 1980s, I've often been told. No two machines were ever the same. Even their cases varied, depending upon what was available underground. The keyboards contained keys polished one at a time with a nail file, upon which professional-looking paper letters and numbers were glued, thanks to a friend's paper business. The purpose was to learn and to have fun, never to engage in corporate profiteering.

Might these cloned computers—derived from smuggled and stolen parts alike—queer anticommunist narratives of socialist tech as simply poor, benign accomplices to *Black the Fall* dystopics? This Spectrum hybrid, a perversion to the West, was not produced by the West, nor by the socialist state. Its past is muddled and unattached to pure origin tales. Its materiality depended upon illicit connections, disassembled motherboards, and forbidden border crossings—objects and events that *Istoria (Nu) Se Repetă* participants imagine could have led to futures beyond Siliconization.

Transition

Sitting around the table at the Macaz Cooperative, across from a list of antiracist, anticapitalist, and feminist ethics painted on the wall, *Istoria (Nu) Se Repetă* participants began recounting stories of 1990s technoculture and its various perversities. What if these could have somehow staved off the dawn of post-1989 technocapitalism? "No, it would have been impossible to fight back," another ventured. "The West and its technologies were too powerful." With that, one workshop participant began detailing how much she remembers transition itself being informed by technology, particularly media. Not only was the 1989 revolution itself the first revolution televised, but the broadcasting of the event was staged by the West to justify Western intervention (Petrovskzy & Țichindeleanu, 2011). But on top of that, she recalls, "People just started watching TV. Western TV. Or Romanian TV modeled on Western programming. But either way, TV was the truth teller." Here I continue to explore the complex and often perverse relationship with the West that Romanian technoculture found itself in during transition.

As another friend recounted, during the 1990s when she was just a child, she would sit around with her parents and watch six hours a day of MTV. Because television programs were undubbed, and because people were fascinated with the new world that had just opened up to them, viewers learned English quickly, and also Spanish due to the abundance of telenovelas. Even though MTV has since "gone to shit," her mother, now in her sixties, still watches it daily, and has a television in every room of her home. At the same time, her father became obsessed with bootlegging, and so their family would go to the flea market each weekend to buy black market CDs. Later, during the 2000s, her father would pirate movies from torrent sites, which he would burn to DVDs and arrange by geography in his home library. Through pirating, bootlegging, and television, the post–Cold War spectral encounter between the East and the West became an asymmetrical geographic interplay. McKenzie Wark observes, "The territory of the East was maintained as an image of the other within the map of the West; the map of the West was the other put into covert circulation in the territory of the East" (1994, p. 65). And yet, the circulation of the West in the East produced complex frictions and effects.

English proficiency, along with the abundance of socialist-trained informatics workers, became an inspiration for Western firms looking to launch a new Eastern European outsourcing market post-1989. This offered opportunities to some, but most people I've spoken with recount having lost, rather than gained, employment in the 1990s. Or they somehow pieced together an array of undignified gigs. In 1988 computer production was valued at 10 billion lei, but in 1991 it sunk to 3 billion, with hardware production ceasing (Docaș, 2015). Florin, founder of an IT company, recounts the number of IT workers dropping rapidly,

and a Canadian firm extracting a whole team of two hundred people. As factories crumbled, malls appeared. As small markets vanished, Mega Image and Carrefour hypermarkets manifested from Western Europe. Casinos and gambling venues too erupted in the 1990s, in chain venues such as MaxBet. Between 2003 and 2014 the number of slot machines quadrupled in Romania, reaching 62,000 (Meseșan, 2016). Today these are filled with working-class gamblers trying to win at a capitalist game rigged against them (Verdery, 1995)—something that *Istoria (Nu) Se Repetă* also reimagines another future of.

Cristian, a fellow *Istoria (Nu) Se Repetă* participant, works for a multinational in Sema Park adjacent to the Polytechnic University. One cold winter day he met me there to show me around. As we began walking by teams of tech employees with badges hanging from lanyards worn around their necks waiting in queues for food trucks, Cristian began recounting his own history there. His father had been a cyberneticist, having studied at the university in the 1980s. But his father's position was made obsolete when Western firms swept in after 1989, so he resorted to driving taxis and working odd jobs throughout Cristian's childhood. After high school, Cristian was able to study economics in the UK. He then managed get a job for Hewlett Packard in Romania in the 2010s. Now he does technical writing for a different firm in Sema Park.

During socialism, Sema Park had been an agricultural industrial center. But today it lives as a jumble of high-tech glass towers and old socialist-era warehouses. There are still canteens that serve the same traditional Romanian food that they served to socialist agricultural workers, but now they've rebranded their exteriors with brick and glass, having changed their names to hipster-sounding titles, like "Cactus." "They're just doing what they have to keep up," Cristian tells me, pointing out a large empty lot that reminds him of the spaciousness and heavy industrial ruins of the 1990s. "This is what everything was like in the '90s—I miss it." He used to come here in high school to go clubbing, back when it was cheap. There are also new food trucks that have come in, mostly selling burgers and coffee, and a fancy café inside the glass building where he works that oddly resembles a tropical botanical garden. There's also a sports center and bowling alley, IDM, with a logo mimicking IBM's. But it's been there for a while, and, having bowled there myself, I can attest that is far from bourgeois inside.

Across the city from IDM is Pipera, the neighborhood of socialist-era computing and FELIX manufacturing. After 1989 FELIX found itself in a messy relationship with the actual IBM, the former suddenly supposed to produce hardware for the latter. And yet IBM's strategy failed, at least at first, as they had to compete with a new underground market in which Romanians would assemble their own computers with uncertified IT parts from Hong Kong to Taiwan in small garages. On our Skype call, Tibi recalled, "In the early 1990s, I was interested in building my own PC. If you wanted to do an upgrade with some parts, it was cheaper to build

your own. I was building for a couple of friends, even my brother." As in other peripheral locales, underground technocultures and practices sprung up just to make do with what was available. In doing so, new forms of kinship, connection, and *șmecherie* were engendered.

Tibi also remembered one of the first commercials to be released on Romanian television after 1989. It was a FELIX computer commercial with a slogan went viral: "*V-am prins, vrăjitoarelor!*" (I caught you, witches!). "It was everywhere," he remembers, "Everyone knew it." But what might it actually mean? Today, people have different interpretations of the satiric commercial, which featured a man walking into a cave filled with witches preparing some potion for him. Were the witches FELIX makers crafting socialist-era machines now liberated by capitalism, or were they Americans now trapping corrupt Romanian computer-makers with their end-of-history alchemy? Then again, as witches are gendered and racialized in popular imaginaries in Romania (often invoking anti-Roma racism), might the commercial be conflating socialism with Roma people? If so, the advert renders FELIX on a new Western journey away from its corrupt past. But then again, perhaps the commercial acted as a prescient satire from the future, aware that that despite the West's bests efforts, Romanian computer perversion would continue to flourish—though maybe in internet cafés and computer labs instead of caves.

Postsocialist *Șmecherie*

Indeed, despite the best spells cast by capitalism, the specters of the Spectrum clone found their way into postsocialist times. As I continue to explore, this endurance, bypassed in Siliconized narrative structures, continues to bolster, touch, and pervert the present. While IBM was wreaking havoc in FELIX worlds, Tibi and others continued to produce machines underground. Meanwhile, an array of computer magazines began circulating, saturated with computer construction manuals, software installation guidelines, code, and instructions in how to set up satellites and LAN networks. From backtracking methods to articles on virtual reality, techno-skepticism, and the phenomena of the hacker, magazines such as *Open Tehnologia Informației* and *PC World Romania* blossomed in the 1990s.

Alexandra, a queer programmer who now works for a French tech firm in Bucharest, remembers learning to build computers from reading the magazine *Extreme PC*. It got big in the 2000s, replete with online chatrooms and support. She learned how to code in school during a weekly class and in online chatrooms, some of which are still active today. Meanwhile, apartments began setting up "decoders" to steal HBO, otherwise not available. "It was this funny little device that we all had on the back of our televisions," she recounted as we took a walk through an overgrown park on the outskirts of the city one blistering summer

afternoon. If it broke, everyone knew someone who would come and set up another, she smiled in remembrance.

In 2014 Romania's piracy rate was twice that of the EU at 60 percent, but in 1996 it was as high at 86 percent (Fiscutean, 2014). At the time, there was little legislation protecting intellectual property, and the software market developed accordingly. MS-DOS was the first pirated operating system in the 1990s, and then OS/2, and later Windows, via Russia. At first, pirated software was largely not sold for profit, and rather was understood as educational material, building collective knowledge about coding, algorithms, and open source products. Vlad, a queer performer from Râmnicu Vâlcea, remembers that it was then that a zillion internet cafés sprung up overnight. "It was hard to get into them because they were so crowded," he recalls. One of his neighbors invented a VPN to mask IP addresses, and soon everyone started paying him for VPNs so that they could hack from home. Vlad remembers that often people would make money fast from some internet hack and then use the money to pay for personal *manele* (Roma popular music) concerts.

These networks were soon strung throughout cities on telephone poles, building the backbones of what is now Europe's fastest internet connection. This wasn't the experimental project of state socialism intended to improve central planning and economics; it was more an organic decentralized network intended to connect and share information, music, movies, tools, games, and software amongst neighbors. Because internet dial-up packages were expensive, and because of the intense poverty incited by transition, generally, one person would buy internet and then share or sell it to people in their building, wiring cables haphazardly. As people had already been pirating and sharing satellite stations, and as the magazines and chatrooms taught wiring techniques, stringing cables across apartments and blocks of flats "was really no big deal," I've been told. Today still, telephone poles, from Cluj to Bucharest, are adorned in a massive array of cables from the early 2000s era, some still working, some just there on because they are too woven in to detach. The first time I pointed these out to a friend visiting from the US, she asked if it was an art installation. And yet, as people are always quick to remind me, the cabling today is nothing compared to the early 2000s, when it became commonplace for telephone poles to crash with the weight of the cables, sometimes smashing cars parked beneath.

Bogdan set up a similar network in Cluj, connecting twenty-four people in his block. It was 2004, and he had no internet cable, but somehow managed to use TV cable. "We all had Intel 486 computers then, the new generation," he told me. They had sixteen kilobytes, used routers, and it took five minutes to transfer a picture. You could never shut down your computer once it was connected because you didn't want to be bumped off. Setting up this network was just one of his many DIY computer projects of the era. For him, it all began in grade school when

he would cut class and hide in the attic. There, he discovered an old broken MII8B computer from the 1970s. Curious, he came back the next day with a screwdriver. It was the late 1990s, and there was no Google or Yahoo to tell him how to fix it. But there were smoky internet cafés where he could ask questions. So, he began. Two years later, he won a math competition and was awarded an old Intel 486 computer that the national television station was discarding. Eventually, he saved up money from his job at the local newspaper to buy the parts to make it work and to install Windows. Hardware became cheaper after 2002, he remembers, and it became easier to pirate the operating system. Soon after, he began to visit the Oser flea market every weekend to pick up older broken models. Before long, his entire room was crammed with computers. It was then that he began to build his neighborhood network, eager to share and pirate new software for his growing collection.

But then, in 2010, the internet monolith Romania Data Systems (RDS) came in, promising better and faster services, fiber optics even. Threatened by independent networks, they would sometimes threaten building administrators, citing technical illegalities about the size or length of the wire. Sometimes they just cut cables. "Everything went to hell." Eventually, Bogdan's network came down, but still, there remains one stubborn cable. "No one says anything about it—I think people think it's part of a spy network!" he laughs. Today, Bogdan maintains a day job with Amazon, but spends most of his time finding discarded and broken computers, cleaning and repairing them, turning them into specters of their former selves.

Postsocialist computer cloners, neighborhood network builders, and retrocomputing experts alike touch upon what Bogdan describes as the "X86 Generation"—a reference to Intel's microprocessor and the generation wedged between Gen X and Millennials. This generation was born predigital, but also created the context for the digital. Bogdan argues that it is this generation who created the complex, entangled, and often contradictory Romanian technoscapes today preyed upon by Silicon Valley. "Unlike what everyone thinks, it's not Silicon Valley leading the tech wave—it's these people," he told me firmly. The West may absorb existent infrastructure, computer factories, wires, and more. But it wasn't Silicon Valley that created these materialities. Thus, while Siliconization co-opts underground cyberworlds, it remains materially corrupted by, and dependent upon, their existence.

Florentin, a member of the independent free and open source software and hardware project Ceata, also remembers RDS sweeping in. His own father worked at the state-owned RomTelecom (now Telecom and connected to T-Mobile). RomTelecom, along with C-Zone, was bought up by RDS, he remembers. Meanwhile, UPC, another large corporation, bought up the smaller firm, Astrid. Florentin got his first computer in 2000 before this consolidation, but he never got

to use an independent network because he couldn't find one in his Bucharest neighborhood, Drumul Taberei. "Maybe because everyone there was old," he questioned. There was a really cool network in Crângași where people battled for its control. Florentin wanted to set one up too, but he had no money to buy cables. His father had some extra telephone wires, so he tried to stretch them and use them in a ramshackle way, but it never worked. He recollects how slow the dial-up was in his block between 10 p.m. and 2 a.m., as this was when all the downloading and uploading would begin. He had wanted to start assembling computers independent from Microsoft operating systems, but to download other operating systems, you needed a fast connection. Microsoft had also set up an automatic update on his computer preventing him from downloading what he wanted.

Maybe it was this that got Florentin thinking about the importance of moving away from Silicon Valley and private software. Perhaps it was this that led him to Ceata. "The only way that you can maintain security is to have the right hardware," he explained. Today, Florentin creates new machines from spare parts, much like he and others did a decade earlier. His goal is to ensure that his computers aren't hacked by Silicon Valley–driven data capitalism and spying. He and others from Ceata frequently visit other free software communities from across the globe, determined to string together a network of practitioners and users free from the corporate reigns of Siliconization. Back in Romania, Ceata has even made its way to Macaz, eager to help the co-operative's organizers implement safer practices. Yet back in post–Cold War Silicon Valley, fears of "dangerous" and "illiberal" Eastern European hackers accumulate. This imaginary often becomes internalized in Romania, reflective in *Black the Fall* imagery and Light Revolution protests alike. Nevertheless, technocultural deviancy persists, building upon histories of informal infrastructure and subversive relationality.

Space Invaders

In the spring of 2018, during a Light Revolution protest (and also a far-right homophobic "Normality" demonstration), a third march crawled through Bucharest's streets. For the first time, the annual LBGTQ pride parade was granted access to march through Bucharest's city center, rather than being confined to urban outskirts. Also, for the second year in a row, IBM, Google, and Accenture pinkwashed the event (Popovici, 2020b), not dissimilar to pride parades in California's Silicon Valley (Stanley, 2018). However, this year, a small group of anticapitalist protestors, many of whom were *Istoria (Nu) Se Repetă* participants (but also part of a broader wave of anticapitalist queers espousing anarchist, feminist, antiracist, and antifascist politics), were prepared. We came equipped with large banners against pinkwashing, racial capitalism, and fascism. "Fuck Off Google" stickers were brought from a solidarity action in Berlin, where at the time, Google was attempting to establish a campus. Activists replicated the

messaging during the Cluj pride that took place a week later, along with a "LGBT and Space Invaders Against Gentrification" sign. Referencing the 1978 Cold War video game, the sign overtly corrupted the Cold War 2.0 to reclaim robotic space invaders.

Unsurprisingly, liberal technocapitalists chastised the queer dissidents in both cities, reminding us that Romania was now finally free from socialism. How dare we corrupt that! As Popovici recounts of the tensions, if progress can only be achieved through neoliberal complicity, "an anti-capitalist position associated with queer and feminist positions becomes incompatible with the desired future of a Western becoming" (2020b, p. 56). When a photo of one of the anti-pinkwashing banners began circling in a forum monitored by Accept, rather than defend it, the organization just deleted the image. It was "too far of a step to take, the anti-Google stuff," someone later explained. This, of course, is a far step away from the speculative future woven by *Istoria (Nu) Se Repetă* participants, who imagined how Accept and Romani Criss worked together to corrupt Siliconization.

Had Ceata and others of the X86 Generation been committed to queer, decolonial future-making in the 1990s, perhaps a Free School replete with hacking classes would have been created. In this speculative future, *șmecher* practices might have been able to queer early Siliconization and instantiate antiracist, anticapitalist cyberworlds. Instead, *șmecher* hacking practices were quite distinct from 1990s Accept and Romani Criss worlds. Nevertheless, *șmecher* practices did indeed subvert and devalue Siliconization imperatives. Perhaps it is this devaluation that *Istoria (Nu) Se Repetă* find hopeful in their speculative accounting. As Robin D. G. Kelly (1996) has insisted, reserving the category of resistance for activists belittles everyday forms of resistance and subversion. Writing of such everyday practices, he suggests,

> If we are to make meaning of these kinds of actions rather than dismiss them as manifestations of immaturity, false consciousness, or primitive rebellion, we must begin to dig beneath the surface of trade union pronouncements, political institutions, and organized social movements, deep into the daily lives, cultures, and communities which make the working classes so much more than people who work. (Kelly, 1996, pp. 3–4)

Along these lines, Saba Mahmood suggests that "the category of resistance impose[s] a teleology of progressive politics that makes it hard for us to see and understand forms of being and action that are not necessarily encapsulated by the narrative of subversion and the re-inscription of norms" (2011, p. 9).

Thus, queer and decolonial speculative accounts understand that *șmecherie*, despite its lack of overt politics, subverts Siliconization beyond normative

resistance frameworks. Rather than cloning liberal platforms of recognition, *șmecherie* exists in excess of such framing. It is this that perhaps *Istoria (Nu) Se Repetă* participants, along with Popovici and Nicolae, find hopeful in their dreaming of technofutures to come. José Esteban Muñoz writes,

> To want something else, to want beside and beyond the matrix of social controls that is our life in late Capitalism, is to participate in this other form of desiring. Thus, the connection between queerness and utopia is most salient at this precise point—the desire for a new world despite an emotional/world situation that attempts to render such desiring impossible. (2009, p. 278)

Queerness, as both perversion to capitalism and desire for something else, is not simply recasting socialist nostalgia, nor reproducing liberal imaginaries. Unattached to origin stories and to becoming Silicon Valley, queering here commits to speculating upon other cyberworlds and friendships in order to code something new.

Acknowledgements

This article is dedicated to everyone I have learned from and organized with in Romania, particularly those in Macaz and the FCDL, and to *Istoria (Nu) Se Repetă* co-creator, Mircea Nicolae, who sadly passed away during the course of my writing of this article. In particular, I am indebted to Veda Popovici, whose generosity in sharing knowledge, stories, and analysis is far too great to describe here. I also thank those who offered me feedback on this piece at various stages of its writing, including Neda Atanasoski, Lisa Rofel, Karen Barad, Megan Moodie, Liviu Chelcea, Bogdan Popa, Sareeta Amrute, Luis Felipe R. Murillo, Veda Popovici, and the generous anonymous reviewers.

Notes

[1] The Mineriads were a series of miner-led altercations that took place in Romania following the collapse of state socialism.

[2] Postsocialist transition has led to the disproportionate evictions of Roma residents in Romania (Popovici, 2020a; Vincze & Zamfir, 2019). Roma are Romania's most racialized minority, having been subjugated to slavery, failed reparations, eugenic technoscience, nationalism, and fascism—all setting the stage for contemporary dispossession (Lancione, 2019; McElroy, 2019).

[3] *Șmecherie* is used by Roma and non-Roma Romanians alike due the prevalence of Roma culture in poor and working-class spaces. As a word, it is significant in Roma and Romanian culture, without an exact English equivalent.

[4] The FCDL is an antiracist, feminist, and anticapitalist grassroots organization that fosters solidarity and builds community to resist gentrification (Popovici, 2020a).

[5] The Dacia automobile manufacturer was famously founded in Romania in 1966, and then purchased by the French Renault group in 1999.<Author: See end of document. Designers: To be formatted and moved here.>

References

Amrute, S. (2016). *Encoding race, encoding class: Indian IT workers in Berlin*. Duke University Press.

Atanasoski, N., & McElroy, E. (2018). Postsocialism and the afterlives of revolution: Impossible spaces of dissent. In N. Pireddu (Ed.), *Reframing critical literary, and cultural theories* (pp. 273–297). Palgrave Macmillan.

Atanasoski, N., & Vora, K. (2018). Postsocialist politics and the ends of revolution. *Social Identities, 24*(2), 139–154.

Bahng, A. (2017). *Migrant futures: Decolonizing speculation in financial times*. Duke University Press.

Baltac, V. (2015). *Lumea digitală: Concepte esențiale* (The digital world: Essential concepts). Editura Excel XXI Books.

Barad, K. (2015). Transmaterialities: Trans*/matter/realities and queer political imaginings. *GLQ: A Journal of Lesbian and Gay Studies, 21*(2–3), 387–422.

Bhabha, H. (1997). Of mimicry and man. In F. Cooper & A. L. Stoler (Eds.), *Tensions of empire: Colonial cultures in a bourgeois world* (pp. 152–160). University of California Press.

Bhattacharjee, Y. (2011, August 31). How a remote town in Romania has become cybercrime central. *Wired.* https://www.wired.com/2011/01/ff-hackerville-romania/

Boatca, M. (2006). Semiperipheries in the world-system: Reflecting Eastern European and Latin American experiences. *Journal of World-Systems Research, 12*(2), 321–346.

Buck-Morss, S. (2002). *Dreamworld and catastrophe: The passing of mass utopia in east and west*. MIT Press.

Chan, A. S. (2018). Decolonial computing and networking beyond digital universalism. *Catalyst: Feminism, Theory, Technoscience, 4*(2), 1–7. https://doi.org/10.28968/cftt.v4i2.29844

Chakrabarty, D. (2008). *Provincializing Europe: Postcolonial thought and historical difference*. Princeton University Press.

Chari, S., & Verdery, K. (2009). Thinking between the posts: Postcolonialism postsocialism, and ethnography after the Cold War. *Comparative Studies in Society and History, 51*(1), 6–34.

Chelcea, L., & Druță, O. (2016). Zombie socialism and the rise of neoliberalism in post-socialist Central and Eastern Europe. *Eurasian Geography and Economics, 57*(4–5), 521–544.

Coleman, G. (2017). From internet farming to weapons of the geek. *Current Anthropology, 58*(S15), S91–S102.

Collier, S. (2011). *Post-Soviet social: Neoliberalism, social modernity, biopolitics*. Princeton University Press.

Docaș, C. (2015, March 17). România furată: Ice Felix (Stolen Romania: Ice Felix), *Digi24*. https://www.digi24.ro/special/campanii-digi24/romania-furata/romania-furata-ice-felix-o-afacere-extrem-de-profitabila-predata-intereselor-imobiliare-372024

Deoancă, A. (2017). Class politics and Romania's "White Revolution." *Anthropology News, 58*(4), e394–e398.

Dunne, S. (2015). *In Search of the Most Dangerous Town on the Internet.* Norton.

Eshun, K. (2018). *More brilliant than the sun: Adventures in sonic fiction*. Verso.

Fiscutean, A. (2014, August 28). The mix of poverty and piracy that turned Romania into Europe's software development powerhouse. *Znet*. https://www.zdnet.com/article/the-mix-of-poverty-and-piracy-that-turned-romania-into-europes-software-development-powerhouse

Fiscutean, A. (2017, November 1). The underground story of Cobra, the 1980s' illicit handmade computer. *Arstechnica.* https://arstechnica.com/gadgets/2017/11/the-underground-story-of-cobra-the-1980s-illicit-handmade-computer

Fiscutean, A. (2018, August 1). *Hacking the Iron Curtain: From smuggling computer parts to owning* [Video], Keynote presentation, PyData Conference, Berlin. https://www.youtube.com/watch?v=5bJHUvQ_xGM

Florea, I. (2015). The ups and downs of a symbolic city: the architectural heritage protection movement in Bucharest. In K. Jacobsson (Ed.) *Urban Grassroots Movements in Central and Eastern Europe* (pp. 55–78). Routledge.

Freeman, E. (2010). *Time binds: Queer temporalities and queer histories*. Duke University Press.

Fukuyama, F. (2006). *The end of history and the last man*. Simon and Schuster.

Gutfrański, K. (2019). Introduction: The speed of Guccifer. *Obieg*. https://obieg.u-

jazdowski.pl/en/numery/the-speed-of-guccifer/introduction-the-speed-of-guccifer

Haigh, M. (2007). Downloading communism: File sharing as Samizdat in Ukraine. *Libri, 57*(3), 165–178.

Haraway, D. (1987). A manifesto for cyborgs: Science, technology, and socialist feminism in the 1980s. *Australian Feminist Studies, 2*(4), 1–42.

Hartman, S. (2018). The anarchy of colored girls assembled in a riotous manner. *South Atlantic Quarterly, 117*(3), 465–490.

Hu, T. (2015). *Pre-history of the cloud*. MIT Press.

Imre, A. (2016). *TV socialism*. Duke University Press.

Irani, L. (2019). *Chasing innovation: Making entrepreneurial citizens in modern India*. Princeton University Press.

Jakić, B. (2014). Galaxy and the new wave: Yugoslav computer culture in the 1980s. In G. Alberts and R. Oldenziel (Eds.), *Hacking Europe* (pp. 107–128). Springer.

Karkov, N., & Valiavicharska, Z. (2018). Rethinking East-European socialism: Notes toward an anti-capitalist decolonial methodology. *Interventions, 20*(6), 785–813.

Keeling, K. (2019). *Queer times, Black futures*. NYU Press.

Kelly, R. D. G. (1996). *Race rebels: Culture, politics, and the Black working class*. Simon and Schuster.

Kind-Kovács, F., & Labov, J. (2013). *Samizdat, tamizdat, and beyond: Transnational media during and after socialism*. Berghahn Books.

Koobak, R., & Marling, R. (2014). The decolonial challenge: Framing post-socialist Central and Eastern Europe within transnational feminist studies. *European Journal of Women's Studies, 21*(4), 330–343.

Kovacs, F. (1991). Implementing robotics in "classical" factories: A difficult task for the East European industries. In *[1991 Proceedings] 6th Mediterranean Electrotechnical Conference*, LJubljana, Slovenia, vol. 2, pp. 942–944. http://doi.10.1109/MELCON.1991.161997

Lancione, M. (2019). The politics of embodied urban precarity: Roma people and the fight for housing in Bucharest, Romania. *Geoforum*, vol. *101*, pp. 182-191.

Liu, X. (2019). *Information fantasies: Precarious mediation in postsocialist China*. University of Minnesota Press.

Lothian, A. (2018). *Old futures: Speculative fiction and queer possibility*. NYU Press.

Mahmood, S. (2011). *Politics of piety: The Islamic revival and the feminist subject*. Princeton University Press.

Mattern, S. (2017). *Code and clay, data and dirt: Five thousand years of urban media*. University of Minnesota Press.

McElroy, E. (2019). Digital nomads in Siliconising Cluj: Material and allegorical double dispossession. *Urban Studies*. https://doi.org/10.1177/0042098019847448

Meseșan, D. (2016, November 20). Romanian roulette. *Balkan Insight*. https://balkaninsight.com/2016/11/20/romanian-roulette-11-17-2016/

Muñoz, J. E. (2009). *Cruising utopia: The then and there of queer futurity*. NYU Press.

Mureșan, M. (2008). Romania's integration in COMECON: The analysis of a failure. *The Romanian Economic Journal, 11*, 27–58.

Petrovszky, K., & Țichindeleanu, O. (2011). *Romanian revolution televised: Contributions to the cultural history of media*. Idea.

Popa, B. (2018). Trans* and legacies of socialism: Reading queer postsocialism in tangerine. *The Undecidable Unconscious: A Journal of Deconstruction and Psychoanalysis, 5*, 27–53.

Popovici, V. (2020a). Residences, restitutions and resistance: A radical housing movement's understanding of post-socialist property redistribution. *City*, *24*(1–2), 97–111. https://doi.org/10.1080/13604813.2020.1739913

Popovici, V. (2020b). Solidarity in illegality: How the corrupt East is already a queer East. In K. Wiedlack, S. Shoshanova, & M. Godovannaya (Eds.), *Queering paradigms VIII: Queer-feminist solidarity and the East/West divide* (pp. 51–76). Peter Lang.

Popoviciu, T. (1969). *Contribuții ale institutului de calcul din cluj la aplicarea matematicii în economie* (Contributions of the Computer Institute of Cluj towards mathematics applications in the economy). Editura Academiei R.S.R.

Rai, A. (2019). *Jugaad time: Ecologies of everyday hacking in India*. Duke University Press.

Rifkin, M. (2019). *Fictions of land and flesh: Blackness, indigeneity, speculation*. Duke University Press.

Rofel, L. (2007). *Desiring China: Experiments in neoliberalism, sexuality, and public culture*. Duke University Press.

Rosas, R. (2010). The Gambiarra: Considerations on a recombinatory technology. In M. Boler (Ed.), *Digital media and democracy: Tactics in hard times* (pp. 343–354). MIT Press.

Stachniak, Z. (2015). Red clones: The Soviet computer hobby movement of the 1980. *IEEE, 41*(2), 12–23.

Stanley, E. (2018). The affective commons: Gay shame, queer hate, and other collective feelings. *GLQ: A Journal of Lesbian and Gay Studies, 24*(4), 489–508.

Starosta, A. (2014). Perverse tongues, postsocialist translations. *boundary 2, 41*(1), 203–227.

Švelch, J. (2018). *Gaming the Iron Curtain: How teenagers and amateurs in communist Czechoslovakia claimed the medium of computer games*. MIT Press.

Tlostanova, M. (2018). *What does it mean to be post-Soviet?: Decolonial art from the ruins of the Soviet Empire*. Duke University Press.

Țichindeleanu, O. (2010). Towards a critical theory of postcommunism. *Radical Philosophy, 159*, 26–32.

Verdery, K. (1995). Faith, hope, and Caritas in the land of the pyramids: Romania, 1990 to 1994. *Comparative Studies in Society and History, 37*(4), 625–669.

Verdery, K. (2018). *My life as a spy: Investigations in a secret police file*. Duke University Press.

Vincze, E., & Zamfir, G. (2019). Racialized housing unevenness in Cluj-Napoca under capitalist redevelopment, *City, 23*(4–5), 439–460. https://doi.org/10.1080/13604813.2019.1684078

Wark, M. (1994). *Virtual geography: Living with global media events*. Indiana University Press.

Wasiak, P. (2014). Playing and copying: Social practices of home computer users in Poland during the 1980s. In G. Alberts & R. Oldenziel (Eds.), *Hacking Europe* (pp. 129–150). Springer.

Woodcock, S. (2011). A short history of the queer time of "post-socialist" Romania, or are we there yet? Let's ask Madonna. In R. Kulpa & J. Mizielinska (Eds.), *De-centring Western sexualities: Central and Eastern European perspectives* (pp. 63–83). Routledge.

Yurchak, A. (2013). *Everything was forever, until it was no more: The last Soviet generation*. Princeton University Press.

Author Bio

Erin McElroy is a postdoctoral researcher at New York University's AI Now Institute,

and is co-founder of the Anti-Eviction Mapping Project and the Radical Housing Journal. Erin earned a doctoral degree in feminist studies from the University of California, Santa Cruz, with a focus on the politics of space, race, and technology in Romania and Silicon Valley.