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## 14. The Subject of Territory: The Body-Archive after Chernobyl

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### Accidental Territory, Extended

Most often, the explosion at the Chernobyl Nuclear Power Plant in April 1986 is referred to by one of two terms, used interchangeably: “accident” or “catastrophe.” Among the two, the term “catastrophe” is broader, and it suggests the devastating and damaging outcome of the event. Neither of the terms, however, implies that the tragic outcome is entirely unforeseeable. “Catastrophe” originates from the ancient Greek word καταστροφή, which means “coup,” “the end,” “overthrow,” “death.” The term came from drama, where it stood for a fatal consequence of adverse events that had occurred earlier. Such fatality, for the Greeks, always involved a clear deadly logic and an inevitable trajectory of deployment, the understanding of which, unfortunately, always comes too late; thus, the catastrophe may be unexpected, but only due to the limitation of knowledge or the lack of information. As philosopher Ian Hacking reminds us, the meaning of “accident” changed in the nineteenth century due to what he

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describes as “the erosion of determinism” leading to “the taming of chance” through the development of mathematical statistics and probability theory, which led to formulating the laws of random phenomena. He writes:

A new kind of “objective knowledge” came into being, the product of new technologies for gaining information about natural and social processes. There emerged new criteria for what counted as evidence for knowledge of this kind. The statistical laws that could thus be justified were used not only for description but also for explaining and understanding the course of events. Chance became tamed, in the sense that it became the very stuff of the fundamental processes of nature and of society.<sup>1</sup>

Of course, the very fact that a random event obeys any sort of logic is utterly paradoxical, but this very paradox is inherited and embedded in the scientific and philosophical thought of the following centuries. Since chance was no longer accidental and could be captured by a mathematical formula or calculation, its status changed from non-systemic to systemic: it became a predictable logical part of complex events, even if hiding in plain sight.<sup>2</sup> This new epistemology of chance, that later developed via cybernetics and systems theory, came as foundational for cultural theorist Paul Virilio’s description of the Chernobyl disaster as “the original accident.”<sup>3</sup> Virilio argued that without an accident, we remain unaware of how technology functions. He elaborated by citing French writer Paul Valéry, who observed that “[t]he tool is tending to vanish from consciousness.” “We commonly say that its function has become automatic,” Valéry wrote, so “consciousness only survives now as awareness of accidents.”<sup>4</sup> This reading suggests that the accident functions like psychoanalytic “afterwardness” that initiates a belated understanding or retroactive attribution of meaning to a technology: although created beforehand, it can only qualify as an invention after the accident exposes the whole range of its creative and destructive capacities. Here, Virilio offers

an Aristotelean view of accidents that suggests a non-linear development of technology: “the accident reveals the substance,” in other words, accidents are teleological in how they expose the essence of technical objects through the purpose they serve rather than the cause by which they come to be. Take a shipwreck, Virilio explains, without it, the invention of the ship is incomplete. He writes, “[t]he shipwreck is consequently the ‘futurist’ invention of the ship, and the air crash the invention of the supersonic airliner, just as the Chernobyl meltdown is the invention of the nuclear power station.”<sup>5</sup> Quite symptomatically, “the worst nuclear disaster in history both in terms of cost and casualties”<sup>6</sup> is a representative event of modernity for a particular reason: it contributes to the irreversible convergence of war and peace. Nuclear power stations are the most illustrative example of such convergence – in the United States, in the United Kingdom, in the Soviet Union, or anywhere in the world torn by the Cold War competition for economic and military domination. Their heavy military legacies were often carried onto the present by the stations performing their single or parallel task of serving military research and industries under the typical camouflage of celebratory narratives about the “peaceful atom.”<sup>7</sup> The Chernobyl Nuclear Power Plant (ChNPP) was not an exception. The evidence that its reactors were used for both civilian and military purposes remains persuasive. The clandestine production of weapons-grade plutonium, and that its four reactors’ “most likely military purpose [was] to make tritium, a rare isotope of hydrogen used in thermonuclear weapons”<sup>8</sup> was an open secret even in the Soviet Union despite the popular cover-up narrative about the “peaceful atom.”

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By introducing the notion of “risk society” immediately after the explosion of the ChNPP reactor, sociologist Ulrich Beck described a novel sense of emergency characterizing all life processes after Chernobyl in a similar way – as a culmination of technological modernity. Such awareness also implies a state of awaiting when the subject is caught by the inverted temporality of the future accidents determining the past. Living in a “risk society,” according to Beck, means witnessing a global increase in the number of man-made disastrous accidents,<sup>9</sup> including technogenic catastrophes that leave irreversible imprints on large areas turning them into ghostly exclusion zones, the *accidental* territories, in the Virilian sense of the word.

In *The Birth of Territory*, political theorist Stuart Elden explores “the emergence of the concept of territory in Western political thought” as “a distinctive mode of social/spatial organization”<sup>10</sup> by reading it against such notions as “land,” “terrain,” and “territoriality.” Let us look closely at each of the notions, traced by Elden. Land is “a relation of property, a finite resource that is distributed, allocated, and owned... Land can be bought, sold, and exchanged; it is a resource over which there is competition.”<sup>11</sup> Terrain is “a relation of power, with a heritage in geology and the military, the control of which allows the establishment and maintenance of order. ... [It is] something that is acted upon rather than itself active.”<sup>12</sup> The definition of territory, according to Elden, is wider and more complex: it encompasses the relation of property, the relation of power, and also, the relation of production and cooperation – in a politico-economic sense, but also, as production and reproduction of life, the active forces of transgression, the complexity of life-sustaining processes of the “new wilderness” and the cooperative assemblages that are forming within it. Then, he goes to elaborate the relation

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and difference between the notions of territory and territoriality. Territoriality, understood through “two conflicting traditions: the first biological, the second social”: the latter considers the rapid changes of human social organization; the former studies the fundamental biological drives and the forms of animal association crucial for understanding of territory.<sup>13</sup> “Where it is defined,” Elden notes, “territory is either assumed to be a relation that can be understood as an outcome of territoriality, or as a bounded space.”<sup>14</sup> However, the relation between *territory* and *territoriality* is more complex. When Elden writes that “territory... is conceptually prior to territoriality, even if existentially second,”<sup>15</sup> he suggests that even if the meaning of *territoriality* “has today a rather more active connotation,”<sup>16</sup> it is a concept of *territory* that serves as a condition of possibility that mobilizes the processes associated with *territoriality* understood as “the condition, or status of territory, rather than a mode of operating toward that territory.”<sup>17</sup> Thus, *territory* and *territoriality* are not bound by causality, nor they are in any way sequential. Instead, the dynamics of their relation show the patterns of volatile co-existence, where the persistent territorialization is disturbed by unmappable territoriality. *Territoriality*, then, encompasses both deterritorialization, or the process of losing the territory’s organization and context, and reterritorialization, or the territory’s re-establishing and re-setting, as the two demonstrate a pulsating relation of “the push-pull, almost dialectical, balance.”<sup>18</sup> *Territoriality* is that third term without which the map-to-territory relation will remain an unresolvable paradox: it demonstrates an impossibility of mapping a territory that is always unequal to itself – being either smaller or larger than what is mapped.

In this theoretical setting I locate the discussion about the territory of the Chernobyl Zone and its border that *allegedly* bounds *all* – but *certainly, not-all* – larger contaminated areas along with a variety of smaller spots marked by radioactive pollution into one single entity. The *territory* of the Chernobyl Zone of Exclusion is the production of a *systemic accident*, now stripped of its accidental nature. Still a work-in-progress, my five-year-long ethnographic project exploring the technological, political, and cultural circumstances of delineating the Zone’s border already reveals that this border is anything but a container; even if it was established by the Soviet Armed Forces after the 1986 explosion, then, since 2011, administered by the State Agency of Ukraine on the Exclusion Zone Management (SAUEZM), an agency within the State Emergency Service of Ukraine, and is currently guarded and policed by special units of the Ministry of Internal Affairs. This territory is continually deterritorialized and reterritorialized by the agents and processes of *territoriality* that not only destabilize and transgress the territory’s borderline, but also disseminate and process its content: contamination. The diverse community of various life forms, the biotic population of the Chernobyl Zone including any human and “non-human people,”<sup>19</sup> who act as the *agents of territoriality*, are the *subjects of territory*.<sup>20</sup>

### Biological Citizens, Revisited

“To be in the territory is to be subject to sovereignty,” Elden writes: “you are subject to sovereignty while in the territory, and not beyond; and territory is the space within which sovereignty is exercised: it is the spatial extent of sovereignty.” Therefore “sovereignty... is exercised over territory: territory is that over which sovereignty is exercised.”<sup>21</sup> What might be

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true for most cases of political geography is more complicated when it comes to the post-1986 realities after the collapse of the Soviet Union and the nodal status of the Zone bounding the territories of the three former Soviet republics. The dual position of the *agent of territoriality* who simultaneously is the *subject of territory* cannot be changed upon a departure from the contaminated areas. The body of the agent of territoriality is an extension of territory. No matter how far the subject drifts away from the epicentre of the non-accidental catastrophe, the body is marked by a radioactive *trace* of the state's techno-politics, a material *inscription* of the state on the body of the subject to sovereignty. Here the body is occupied or subsumed by the state, and it serves as a realm for the state's territorial expansion on a microlevel of the flesh, biopolitically, governing it towards (un)certain futures.

In a *Manual for Survival: An Environmental History of the Chernobyl Disaster*, historian of science Kate Brown draws attention to how human and non-human bodies as well as various life forms were exploited as part of the complex assemblage of heterogenic entities that cycled and filtered radioactive substances days after the explosion at the Fourth reactor of the ChNPP. She writes:

The newsreels of the May holiday did not record the actions of two and a half million lungs, inhaling and exhaling, working like a giant organic filter. Half of the radioactive substances Kyivans inhaled their bodies retained. Plants and trees in the lovely, tree-lined city scrubbed the air of ionizing radiation. When the leaves fell later that autumn, they needed to be treated as radioactive waste. Such is nature's stunning efficiency at absorbing bursts of radioactivity after a nuclear explosion.<sup>22</sup>

Understanding the impact of ionizing radiation on health and environment, both in the cases of short-term and long-term exposures, requires the study of many generations. Today, the mounting evidence presented by radiologists, who research "the complex interplay

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between exposure, organism physiology and phenotypic response over extended timescales” through the lens of epigenetics, already demonstrates that the changes caused by the impact of radiation in “gene activity and transcript architecture, including splicing variation, that cannot be explained solely by changes in DNA sequence” are heritable over generations.<sup>23</sup> The difficulty of studying such changes is that they could be observed not in the generation that had undergone short- or long-term radiation exposure, but in the performance of genes of future generations; and also, because, depending on the specifics of different cases, these effects could be multigenerational or transgenerational.<sup>24</sup> Even though the logic of its occurrences is still unclear, the fact that the biopolitical epigenetic inscription occurs on citizens’ bodies, the extension of the state’s territory, is archived in the bodies and is transmittable to other generations. Turning the bodies of the subjects of territory into such an *archive* is an ultimate expression of territorial sovereignty written into the subjects on the level of the flesh. Along with all life forms whose matter is affected by radiation, these human bodies literally *archive* the record of the subjects’ short- and long-term encounters with radiation that can be read in DNA sequence, but the comprehension of this record is delayed due to the complexity of time-consuming research. Producing understanding of the record in the bodies done by radioactive depositions requires time: it is significantly slower than the unfolding performance of the *written*. This performance is “a material trace of and a ‘material witness’ to the history of political violence.” Such material witness, Susan Schuppli writes, opens a possibility for

an exploration of the evidential role of matter as registering external events as well as exposing the practices and procedures that enable such matter to bear witness. Material witnesses are nonhuman entities and machinic ecologies that archive their complex interactions with the world, producing ontological transformations and



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informatic dispositions that can be forensically decoded and reassembled back into a history. Material witnesses operate as double agents: harboring direct evidence of events as well as providing circumstantial evidence of the interlocutory methods and epistemic frameworks whereby such matter comes to be consequential. Material witness is, in effect, a Möbius-like concept that continually twists between divulging “evidence of the event” and exposing the “event of evidence.”<sup>25</sup>

Soon after the Chernobyl catastrophe, medical anthropologist Adriana Petryna studied “the state’s public health and welfare infrastructure where increasingly poor citizens – former and current Chernobyl plant workers and populations resettled from contaminated zones – mobilize around their claims of radiation-induced injuries.” She called such social practice that has emerged in Ukraine in the early 1990s, “biological citizenship” (1999): “In Ukraine, where an emergent democracy is yoked to a harsh market transition, the damaged biology of a population has become the grounds for social membership and the basic for staking citizenship claims.”<sup>26</sup> For Petryna, the concept of biological citizenship “sheds light on a fundamental practice of polity building in post-socialism.”<sup>27</sup> Today the notion of “biological citizenship” is particularly valuable in how it lends to reconceptualization with the consideration of contexts I outlined earlier. My take on it, however, is rather pessimistic: if Petryna’s version of the notion captures the processes of citizens’ mobilization around claiming rights to health care, I use this term to mark their loss due to the subsumption of citizens’ bodies by the state. Citizenship is always a result of politico-economic arrangements, power relations and techno-politics preserved and re-enacted by what Ann Laura Stoler calls durable imperial infrastructures.<sup>28</sup> One of such infrastructural micro-elements escaped the nuclear reactor in macro-quantities and disseminated as a radioactive fallout producing the contaminated territory and its extension, biological citizens. The *subjects of territory*, together with their next generations and the

generations of other life forms exposed to radiation, became the carriers of an infrastructural inscription of the state beyond the Union of Soviet Socialist Republics' collapse in 1991 and into the future. The state survives by its *traces*.



Figure 13. An apartment building #3 on Sergeant Lazarev Street in Prip'yat featuring a celebratory slogan typical for the Soviet atomic cities, “Let the atom be a worker, not a soldier,” that supported and reinforced the ideological narrative about “peaceful atom.” Although its scale cannot be fully assessed and understood today, I am reading the bodies of the *subjects of territory* (human and non-human) as a collective *body-archive* where epigenetic transformation occurs. This mark is a direct imprint of the state techno-politics and its information policy on risk communication (or rather, a lack thereof) made the subjects connected, subscribed, and subordinated to the contaminated territory – biopolitically. The promotional slogan proudly installed on the top of one of the highest buildings was seen by many citizens as a reversal of the truth, which paradoxically revealed the impossibility to hide it and served as its expression in a

negative form: an open secret, especially, in a small, restricted-to-visitors atom city where most of the population were the NPP workers. (Pripyat Film Archive. Found footage. Year not identified. Photo courtesy of Oleksandr Syrota. Used under a CC-BY-NC-ND license.)

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<sup>1</sup> Ian Hacking, *The Emergence of Probability: Early Ideas About Probability, Induction and Statistical Inference* (Cambridge: Cambridge University Press, 2006), vii.

<sup>2</sup> Ibid., 4.

<sup>3</sup> Paul Virilio, *The Original Accident* (Cambridge: Polity, 2007), 5. Also see Yui Hui's detailed account of Virilio's theory of accidents: Yui Hui, "Algorithmic Catastrophe – The Revenge of Contingency," *parrhesia* 23 (2015): 122-143.

<sup>4</sup> Qtd. in Virilio, *The Original Accident*, 5.

<sup>5</sup> Ibid.

<sup>6</sup> Richard Black, "Fukushima: As Bad as Chernobyl?" *BBC News*. August 16, 2011. <https://www.bbc.com/news/science-environment-13048916>

<sup>7</sup> See, for example, Adam Higginbotham on Calder Hall nuclear power station, on the northwest coast of England constructed to manufacture plutonium for Britain's nascent atom bomb program in Higginbotham, *Midnight in Chernobyl*. (New York: Simon & Schuster, 2020), 40-41.

<sup>8</sup> Robert Gillette, "Soviet Military Apparently Had Role at Chernobyl A-Plant," *The Los Angeles Times*, Oct. 3, 1986, <https://www.latimes.com/archives/la-xpm-1986-10-03-mn-4176-story.html>. Most recently, in the interview to Yanina Sokolova, Ukraine's first President Leonid Kravchuk stated that the Chernobyl NPP was used for military purposes. See, "Леонід Кравчук: про Байдена, ядерну зброю, дачу, дзвінок Януковича | Рандеву з Яніною Соколовою," [https://www.youtube.com/watch?v=1-5\\_DAO07NA](https://www.youtube.com/watch?v=1-5_DAO07NA). In my own field work in and around the Chernobyl Zone of Exclusion, a former high-rank official working at the ChNPP in the 1980s, whom I interviewed in August 2019, also confirmed that the ChNPP has been used for production of weapons-grade plutonium.

<sup>9</sup> Ulrich Beck, *Risk Society: Towards a New Modernity* (London: SAGE Publications, 1992).

<sup>10</sup> Stuart Elden, *The Birth of Territory* (Chicago: The University of Chicago Press, 2013), 10.

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<sup>11</sup> Ibid., 9.

<sup>12</sup> Ibid.

<sup>13</sup> Ibid., 4.

<sup>14</sup> Ibid., 3.

<sup>15</sup> Ibid., 6.

<sup>16</sup> Ibid., 4.

<sup>17</sup> Ibid. Elden also notes that this is “the other, older sense of territoriality ... [that] is generally lost, though it would be good to retrieve it.”

<sup>18</sup> Stuart Elden, “The State of Territory under Globalization: Empire and the Politics of Reterritorialization,” *Thamyris/Intersecting* 12 (2006): 56.

<sup>19</sup> Timothy Morton, *Humankind: Solidarity with Non-Human People* (London: Verso, 2019).

<sup>20</sup> Here the notion “subject” is used in the Lacanian and Marxist sense, at the same time. This is not the liberal subject, a liberated and/or liberating agent of change, but the alienated subject of the system and of the unconscious, whose agency itself is either estranged or a matter of appropriation.

<sup>21</sup> Elden, *The Birth of Territory*, 329.

<sup>22</sup> Kate Brown, *Manual for Survival: An Environmental History of the Chernobyl Disaster*, Kindle Edition (New York: W. W. Norton & Company, 2019), 6.

<sup>23</sup> Nele Horemans, David J. Spurgeon, Catherine Lecomte-Pradines, Eline Saenen, Clare Bradshaw, Deborah Oughton, Ilze Rasnaca, Jorke H. Kamstra, Christelle Adam-Guillermin, “Current Evidence for A Role of Epigenetic Mechanisms in Response to Ionizing Radiation in An Ecotoxicological Context,” *Environmental Pollution*, 251 (2019): 470.

<sup>24</sup> Ibid., 472.

<sup>25</sup> Susan Schuppli, *Material Witness: Media Forensics, Evidence*, Kindle Edition (Cambridge, MA: MIT Press, 2020), 18-19.

<sup>26</sup> Adriana Petryna, *Life Exposed: Biological Citizens after Chernobyl* (Princeton: Princeton University Press, 2002), 5.

<sup>27</sup> *Ibid.*, 6.

<sup>28</sup> Ann Laura Stoler, *Duress: Imperial Durabilities in Our Times* (Durham: Duke University Press, 2016).