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Memory, Identity and Integration

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"It Was Normal": Environmental Contamination in the Collective Memory of the Inhabitants of Szopienice

Abstract: This paper presents the findings of research aimed at verifying Peter H. Kahn Jr.'s thesis on environmental generational amnesia. It was conducted in 2022 in a local community affected by environmental contamination. The settlement in Szopienice contained a non-ferrous metals plant, which operated for several decades and had negative impacts on the surrounding area. The consequences were particularly severe for local children, who suffered from lead poisoning. To verify Kahn's thesis, the researchers conducted 17 in-depth interviews with the inhabitants of Szopienice. During analysis of the interviews, the authors were mainly interested in the strategies the interviewees used to reduce the cognitive dissonance between the state of environmental contamination in Szopienice, as they remember it, and today's knowledge of the magnitude of environmental contamination. The theoretical framework for this analysis was the study of collective memory, with particular emphasis on exploring the concept of normality and with reference to the concepts of Alfred Schütz.

Keywords: normality, collective memory, metallurgical community, environmental generational amnesia, Szopienice

Jolanta Wadowska-Król, a retired pediatrician from Katowice, received the title of Doctor Honoris Causa from the University of Silesia on June 24, 2021. This most important honor in the Polish academic world was awarded for her fight for the health of children in Szopienice and Burowiec, starting in the mid-1970s. She ascertained that the children were being poisoned with lead and took action to improve their health. Almost single-handedly, she faced the party-economic bureaucracy, which did not want to reveal that, under the communist system, children could be affected by diseases caused by industrial pollution. With the unwavering support of her trusted colleagues and the guidance of Bożena Hager-Małecka, an outstanding pediatrician and also an influential member of the Polish Parliament, she ensured that some of the most vulnerable residents were resettled to new apartments in a healthier environment (several buildings were demolished). Furthermore, she initiated vital measures to ensure the well-being of the affected children through medical treatment and organized trips to preventoria in the mountains, marking the commencement of their road to recovery. However, she endured significant repercussions for her actions: she was barred from defending her completed doctoral thesis on lead poisoning among children. The results of her many years of research have been lost somewhere in the archives of the Medical University of Silesia. Until the political shift

in 1989, it was forbidden even to mention her findings. Only in recent years has the case resurfaced. First came Michał Jędryka's *Ołowiane dzieci* (Lead Children) (2020), an interesting book written by a person who had experienced lead poisoning himself as a child. Then, along with the university initiative, came reports, memoirs, and other books that took advantage of the popularity of the topic, though with less success (Fox 2021; Majcher 2023).[1]

The University of Silesia's recognition of Jolanta Wadowska-Król's work[2] served as inspiration for a team of scientists to initiate a collaborative and interdisciplinary research project titled "The Impact of Long-Term Pollutant Emissions—Environmental, Health, and Socio-Cultural Effects of Non-Ferrous Metallurgy." The project involved a comprehensive analysis of the effects of the non-ferrous metallurgical plant in Szopienice. The research team recognized the importance of including sociologists in the project; they were tasked with examining the collective memory of the settlement's residents in relation to the effects of the metallurgical operations.[3] For this purpose, in the summer and autumn of 2022, 17 unstructured interviews were conducted with people who had lived in Szopienice before 1980. To this day, the topic is sensitive, and interviewees were found with great difficulty. Despite the abundance of collected material, only a fraction of it was chosen for analysis: the part that concerned the recollections of the residents regarding the pollution of Szopienice's natural environment. I was especially interested in the possibility of verifying Peter H. Kahn, Jr.'s thesis regarding the presence of environmental generational amnesia. In a recent publication, Kahn and his co-author Thea Weiss wrote that "With each successive generation, the level of environmental degradation intensifies, yet each generation tends to perceive this degraded state as the undamaged condition, as the normative experience" (Kahn, Weiss 2017). Kahn formulated his thesis based on research in social psychology. Therefore, I have not limited myself to verifying the thesis but have attempted to view it from the standpoint of sociology, and particularly sociological reflection on normality and the phenomenological sociology of Alfred Schütz and his followers.

Therefore, the text's theoretical assumption is that there is a link between the findings of research into collective memory and collective forgetting, the sociological search to make sense of normality (both strands meet in Barbara Misztal's work), and Schütz's theoretical ideas. The mining and smelting industrial settlements are worlds in themselves, where work and neighborhood and family ties overlap, producing an exceptionally integrated community with the workplace as its center (Nawrocki 2006; Crow 2002). In both cases, there is interference with the surrounding biosphere. The only difference is that in the case of the mining community, the landforms are changed (mining sinkholes, spoil tips), while in the case of the smelter, the air, soil, plants, and animals are contaminated. Szopienice, the area we studied, was the latter type of community. The research we conducted was qualitative and based on the free interview technique (17 interviews). The material collected was intended to verify Kahn's thesis about the occurrence of environmental generational

[1] A compendium of Jolanta Wadowska-Król's activities is included in a special issue of *Narracji o Zagładzie* (Narration about the Holocaust), published in 2021.

[2] Jolanta Wadowska-Król died on June 18, 2023.

[3] Along with the author, the sociological team included Justyna Kijonka, Andrzej Niesporek, and Bożena Pactwa.

amnesia and, in the case of its confirmation (as happened), to show what techniques our interviewees used to reduce the tension between their belief in the normality of the situation and their knowledge of extreme environmental degradation. Finally, the Kahn paradox discussed by psychologists is contrasted with much earlier sociological explanations for why the world around us seems ordinary to us.

Conceptual Background

This study is situated within a theoretical framework that explores the interrelations between collective memory, collective forgetting, and places of memory. In the case of collective memory, the foundations laid by Maurice Halbwachs serve as a reference point. In the preface to his most important work, *Social Frames of Memory*, he remarked that "it is within society that an individual typically acquires memories, recognizes them, and situates them" (2008: 4). While memories are experienced on an individual level, they are shaped and influenced by the social context in which a person exists. This social framework plays a significant role in determining how we select specific memories from the vast pool of available resources; it also influences how we interpret their content (Erll 2018: 35). As stated by Halbwachs, in this sense, there is a collective memory and a social framework of memory, and only as our individual thought places itself within this framework and participates in this memory will it be capable of recollection (35). However, this does not prove the production of a supra-individual entity. The two forms of memory are dependent on each other (Erll 2018: 35). Individuals reminisce by adopting the group's point of view, but the group's memory is realized and manifested in individual memories (Halbwachs 2008: 8).

The group changes, and the social framework of memory evolves with it. The individual is constantly reconstructing the past (Kapralski 2012: 51). We do not have ready-made reflections about the past, but "selective, eclectic reconstructions" (Lowenthal 1985: 210). Therefore, collective memory "is not static, but changeable and dynamic. It is also a field of constant encounters, clashes, and mixing of images of the past constructed from different perspectives and built from different elements" (Szacka 2006: 44). It is tainted with the stigma of the present, and memories are evoked through the prism of the social present of the group and its future (Lowenthal 1985: 210). As noted by Dominic LaCapra, "memory is a part of the experience of a given group, which is related to the way that group relates to its own past in the context of its impact on the present and future" (LaCapra 2009: 90). David Lowenthal added that its basic function "is not so much to preserve the past, but above all to adapt it in order to be able to enrich and govern the present. By not clinging to the past, memory helps us understand it" (Lowenthal 1985: 210: 22).

So, what exactly is collective memory? Jacek Nowak defines it as "a collection of the ideas held by members of a community about its past, negotiated through internal communication and transmitted across generations in order to maintain a coherent narrative of identity" (Nowak 2011: 13). Implicit in this definition is the understanding that identity is shaped by our perception of continuity over time (Nowak 2011: 53–54; cf. Łuczewski 2017: 128–133). According to Richard Ned Lebow, quoted by Sławomir Kapralski,

"understanding the past not only allows us to interpret the present, but also tells us who we are. Shared experiences and memories, values and commitments…provide individuals and groups with distinctive identities" (Kapralski 2012: 54). Active participation in collective memory also serves to reinforce a sense of belonging to a particular group.

In formulating a model of the dynamics of social memory experienced by an individual in a specific culture, Christopher J. Hewer and Ron Roberts drew attention to the various sources of memory (2012: 171–173). According to the authors, an individual's subjective perception of the past is influenced by their personal experiences, the collective memory within their community, and historical knowledge derived from scientific and academic studies. These three spheres influence each other through socially shared knowledge of historical publications and biographical texts, but also through processes of communication and information exchange between individuals (Hewer, Roberts 2012: 172–173). Thus, individual memory consists of interpenetrating personal and mediated experiences (cf. Giddens 2001: 314).

In the present article, our attention is focused on communicative memory. Unlike cultural memory, which encompasses a broader historical context, communicative memory specifically revolves around the immediate past. Moreover, the bearers of communicative memory are individuals within a community who are not interested in historical research and who do not have any particular desire to influence others (J. Assmann 2009: 82–88).

Forgetting, like remembering, also has a societal dimension. It would be overwhelming to retain every single memory, which is why memory is inherently selective, and the "law of necessary forgetting" comes into play. Within the group's collective past, only certain events endure in the social consciousness, while others may become repressed within the collective subconscious or entirely forgotten. However, when collective memory is confronted with historical memory, previously suppressed or forgotten content can resurface. This opens up avenues for exploring the significance and function of forgetting and for reflecting on the nature of that forgetting, as in the work of Franklin R. Ankersmit (2003) or Paul Connerton (2008).

Ankersmit defined four types of forgetting. First, forgetting about ordinary, repetitive events in everyday life. This has no negative consequences either for community activities or individuals' mental health. Second, forgetting about things that are important to identity and action, whose meaning we do not know. Using psychoanalysis, Ankersmit believed that the really important things in our past are forgotten in collective and historical memory. Only the discovery of a new sense of what is causally important can make us aware of the meaning of hitherto generally overlooked aspects of the past (Ankersmit 2003: 27). Third, we sometimes forget because we have good reason to do so, as is known from the discussion about the memory of the Holocaust or the Silesian Tragedy. Memory of the concentration camps where Silesians or Lemkos were imprisoned after the war is too painful for the Polish community: therefore, it is pushed into the collective subconscious. Fourth, there is the type of forgetting caused by great changes: it involves forgetting the world before the changes and getting rid of the previous identity. Thanks to this, it becomes possible to find oneself in a new reality. These changes are extremely painful: the feeling is always present and cannot be hidden. The changes are accompanied by feelings of deep and irreparable loss, cultural despair, hopelessness, and disorientation. In this sense, such historical experiences are truly

traumatic: you really lose yourself. The previous identity is once and for all and irreversibly lost: suppressed by a historically and culturally new identity, which absolutely prevents any reconciliation between the old and the new identity. The new identity is mainly established by the trauma of the loss of the previous identity—this is what constitutes its main content. Forgetting here is associated with a turning point in the biographies of individuals. The reality of war is forgotten in order to find oneself in the postwar world (Ankersmit 2003: 28).

In turn, Aleida Assmann (2009), a German researcher, drew attention to the strategy of repressing the past from consciousness. We run away from the past by adopting strategies of compensation (our guilt is balanced by the guilt of others and thus canceled out); externalization (we move the blame away from ourselves by ascribing it to others); exclusion (we do not accept something as true, so that it cannot become an object of memory); silence about the past (both for victims and perpetrators); and misrepresentation (Germans as victims of the Third Reich). We choose one of these strategies to deal with an inconvenient element of collective memory (A. Assmann 2009: 333–349).

Halbwachs's research on the social framework of collective memory inspired the French researcher Pierre Nora to formulate the concept of *lieux de mémoire* (Szpociński 2008). This has given a new dynamic to memory research. Although Nora never defined the term, from the contents of the seven-volume almanac on French *lieux de mémoire* he edited, one can guess how he understood it. He emphasized that places of memory are places in the triple sense of the word—material, symbolic, and utilitarian: "what constitutes them is the game of memory and history and the interaction between them, which leads to their excessive mutual conditioning. First, however, the will to memory must appear" (Nora 2022: 116). Therefore, these do not have to be geographical places; they can also be "events and processes, imagined and real people, artifacts, symbols and other historical phenomena in which national heritage crystallizes" (Kończal 2014: 230). Through them, the past is visible in the present and thus influences the process of constituting and stabilizing collective identity (Hahn, Traba 2015: 15).

The immediate inspiration for the present text came from the research of American psychologist Peter H. Kahn Jr. This author, following in the footsteps of Louise Chawla (1986, 1994), noticed during a study conducted in the 1990s among children in Houston, Texas, that about two thirds of the children understood the idea of environmental pollution, but only one third believed that the problem affected their city, even though Houston was then one of the most polluted cities in the US. He argued that perhaps this was because if one's only experience is of a polluted environment, then it is perceived as a normal situation and the standard to which the state of contamination in other parts of the country is compared (Kahn 2007: 203). In the following years, Kahn developed this observation and formulated a term reflecting the essence of the phenomenon: "environmental generational amnesia." According to him, people form an opinion in childhood of what a normal environment is and treat it as a frame of reference (baseline) for assessing environmental degradation later in life (Kahn 2007, 2022). The problem is that with each successive generation, the degree of environmental degradation increases; yet each generation tends to assume that the state of the environment is normal, unaffected by degradation (Kahn 2011: 165). Under the influence of criticism, Kahn softened his thesis and called it a hypothesis. At the same time, he gathered arguments for its verification (Kahn 2011: 165–166).

The focus on environmental amnesia has provided an opportunity to refer to environmental memory research. This approach flourishes within the discussion of the Anthropocene (Craps et al. 2017). The term itself is not precisely defined. However, it is worthwhile to follow in the footsteps of Lawrence Buell, who understood the term as I shall mean it, in the sense (whether conscious or not, accurate or not, shared or not) of environments as lived experience in the fourth dimension, that is, the intimation of human life and history as unfolding within the context of human embeddedness in webs of shifting environmental circumstances of some duration, whether these be finite time spans (a lifetime, a generation, an epoch, a dynasty) or stretch back indefinitely into remotest prehistory (Buell 2017: 96; Praczyk 2018: 13).

In order to reconstruct the collective memory of the everyday life-world in the shadow of the steelworks, it was also extremely useful to draw on the ideas of phenomenological sociology, especially those of Alfred Schütz. His concept of natural attitude made it possible to go beyond Kahn's descriptive thesis. Let us recall that for Schütz, in the everyday life-world a person suspends (*epoché*) any doubt that the world could be different than it appears (Schütz 2012: 34; see Mandes 2012). Moreover "we have no reason to cast any doubt upon our warranted experiences which, so we believe, give us things as they really are. It needs a special motivation, such as the upshooting of a 'strange' experience not subsumable under the stock of knowledge at hand or inconsistent with it to make us revise our former beliefs" (Schütz 1945: 550). Then, the past can be the object of reflection in this same frame (Mandes 2012: 57). However, what and how we remember results from our attention to life. According to Schütz,

> attention to life is the basic regulative principle of our conscious life. It defines the realm of our world which is relevant to us; it articulates our continuously flowing stream of thought; it determines the span and function of our memory; it makes us—in our language—either live within our present experiences, directed toward their objects, or turn back in a reflective attitude to our past experiences and ask for their meaning (Schütz 1945: 537).

Metallurgical Community

From 1834 on, the focal point of Szopienice was the Non-Ferrous Metals Plant. In that year, Bergwerksgesellschaft Georg von Giesches Erben launched the Wilhelmina zinc smelter, which was later joined by the Uthemann Smelter (cf. Boroń, Grudniewski 2023). This brought into being the largest complex for non-ferrous metal production in Silesia and the world's largest cadmium producer. The smelter remained the lifeblood of Szopienice until its liquidation in 2008. The metal plant provided jobs and housing, and organized leisure activities and children's summer camps. Although there were other workplaces in Szopienice (e.g., Śląskie Zakłady Przemysłu Tłuszczowego, formerly Strahl Grease Plants, vinegar factories, mines), it was the metallurgical conglomerate that determined the nature of the community's social relations. It served as a space where numerous types of relationships intertwined, encompassing interactions between coworkers and neighbors, as well as individuals bonding over recreational activities and quality time shared with friends and family. As in other patronage estates, a strong bond was created between the inhabitants (Nawrocki 2006; Wódz 1992). Although Szopienice and its adjoining areas became part of Katowice in 1960, this did not change the inhabitants' strong sense of

separateness. You lived in the town (Szopienice) and went to Katowice to shop or study. You were an inhabitant of Szopienice, living in the districts of Roździeń, Wilhelmina, Stawiska, or Drugie Szopienice. Janów, Nikiszowiec, and Dąbrówka Mała were traditionally closer to Szopienice; Katowice was foreign and distant.

On the one hand, the Plant was the center of the Szopienice world, providing work and organized life; on the other, it gradually destroyed the community associated with it. The price for its functioning and the development of the settlement was the degradation of the natural environment and the ruination of the health of the inhabitants. Year after year, for over a century, the fumes from the steelworks, processing the most harmful metals, poisoned the people and polluted the environment. As Primo Levi, a great writer and chemist, wrote many years ago, "Lead is the metal of death" (cited in Cabała et al. 2021: 153). Lead is not needed for human life and is toxic in any quantity (ibid.; cf. Dziubanek 2012). The smelter also processed other heavy metals harmful to humans and their environment, such as cadmium and zinc. Meanwhile, during the Prussian and Polish periods before 1989, little importance was placed on environmental protection, resulting in factories externalizing their production costs onto the surrounding environment. Research conducted by scientists from the Medical University of Silesia in 2011–2012 showed the scale of environmental degradation. In two samples taken from the area of the Szopienice housing estates, the concentrations of lead were 11,408.6 mg/kg DM and 8,718.94 mg/kg DM (the average value in soils in Poland was 18 mg/kg DM). The values for cadmium were 430.88 mg/kg DM and 26.48 mg/kg DM (Polish average 0.2 mg/kg DM); for zinc, 23,684 mg/kg DM and 10,499.75 mg/kg DM (average value 10–200 mg/kg DM) (Dziubanek 2012: 170–174). The standards regarding lead presence were also exceeded, with the sand from sandboxes in local playgrounds (115.39 mg/kg DM) and the soil in nearby sports grounds (479.77 mg/kg DM) both surpassing the permissible limit of 100 mg/kg DM. The soil from sports grounds also contained large amounts of zinc (1,643.01 mg/kg DM compared to a norm of 300 mg/kg DM) and cadmium (9.81 mg/kg DM, compared to a norm of 4 mg/kg DM) (Nieć 2013: 58–60) The research was carried out when the Metals Plant was already in the process of liquidation; the most harmful technologies had been limited for many years, and the Targowisko ("Marketplace") buildings most exposed to contamination had been demolished. Despite this, the inhabitants still lived in an environment that was dangerous to their health. Heavy metals present in the surface layers of the soil are a source of danger in the form of secondary dusting; children are the most exposed as they spend more time outdoors (Nieć 2013: 57). Any amount of lead in the body is dangerous: its presence threatens multi-organ damage, including death. Cadmium leads to metabolic disorders and damages the kidneys; it is also neurotoxic and carcinogenic with prolonged exposure. Excess zinc negatively affects the bone marrow, the functioning of the liver, and the respiratory system (Nieć 2013: 56–57).

Research

The main goal of our research was to recreate collective memory of the functioning of the Szopienice metallurgical community. We were interested in the everyday life of

the community, ethnic issues, the impact of the school, and other questions. However, the most crucial matter for us was remembrance of the complex range of issues related to environmental contamination caused by the steelworks. We were interested in how contemporary respondents perceived their former life in a contaminated environment. The next section of the paper addresses this question.

The research was of a qualitative nature, as is typical of projects focusing on the communicative aspect of collective memory. While conducting the research in Szopienice, we used the classic sociological technique of in-depth interviews based on previously prepared instructions (Mayntz, Holm, Hübner 1985: 132–133; Babbie 2003: 327–330). Such interviews can also be described as qualitative and factual (Kvale 2010: 19, 124–125). The research aimed to "understand the world from the perspective of the participants, interpret the significance of human experiences, and uncover the world in which they lived prior to scientific explanations" (Kvale 2010: 19). The choice of a qualitative approach was driven most strongly by the research goal, which was to gain a broad and in-depth knowledge of the past of the Szopienice community.

The interviews were recorded (with the respondents' consent) and then transcribed.[4] The resulting material was analyzed via categorization and typologization relating to individual research problems.

The respondents were deliberately selected for the study. Due to the cases of lead poisoning among children in the mid-1970s, it was decided to interview people who had lived in Szopienice before 1980. During the interviews, the participants were asked to recommend subsequent interviewees (snowball sampling). A total of 17 interviews were conducted; 8 with women and 9 with men. The oldest person was 84, the youngest was 47. The group included former professors of the University of Silesia and former employees of the steelworks. Of the interviewees, 13 still live in Szopienice; 4 lived there in childhood and youth.

Research Results—Discussion

Let us recall that the material collected in Szopienice was used to verify Kahn's hypothesis. First, however, it should be emphasized that the key element for understanding the accounts of Szopienice's past is the Metals Plant. In this settlement, any talk about its past is talk about the steelworks. Today, the Metals Plant has become a place of remembrance in several senses; material (some metallurgical buildings still remain, along with tracks leading to the steelworks, wastelands burnt out by metallurgical fumes, etc.), symbolic (as an element whose memory gives the community identity), and in terms of use, as the Zinc Smelting Museum has been opened in the rolling mill building through the efforts of community members. Local heritage is concentrated in the smelter. Thanks to it, the past is visible in the present, enabling the stabilization of collective identity. It marks the boundaries between the community connected through the smelter and the outside world (cf. Misztal 2003: 137).

[4] Some of our interlocutors used phrases from the Silesian ethnolect. Unfortunately, the translation of the text into English does not capture the flavor of these expressions.

And everything happened in the Metals Plant and everything was around the Metals Plant. [10_M_73][5]

Treating the steelworks as a *lieu de mémoire* (as understood by Nora) sets the framework for the analysis below and allows for a better understanding of the normality of the world produced by the steelworks. It was normal to live in a metallurgical settlement, work in a smelter or other plant, and bear the associated costs. When asked about the state of the environment in the past, our interviewees most often replied that "it was normal." This *normality* was emphasized in almost every interview, regardless of whether we were talking to a retired steelworks worker, a housewife who had lived there all her life, or a professor of biology. The word "normal" appeared in various phraseological units (normal work, normal lifestyle, normal eating of plants growing there, normal fun in the vicinity of the steelworks, normal planting of fruit bushes, etc.).

If you led a normal life, there was not a single cadmium or lead contamination. [3_M_75]

Well, that was normal. Let me tell you, in those days, under communism, it was a normal job. [10_M_73]

So it was, and so it had to be. Those were the times. A retired middle-level supervisor at the steelworks put it this way:

In the area of Uthyman, which is part of Szopienice, there were two houses [families] that had the worst conditions. One of these was called Pytel—my friend's grandfather. We used to laugh because there was a roasting room there, and there were always flies flying around. If one of them accidentally flew into the wrong air current, it would suddenly drop. That's just how the environment was there.
Ma'am, this was the only area with a man-made desert. It wasn't so much due to zinc production, but rather from the roasting plant, which emitted nitrogen oxides. There was a small chimney from which yellow smoke would billow out and that yellow smoke consisted of nitrogen oxides. Nitrogen has the ability to burn everything, whether it be grass or non-grass, nothing stood a chance. Since the winds in this area were mostly from the west, the smoke from Uthyman would blow towards the east, causing the creation of this desert-like area on the eastern side. Unfortunately, there was nothing much to do about it. That's just how things were. [15_M_73]

Our interviewees and their relatives, who were used to "a normal" life in Szopienice, had problems when they left and faced life in different conditions. The same interlocutor joked about this:

The odor in that area was quite overpowering, almost like a mixture of various elements from Mendeleev's periodic table. However, we were accustomed to it and considered it normal. There was this one incident when my wife and I went on a holiday to the Suwałki region, but she experienced an oxygen shock. Her head was throbbing for the entire first week due to excessive oxygen exposure. At that time, I had a diesel car, so we jokingly suggested that she should lie down next to the exhaust pipe, as if she were inhaling the smoke, and it would miraculously cure her. It may sound absurd, but that was just the way things were. Even my younger daughter had a similar experience. Whenever the children went to summer camps, and she went to the seaside, she would develop a rash. However, by the time they returned, the rash would have disappeared. It was because she had adapted to the environment here; while there, there was an excess of iodine and oxygen, causing an immediate rash. We found humor in such situations because, realistically, there was nothing else we could do—that's just how life…was. [15_M_73]

The conclusion from the last sentence is important here: *such was life*, and it had to be accepted as a normal situation. None of our interviewees had a contrary opinion.

[5] We have marked the origin of the interview quotes in the following fashion: first, the interview number (10), then the gender (M—male, F—female) and the age of the interlocutor (M_73). The transcripts of all interviews are in the project archive.

This allows us to confirm Kahn's hypothesis. Additional arguments were also provided by confronting the belief in normality with the knowledge of the harmfulness of the impact of the steelworks. This information was available primarily to employees who had contact with the safety procedures for working with harmful substances (breaks at work, blood tests, removal from work in harmful departments, use of protective clothing, etc.):

> It was the responsibility of the steelworks to conduct quarterly blood tests for what they referred to as "heavy metals." A team of medical professionals would arrive, collect blood samples, and send them to the laboratory for analysis. If the levels of lead or cadmium exceeded the established standards in the lead smelter or cadmium department, employees would be removed from these positions. In turn, we would receive a "fresh" group of dismissed employees, which served as evidence that our department was not harmful. The levels of lead and cadmium present in the smelted zinc were so minimal that, if someone led a normal lifestyle, there would be no contamination with either cadmium or lead. [3_M_75]

Families of employees, and people living in the immediate vicinity, also had a certain knowledge of the harmfulness of the steelworks. Although there were voices that said "but around here, everyone knew" [15_M_73], people not linked to the steelworks and living further away from it began to find out only after Jolanta Wadowska-Król's speech (1974). The demolition of the most polluted buildings (the so-called Marketplaces), the sending of children to preventoria in the mountains, the displacement of some residents, limits to the most harmful technologies, and so on, brought to light the fact that there was a problem. However, it was only after the fall of communism in 1989 that the subject could be introduced into the public debate:

> Over time, I noticed that people started to become more conscious of the situation. Initially, they didn't believe it until they witnessed concrete examples, such as children experiencing tooth loss due to their close proximity to the environment. These children would consume vegetables directly from the garden, and some of them even consumed them raw, unaware that these vegetables contained a significant amount of lead, reaching up to 2%. It was only after witnessing these incidents that those who took a genuine interest in the matter began to develop an awareness of the potential risks associated with the environment. This awareness did not come immediately but gradually built up later on. [3_M_75]

Over the years, knowledge about the contamination of the environment by the steelworks became more widespread. However, belief in the normality of life in the local environment still persisted. In this way, a dissonance appeared between these two cognitive elements (cf. Festinger 1957; Aronson et al. 2015). The local people knew that the Metals Plant was polluting the environment, but they also believed that they lived in a normal situation. As social psychologists have found, the acceptance of two such cognitive judgments produces a feeling of discomfort, which in turn leads to attempts to reduce it. This reduction can occur in three ways: changing our behavior, justifying our behavior by changing one of the cognitive elements to make it conflict less with our behavior, or justifying our behavior by adding new cognitive elements to support it (Aronson et al. 2015: 159). In this case, cognitive dissonance could be reduced either by acknowledging that environmental pollution was pathological and devastating to the community (rejecting the assumption of normalcy), challenging the notion of pollution being harmful to residents (upholding the assumption of normalcy), or recognizing that the Metals Plant polluted the environment but also that it provided certain benefits to the residents (again, upholding the assumption of normalcy).

The analysis of the collected material showed that our interlocutors rejected the first method of reducing dissonance. None of them described the then state of the natural environment as something that should not have happened. On the contrary, describing the impact of the steelworks on the environment more or less bluntly, they always pointed out that, at the time, it was normal. Something that was in essence an abnormal situation was treated as an element of communist normality:

At the smelter, they were constantly replacing filters, but smoke was everywhere. It was the combination of the roasting plant and lead smelter that led to cases of lead poisoning. Despite these circumstances, there are still some plants growing in the gardens. I personally have celery and parsley growing in mine.
In the past, there used to be pigsties in the square. We would keep pigs there, and Director L. would take care of them. Additionally, we also had rabbits, chickens, and hogs—it was like a small village here. However, eventually, all of it was demolished. […] That's precisely how things were in this area. [5_F_77]

However, the other two methods of reducing cognitive dissonance appeared in a number of variants. First, the meaning of one of the elements (knowledge about environmental contamination) was reformulated so that it was not in contradiction with belief in the normality of life in the metallurgical community at that time. It was repeatedly pointed out to us that the harmfulness of the steelworks' operation was "not such a simple matter." There were various arguments: the longevity of one's relatives, consumption of vegetables and fruits from surrounding gardens, children spending time outdoors, ponds inhabited by crayfish, and so on.

A: And how did it affect your health, do you think?
R: And do we know it's because of that? No one can prove it to me that this is because of that stench. My mother lived to be 76, my father to be 79… My sister is 73 and I am 77. [13_F_75]

It was in this garden that carrots, parsley, beans grew…I planted the bushes because my uncle allowed me to build a garage there, and I had gooseberries, currants, and vines planted near the access road to the garage. We would eat those gooseberries and currants without any concerns. Even my aunt and uncle ate what they grew from the ground, including carrots, which they ate all their lives.
WR: And how long did they live?
R: My aunt died at 84 and my uncle at 86. So let me tell you something…It's not such a simple thing to assume that it's harmful. [16_M_80]

I used to eat sorrel in that area, and if I were to mention it now, people might think I was trying to commit suicide because there was so much dust present. I would consume carrots there that I wouldn't eat at home. We would wander around, exploring the large garden in our yard, and pick those carrots, often eating them along with the soil. [2_M_62]

Interestingly, the water in the nearby ponds was very clean. You could find plenty of crayfish there, and crayfish are considered indicators of a high degree of water purity. However, I'm not sure if they were noble crayfish or spiny-cheek crayfish. It's perplexing to think about where these heavy metals came from since there were no direct water discharges, such as sewage, into these ponds. The metals were largely present in the form of dust and would settle at the bottom, creating a continuous cycle. Consequently, the accumulation of heavy metals would vary depending on the fish species present. For instance, the top predator, the pike, may have different levels of these metals, which are currently unknown, but they are all interconnected within the ecosystem. [1_M_63]

A variation on this method of reducing cognitive dissonance was to accept the fact that the environment of Szopienice was polluted, while emphasizing that the local population had adapted to it and that the contamination was primarily harmful to visitors. As evidence, our participants cited prevailing opinions in the community and scientific arguments:

I had a friend who was a doctor and happened to be a friend of my husband's too. We knew each other well. There was a metallurgical clinic on Korczak Street, across from the hospital, where they conducted research on diseases related to the steelworks. It became a major scandal when children fell ill and even dogs started dying. My friend, the doctor, shared some interesting findings with me. He said that all those who came to Silesia to work in the steel industry suffered from asthma and various forms of poisoning, such as cadmium and lead. Even the local residents experienced these issues, but when looking at it proportionally, a higher percentage of these visitors were affected. On the other hand, those of us born and raised here had inherited lead, cadmium, and other toxins in our genes. This, to me, is the strongest evidence of the impact. [13_F_75]

It's a matter of genotypes, as everyone's body reacts differently to these pollutants. In Silesia, particularly within families native to the region, there has been a selection of genotypes since the 18th century. In my opinion, the most vulnerable genotypes were those brought by newcomers and their offspring. That's just how it unfolded. I recall during the thaw in the 1980s, when environmental protection started to gain attention and became a popular topic, I remember that this issue appeared in a magazine then. [1_M_63]

They also recalled their own experiences, such as one about a visit by a girl from outside Silesia:

When she was around 10 or 12 years old, I took her for a walk from Drugie Szopienice [part of the city] to Wilhelimin [Smelter], which was behind the zinc smelter and the roasting plant. They were conducting some activities there, and these yellow fumes were billowing out. In the middle of our walk, she suddenly fainted, and I noticed blood coming out of her nose. I immediately understood what was happening and hurriedly pulled her behind that cloud, towards my friend's grandmother's house in Wilhelimin. It was quite alarming because she was a girl from the countryside, used to fresh air. I told her that we needed to run fast to pass through the cloud, so we took a deep breath and exerted ourselves to get through it. Unfortunately, she practically collapsed due to the exertion. [16_M_80]

This story shows the social aspect of adapting to environmental pollution; it also reveals contamination handling practices. The local people knew when a "difficult situation" arose and what to do (when to close windows, stay home, wash hands after playing outside, etc.):

Close the window because Blajówa [local name of the smelter] is smoking! [17_M_70]

The way they disposed of waste from the soap shop was by flushing it, and if you didn't close your window, the stench would be unbearable. It was so foul that it made it difficult for me to eat anything. [15_M_73]

The only problem was with washing hands. When you came back from the so-called square, you had to wash your hands. This was something that needed to be closely observed. [1_M_63]

Visitors had no such knowledge. This was even more evident when working in the steelworks. It was impossible to underestimate the importance of the procedures regarding occupational health and safety, medical examinations, especially blood tests for heavy metals, proper lifestyle (diet, rest), and so on:

My dad used to mention that when he worked at the lead smelter, it was mainly the Silesians who had been working there for generations, from their grandfathers to great-grandfathers, who knew how to behave. They knew that in the dining room, they should remove their dirty coats and gloves, wash up, and then sit down to eat. On the other hand, the newcomers would often be there wearing masks and gloves…Sometimes, they ate this dust during this breakfast. [7_F_56]

The locals rarely got sick, thanks to the acquired immunity. In contrast, those who arrived from outside, having come from a clean environment, lacked natural immunity and were more susceptible to infections. However, among the locals, it was uncommon for someone to get infected, although not unheard of. Maintaining a hygienic lifestyle, such as eating nutritious meals, refraining from excessive alcohol consumption, and getting adequate

rest after work, significantly reduced the risk. If one were to fall ill despite these precautions, it would likely be a conscious decision or a circumstance beyond their control. [3_M_75]

The existence of procedures in the steelworks aimed at the safety of employees was strongly emphasized. We were told about dust monitoring, medical examinations, the blood testing system, and milk provided to workers as an antidote:

For a simple reason, the locals inadvertently exposed themselves to lead poisoning and underwent monthly medical examinations. The doctors would assess and determine the level of lead poisoning in their bodies. If the poisoning was minor, they received one mark. If it increased, they received two marks after another month. And if the indicator continued to rise for three consecutive months, they received a third mark, which led to immediate dismissal from the lead smelter where they worked. Despite being aware of their poisoning, after six months, they would be re-examined. If their indicators showed a decrease, they were allowed to return to the Metals Plant. [16_M_80]

Ma'am, we used to provide milk to our workers as an antidote to maintain their health. However, it was later discovered that milk is actually the most effective agent for retaining heavy metals in the body. Once this truth was revealed, we immediately ceased the practice. [15_M_73]

However, no mention was made of the use of such procedures in other plants in Szopienice, which also polluted the environment:

For me and my family, the harm caused by the Metals Plant was relatively minimal compared to the factory that produced gray soap. It is difficult to imagine the process they employed, which involved using old bones in the production and releasing smoke and a strong stench into the surrounding environment. Simply put, this aspect of the factory was the most onerous for us. [13_F_75]

The positive image of the steelworks, which united the local world of Szopienice (providing work, organizing free time, acting for the benefit of the community, etc.) drew attention to other enterprises polluting the environment (primarily Zakłady Tłuszczowe—in English, the "Grease Plants").

No, they changed the filters at the lead smelter, they changed everything, the air didn't smell so bad anymore. Bad smells came literally from every side: vinegar plant here, roasting plant there, you could smell "rotten eggs" everywhere… [4_F_78]

While the impact of the metallurgical complex on environmental devastation was acknowledged, equal attention was given to highlighting the benefits that the community of Szopienice derived from the operation of the steelworks. In this way, our interviewees used the third type of cognitive dissonance reduction. A new element appeared which made it possible to reconcile the belief in the normality of the situation with the knowledge of the effects of the steelworks' activities on the environment. It was just that we lived in unfavorable conditions; however, we had a job, housing from the steelworks, and the possibility of holiday trips. Thanks to the steelworks, we were able to work normally and thus live normally:

You just had to work somewhere; the Plant provided housing and so on, but it also provided one more thing—a habit. No matter where you go to work, you get used to it. In Silesia, there was this kind of approach to life. Here, no one was ever impressed by martyrdom or any military unions…You would never see anything like this here. A guy had to be good at work, not fail at anything, he had to show that he could earn a living. [15_M_73]

In Silesia, the quality of a person's work was a testament to their skills and abilities. No matter where, no matter what job, it was important that a man worked for his livelihood [cf. Nawrocki 2006]. Such an attitude can be found in the statement quoted above. However, there were also those for whom working in harmful conditions provided an opportunity to earn more money than they could have earned in less harmful places:

Ma'am, it's always the case with employees that the first thing they look at is the work. Ma'am, the situation was what it was, and it was nothing new for us. It was the same in other plants, where there was an addition of 2 PLN for working in harmful conditions. And if someone came and said that they would improve these conditions but the supplement would have to be abolished—absolutely, no one would agree. Ma'am, that's how it was. Employees assumed they might lose their jobs. And that they work…If lead poisoning was detected in someone, they were withdrawn for 2–3 months. Because with lead this is what happens: the blood is tested, and if you withdraw from work, the level of lead in the blood drops. There it fell back to normal. These were the rules, no one did it on purpose, this was the science back then, and this was how it was approached. These people were coming back. [15_M_73]

Because there were very high salaries—in this department, people sacrificed their health for high salaries. [9_F_47]

We argued about better conditions for the women who worked here in these rough departments; they worked in difficult conditions. These women did not want to quit their jobs. They defended themselves and said it was cool. They carried a heavy load of more than 30 kilos, and still sang about St. Mary. And when they had to be fired, they said, "No! It suits us here." Their arms were so long they could scratch their ankles. […] I remember how during the Solidarity period we argued about it. A delegation from Warsaw came, and everything was fine. We took them to the positions where women worked and when it came to signing what we had negotiated, the representatives of the steel mill did not want to agree, because they would have to admit to the world that women work in such difficult conditions. These women wanted to work there because they also wanted to earn money to support their family when there was no man at home, because he had died in the war or something else happened. [6_M_84]

The Metals Plant was not only "a source of food for many families" [13_F_75]; it was more. People usually worked there their whole lives. The daughter of a Metals Plant worker said that for her mother,

The Metals Plant felt like a second home, just like that. In the past, and perhaps not as much today, it was common to start a job and remain in the same place, in the same profession, with the same group of people, until retirement. My mother, for instance, worked in one laboratory for 40 years, starting there after completing her schooling. [7_F_56]

As a priority plant, it provided housing relatively quickly, which was a rare commodity under communism. It also provided organized free time and holidays, and honored meritorious employees. The awareness of life being determined by the operations of the steelworks resonated in conversations with retired employees:

The Metals Plant…you could earn money; you could take advantage of the conditions it offered. There was a social department that offered summer camps for children. We had recreation centers, company apartments, we had homes for young couples, and an older hotel where the conditions were a bit worse, also there were other places where the conditions were better. It can be said that the Plant employed not only residents from Katowice, Mysłowice, and the surrounding area, but it employed workers from all over Poland. As a superintendent, I had employees from Ciechanów and Oława. The Metals Plant was just like a mine. You could go there instead of going into the army […] Exactly, because the steelworks was such a specific plant that it was a protective place, as I said before. It provided for the employee's free time. There was a factory community center where everyone knew that during the carnival period, there would be a factory party. Then integration occurred. Just as it is now said that an employer integrates the staff and organizes trips, it was the same here: there was a company band, the well-known Adrian played in it and sang; there was a community center and an orchestra there. At the carnival,

every Saturday was occupied by the department; everyone organized a carnival party; there was a club called Natasha. This integration had already taken place. Most of the external employees received apartments in first order. [3_M_75]

There were also anniversaries that I used to attend frequently, particularly those organized by the unions. The celebrations would commence from the twentieth anniversary onwards, and the highlight was always a mass held at the metallurgist church. It was a grand affair with a procession attended by the management. After the church service, we would gather at the center, specifically at Michalik near the old Wedding Palace in Katowice [Pałac Ślubów w Katowicach, demolished in 2011]. This venue, known as Variete, hosted the annual Metallurgist's Day, where medals were awarded. The Plant took great care of its employees, providing them with a large polyclinic in Borki equipped with various medical professionals, including factory doctors and rehabilitation specialists. Additionally, a hospital was available for more serious medical needs. My father, for instance, stayed there at one point. Those working in production, especially at the roasting plant, were even sent to sanatoriums for treatment related to lead poisoning or pneumoconiosis. It is evident that the Plant truly prioritized and cared for its people. [5_F_77]

On the one hand, the inhabitants of Szopienice lived in a polluted environment; on the other hand, the Metals Plant, which was the main cause, allowed employees and their families to function in a privileged way (of course, within communist realities). The memory of this fact was effective in reducing the importance of cognitive dissonance. One of the retired steelworks employees expressed the situation directly:

Because if I was told, "Listen, the Metals Plant is harmful, we are closing it"—But wait…What will I do? What will happen to my children? It's not such a simple matter. [16_M_80]

While the Metals Plant functioned, it was the center of the local community, both in a metaphorical and real (Giddensian) sense. This was where the "daily trajectories" of not only the steelworkers, but also their families and other residents of Szopienice intersected. Thanks to this, they could use "various forms of social separation" and distance themselves from others (Giddens 2003: 175). This was especially true after their incorporation into the Katowice area (1960):

The Metals Plant served as a cornerstone of community integration, with numerous people from the surrounding area employed there. However, when the plant eventually collapsed, the sense of togetherness faded away. The Community Center relocated to the city, and the once-thriving metallurgical polyclinic ceased to exist, leaving the community without access to healthcare. Suddenly, everyone went their separate ways, and the situation became quite unfortunate and disheartening. [9_F_47]

In this aspect, Szopienice was no different from other post-industrial communities whose splendor was linked to industry. In the description of the metallurgical community of Sisak in Croatia, most of the characteristics specific to Szopienice can be found:

these testimonies enable us to understand the importance of industry and its interconnectedness with the community. Ideas of the factory "as a provider" that created numerous possibilities of work, took care of family life, organized schooling, encouraged self-improvement, guaranteed advancement in the workplace, secured a reliable source of income, and offered vacation time at factory seaside resorts, prompted a collective nostalgia among former workers and their families once the factory was closed. It was there in the "utopian past," in retrospective, that the evidence of unselfish communitarianism, selfless collectivity, and honor in taking part in building the new socialist society was to be found (Potkonjak, Škrbić Alempijević 2023: 17).

Therefore, both localities were nostalgic for the old days. The situation is different in localities that, like the Croatian town of Bakar or the suburban town of Murcki, have gained a new opportunity for development (Potkonjak, Škrbić Alempijević 2023; Nawrocki 2006).

A Few Closing Thoughts

The research in Szopienice confirmed Kahn's hypothesis of the occurrence of generational environmental amnesia. All our interviewees treated the environmental situation of the community as normal. Their view was not influenced by knowledge acquired over the years about environmental contamination. The resulting tension between memory and information about the environmental harm was reduced without any questioning of the normality of the situation. These findings are certainly interesting but require further research, especially studies that would go beyond environmental psychology and would incorporate research on social memory and collective forgetting, as Buell has done in a load-bearing research project on environmental memory (2017).

This combination of perspectives could significantly enrich our understanding of how we remember the state of the environment in which we lived and still live. It is clear to sociologists, especially those who deal with memory, "that the knowledge and judgments that an individual's mind is equipped with and the skills embodied in his or her actions are always localized in a specific historical time, while the individual who is a 'product' of socialization is always a person of that time and place in which he or she lives" (Marody 2014: 23). A sociological reflection on normality could also prove helpful. As rightly noted by Barbara Misztal, the concept of normality has been present from the very beginnings of sociology (Misztal 2016: 103). Despite a gradual decline in interest, the concept of normality has regained prominence in discussions concerning the nature of social reality. Initially this was linked to conformity within functionalist perspectives; later, recognition grew of the influence of rapid social change and cultural transformations on everyday experiences. As a result, the understanding of normality underwent reevaluation to better align with the evolving context (Misztal 2016: 104). According to those researching the concept of normality, valuable insights on the subject can be gleaned from various sources: these include classic figures in the discipline such as Auguste Comte and Emil Durkheim, as well as more recent scholars such as Erving Goffman, Harold Garfinkel, Fiona Duncan, and Mark Sladen. Reference could be made, for example, to Durkheim's classic *Principles of Sociological Method* (2000) and his way of understanding a normal social fact. Of course, the point is not the universality of the phenomenon, but above all about considering it "in close connection with the conditions of the entire collective life" (Durkheim 2000: 100). Considering the context of life in communist Poland, the conditions in a metallurgical community at that time are understood as a situation where the environmental costs were shifted onto the environment and the workforce's basic and extended reproduction was constrained in favor of production. This state of affairs was considered normal during that era (see Jałowiecki 2010).

We can also change our perspective and follow Goffman to look at how normality is "constituted out of interactional materials" used by various social circles to reach "a working understanding" (Goffman 1983, after Misztal 2016: 105). In our interviews, we looked for descriptions of everyday practices that confirmed the impression of normality. These can be found in the memories of children's games, of shopping, of social meetings organized by the steelworks, and so on:

Walking around the swamp in a few hours was what we called an expedition—that we explored all these ponds, Hubertus [a pond's name] and so on. Who would have thought…a child of eight or eleven years old…? Today it is unthinkable, once you used to go out somehow… [1_M_63]

In this way, a sense of safety and predictability was created. Such was the importance of both children's games (exploring the area, playing hockey or football—"our group against your group") and the previously described control rituals in the steelworks. It would be useful to examine this area further in explaining the local inhabitants' memory of the normality of that world, in contrast to the information they received later about the condition of the natural environment in Szopienice. According to the theorem of William I. Thomas (Merton 1995) it is irrelevant whether the interpretation of a situation is correct, if it defines itself as real and normal, it produces real consequences. As in the case of children's games, which took the ecological threat for nothing and played as if it did not exist.

Harold Garfinkel's self-reflective remark is of paramount importance here. When having difficulties analyzing patient files, he decided to look at the data in terms of "normal, natural troubles"—not as something abnormal, but as an element of normality (Garfinkel 1967: 191). In doing so, he "normalized discrete activities" by "embedding them within new accounting frameworks." As Misztal noted, this happens primarily in the face of particularly destructive experiences (Misztal 2016: 106). Contact with the effects of the steelworks' operation constituted just such an experience.

Or the matter can be taken a step further and help can be sought from a thinker to whom both Garfinkel and Goffman owe much: Alfred Schütz. Then Kahn's hypothesis ceases to be surprising, and its verification raises new research questions. According to Schütz's natural attitude, we take the world for granted as long as nothing contradicts it (2012). Therefore, it becomes interesting to ask why the widespread knowledge of industrial contamination was insufficient to contradict the local residents' belief in normalcy. Is it enough that people grow older together (Schütz 1962: 220)? Questions arise about the social framework of collective memory (Schütz would use the phrase "social sources of knowledge") and about how knowledge is distributed in the environment (Schütz 2006: 874). What needs to happen so that the "*attention à la vie*" (Schütz uses this phrase of Henri Bergson's) changes and a reflexive attitude is activated that allows the reading of past experiences to change (Schütz 2012: 21). For Michał Jędryka, author of the novel *Ołowiane dzieci* [Lead Children], this was the experience of illness and the death of peers. These questions could not be answered by a research project in which the issue of environmental memory was only one of many elements. It would have required a return to this community for research focused solely on this issue. Reaching out to phenomenological sociology opens up new possibilities for research. The memory of the everyday life-world in a contaminated environment is worthy of further research, and the metallurgical community provides a unique testing ground.

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