

# 1 The Power of Polio

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The year 1952 was a tumultuous one. It saw the Cold War gain full speed: the United States detonated its first hydrogen bomb, while Britain announced that it was now in the possession of an atomic bomb. East Germany started forming the National People's Army and the B-52 aircraft flew for the first time. As the division of the world between East and West deepened, another crisis was unfolding as the summer of 1952 arrived: a severe polio epidemic wave swept over the world, leaving tens of thousands of children disabled and thousands dead. The worst epidemic outbreak in the history of the United States and Denmark, polio in 1952 marked a turning point in the history of the disease. The severe epidemic boosted vaccine research in the former country, and prompted innovation in respiratory technology in the latter, making it the European centre of polio research.

The epidemic wave also hit Hungary, a small Eastern European country whose society was still struggling with the aftermath of a destructive war and whose communist government was grappling with the task of laying down the foundations of a new era. The epidemic started with an outbreak in North-Eastern Hungary,<sup>1</sup> a region that continued to show the highest incident rates of polio throughout the decade. Cases of poliomyelitis started rising in June and peaked in August and September, paralysing nearly 500 patients and leaving 29 dead<sup>2</sup> out of a total population of roughly 9.5 million.<sup>3</sup> This was the first major epidemic since 1948. At first glance, the numbers do not seem to be particularly high, especially compared to the over 21,000 paralytic cases in the United States<sup>4</sup>

<sup>1</sup> Gábor Debrődi, 'A Mesterséges Lélegeztetés és az Újraélesztési Eljárások Története Magyarországon a Felvilágosult Abszolútizmus Korától az 1960-as Évekig, a Hazai Modern Mentéstudomány (Oxylogia) Megszületéséig', *Kharón* 7, no. 4 (2003): 52–76.

<sup>2</sup> Károly Nagy, *Medical Microbiology* (Budapest: Institute of Medical Microbiology, Semmelweis University, 2008).

<sup>3</sup> The population of Hungary in 1952 was 9,453,000 according to the figures of the Hungarian Central Statistical Office. Központi Statisztikai Hivatal, 'Népesség, Népmozgalom (1949–)' (Budapest: Központi Statisztikai Hivatal, 2012).

<sup>4</sup> *Poliomyelitis*, vol. 74, Health Information Series (Washington, D.C.: U.S. Department of Health, Education and Welfare. Public Health Service, 1963).

or the 3,000 cases in Copenhagen alone.<sup>5</sup> However, this was the first instance in which the healthcare system of the new People's Republic of Hungary was faced with such an epidemic crisis.

Following general guidelines of contagious diseases, polio patients needed to be quarantined for four weeks, preferably in one of the six infectious disease wards in the country, but if the paralysis was not too severe home care was also possible. There were two iron lungs operating in Hungary at the time, both in the László hospital in Budapest, therefore all respiratory cases needed to be directed to the capital.<sup>6</sup>

It soon became clear that an epidemic of this volume challenged the meagre resources of post-war Hungary. In a meeting prompted by the epidemic, the leading epidemiologists and hospital directors of Budapest agreed that infectious disease and post-treatment facilities were badly needed for the rehabilitation of polio patients. The absence of 400 beds in the infectious disease hospital – they had been destroyed in a bombing in the war – was particularly felt and resulted in crowded conditions in time of epidemics.<sup>7</sup> As a report from the Health Ministry pointed out in 1953, 'In the war the [Hungarian] healthcare network collapsed'. An epidemiological network was put in place in 1951 and the number of doctors was constantly increasing, but hospital buildings had not been renovated since the 1930s and shortages in beds, medical equipment, food and heating were everyday concerns for most medical institutions.<sup>8</sup>

In these days Hungary, along with other Eastern European countries, was not only facing the challenges of recuperating from a devastating war, but also undergoing a major transformation that ranged from the political system to the social makeup. Eastern Europe was the hardest hit area of the Second World War: millions of its population killed in concentration camps and vigorous ethnic cleansing campaigns, its cities and bridges bombed, its infrastructure destroyed. Rebuilding the country coincided with the construction of a new political and social structure. The 'communist takeover' in 1949<sup>9</sup> marked the

<sup>5</sup> H. C. A. Lassen, 'The Epidemic of Poliomyelitis in Copenhagen, 1952', *Proceedings of the Royal Society of Medicine* 47 (1953): 67–71.

<sup>6</sup> 'Járványos Gyermekbénulás Elleni Védekezés.' Budapest: Budapest City Archives, Fővárosi Tanács Egészségügyi Osztálya, 10. doboz, B/8/2558/952.VIII.19, 1952.

<sup>7</sup> 'Jegyzőkönyv a Folyó Évi Október 24-ÉN Pénteken Délután 3 Órakkor Megtartott Járványügyi Ankéton Elhangzott Felszólalásokról.' Budapest: Budapest City Archives, Fővárosi Tanács Egészségügyi Osztálya, 10. doboz Tanácsi iratok gyűjteménye, B/8/3280/952, 1952.

<sup>8</sup> Antal Greiner. 'Magyarország Egészségügyi Helyzete 1953. Évi Adatok Alapján.' Budapest: National Archives of Hungary, Simonovits István iratai, Egészségügyi Minisztérium, XIX-C-2-s Box 20, 7/1953, 1953.

<sup>9</sup> On recent critical histories of the communist takeover that argue against the seeming inevitability, uniformity and strictly oppressive nature of the communist regime changes see Kenez, 'The Hungarian Communist Party and the Catholic Church 1945–1948'; Mark Pittaway, 'The

beginning of a new era, as the Cold War unfolded and the Hungarian Stalinist regime headed by Mátyás Rákosi set out to build the communist People's Republic. Forced collectivisation, show trials and empty shelves accompanied the construction of a classless society.

Polio might seem a trivial matter against this background, especially since, in terms of numbers, it was not a major health threat. Even at the climax of an epidemic, the increased incidence numbers were not particularly high when compared to the morbidity and mortality of other diseases. For example, in 1959, the year of the second largest epidemic in Hungary, ten times as many people were diagnosed with hepatitis and twice as many patients died as a result than with polio. In the same year, nearly four times as many people fell ill with influenza and its complications, with a death toll 140 times larger than that of polio<sup>10</sup>. Moreover, among the causes of death, infectious diseases on the whole ranked quite low: in 1960 they were responsible for 4.4 per cent of total deaths in the Hungarian population, while cancer claimed 17 per cent and 40.3 per cent died due to cardiovascular diseases.<sup>11</sup>

However, the Hungarian government invested significantly in the disease. While Hungary came to see much worse epidemics than the one it faced in 1952, the year marked the beginning of the state's intensive and growing interest in the prevention and treatment of the disease, which culminated in the latter half of the decade. The importance of polio overarched regime changes, revolutions and retributions. Moreover, by the end of the decade the Hungarian communist government would sidestep conventional domestic and foreign policies in order to curb the disease.

Hungarian involvement in the prevention and treatment of polio was part of a broader process in the epidemic management of polio that spanned the globe in its range. The disease had a tremendous effect not only on Hungarian politics, citizens and scientific communities, but also on societies from New Zealand to Brazil to the Netherlands. Polio created spaces of international collaboration in which Cold War politics played out in unexpected ways. Throughout the 1950s vaccines, iron lungs, people and practices crossed the Iron Curtain back and forth in a mutual effort to prevent and treat the disease.

Politics of Legitimacy and Hungary's Postwar Transition', *Contemporary European History* 13, no. 4 (2004): 453–75; Katherine Lebow, 'Public Works, Private Lives: Youth Brigades in Nowa Huta in the 1950s', *ibid.* 10, no. 2 (2001): 199–219; Benjamin Frommer, 'Retribution as Legitimation: The Uses of Political Justice in Postwar Czechoslovakia', *ibid.* 13, no. 477–492 (2004).

<sup>10</sup> Központi Statisztikai Hivatal, 'Egészségügyi Helyzet 1963', 86.

<sup>11</sup> András Klinger, 'Magyarország Népesedése az Elmúlt Negyven Évben', in *Magyarország Társadalomtörténete III. (1945–1989)*, ed. Nikosz Fokasz and Antal Örkény (Budapest: Új Mandátum, 1999), 65.

Where did the power of polio to meddle with Cold War politics, initiate international cooperation and jumble the tasks and responsibilities of family, medical staff and state come from? How did a disease whose effect was never great in numbers gain so much attention from the scientific community, governments and international organisations? What was so special about this particular disease?

The answer lies in the details of the important aspects of poliomyelitis: it was a relatively new disease; it was present across the globe; it affected children; and it caused disability. Polio epidemics received especially heightened attention in the 1950s from scientists to bureaucrats in Hungary and elsewhere because the particularities of the disease amalgamated with the particularities of the post-war era. Polio challenged demographic goals, ideas of modern production, medical theories and practice, and spoke to a post-war confidence in technological and scientific progress and a renewed obsession with children in propaganda and humanitarian work.

The four factors discussed below played equally important roles in forming the Hungarian and international response to polio. In order to understand the significance of the disease in the 1950s and early 1960s and its Cold War history, we need to take a broader look at the attributes of polio that created spaces of cooperation and brought together unlikely allies.

### A Twentieth-Century Disease: New Challenges Unite

Poliomyelitis was a relatively new disease in the mid-twentieth century. Severe and widespread epidemic waves had started appearing quite recently, most notably in Sweden in the late nineteenth century and in the United States in the early twentieth century. The rising number of cases gave way to an increase in scientific interest, as virologists and physicians tried to understand the virus and to figure out efficient ways of preventing and treating the disease.

Although polio is usually considered a success story, with the disease eradicated from most countries in the world, this story unfolded rather slowly. As Naomi Rogers argues in her book *Dirt and Disease: Polio before FDR*, 'polio epidemics highlighted tensions between old and new medical theories and practices as physicians, scientists, and the lay public debated the increasing authority of scientific medicine'.<sup>12</sup>

For almost half a century, the virus's point of entry into the human body was debated. The treatment of paralysis caused by polio was not standardised until well into the 1950s and, even then, different schools of thought and concepts

<sup>12</sup> Naomi Rogers, *Dirt and Disease: Polio before FDR*, ed. Judith Walzer Leavitt and Morris Vogel, *Health and Medicine in American Society* (New Brunswick: Rutgers University Press, 1992), 3.

about what counted as an efficient cure clashed regularly. Debates about vaccine efficiency and safety – first with Salk’s killed virus vaccine, followed by several live virus vaccines – flared, as did difference of opinions on the right dosage, method of injection and age groups to be vaccinated.

These continuous, ongoing conversations (some more heated than others), the constant uncertainty about the best way to prevent and treat this virus and the new high-tech equipment and specialised knowledge needed by polio research and treatment all played a part in creating a space of intensive scientific interaction. As the following chapters of the dissertation show, this space was perceived as standing above Cold War divisions, and moreover it was a space that was, to certain extent, open to actors outside the medical profession as well.

### *Scientific Uncertainties*

Marking two crucial turning points in the identification of the disease, the name Heine-Medin’s disease became commonly used through the first half of the twentieth century; in some parts of the world, like Hungary, the term is still widely used today. In the late eighteenth and early nineteenth centuries, British physicians described the paralysis of the lower extremities in children as a separate disease.<sup>13</sup> One of the groundbreaking works in polio’s history was published in 1840 by German orthopaedist Jakob von Heine,<sup>14</sup> who identified this particular type of paralysis as a disease entity and termed it spinal infantile paralysis (*Spinale Kinderlähmung*).<sup>15</sup>

Polio first appeared as an infectious disease in a presentation given by Karl-Oskar Medin, a Swedish physician at an international conference in Berlin in 1890. Provincial doctor Nils August Bergenholtz identified the first epidemics of infantile paralysis in Sweden in 1881, and the Scandinavian country experienced several epidemic waves before the turn of the century. Medin based his findings on an epidemic in 1887 and concluded that polio was an acute infectious disease, but not a contagious one. At the time concepts of contagious and non-contagious diseases were not clear-cut categories, therefore while considering it to be an epidemic disease, ‘Medin thought of polio as caused by miasmatic conditions.’<sup>16</sup>

<sup>13</sup> J. M. S. Pearce, ‘Poliomyelitis (Heine-Medin Disease)’, *Journal of Neurology Neurosurgery and Psychiatry*, no. 76 (2005): 128.

<sup>14</sup> Jakob von Heine, *Beobachtungen über Lähmungszustände der untern Extremitäten und deren Behandlung: Mit 7 Steindrucktafeln* (Stuttgart: Köhler, 1840).

<sup>15</sup> Jakob von Heine, *Spinale Kinderlähmung: Monographie* (Stuttgart: J. G. Cottascher Verlag, 1860).

<sup>16</sup> Per Axelsson, ‘“Do Not Eat Those Apples; They’ve Been on the Ground!”: Polio Epidemics and Preventive Measures, Sweden 1880s–1940s’, *Asclepio. Revista de Historia de la Medicina y la Ciencia* 61, no. 1 (2009): 23–38, at 30.

It was in 1908 that Austrian physicians Karl Landsteiner and Erwin Popper identified the poliovirus as the cause of poliomyelitis.<sup>17</sup> Acting upon the news of the virus isolation, Simon Flexner, director of the Rockefeller Institute for Medical Research, took on experimental poliomyelitis; in 1908 he inoculated monkeys with human tissue containing poliovirus, and was able to pass polio from monkey to monkey as well.<sup>18</sup> Moving the study of the disease to the laboratory and the problem of applying findings to epidemics that played out in various populations was a characteristic of polio research throughout the next fifty to sixty years.

In the early twentieth century, polio epidemics became particularly severe in the United States. In 1916, Americans were faced with the world's then worst outbreak, counting 27,000 cases, with 8,900 in New York City alone.<sup>19</sup> This severe epidemic marked the beginning of the American history of polio, which soon became connected with the figure of Franklin D. Roosevelt, whose person determined the image of polio victims in pre-Second World War United States.<sup>20</sup> While hiding his disability in his public appearances, Roosevelt played an important part in the formation of American polio research and treatment, with the foundation of Warm Springs, a major treatment centre in Georgia, and the National Foundation for Infantile Paralysis, which provided the financial means for vaccine research and treatment through the March of Dimes.<sup>21</sup> Moreover, the national myth of Roosevelt's success in conquering polio was so pervasive that it greatly influenced polio patients' thinking of their own disease and disability, either by aligning with the president's myth, or challenging it.<sup>22</sup>

In this sense, polio in the United States was peculiar when seen in an international comparison. The personal involvement of a highly esteemed political leader was unique, and in some ways the funding of scientific research and medical treatment as well. In societies where free healthcare provided by the state was an organisational cornerstone and where discussions about the health of children were framed through paternalism, fundraising and individual donation were entirely missing from the steps taken against polio epidemics. This does not mean, of course, that citizens outside the United States were not called upon in one way or another to participate in the effort to curb the

<sup>17</sup> John R. Paul, *A History of Poliomyelitis*, Yale Studies in the History of Science and Medicine (New Haven: Yale University Press, 1971), 98.

<sup>18</sup> Saul Benison, 'Speculation and Experimentation in Early Poliomyelitis Research', *Clio Medica* 10, no. 1 (1975): 1–22.

<sup>19</sup> Rogers, *Dirt and Disease*, 10–11.

<sup>20</sup> Daniel J. Wilson, 'A Crippling Fear: Experiencing Polio in the Era of Fdr', *Bulletin of the History of Medicine* 72, no. 3 (1998): 464–95.

<sup>21</sup> See chapters 2 and 3 in Oshinsky, *Polio: An American Story*.

<sup>22</sup> Amy L. Fairchild, 'The Polio Narratives: Dialogues with FDR', *The Bulletin of the History of Medicine* 75 (2001): 488–534.

disease. Rather, the differences and similarities between the various experiences of the disease comprised overlapping and constantly moving maps of what polio meant and how it was approached by politics, society and science.

Polio cases had been recorded in Hungary from the end of the nineteenth century and epidemics had been observed from 1911 onwards. From the following year, polio became a reportable disease in the country and the Health Minister ordered patients diagnosed with polio to be quarantined for three weeks, along with children in the patient's household. After the three weeks of seclusion, the patient's immediate environment was to be disinfected.<sup>23</sup> The regulation shows that polio was already perceived in Hungary as a public health threat in the early twentieth century and that the attempts at prevention followed the usual protocol of contagious diseases. The exact way the virus spread, however, would not be agreed upon until quite a while after the introduction of these early prophylaxis strategies.

The virus's entry point into the body was debated for over half a century. Flexner was an early proponent of the theory that the disease infected through the nasal mucus.<sup>24</sup> Coming from a microbiological approach, Flexner based his theory on the animal model. He succeeded in infecting monkeys by wiping their nasal passages with infected material in 1910.<sup>25</sup> The conclusion, that this was the mode of infection among humans as well, prompted a field trial in Alabama in 1936 where a nose spray designed to chemically block the nasal mucosa was tested – the trial closed as inconclusive in 1937. Meanwhile, in the same year, with pressure from the public due to an unfolding epidemic, the Ontario government in Canada conducted yet another trial to test the nasal spray that was already in use by many private physicians, with similar results.<sup>26</sup> The enthusiasm that initially surrounded this prevention technique did not spread further and the method was not tested or used elsewhere again. Following the unsuccessful trials and the lack of evidence for the nasal route infection, the theory was highly contested in the late 1930s and abandoned by the early 1940s.<sup>27</sup>

Other theories were more persistent. Armed with the relatively new germ theory of disease and the obsession with cleanliness it brought to the everyday

<sup>23</sup> Rezső Hargitai and Kiss, *A Gyermekbénulás Elleni Küzdelem: Beszámoló egy Ma Már Múlttá Váló Rettegett Betegség Ellen Folytatott Hősies Küzdelemről és Felszámolásának Lehetőségéről: A Szent László Kórház Centenáriumára Készült Összeállítás* (Budapest: Literatura Medica, 1994).

<sup>24</sup> Margaret L. Grimshaw, 'Scientific Specialization and the Poliovirus Controversy in the Years before World War II', *Bulletin of the History of Medicine* 69, no. 1 (1995): 44–65, at pp. 46–47.

<sup>25</sup> Paul, *A History of Poliomyelitis*, 243.

<sup>26</sup> Christopher J. Rutty, 'The Middle Class Plague: Epidemic Polio and the Canadian State, 1936–37', *Canadian Bulletin of Medical History* 13, no. 2 (1996): 277–314, at pp. 291–95.

<sup>27</sup> Grimshaw, 'Scientific Specialization and the Poliovirus Controversy in the Years before World War II'.

perception of diseases and health,<sup>28</sup> researchers as well as the lay public looked to that profound connection between filth and disease. As early as the 1916 New York epidemic, evidence suggested that polio preferred healthy, well-nourished children in affluent homes with good sanitation to impoverished households and filthy neighbourhoods.<sup>29</sup> Even as experience seemed to contradict the theory and new epidemiological thinking gained momentum, ridding households of flies, washing fruit and emphasising the cleanliness of the home continued to be a major part of prevention efforts well into the 1950s in many parts of the world.

Early twentieth century researchers were puzzled by the fact that polio can spread in a relatively wide geographical area with considerable speed while not producing a particularly high incidence rate. The conclusion was that there had to be ‘abortive cases’ of polio, meaning that the disease did not cause paralysis in everyone who contracted it. Based on observations of the 1905 Scandinavian epidemic, Ivar Wickman (a student of Medin) claimed that there were far more non-paralytic cases than paralytic ones and that these ‘abortive’ cases played a key part in spreading the disease.<sup>30</sup>

Equally puzzling was the seasonal nature of the epidemics. Polio usually arrived recurrently at a particular time of year, which also affected the cause that was attributed to the spread of polio. This attribute added to the unknown or debated aspects of the disease. An analysis of the 1939 epidemic in the Eastern Hungarian city of Debrecen<sup>31</sup> published in a public health journal in 1941 gives an overview of possible reasons, none of which, it concludes, can serve as a sole explanation for the pattern. Infection by insects, gastrointestinal infection, the presence of dust in the dry summer weather, the amount of precipitation and dampness and even the general direction of wind were all raised and discarded, leaving the author with the conclusion that there was definitely an observable pattern in climate regarding polio epidemics, but no sufficient explanation to account for it. Moreover, the author felt the need to remark that ‘the practice of meteoropathology is tiresome and the results obtained do not reflect the amount of work invested in the process’.<sup>32</sup> While finding a plausible explanation could be useful in developing adequate prevention measures, the results acquired in this kind of research were simply not worth the effort.

<sup>28</sup> Nancy Tomes, *The Gospel of Germs: Men, Women, and the Microbe in American Life* (Cambridge, Mass.: Harvard University Press, 1998).

<sup>29</sup> Rogers, *Dirt and Disease*, 161–63.

<sup>30</sup> Tony Gould, *A Summer Plague: Polio and its Survivors* (New Haven: Yale University Press, 1995), 112–13.

<sup>31</sup> László Mecsek, ‘Meteorológiai Vonatkozások a Heine-Medin-Kór Epidemiológiájában’, *Népegészségügy*, no. 14 (1941).

<sup>32</sup> *Ibid.* 9.

In the meantime, the scientific uncertainty that surrounded the recurrent spread of the disease trickled down to the public perception of environmental threats that could cause polio. Children were warned against over-exhaustion when playing outside, public swimming pools were to be avoided in the heat, fruit was to be thoroughly washed and homes were to be kept particularly clean. A theory in New Zealand blamed the inefficient clothing of children during the summer – the sudden changes in temperature taxed children's bodies, which were clad in short socks and short trousers or skirts, leaving their legs exposed to the elements.<sup>33</sup> Polio did not arrive in the summer months in every corner of the world, though. In Sweden, it was the autumn months that suffered the peak of epidemics, thus giving polio its popular name, 'the Autumn Ghost',<sup>34</sup> and prompting people to avoid falling leaves and rotting fruit in order to prevent polio.<sup>35</sup>

### *Vaccine Development*

The scientific uncertainties surrounding polio continued well into the post-war era. Whenever one issue seemed to be resolved and a unison in scientific explanation achieved, three others jumped into its place. Even the development and spread of vaccines in the 1950s did not really help to stabilise the knowledge about polio. One of the key remaining questions to be answered was about how many strains of poliovirus there were. Australian and American researchers identified two strains of the virus and concluded, with animal experiments, that surviving polio of one strain did not provide immunity to the other. Confirming and identifying the number of strains was crucial, therefore, in developing an effective vaccine. This tedious and repetitive work was conducted in individual American laboratories in 1948 with funds from the National Foundation for Infantile Paralysis (NFIP).<sup>36</sup>

Another important step in providing the conditions for vaccine research in the 1950s was the breakthrough of virus culturing. In 1949, John Enders and his colleagues at Harvard University succeeded in culturing poliovirus *in vitro*, that is, in a test tube. Growing poliovirus under laboratory conditions had been possible for decades, though only in the nervous tissue of monkeys, which is dangerous to life when injected into humans and therefore was not an option to use in vaccine production. The intervention of Enders and his colleagues was to use tissues, among them kidney, in culturing that were safe for human use.

<sup>33</sup> Ross, 'A History of Poliomyelitis in New Zealand'.

<sup>34</sup> Per Axelsson, *Höstens Spöke. De Svenska Polioepidemiernas Historia* (Stockholm: Carlssons, 2004).

<sup>35</sup> "'Do Not Eat Those Apples; They've Been on the Ground!': Polio Epidemics and Preventive Measures, Sweden 1880s–1940s', 37.

<sup>36</sup> Daniel J. Wilson, *Polio* (Portsmouth: Greenwood Publishing Group, 2009).

This feat earned them a Nobel Prize in Physiology or Medicine in 1954 'for their discovery of the ability of poliomyelitis viruses to grow in cultures of various types of tissue'.<sup>37</sup>

As polio epidemics appeared with more frequency and with higher and higher incidence rates around the world, vaccine development became especially pressing and therefore had priority in securing funds. In the United States, where both the killed virus vaccine (by Jonas Salk) and the three live virus vaccines (by Hilary Koprowsky, Albert Sabin and H. R. Cox) were developed, the majority of the funding came from the NFIP. The first vaccine to be widely produced and distributed was the Salk vaccine, which induced immunity to the disease with the help of inactivated or killed poliovirus.

Developing the vaccine was one important step. Establishing its efficiency was quite another. American authorities moved quite fast when it came to approving and licensing the Salk vaccine;<sup>38</sup> it took them a mere two hours after Thomas Francis, director of the University of Michigan Poliomyelitis Vaccine Evaluation Centre, officially announced the results of the field trial involving 1.8 million schoolchildren on 12 April 1954.<sup>39</sup> However, in the following years, based on varying experience of the Salk vaccine around the world, its efficacy would be debated in the pages of medical journals well into the 1960s.

Live poliovirus vaccines fared even worse in creating consensus in vaccine efficiency and, more importantly, safety. Fears that vaccines made with attenuated live viruses could cause or spread polio instead of curbing the disease were persistent throughout the development of the live vaccines in the 1950s and early 1960s by Albert Sabin, Hilary Koprowski and H. R. Cox. The vaccine trials of the three vaccines, spanning five continents, aimed to soothe reservations about safety and efficiency, but, as Chapter 5 shows, were far from successful in bringing about consensus in the scientific community.

Questions about vaccine evaluation kept appearing with every trial and after every outbreak of polio. New answers to a new disease created yet another set of uncertainties. How would one translate laboratory results into effects on whole populations of a disease that came haphazardly and with varying force? How could one establish the length of the vaccines' protective power when such a short time had elapsed between the development, trial and widespread

<sup>37</sup> The Nobel Foundation, 'The Nobel Prize in Physiology or Medicine 1954. John F. Enders, Thomas H. Weller, Fredeick C. Robbins', [www.nobelprize.org/nobel\\_prizes/medicine/laureates/1954/](http://www.nobelprize.org/nobel_prizes/medicine/laureates/1954/).

<sup>38</sup> The Secretary of Health, Education and Welfare was responsible for giving licence, acting on the recommendation of the Surgeon General. The latter was advised by the National Institute of Health and the Division of Biological Standards. Subcommittee on Health and Safety of the Committee on Interstate and Foreign Commerce, *Polio Vaccines*, First session on developments with respect to the manufacture of live virus polio vaccine and results of utilization of killed virus polio vaccine, 16 March 1961, 3–4.

<sup>39</sup> Oshinsky, *Polio: An American Story*, 203.

use of the serum? In the pages of medical journals, at international polio conferences and at personal laboratory visits, virologists, paediatricians and public health officials exchanged experiences, crunched numbers and debated results to establish proper prophylactic and treatment strategies for their respective countries and ultimately to aim for a consensus in curbing the disease worldwide.

The increasing preoccupation with polio prompted the application of new scientific methods, such as Wickman's statistical analysis and Flexner's use of the animal model in constructing knowledge about the virus. The conflicting theories and the scientific uncertainty that enveloped the disease opened yet new arenas of cooperation between virologists, therapists and physicians in a world already densely interwoven with an international scientific network,<sup>40</sup> and kept them in place during an unfolding Cold War.

In order to plan and execute prevention methods, develop vaccines and provide state of the art treatment for a new epidemiological phenomenon, scientific communities needed to be constantly in touch with each other, share new experiences and knowledge and cooperate in figuring out the next step. The lack of widely accepted standard procedures and the presence of intense debates in the fields of virology, medicine and public health ensured that a space for exchange and cooperation existed continuously, disregarding the barriers erected after the Second World War between East and West.

While scientific uncertainties were, in some ways, continuously present throughout the first half of the century, the meaning of polio changed over time. From its existence as a rhapsodically appearing and puzzling disease in the early twentieth century, it became a major threat to future populations by the early 1950s. In the early 1960s the disease changed meaning yet again and became synonymous with scientific triumph over nature and a symbol for international cooperation.

## A Global Issue

Polio epidemics not only increased in their severity over time in the first half of the twentieth century, but also in their geographical scope. Outside Europe and North America, where polio outbreaks began to be registered in the late

<sup>40</sup> See for instance Anne Marie Moulin, 'The Pasteur Institute's International Network: Scientific Innovations and French Tropisms', in *Transnational Intellectual Networks. Forms of Academic Knowledge and the Search for Cultural Identities*, ed. Christophe Charle et al. (Frankfurt: Campus, 2004), 134–64; Clifford Rosenberg, 'The International Politics of Vaccine Testing in Interwar Algiers', *American Historical Review* 117, no. 3 (2012): 671–97; Joao Rangel de Almeida, 'The 1851 International Sanitary Conference and the Construction of an International Sphere of Public Health' (PhD thesis, University of Edinburgh, 2012).

nineteenth and early twentieth centuries, the disease made its appearance on a large scale in Africa, Asia, Latin America and Oceania in the 1920s.<sup>41</sup>

### *Research Cooperation*

While global cooperation in polio research, prevention and treatment reached its climax in the 1950s, an international exchange of knowledge and specimens had existed from the outset. For instance, when asked for poliovirus samples to facilitate European research, Flexner sent specimens to Dr Arnold Netter, a French clinician, through personal contacts.<sup>42</sup> Interwar Hungarian publications on polio demonstrate an extensive knowledge of contemporary epidemiological research, and place their findings in the context of the up-to-date data and theories published by German, French, Romanian, Swedish, American and British colleagues.<sup>43</sup>

With the creation of the United Nations and the World Health Organisation (WHO), international scientific cooperation received new impetus. The WHO expressed interest in international research on polio from the very beginning of its existence. At the suggestion of the French delegation, who emphasised that polio should be studied by an international group of virologists, epidemiologists and clinical experts, the First World Health Assembly passed a resolution to investigate the disease and to base its report on international conferences.<sup>44</sup>

In the same year that the WHO held its founding meeting, virologists and public health delegates from 28 countries came together to discuss the crippling disease. The 1948 First International Poliomyelitis Conference in New York was funded by the National Foundation for Infantile Paralysis (NFIP), which was celebrating its tenth anniversary.<sup>45</sup> The conference covered a wide range of subjects related to polio, among them polio's global issues. The papers and discussions emphasised the presence of polio across the continents and the severe problems it raised in medical care, economy and social stability. Some papers followed arguments much along the ideas articulated a century before at the 1851 International Sanitary Conferences, the first international public health meetings: the economic reverberations of an epidemic; the feasibility of quarantine from the perspective of cost and its effect on trade;

<sup>41</sup> Matthew Smallman-Raynor, *Poliomyelitis: Emergence to Eradication*, Oxford Geographical and Environmental Studies (Oxford and New York: Oxford University Press, 2006), 192.

<sup>42</sup> Benison, 'Speculation and Experimentation in Early Poliomyelitis Research', 4.

<sup>43</sup> Jenő Barla-Szabó, 'A Heine-Medin-Kór Kezelése Lyssa Ellenes Oltásokkal', *Orvosi Hetilap*, no. 22 (1933): 465–66; Elemér Hainiss, 'A Heine-Medin-Betegség Kóreredete és Kezdeti Szakasának Jelentősége', *Orvosképzés*, no. 2 (1936), 109–13; Ferenc Székely, 'A Poliomyelitis Anterior Acuta (Heine-Medin) Serumterápiájáról', *Gyógyászat* 82, no. 32 (1942), 1–8.

<sup>44</sup> María Isabel Porras, María José Báguena, and Rosa Ballester, 'Spain and the International Scientific Conferences on Polio', *Dynamis* 30 (2010): 91–118.

<sup>45</sup> *Ibid.* 102.

and the question of submitting political independence to epidemic control in the name of efficiency.<sup>46</sup> Soon, a specifically European organisation followed in the footsteps of the International Congress and the European Association against Poliomyelitis was formed in 1951. Its first symposium was held in 1953 in Copenhagen,<sup>47</sup> a year after one of the most severe polio epidemics in the world, which had pushed Denmark to the forefront of European polio research and treatment.

Both the International Conferences and the Symposia of the European Association for Poliomyelitis became regularly occurring events. The former met every three years until 1960 and all of its meetings were funded by the NFIP. It would seem, then, that polio occupied a similar space in the Cold War politics of the United States to malaria control, in line with Marcos Cueto's argument. From the analysis of malaria eradication efforts in the 1950s in Latin America, Cueto argues that malaria prevention turned into a political tool of the Cold War in the hands of international agencies, the Rockefeller Foundation and the United States government, both on the rhetorical and the practical level.<sup>48</sup> However, polio did not follow the same pattern.

While it is clear that the NFIP did not fund a string of gigantic international events without a possibly political agenda, the Cold War rhetoric of polio worked in the opposite way to that of malaria. Emphasis was continuously on international cooperation and on standing above the Cold War itself. Moreover, the conferences gave an opportunity for intensive cooperation between researchers across the globe and for the exchange of information and experience of a disease whose laboratory research was hardly affordable for countries with weaker economies. This marked difference in the way these two diseases were handled during the Cold War politics of medicine and public health was at least partly due to the global presence of polio. While malaria affected areas of the world with a particular climate (and which coincided with the geopolitical interest of both East and West), polio was present on both sides of the Iron Curtain and thus acted as an equaliser in scientific exchange and international public health interventions.

Still, national agendas and local politics of science and economy intertwined with transnational goals of disease control: the severe post-war epidemics caught many countries in transformative moments. For instance, the location chosen for the 1954 meeting of the International Poliomyelitis Congress in Rome represented the opening of Italy's medical and professional community

<sup>46</sup> Rangel de Almeida, 'The 1851 International Sanitary Conference and the Construction of an International Sphere of Public Health'.

<sup>47</sup> Ballester and Porras, 'La Lucha Europea Contra la Presencia Epidémica de la Poliomiélitis: una Reflexión Histórica'.

<sup>48</sup> Cueto, *Cold War, Deadly Fevers*.

after the fascist era and aimed to display the country's economic recuperation through the Marshall Plan.<sup>49</sup> Spain, not being a member of the WHO until 1958, used its participation in the European Symposium from 1954 onwards to promote its unpopular dictatorship in the European public health scene.<sup>50</sup>

It would be a mistake to over-evaluate the universality of the WHO's and Poliomyelitis Conferences' proclaimed goals as neutral and interest-free. The WHO was itself a venue where the Cold War was fought,<sup>51</sup> and decisions of aid and public health assistance were infused with geopolitical and economic interests.<sup>52</sup> It would equally be a mistake to under-value the opportunities that the global presence of the disease created. Individual scientists, who were in many ways hindered by the foreign policies of their governments, could connect or keep existing networks alive in international meetings. Delegates from countries of little geopolitical influence could voice concerns and contribute to a discussion that affected all parties in a roughly equal manner. Based on fresh statistics and detailed information presented at the conferences, as we see in the following chapter, iron lungs flew across the globe as they grouped and regrouped in epidemic areas, undoubtedly saving many lives.

A critical assessment of these spaces of cooperation can show us a more nuanced, and perhaps different, side of Cold War interactions and the role that polio played in forming them. The global presence of the disease, together with the lack of clear answers to it, created room in international public health for an elaborate dance of national agendas and scientific cooperation.

### *Epidemic Reporting*

The World Health Organisation played a central role in epidemiological data collection and management. This task was one of the most powerful tools of the WHO: it encompassed a classification system that would have an effect on trade, travel regulations, aid distribution, markers of progress, national agendas and medical practices. The WHO was not the first to exercise the power of collecting, producing and analysing public health data: international health organisations prior to the founding of the WHO had long-standing involvement with international statistics organisations. The International Statistical Institute compiled the International List of Causes of Death in 1891, which

<sup>49</sup> Fantini, 'Polio in Italy'.

<sup>50</sup> Porras et al., 'Spain and the International Scientific Conferences on Polio'.

<sup>51</sup> Theodore M. Brown, Marcos Cueto, and Elizabeth Fee, 'The World Health Organization and the Transition from "International" to "Global" Health', in *Medicine at the Border: Disease, Globalization and Security, 1850 to the Present*, ed. Alison Bashford (Basingstoke: Palgrave Macmillan, 2006), 76–94.

<sup>52</sup> Randall Packard, "'No Other Logical Choice": Global Malaria Eradication and the Politics of International Health in the Post-War Era', *Parasitologia* 40, no. 1–2 (1998): 217–29.

was revised every ten years. In the interwar era the League of Nations developed the lists further (in cooperation with the Statistical Institute).

The devastating effects on populations of the First World War and the forced and voluntary migrations in its wake, along with their traditional travelling companions, typhus and cholera, prompted the nascent Health Committee of the League of Nations to organise a more effective method of epidemic data exchange. To this end the *Annual Epidemiological Report and Corrected Statistics of Notifiable Diseases* was founded, with polio among the regularly reported morbidity and mortality rates.<sup>53</sup>

Epidemic reporting and statistical data management really took off after the Second World War, when the list of causes of diseases and death became one of the top priorities of the nascent WHO, which formally adopted the *International Statistical Classification of Diseases, Injuries and Causes of Death* at the First World Health Assembly in 1948.<sup>54</sup> The WHO not only worked out the system in which diseases and causes of death should be viewed, but also intervened directly in the data collection process. Regulations No. 1 of the WHO (also ratified in the First Assembly) set requirements for individual countries for the death certification process, and from 1952, WHO consultants travelled to member states to give 'advice on the institution or improvement of local statistical systems'.<sup>55</sup> From the information gathered by member states and national public health offices, the WHO published a monthly and annual *Epidemic and Vital Statistics Report* in which they included articles,<sup>56</sup> statistical tables on communicable diseases<sup>57</sup> and, later, vaccination statistics.<sup>58</sup>

The way epidemiological reporting worked in reality was a different question. WHO data relied on the collection and management system of national statistics, which could operate with various levels of rigour. Moreover, collecting data on polio was a tricky issue, as the case of Hungary shows. Although polio was considered a significant problem in the 1950s, the analysis of data compilation of polio incidences in Hungary shows a puzzling picture. Currently we cannot be sure about the exact number of people who fell ill with polio in the 1950s, partly because of the peculiarities of polio, partly because of organisational problems. Polio diagnosis remained problematic throughout the decade. Do these numbers then only refer to the children who needed to be

<sup>53</sup> Smallman-Raynor, *Poliomyelitis: Emergence to Eradication*, 194.

<sup>54</sup> *The First Ten Years of the World Health Organization* (Geneva: World Health Organization, 1958), 278.

<sup>55</sup> *Ibid.* 280.

<sup>56</sup> M. J. Freyche, 'The Incidence of Poliomyelitis in the World, 1947–1949', *Epidemiological and Vital Statistics Report* 4, no. 1 (1951): 3–18.

<sup>57</sup> 'Morbidity Statistics Acute Poliomyelitis', *ibid.* 14 (1961): 91–117.

<sup>58</sup> 'Number of Persons Immunized against Poliomyelitis', *ibid.* 11 (1958): 330–31.

hospitalised? Were the registered cases all paralytic? Were all paralytic cases registered? The novelty of the disease, the lack of standards in the diagnostic process and the costly and time-consuming method of virological identification all contributed to uncertainty in reporting. As historian Saul Benison argues, ‘physicians at the time, like physicians everywhere, . . . from the point of view of reporting, paid no attention to non-paralytic cases’.<sup>59</sup> The problem persisted in countries like the United States, where, since 1951, epidemic reporting separated paralytic and non-paralytic cases. Some patients did not seek medical care, while others could be underdiagnosed, or simply not reported.<sup>60</sup>

The problem of polio reporting as a widespread phenomenon is also addressed in the WHO report ‘Poliomyelitis’ from 1955. In relation to polio data compilation in general, the report remarks that:

in certain countries, only cases of the acute paralytic form of the complaint are registered under the heading of ‘poliomyelitis’; in addition, even in the most carefully compiled series, diagnostic errors of the order of 14% have been found. Elsewhere, notifications also cover a varying proportion of febrile states with signs of meningeal irritation, without symptoms of spinal or bulbar paralysis, and perhaps abortive forms without manifestations, which can be ascribed to involvement of the central nervous system. In such cases, a clinical diagnosis can only be one of probability, even when it refers to patients who have been in close contact with a confirmed case of poliomyelitis and the possibility of error is very large.<sup>61</sup>

Inaccurate registration and belated reporting further complicated the compilation of statistics in Hungary. Epidemic reporting on polio began in Hungary in 1926, when an outbreak prompted János Bókay, the renowned paediatrician, to persuade the Minister for Welfare and Labour to classify polio as a reportable disease.<sup>62</sup> This reporting, however, was not always up to expectations, and was a cause for frustration as epidemics turned more frequent and more severe. Ottó Rudnai of the National Public Health Institution pointed out the deficiencies in the reporting process in 1952.<sup>63</sup>

The problems, mainly concerning the lack of thoroughness of local physicians in their paperwork, their responsibility to overlap with hospitals and the lack of follow-up from the Health Ministry, seemed persistent throughout the decade. As late as 1959, records indicate the burning necessity of

<sup>59</sup> Saul Benison, ‘International Medical Cooperation: Dr. Albert Sabin, Live Poliovirus Vaccine and the Soviets’, *Bulletin of the History of Medicine* 56, no. 4 (1982): 460–83, at 461.

<sup>60</sup> Richard L. Bruno, ‘Paralytic Versus “Non-Paralytic” Polio: A Distinction without a Difference?’, *American Journal of Physical Medicine and Rehabilitation* 79 (2000): 1–9.

<sup>61</sup> Matthieu-Jean Freyche and Johannes Nielsen, ‘Incidence of Poliomyelitis since 1920’, in *Poliomyelitis*, ed. Robert Debré (Geneva: World Health Organization, 1955), 59–109, at 59.

<sup>62</sup> János Bókay, *Az 1926. évi Heine-Medin-Járvány Csonka-Magyarországban* (Budapest: Pest könyvnyomda részvénytársaság, 1927).

<sup>63</sup> Ottó Rudnai, ‘Járványügyi Munkánk Néhány Hiányosságáról’, *Népegészségügy*, no. 33 (1952): 343–47.

revising the questionnaire about the incidence of polio.<sup>64</sup> As a result of diagnosing difficulties and lack of rigour in reporting, the political system, which appeared to be efficient at organising and enforcing regular reports on individuals for its secret service, spent a whole decade unable to overcome the chaotic and disorderly reporting practice of a recurring epidemic that threatened the whole population.

In whatever way public health officials interpreted epidemiological data, and regardless of the problems with numbers that we may raise today, polio epidemics were definitely gaining momentum up until the 1960s in Europe, and in many other parts of the world even after that. Whether the numbers can be considered accurate or imprecise, they were consistently growing, and more importantly, the threat of polio was perceived to be growing by parents, the scientific community and the state.

Access to epidemic data across the globe made an expansion of scope in polio research possible. The analysis of incidence rate from Cairo to Tokyo to Greenland provided an opportunity to corroborate theories that were based on the study of a limited geographical area. The observation that paralytic polio was at its worst in social groups that were relatively well off, rather than the expected poor and crammed neighbourhoods where most epidemic diseases flourished, could now be extended on a global scale. Middle class families became first world countries, while slums became equivalent to post-colonial and 'backward' societies.

One of the conclusions drawn about the rapid emergence of polio and the difference in the ways in which it attacked various populations across the globe was that polio went from being endemic with low paralytic rates to epidemic and highly paralytic because of changes in sanitation and lifestyle. Increasing sanitary conditions and personal hygiene reduced the fecal-oral route of infection and thereby reduced the exposure of the population in early infancy. This meant that a latent immunisation could not develop in the majority of society, leaving children and adults unprotected against the disease.<sup>65</sup>

By mid-century, polio became a disease of civilisation. As Albert Sabin put it: 'The poorer the population, its standard of living and sanitation, the more extensively is poliomyelitis virus disseminated among them and the lower is the incidence of paralytic poliomyelitis when virulent strains of virus come their way.'<sup>66</sup> If a country had epidemic polio, it was one of the civilised nations. This

<sup>64</sup> Bakács, 'Poliomyelitis Betegek Védőoltására Vonatkozó Adatgyűjtés.' Budapest: National Archives of Hungary, 1959.

<sup>65</sup> M. R. Smallman-Raynor et al., *Poliomyelitis. A World Geography: Emergence to Eradication* (New York: Oxford University Press, 2006), 127.

<sup>66</sup> Albert B. Sabin, 'Paralytic Consequences of Poliomyelitis Infection in Different Parts of the World and in Different Population Groups', *American Journal of Public Health* 41, no. 10 (1951): 1215–30, at 1229.

marker of civilisation and progress later lost its force, and a complete lack of polio became the new signifier as vaccination became widely used.

### **Infantile Paralysis: Children as Catalysts for Cold War Cooperation**

While scientific uncertainties and the global scale of the disease can serve as sufficient explanation for why polio could create international cooperation and exchange by the early Cold War era, it is important to consider that the incidence rate and the death toll of polio was far from reaching the scale of many other infectious diseases of the time, such as influenza or tuberculosis. The fact that it was a relatively rare disease demands a look into the other attributes of polio. One of the most important explanations for the exceptional status of polio in the Cold War era was that it attacked children.

'Is there a greater joy for the parent than his child, and is there a greater worry?' begins a popular Hungarian handbook from 1957 titled *The Healthy and the Sick Child*.<sup>67</sup> Indeed, concern over the health of children lay at the heart of many parents' fear of the summer months, and they found a partner for their concern in the state – whether that be the self-proclaimed champion of freedom, or the pioneer of international communism.

One of the severe diseases threatening the Healthy Child was polio: in many parts of the world it remained perceived as infantile paralysis, as the virus mostly attacked the bodies of children. While in some countries, like the United States, the age distribution of the disease changed over time to higher and higher age groups<sup>68</sup> (and thus changed the widespread use of its name from infantile paralysis to polio), in many other states the childhood nature of the disease remained. In Hungary, for instance, between 1952 and 1957, the age group most affected by polio comprised those between 1 and 2 years old. In 1959, the largest group to fall ill with the disease was under one year of age.<sup>69</sup>

While polio's status as a new disease opened spaces for knowledge exchange, equally important, if not even more important, in this process was the widely held view that it was most prevalent among children. In an era of post-war recuperation, at a time when ideologies that claimed to have the exclusive answer to a bright future clashed, the fledglings of a new generation received heightened attention. Seen as key subjects of national security and

<sup>67</sup> Alfréd Berndorfer et al., *Egészséges és Beteg Gyermek* (Budapest: Gondolat Kiadó, 1957).

<sup>68</sup> Albert Sabin, 'Epidemiologic Patterns of Poliomyelitis in Different Parts of the World', in *Poliomyelitis: Papers and Discussions Presented at the First International Poliomyelitis Conference* (Philadelphia: Lippincott, 1949), 3–33.

<sup>69</sup> Ottó Rudnai and Gyula Barsy, *The Results of Salk Vaccination in Hungary as Measured on the 1959 Poliomyelitis Epidemic*, Acta Microbiologica (Budapest: Akadémiai Kiadó, 1961).

economy, children of the 1950s were considered particularly precious to states on both sides of the Iron Curtain.

Cold War concepts of the role of children in the new world order were paired with long-standing ideas of children as symbols of innocence. The figure of the universal and untainted child could be used concurrently to opposing ends: Cold War cooperation and the reinforcement of nationalist and antagonist agendas.

One of the most striking features of polio as a disease was that it threatened those who were perceived as the most vulnerable segment of society: children. Moreover, the victims of the disease were mostly considered to be faultless in contracting the debilitating virus. This is not to say that polio was without powerful metaphors. Cold War interactions over polio utilised the military metaphor extensively, and polio treatment was imbued with military and industrial metaphors in the 1950s.<sup>70</sup> Moral considerations, however, played little or no part in the understanding of the disease, which, together with the fact that polio did not affect the face or skin, led Susan Sontag to consider polio 'unmetaphorical'.<sup>71</sup> However, upon closer inspection, Sontag's conclusion does not hold up, as Marc Shell's work, *Polio and Its Aftermath*, also demonstrates.<sup>72</sup> Polio was laden with ideas of production and masculinity, and its prevention and treatment more often than not operated with a militaristic language.

However, the lack of moral issues that so much permeated sexually transmitted diseases and contagious diseases connected to a particular social class or poverty was a crucial feature of polio. It opened an apparently neutral space by putting forth an image that could be universally appropriated: a disease unfairly attacking the symbols of innocence. The innocence of children, by no means a new perception,<sup>73</sup> gained new momentum in the post-war era. Ideas of childhood that had become prevalent a few centuries previously resurfaced in new ways after the Second World War. The preoccupation with innocence, parent-child relations and the rights of children significantly formed the way in which polio was talked about and acted upon in the 1950s.

Most historians agree that as far as the visual representation of innocent childhood is concerned, it is a modern phenomenon. It first appeared in the works of eighteenth-century British portrait painters, which diffused into

<sup>70</sup> David Serlin, 'The Other Arms Race', in *The Disability Studies Reader*, ed. Lennard J. Davis (New York: Routledge, 2006), 49–65; Basil O'Connor, 'The Setting for Scientific Research in the Last Half of the Twentieth Century', in *Fifth International Poliomyelitis Conference*, ed. International Poliomyelitis Congress (Copenhagen, 1960); József Vető, 'A Sabin-Cseppek', *Népszabadság* 1960, 1.

<sup>71</sup> Sontag, *Illness as Metaphor and AIDS and Its Metaphors*, 127.

<sup>72</sup> Marc Shell, *Polio and Its Aftermath: The Paralysis of Culture* (Cambridge, Mass.: Harvard University Press, 2005), 186–89.

<sup>73</sup> Albrecht Classen, ed. *Childhood in the Middle Ages and the Renaissance* (Berlin: Walter de Gruyter, 2005), 3–8.

popular consciousness during the nineteenth century. Anne Higonnet explains the pervasiveness of these images: ‘childhood innocence was considered an attribute of the child’s body, both because the child’s body was supposed to be naturally innocent of adult sexuality, and because the child’s mind was supposed to begin blank’.<sup>74</sup>

The idea of children’s innocence played a large part in forming children as universal and politically neutral citizens in the early twentieth century. During and following the First World War, children were the primary publicity tool and main recipients of relief efforts, since their innocence protected them from being seen as enemies. Moreover, representing children as universal played an essential part in establishing the neutrality of humanitarian aid in the early years of the war.<sup>75</sup>

International medical relief for children became an important component in foreign diplomacy from the First World War onwards, with the participation of international organisations such as the Red Cross<sup>76</sup> and the Save the Children Fund.<sup>77</sup> The Declaration of the Rights of the Child, adopted by the League of Nations in 1924 – a document not binding by international law, but rather perceived as guidelines – proclaimed rights specific for children for the first time and established adults’ responsibility towards children.<sup>78</sup> The first, legally binding legislation to secure the rights of children transnationally was the document of the same name, adopted by the General Assembly of the United Nations in 1959, which proclaimed the rights of children to medical care and to special education and treatment if they were handicapped.<sup>79</sup> Concerns over the physical, mental and social development of children at once became a unifying pursuit, but also created a battleground for ideological clashes in the Cold War era. Both of the Declarations worked with a fluid concept of what a child was, as neither set any limit of age or otherwise to define where childhood began and ended.

The abstract idea of the child, a flexible term that can be added to give weight to a multitude of arguments, has become so naturalised over the course

<sup>74</sup> Anne Higonnet, *Pictures of Innocence: A History and Crisis of Ideal Childhood* (London: Thames and Hudson, 1998).

<sup>75</sup> Dominique Marshall, ‘Children’s Rights and Children’s Action in International Relief and Domestic Welfare: The Work of Herbert Hoover between 1914 and 1950’, *The Journal of the History of Childhood and Youth* 1, no. 3 (2008): 351–88, at 362.

<sup>76</sup> Julia Irwin, ‘Sauvons Les Bébés: Child Health and U.S. Humanitarian Aid in the First World War Era’, *Bulletin of the History of Medicine* 86, no. 1 (2012): 37–65.

<sup>77</sup> Friederike Kind-Kovacs, ‘Child Transports across and beyond the Empire: World War I and the Relocation of Needy Children from Central Europe’, *Revue d’histoire de l’enfance ‘irrégulière’* 15, no. Enfances déplacées. (II) en temps de guerre (2013): 75–109.

<sup>78</sup> ‘Geneva Declaration of the Rights of the Child of 1924’, in *O.J. Spec.Supp.* 21, ed. League of Nations (Geneva, 1924).

<sup>79</sup> United Nations General Assembly, ‘Declaration of the Rights of the Child’, in *Resolution 1386 (XIV)* (Geneva, 1959).

of two centuries that it has become a concept that is rarely problematised or questioned. Moreover, this perceived universality and flexibility has provided space for the justification of various, often opposing political positions since the nineteenth century, as Robin Bernstein argues in her analysis of American dynamic ‘racial innocence’.<sup>80</sup> In scientific and political reasoning, on national and international levels, the image of the innocent child was called upon to rationalise policies, voice concerns or promote cooperation. The innocent child, a universal concept, was used on both sides of the global divide, often with opposing ends: either fighting against or reinforcing Cold War antagonisms.

### *The Imagery of the Child in 1950s Eastern Europe*

Children were extensively used as symbols of the communist and democratic future and as innocent victims of the opposing political system throughout the Cold War. Images of children were especially used in the Vietnam War in order to justify the political and military aims of all sides.<sup>81</sup> As Karen Dubinsky remarked in a recent piece: ‘While children rarely achieve political citizenship, the world’s political posters provide an extensive visual argument that children are political subjects.’<sup>82</sup>

In the case of polio, the idea of innocent children was utilised to place the scientific, economic and political effort to curb the disease above the global conflict. The innocence of children turned scientific work into a noble enterprise. The pursuit of a vaccine, development of treatment options and provision of access to medical technology was furthered by the concept of protecting the universal child on both sides of the Iron Curtain. Meanwhile, this set of imagery was highly politicised and, as the following two sections show, connected to the physical reality of children and their place in society in the post-war era.

In her book *The Lost Children: Reconstructing Europe’s Families after World War II*, Tara Zahra argues that the post-war era was a time when ‘basic ideals of family and childhood were reinvented’.<sup>83</sup> Children were increasingly seen as a form of national property, as the European population was reshuffled

<sup>80</sup> Robin Bernstein, *Racial Innocence: Performing American Childhood from Slavery to Civil Rights* (New York: New York University Press, 2011).

<sup>81</sup> Margaret Peacock, ‘Broadcasting Benevolence: Images of the Child in American, Soviet and Nfi Propaganda in Vietnam 1964–1973’, *Journal of the History of Childhood and Youth* 3, no. 1 (2010): 15–38.

<sup>82</sup> Karen Dubinsky, ‘Children, Ideology and Iconography: How Babies Rule the World’, *ibid.* 5 (2012): 5–13, at 6.

<sup>83</sup> Tara Zahra, *The Lost Children: Reconstructing Europe’s Families after World War II* (Cambridge, Mass.: Harvard University Press, 2011), x.

through DP camps, forced resettlement and mass migration. Exhibiting universally perceived values (and at the same time following an East–West divide, as discussed in the section below), the figure of the child and its importance in the biological and political future of the nation became a central issue in reconstruction policies and emerging state systems. After a world war that permeated all areas of life and left almost the whole European civilian population compromised in one way or another, children seemed to have remained the only innocent victims of the destruction.<sup>84</sup> It was this innocence from which communist propaganda drew its powerful images.

On a national level, the representation of the child in communist societies was part of a complicated perception of family. The patriarchal state, which acted as a parent to the child-citizens, formed one family. In this superstructure nested the domestic family. The resources, tasks and responsibilities were shared among the members. The state – at least on a rhetorical level, much less in reality – provided healthcare, childcare and mass dining for the workers, who in return were expected to pay with their loyalty, their production and, most importantly, their reproduction.<sup>85</sup>

On the one hand, the figure of the child was used as a model for adults and children alike. In Russia, visual and literary depictions of children in the Stalinist era showed children as ‘the ultimate model citizens of the Soviet state, more perfectly grateful than any adult could be’ and their portrayal indicated expectations of citizenship as well.<sup>86</sup> We can see this strategy at work in Hungarian imagery as well, which looked to the Soviet example in much of its propaganda.<sup>87</sup>

On the other hand, the child, happy and healthy, represented the bright future of the nation. Communist propaganda was one of promise: there might be hard times now, but we are all striving to build the ideal world in which our children will be living. ‘The chiming laughter of our children is carried far by the wind . . . the people’s struggle is not in vain, they want to see their children laughing’ captured the message of a poem published in the Hungarian women’s magazine *Nők Lapja* in 1952.<sup>88</sup>

<sup>84</sup> Ibid. 241–42.

<sup>85</sup> Joanna Goven, ‘Gender and Modernism in a Stalinist State’, *Social Politics* 9, no. 1 (2002): 3–28.

<sup>86</sup> Kelly, *Children’s World*, 110–11.

<sup>87</sup> Csilla Halász, ‘Agitáció és Propaganda a Népművelésben a Rákosi-Rendszer Idején’ (PhD thesis, Eötvös Loránd Tudományegyetem, 2011).

<sup>88</sup> Uj Rezső, ‘Kacagjanak a gyermekek’ *Nők Lapja*, 10 April 1952. Cited in Katalin Kéri, ‘Gyermekképzésünk Az Ötvenes Évek Első Felében’ *Iskolakultúra*, no. 3 (2002): 47–59. *Nők Lapja* was the most important women’s magazine of the whole socialist era, focusing mainly on working women, women’s career choices, social issues, and giving advice on everyday life. Attila Horváth, *A Magyar Sajtó Története a Szovjet Típusú Diktatúra Idején*, ed. András Koltay and Levente Nyakas, Médiatudományi Könyvtár (Budapest: Médiatudományi intézet, 2013).

Children as the future of Hungary – based on Soviet practice – were often contrasted with children of the past or children suffering in imperialist countries.<sup>89</sup> Contrasting the social benefits of childcare and support of communism with the poverty and high infant mortality of the interwar era was a powerful way to communicate the superiority of the new regime. Furthermore, depictions of children who had fallen victim to racism and imperialist exploitation invariably portrayed unwashed, uncombed, ragged and emaciated children as opposed to the round, pink, healthy and well-groomed young pioneers of the Eastern Bloc.<sup>90</sup>

While the innocence and malleability of children was used to reinforce Cold War divides in the national rhetoric, the universal child served as a symbol of cooperation and key to world peace on the international scene. This symbol was, to a large extent, thoroughly politicised in Cold War interactions. Catriona Kelly argues that

in the peculiar circumstances of the Cold War, children's rights, like other areas of international diplomacy, became an arena in which key points of political difference – the extent to which state control over the family was ideologically desirable, the importance or otherwise of explicit political indoctrination – could be brandished, and where set positions of hostility or rapprochement could be adopted. Significantly, it was not until the Cold War was coming to an end that a broader agreement about international standards of children's welfare began to emerge.<sup>91</sup>

However, if we look at polio from the Hungarian angle, another story unfolds. In scientific and political exchanges over the disease, the fact that the virus attacked children created a common ground, a cause to unite efforts and disregard Cold War politics. The argument that 'the Russians love their children, too', as captured by the well-known song by Sting in 1985,<sup>92</sup> was drawn upon when dismantling Cold War stereotypes in the evaluation of the scientific results of vaccine testing.<sup>93</sup> Furthermore, as the following chapters show, governments on both sides of the Iron Curtain were ready to step over the boundaries of their own international and domestic politics in the name of children. In short, the rhetoric of protecting innocent children from polio

<sup>89</sup> Dina Fainberg, 'The Heirs of the Future: Foreign Correspondents Meeting Youth on the Other Side of the Iron Curtain', in *Winter Kept Us Warm Cold War Interactions Reconsidered*, ed. Sari Autio-Saraso, Brendan Humphreys and Katalin Miklóssy (Helsinki: Aleksanteri Institute, 2010), 126–36.

<sup>90</sup> Kéri, 'Gyermekképünk az Ötvenes Évek Első Felében'.

<sup>91</sup> Catriona Kelly, 'Defending Children's Rights, "in Defense of Peace": Children and Soviet Cultural Policy', *Kritika: Explorations in Russian and Eurasian History* 9, no. 4 (2008): 711–46.

<sup>92</sup> Sting and Sergei Prokofjev, *Russians: The Dream of the Blue Turtles* (Santa Monica: A&M, 1985), Single.

<sup>93</sup> See Chapter 4.

played an important part in creating a safe haven in the troubled sea of Cold War politics.

The role of childhood and the importance of the child in Cold War rhetoric often did not match everyday experiences in the 1950s. The ways in which the rhetoric used by the Hungarian communist state in social issues played out in governmental actions and in the experiences of women, families and children have been explored by feminist scholars,<sup>94</sup> and some aspects are covered in this book. The distance between representation and experience does not mean, however, that they did not significantly influence policies. Professional organisations, governments and individuals drew on rhetorical elements to justify their policies and aims, or support their claims and needs. Children played such a role in creating a neutral place in the international and national politics of polio. The image of the innocent child and the role of scientists, governments and international organisations to protect them from the harm of the debilitating disease provided an opportunity to transcend boundaries and political limitations.

#### *Demographic Context and Pro-Natalism in Hungary*

Children became the focus of the Hungarian government not only from a propagandistic view, but also from a demographic one. Between the years 1949 and 1960, 24.9–25.4 per cent of Hungary's population was aged under 15 years.<sup>95</sup> This means that in the 1950s, the age group most endangered by polio constituted a quarter of the country's inhabitants. Following the demographic shock of the Second World War, the spectre of such destruction elevated the significance of the disease and placed it at the centre of the state's attention as polio epidemics became more frequent and more powerful throughout the decade.

As in many post-war societies, population politics became increasingly important in the wake of long years of devastating and bloody battles, deportations, genocide and starvation. In the course of the war, Hungary lost 40 per cent of its national wealth and over 10 per cent of its population, around 1 million people.<sup>96</sup> A severely damaged infrastructure and housing shortage brought challenges for post-war governments, and demographic problems

<sup>94</sup> See Éva Bicskei, "'Our Greatest Treasure, the Child': The Politics of Child Care in Hungary, 1945–1956", *Social Politics* 13, no. 2 (2006): 151–88; Joanna Goven, 'Gender and Modernism in a Stalinist State', *ibid.* 9, no. 1 (2002): 3–28.

<sup>95</sup> Gyula Benda, 'Budapest Társadalma 1945–1970', in *Magyarország Társadalomtörténete III. (1945–1989)*, ed. Nikosz Fokasz and Antal Örkeny (Budapest: Új Mandátum, 1999), 8–31, at 22.

<sup>96</sup> Ignác Romsics, *Magyarország Története a XX. Században* (Budapest: Osiris Kiadó, 2001).

were further exacerbated by the reorganisation of industry and labour in the early years of the communist takeover.

While the number of live births increased in the years following the war, and between 1947 and 1950 population increase stabilised at a rate higher than preceding the war (2.1 per cent),<sup>97</sup> a more significant growth in the future labour force was needed to make up for the lack of resources and to fulfil the industrial goals of the new communist state. To further boost population increase, in 1952 the Hungarian government enforced a strict pro-natalist policy. The Hungarian government was not alone in introducing the policy; other Eastern European Peoples' Democracies also decided to ban the termination of pregnancies at this time.<sup>98</sup> While Hungary's method was nowhere near as extreme as the infamous abortion ban of Ceaucescu's Romania over a decade later, the general idea and goal undergirding such pro-natalist policies was a shared attribute in the Eastern Bloc. As historian Gail Kligman put it,

mobilization and control of the population were of critical strategic importance for the maximization of development potential, and attention to demographic phenomena was essential to securing long-term interests. In order to meet the relatively high labor needs of such economies, reproduction of the labor force became a priority planning item.<sup>99</sup>

The *Decree on the Further Development of Mother and Child Protection* was a short lived regulation, with significant effects – in the years between 1953 and 1955, the population increase more than doubled to 5.1 per cent.<sup>100</sup> This jump was achieved by limiting access to contraceptive methods, financial incentives and propaganda. Women were severely punished for undergoing abortions, as were doctors who performed them. Public show trials of abortionist doctors and midwives began in the autumn of 1952 and concluded with exceptionally severe sentences.<sup>101</sup> All pregnant women were required to register at state offices, and the state imposed a special tax on childless citizens over 20 years of age. If they had no children, women between 20 and 45 and men between 20 and 50 had to pay a tax equalling 4 per cent of their salary. Both women and men were exempt from the tax until the age of 24 if they were students.<sup>102</sup> Propaganda efforts went as far as to urge childbearing both among

<sup>97</sup> Kéri, 'Gyermekeképünk az Ötvenes Évek Első Felében'.

<sup>98</sup> Andrea Pető, 'Women's Rights in Stalinist Hungary: The Abortion Trials of 1952–1953', *Hungarian Studies Review* 29, no. 1–2 (2002): 49–76.

<sup>99</sup> Kligman, *The Politics of Duplicity*, 19.

<sup>100</sup> Kéri, 'Gyermekeképünk az Ötvenes Évek Első Felében'.

<sup>101</sup> Pető, 'Women's Rights in Stalinist Hungary: The Abortion Trials of 1952–1953', 53.

<sup>102</sup> 'Határozat Az Anya- és Gyermekevédelem Továbbfejlesztéséről. 1004/1953. (II.8.) M.T.', in *A Családjogi Törvény*, ed. Jenő Bacsó, Géza Rády and Viktor Szigligeti (Budapest: Közgazdasági és Jogi Könyvkiadó, 1955), 365–74.

married couples and out of wedlock, emphasised by the slogan of the movement: 'To give birth is a duty for wives, and glory for maidens.'<sup>103</sup>

The pro-natalist policy was connected to the name of Anna Ratkó, Welfare Minister and later Health Minister, and the only female member of government of her time. The population policies of the early 1950s were soon termed 'Ratkó-era', and the members of the baby boomer generation, born between 1952 and 1956, are even today called 'Ratkó children'. However, according to archivist Piroska Kocsis, the welfare minister had little to do with the development and implementation of the policy herself.<sup>104</sup> A textile worker with a long history of activism in the communist movement, Ratkó, in her own words, 'had nothing to do with health issues . . . Comrade Rákosi told me that I could not choose what I wanted to do, I had to do what the Party wished.'<sup>105</sup> Her career as a government member ended in April 1953, but her name forever became one with this exceptional period in the Hungarian history of population policy.

The harsh anti-abortion decree met significant resistance from citizens, as well as from the state administration itself, from the beginning. Historian Andrea Pető has shown that those who did not want to have children found a way to have abortions independent of regulations.<sup>106</sup> The decree was enacted on 8 February 1953, and less than a month later, Josip Stalin died on 5 March. The new Imre Nagy government was not keen on enforcing the criminalisation aspect of the decree, and certain parts of the regulation began to be revoked in the autumn of the same year. From 1 January 1954 the government permitted abortions due to social considerations. The decree was finally fully revoked under Soviet pressure in 1956.<sup>107</sup>

The short increase in live births was soon followed by a sharp decrease after abortions became available and the childless tax was withdrawn. Statistics show that families simply rescheduled having children – there was no major increase in the number of children per families; instead, parents had the same amount of children they would have had anyway, crammed into the few years when the decree was effective.<sup>108</sup> This did result in a high peak in the number of young children by the mid to late 1950s, however. Incidentally, this was also the time when polio epidemics began claiming more and more lives and affected the health of more and more children.

<sup>103</sup> Piroska Kocsis, 'A Szövöszéktől a Miniszteri Bársonyszékig', *Archívnet* 6, no. 4 (2006).

<sup>104</sup> *Ibid.*

<sup>105</sup> Gyuláné Králl: Ratkó Anna visszaemlékezése életútjáról. (Interjú, 1979 január. Politikatörténeti és Szakszervezeti Levéltár). Cited *ibid.*

<sup>106</sup> Pető, 'Women's Rights in Stalinist Hungary: The Abortion Trials of 1952–1953', 52.

<sup>107</sup> Kocsis, 'A Szövöszéktől a Miniszteri Bársonyszékig'.

<sup>108</sup> Klinger, 'Magyarország Népesedése az Elmúlt Negyven Évből', 47.

Moreover, the state's concern with population growth was renewed by the lives lost in the 1956 revolution, coupled with a massive emigration of dissidents. Over 200,000 out of a total population of 9 million citizens left when the revolution was suppressed, about 40 per cent of them industrial workers. According to Austrian official sources, between late October 1956 and the end of April 1957, over 180,288 people crossed the border from Hungary, most of them in November 1956. A further 34,000 exited the country through Yugoslavia, after the Austro-Hungarian border was closed down. Around 8,000–10,000 emigrants returned during this time frame.<sup>109</sup> Approximately 25 per cent of emigrants returned in early summer 1957, after the post-revolutionary Kádár government offered amnesty to emigrants who were not affiliated with revolutionary actions.<sup>110</sup>

The modernist communist state showed great interest in demography. Its goals in industrial production rested on having an adequate workforce available, and for that it needed healthy and physically able children who would grow up to be productive miners and steel workers.

### Disabled Bodies and Post-War Production

With an insight into the significance of the disease both for the scientific community and in the eyes of the state and the public, one more important aspect needs to be investigated in order to understand the particular space that polio created and which is explored in more detail in the next five chapters. Polio was a debilitating disease that worked against modern ideas of production based on able bodies. The economic and political challenges of the post-war era and the changes in economic structure and production in the nineteenth and twentieth centuries placed physically disabled children in a new position. As part of their family units and living in relatively small communities, disabled children were often integrated into the family economy. However, an emerging market economy, the spread of wage labour and industrialisation made it more and more difficult for disabled people to find employment.<sup>111</sup> Their disability became increasingly divided from the productive capacity of their able-bodied peers, and many became marginalised, especially in urban areas.

In parallel with physically disabled work falling out of the concept of production, philanthropic organisations became more and more involved in care for the disabled, especially for children. Institutions for crippled children

<sup>109</sup> Ernő Deák, 'Adatok az 1956-os Menekülthullámról', in *Magyarország Társadalomtörténete III. (1945–1989)*, ed. Nikosz Fokasz and Antal Örkeny (Budapest: Új Mandátum, 1999), 72.

<sup>110</sup> Romsics, *Magyarország Története a XX. Században*.

<sup>111</sup> Brad Byrom, 'The Progressive Movement and the Child with Physical Disabilities', in *Children with Disabilities in America: A Historical Handbook and Guide*, ed. Philip L. Safford and Elizabeth J. Safford (London: Greenwood Press, 2006), 49–64.

started cropping up in the late nineteenth and early twentieth centuries, often functioning as homes, vocational schools and sites of medical treatment.<sup>112</sup>

The first such institution in Hungary, the Home for Crippled Children (Nyomorék Gyermekek Otthona), was established in 1903 by the Ferenc Deák Masonry Lodge. As was typical for charitable organisations of the time, the leadership included barons and counts among its ranks.<sup>113</sup> The association, established to raise funds and manage the institution, set a goal

to establish asylums in Hungary for physically crippled (with the exception of blind, deaf-mute, moron) children and in these institutions to train crippled children of both sexes, without regard to religion or ethnicity in body and in mind, and provide them with medical treatment and education, and perhaps vocational training.<sup>114</sup>

The goal of the institution was primarily to train future adults to care for themselves; medical care took a backseat.

The concept of children in policymaking as future workers has been present for centuries. In the nineteenth century, ‘campaigners against child labour in the factories liked to appeal to the self-interest of manufacturers, by suggesting that abuses risked compromising the future quality of the industrial workforce’, and on a more patriotic note also sought to protect them as future soldiers.<sup>115</sup> Modern ideas of production soon became entwined with modern warfare, which on the one hand required the physical ability of a previously unseen amount of citizens, and on the other hand turned out disabled bodies by the thousands. War disability in such large proportions presented the medical profession with new challenges (e.g. the production and design of prosthetic devices) and highlighted concerns about welfare systems from the mid-nineteenth century onwards.<sup>116</sup> War veterans’ disability often became entwined with children’s disability – either by forming each other’s perception and treatment,<sup>117</sup> or by playing a part in making disability invisible.

Disability caused by war was especially problematic in the Socialist Bloc. The Second World War had a devastating effect on the population as

<sup>112</sup> Seth Koven, ‘Remembering Dismemberment: Crippled Children, Wounded Soldiers, and the Great War in Great Britain’, *American Historical Review* 99, no. 4 (1994): 1167–1202.

<sup>113</sup> Béla Kun, *A Fiatalkorúak Támogatására Hivatott Jótékonycéllú Intézmények Magyarországon* (Budapest: Wodianer F. és fiai könyvnyomdai műintézete, 1911), 146.

<sup>114</sup> In the 1950s many children with polio ended up in this institution as wards of state. Nyomorék Gyermekek Menhelye Alapszabálya 1903. 20, cited in Éva Bán et al., eds., *Száz Esztendő a Mozgáskorlátozott Gyermekek Szolgálatában* (Budapest: Nadas Pál, 2003), 14. Nóra Schweitzer, *Polio 2.0* (Budapest: Magyar Polio Alapítvány, 2016), 93.

<sup>115</sup> Colin Heywood, *A History of Childhood* (Cambridge: Polity Press, 2001), 145.

<sup>116</sup> Beth Linker, *War’s Waste: Rehabilitation in World War I America* (Chicago: University of Chicago Press, 2011).

<sup>117</sup> Koven, ‘Remembering Dismemberment: Crippled Children, Wounded Soldiers, and the Great War in Great Britain’.



Figure 1.1 György, age 10, after his last, sixth operation due to polio. Kisvárdá, 1961. From the personal collection of Dr. György Vargha. **This image is protected by copyright and cannot be used without further permissions clearance.**

destructive fronts moved back and forth for years. The bloodshed left nearly 3 million people disabled in the Soviet Union alone, in whose war effort manpower was a central element on the battlefield and home front alike.<sup>118</sup> Yet the social and political status of disabled veterans, as well as their representation and provision, was complicated at best. Second World War veterans' sacrifice in defending the country and contributing to the victory of the army was acknowledged through iconographic imagery in newspapers, films and plays, and some veterans, such as the developer of a prosthetic arm, were hailed as celebrities. At the same time, bodily disability was often invisible in this representation and was always 'cured' either by physicians or through technology.<sup>119</sup>

<sup>118</sup> Frances L. Bernstein, 'Rehabilitation Staged: How Soviet Doctors "Cured" Disability in the Second World War', in *Disability Histories*, ed. Susan Burch and Michael Rembis (Urbana: University of Illinois Press, 2014), 218–36.

<sup>119</sup> 'Prosthetic Promise in Late-Stalinist Russia', in *Disability in Eastern Europe and the Former Soviet Union: History, Policy and Everyday Life*, ed. Michael Rasell and Elena Iarskaia-Smirnova (London: Routledge, 2013), 42–64.

The invisibility of disabled war veterans was even greater in Hungary. Veterans whose bodies had been permanently distorted or mutilated on the battleground had been fighting for a bad cause. In fact, they were the enemy themselves: the new Hungarian state was under the Soviet Union's political and military control, while its citizens a few years before had been involved in armed conflict against that power on the side of Nazi Germany. The disability of war veterans thus raised an uncomfortable issue – the implication of the Hungarian population and their relationship with the Soviet Union. Silencing and erasure was the answer to this vexing problem, as veteran disability associations were discouraged and then forbidden outright, and disabled adults were pushed to the peripheries of the paternalistic state care.<sup>120</sup>

Innocent children were quite another matter. They were not tainted with the history of their forefathers and therefore were 'safe' to address openly. Moreover, since their disability threatened the progress for which the communist government had promised and strived, the prevention and treatment of polio became highly important in the 1950s. This does not mean, however, that disabled children were visible. Concepts of production and the individual's role in society did not permit a visual contrast to the ideal that bodies ridden with polio represented.

Industrial production and the productive body became a focus of attention in the post-war era in many countries, albeit for different reasons and with different attributes. David Serlin has shown that 'with the excitement of industrial production from a military economy still fresh, using one's body remained one of the primary ways that citizens . . . forged identities and affiliations with industrial economies'.<sup>121</sup> The Soviet Union also worked with a functional model of disability from revolutionary times onwards, privileging work capacity as the primary norm for citizens throughout the twentieth century. This framework resulted in a hierarchy of disabilities where children did not always fare well.<sup>122</sup>

Key issues forming the prevention and treatment policies of the communist state were ideological conceptions of the body and particular visions of the role of the individual in society. In this sense, the state expected and supported the construction of perfect productive bodies capable of performing physical labour – the base of the idealized worker-citizen. The muscular and healthy socialist body became a reference point, which in the case of children meant rosy cheeks and a plump figure. One hardly needed to look for signs of the

<sup>120</sup> Monika Baár, 'Disability and Civil Courage under State Socialism: The Scandal over the Hungarian Guide-Dog School', *Past and Present* 227, no. 1 (2015): 179–203.

<sup>121</sup> Serlin, 'The Other Arms Race', in *The Disability Studies Reader*, 49.

<sup>122</sup> Sarah D. Phillips, "'There Are No Invalids in the USSR!': A Missing Soviet Chapter in the New Disability History", *Disability Studies Quarterly* 29, no. 3 (2009), [www.dsqsds.org/article/view/936/1111](http://www.dsqsds.org/article/view/936/1111) (last accessed 11 June 2018).

healthy socialist body, as it was ever-present in public statues, book illustrations, murals and propaganda imagery.

The pages of *Nők Lapja*, for instance, were filled with pictures of mothers and children bursting with health and happiness. This women's magazine was controlled by the Party management and was an established medium to communicate the Party's ideals to worker and peasant women. The editors made a point of presenting success stories about ideal socialist, productive women on a regular basis, in order to give the impression that the number of ideal women was constantly growing in reality, and thereby to convince their readers to follow the example.<sup>123</sup> Since the magazine was illustrated with photographs as well as sketches, it gave an opportunity to the editors to display the ideal bodies to accompany the texts. Children were often represented on these photographs, for another task assigned by Party ideology to the socialist woman was to maintain the ideological and bodily health of her children. Even if the theme was healthcare or women in the medical profession, the photos showed smiling young women examining healthy-looking round babies.

The bodies of children with polio deviated from these idealised forms. Spines distorted by muscle spasms, disfigured arms and immobile legs failed to meet the requirements of production and health demanded by communist ideology. Therefore, it became a central issue in polio care to change the diseased bodies of children back to normal and productive. Restoring children's bodies so as to make them capable of becoming a productive member of socialist society was not particular to Hungary at the time.

Children whose bodies did not conform to the ideal and whose appearance threatened the early Hungarian communist project were often hidden from view. Magazines, newspaper articles and propaganda films showed healthy-looking, completely recovered, cheerful children,<sup>124</sup> while the disability of polio patients was secluded in polio hospitals and wards. Paradoxically, the same reasons – preoccupation with ideal images of the socialist, productive body – that brought polio to the centre of attention also made its reality invisible. This ambivalent perception of polio, its publicly acknowledged importance and its simultaneous invisibility and marginality created a unique space in the society and politics of communist Hungary: polio hospitals and wards became the terrain of contesting bodies of production and disability.

In a report about the Heine-Medin Hospital, the largest daily newspaper, *Népszabadság*, wrote in a bright and affectionate tone, 'The community of the little patients lives in total isolation. They are not broken in soul like those who

<sup>123</sup> Mária Schadt, *Feltörekvő, Dolgozó Nő. Nők az Ötvenes Években* (Budapest: Pannónia, 2005), 98.

<sup>124</sup> 'A Heine-Medines Mozgászavarok Utókezeléséről', Hungary, 1957. Gábor Vajda, 'Visszaadják Őket az Életnek', *Népszava*, 26 March 1961.

are teased by their healthy peers because they are temporarily crippled.<sup>125</sup> The obvious solution was thought to be removing disabled children from society. Polio did not fit with the ideal socialist body; therefore the distorted and disabled bodies of the victims were undesirable to public sight. The reminders of the disease could have compromised the image of the hard but successful struggle against polio that would eventually lead to victory.

Discussion about children with polio rarely appeared on the pages of newspapers and their images even less so.<sup>126</sup> Whenever they were depicted, their disability was invisible; a little boy standing still, a girl reading on a bed: they could have been any child from the neighbourhood. Disabled children were rarely talked about, let alone pictured. This was even true in the case of Heine-Medin Hospital's own internal magazine. In an article reporting on orphan and state ward polio patients being patronised by two factories, a sketch shows two industrial buildings with open arms and perfectly healthy, round little babies in nappies hurrying to them on their hands and knees.<sup>127</sup>

When stories did appear about children with polio, they always told of success and the children presented in them had always made an almost full recovery; disabled children remained invisible in spite of the visibility of polio: '[treatments and surgeries] give more and more paralytic patients their health back, who can grow up to be productive adults'.<sup>128</sup> Children with polio appeared only as future healthy children, rendering their disability invisible. One of the articles from 1957, describing the Heine-Medin Hospital as a beautiful wonderland for children, quite bluntly gives an explanation of why the work of the institution is so important: 'A large number of the children are totally or partially recovered and are not a burden on society.'<sup>129</sup> The function of the Heine-Medin Hospital therefore was not perceived as an institution for disabled children, but one whose goal was to rehabilitate them into useful members of society by making their bodies productive, thereby making them un-disabled.

This invisibility had profound effects on the experience of the disease, and, ultimately, on national and international policies. There were no poster children for the effort against polio, as disabled children did not fit into the representational or physical landscape of communist Hungary. Not when the

<sup>125</sup> András Faludi, 'Az Élet Nevében. Látogatás a Heine-Medin Utókezelő Kórházban', *Népszabadság*, 7 March 1958.

<sup>126</sup> Photographs and illustrations often appeared in medical literature; however, in this section I focus exclusively on representations of the socialist body and polio children in the popular press.

<sup>127</sup> 'Heine Medin Híradó' (Budapest: Heine Medin Utókezelő Kórház, 1959–63).

<sup>128</sup> Rózsa Fehér, 'A Gyógyító Torna', *Magyar Nemzet*, 24 January 1956.

<sup>129</sup> 'Ötszáznyolcvan Újabb Ágy a Heine-Medin-Kórházban Megbetegedettek Utókezelésére', *Magyar Nemzet*, 10 September 1957.

state focused its efforts on demonstrating power over an epidemic disease that was spiralling out of its control, and even less so when Hungary's encounter with polio ultimately became a global success story in itself.

The overall scientific and political discourse on polio in Hungary fitted into a larger Cold War strategy: evasion. Severe public health problems concerning adults and the issue of war disability could be pushed to the background or even made invisible by concentrating on the health of children. Questions of inequalities in access to medical technologies (partly because of Cold War embargoes) could be escaped by the celebration of scientific cooperation. Finally, the common fight against polio rechannelled conversations on hostility: participation in a war on disease, instead of a Cold War on each other.

Yet these mostly rhetorical evasions did create concrete opportunities for cooperation. The universal concept of the innocent child paved the way for international conferences and budding international organisations to provide actual knowledge transfer and transnational assistance in times of polio epidemics. Scientific cooperation did lead to the development and trial of a vaccine that is still used today in global polio eradication efforts.

All of the crucial attributes of polio discussed above played an important part in shaping Cold War interactions between scientists, governments and citizens, with far-reaching ramifications. Medical communities, patients and public health regimes grappling with scientific uncertainties crossed international political divides in the name of children. The global nature of the disease facilitated research and kept the stakes of the disease high. The constant reminder of disability caused by polio contributed to the priority of the disease in comparison to other ailments and public health challenges.

The significance of the disease was fixed in time and place. The era of post-Second World War reconstruction and development made polio a priority, a disease that was not great in numbers, but attacked and debilitated children. It also mattered on which side of the Iron Curtain one contracted the disease, as communist ideals of the body made polio-ridden ones invisible. However, the characteristics of polio were in constant flux. Some uncertainties became established facts, causing other uncertainties in the process. The meanings of the disease changed in space and time, reacting to and interacting with social, political and cultural changes on both sides of the Iron Curtain. The following chapters explore moments in the Hungarian history of polio in which the constantly changing and flexible disease mapped onto an equally fluctuating and shifting Cold War. In these flashpoints, the various attributes of polio come to the foreground to highlight underlying problems or to be used by actors to achieve political or professional goals.