

Articles

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Screening the population: Public information films in Scandinavian tuberculosis campaigns around 1950

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Abstract

The use of film in anti-tuberculosis campaigns dates back to at least the 1910s in Scandinavia and elsewhere. However, in the immediate wake of World War II, developments in mass public health screening necessitated a new wave of informational

films that explained x-rays, Mantoux tests and Bacillus Calmette-Guérin (BCG) vaccination to the public. This article examines three such cases: firstly, *Alle i fare! (All Endangered!)* (Lauritz Falk, Norway, 1948); secondly, a suite of films made in 1948 by Danish filmmaker Hagen Hasselbach for UNICEF for educational and fundraising purposes; and thirdly, *Medan det ännu är tid* ('While there's still time') (Martin Söderhjelm, Sweden, 1952). The films are contextualized within the broader history of anti-tuberculosis films and campaigns, as well as the circumstances of their commissioning and distribution. The article identifies a range of narrative and visual strategies that construct a new kind of national and global citizen whose body is made available and visible to public authorities for the collective good. In particular, it is argued that the (re)mediation of new mass screening technologies such as x-rays, skin tests and health data often make use of the properties of the projection screen, demonstrating the entanglement of medical and media technologies.

Keywords

Danish cinema

informational cinema

public health

mass medical screening

tuberculosis

x-rays

In 1943, the Danish department store Magasin du Nord celebrated its fiftieth year of business in its grand headquarters on Kongens Nytorv. Its newsreel-style review of the year – *Så gik 1943!* ('There goes 1943!') – nonetheless opened with a less glamorous event: the entire staff being screened for tuberculosis. Shop girls, suited bosses and shirtless male employees are shown queuing for tuberculin tests and x-rays. The camera pans to show the mechanics of the pre-vaccination Mantoux test and the controls of the portable x-ray machine. Five years before the introduction of mass tuberculosis screening in Denmark, Magasin was exploiting new technology and procedures to protect the health of its staff and market itself as a modern company.

While Magasin's newsreel *screens* medical *screening* as a technological novelty, its content would not be out of place in films commissioned to support the introduction of mass tuberculosis screening within the next decade, across Scandinavia and beyond. Like the newsreel, public information films are often prompted by technological or legislative change, but with the purpose of informing and persuading the population to engage. Scholars have investigated the range of media that were used in anti-tuberculosis campaigns both in Scandinavia (Hartvig 2016; Jülich 2016) and the wider world (Cartwright 1995; Ostherr 2011; Orgeron 2012; Posner 2012) from the early years of cinema, including posters, brochures, radio broadcasts and remediation of x-ray images. However, the short informational films that were part of this toolkit in Scandinavia have escaped close examination. Centring on a selection of public information films about

tuberculosis made in Denmark, Norway and Sweden around 1950, this article examines how medical screening was mediated on-screen in the Nordic region.

As José van Dijck argues, ‘the development of medico-surgical instruments never occurs in isolation, but is part of an intricate web in which technology, medical practice and cultural representation are mutually constitutive’ (2001: 220). Networks of informational filmmaking and distribution are part of the story of how tuberculosis screening took hold in Scandinavia and beyond. Looking closely at such films allows us to witness how new categories of citizen and patient emerge on-screen in the wake of new laws and medical practices: as medical professionals, as demographic data and as bodies made available to the authorities for the collective health of the nation.

Medical screening and the Bacillus Calmette-Guérin vaccine

While medical screening programmes are an integral part of healthcare today, their principles and praxis were revolutionary in the 1940s. As a disease with a long life cycle, one that disproportionately affected young people, and with no readily available drug or cure until the 1960s (Cartwright 1995: 148), tuberculosis lent itself particularly well to mass population screening and was the first disease to be tackled with the technique.

The Bacillus Calmette-Guérin (BCG) vaccine takes its acronym from the discoverers of its bacille in the 1910s, Albert Calmette and Alphonse Guérin (United Nations 1948: 5). Denmark offered vaccination to schoolchildren from 1927, with mass screening and inoculation from 1948 (Kamper-Jørgensen 2012: 20). The Danish State Serum Institute emerged in the 1940s as a world-leading manufacturer of the vaccine

(United Nations 1948: 5). Sweden began screening and vaccinating army recruits in 1942 and expanded the programme to the rest of the population in 1945–46 (Jülich 2016: 203).

BCG requires an advance-screening programme: the vaccination is necessary only for subjects who have not already acquired immunity by exposure to tuberculosis. The Mantoux test involves applying a trace of tuberculin under the skin of the forearm. In tandem with the BCG, x-rays were used to screen those who had tested positive for immunity for incipient tuberculosis in the lungs.

Mass screening programmes are ‘social interventions as much as they are medical interventions’, requiring non-symptomatic individuals to accede to ‘routinized’ and periodic physical inspection by public authorities (Armstrong and Eborall 2012: 3–5). Screening was neither a cure nor a means of prevention for the individual. Instead, it ‘functioned as a kind of *collective* prophylaxis, making identifiable the disease in its early stages and thus facilitating surveillance and separation of the tubercular subject from family or community’ (Cartwright 1995: 150, original emphasis).

During post-war reconstruction in Scandinavia, health became a social issue and a social democratic project; rehabilitation was as important as prevention and diagnosis (Harthug 2016: 931). However, the principles of medical screening had to be explained to the population. Screening programmes required the individual to understand herself as a new kind of citizen and a new kind of patient: as a statistic, as part of a mass, as *possibly* infected. As Jülich puts it, ‘the mass surveys contributed in [sic] creating different categories of people: sick and healthy persons, imaging experts and the lay public, participants and X-ray objectors’ (2016: 202).

To explain the new phenomenon of screening, campaign communications had to visualize the procedures involved – vaccination and x-rays – and underline the rationality of the process. Key features as mediated in films, brochures and posters were efficiency, speed and the notion of the ‘assembly line’ (Jülich 2016: 205). In moving images, montage lends itself well to such ideas: rhythmic patterns of children or shirtless men lining up at the x-ray machine are invariably combined with close-ups of arms offered up to the BCG syringe, and with a range of ‘types’ of citizens gazing or marching hopefully into the future. But other recurring tropes, motifs and audio-visual strategies can also be observed in films tackling tuberculosis screening, all of them contributing to constructing this new kind of citizen–patient. These include what Kirsten Ostherr calls ‘the medical gaze’, that is, the construction of doctor and patient as such on-screen and in real life; the use of animation to depict physiology; and the use of graphical representations of data (Ostherr 2013: 1–2).

Other kinds of collective identities are re-negotiated and reiterated in tuberculosis films. Studies of US productions have shown how they often reiterated racial prejudices, with productions explicitly or implicitly addressing the perceived role of folk beliefs amongst African American or Navajo communities, for example, in the spread of contagion (Orgeron 2012: 301–09). More germane to the Scandinavian films are categories of gender and class. In US mid-century anti-tuberculosis films, women were often ‘deceptive carriers of a disease that is invisible except under the X ray, threatening the integrity of the family, the community, and the nation’, claims Cartwright (1995: 146). In particular, working-class women were depicted as responsible for the labour of

hygiene and probity (Cartwright 1995: 149–50; Orgeron 2012: 309). Faint echoes of these patterns are apparent in the Scandinavian films discussed below.

As Miriam Posner has argued, germ theory in general and early tuberculosis films in particular offer a new way of seeing the world as knitted together by invisible forces, creating ‘sometimes unwelcome relationships between people of different races and classes’ (2012: 90–91). Much the same could be said about the social relations that were imaginatively woven by later on-screen representations of mass medical screening and, indeed, by the networks of distribution and exhibition of the films in question.

Early use of film in Scandinavian tuberculosis education

It is a historical curiosum that the x-ray and the cinema were born almost simultaneously in 1895, with both Thomas Edison and the Lumière brothers experimenting with x-ray technology and the cinematograph or kinoscope at the same time (Cartwright 1995: 20, 107, 109). The use of film in tuberculosis prevention campaigns dates back to the early days of cinema, and actually pre-dates the programmatic use of x-ray technology in diagnosing tuberculosis. For example, in the United States, the Edison company made six films between 1910 and 1915 for the National Association for the Study and Prevention of Tuberculosis (Posner 2012).

In Scandinavia, as elsewhere, the advent of cinema coincided with the period when tuberculosis mortality was at its worst. Tuberculosis accounted for 14 per cent of deaths in Denmark in the 1890s (Kamper-Jørgensen 2012: 20), while in Norway there were 31 tuberculosis deaths per 10,000 citizens (Harthug 2016: 930). The Swedish film

examined below, *Medan det ännu är tid* ('While there's still time') (Martin Söderhjelm, Sweden, 1952) reports that half a million Swedes died of tuberculosis between 1900 and 1950, the annual mortality rate tapering from 14,000 at the turn of the century to 1500 in 1951. The statistics are especially haunting in terms of the toll amongst young people: even in the early 1920s, two thirds of deaths amongst people in their 20s and 30s in Norway were from tuberculosis (Kornelius 1923).

One public health strategy adopted from the 1910s was the travelling campaign, whereby lecturers and medical staff would tour the country educating local communities on hygiene, nutrition and infection. In Sweden, Nationalföreningen mot Tuberkulos (the National Association against Tuberculosis, hereafter SNMT) was established in 1904 (the Danish equivalent was established in 1901, and the Norwegian in 1910). In its first three decades, SNMT organized over 4000 public lectures, reaching almost half a million Swedes (Nationalföreningen 1939). Nurses were employed in Norway as peripatetic hygiene instructors, giving 275 talks in 1921–22, for example, supported by a mobile exhibition, brochures, magazines and press releases (Nationalforeningen 1922).

Films were a standard part of these campaigns. As far back as 1912, a cinema in the Norwegian town of Kongsvinger procured a tuberculosis film (from where is unclear) and held a fundraising screening (Kongsvinger Sanitetsforeningen 1912). A 'gripping' German Ufa-produced tuberculosis film circulated theatrically as *Folkefienden* ('Enemy of the people') in Norway in the early 1920s (Kornelius 1923).¹ In Sweden, Einar Förberg's informational film *Folksjukdomen tuberkulos* ('Endemic tuberculosis') (1933) was used in conjunction with lectures. This film was described as exemplary by one

reviewer: it gripped the attendees by using a full 16,000-capacity stadium as a visual index for the number of tuberculosis deaths in Sweden every two years. There followed details of the spread and progress of the disease, and the latest surgical techniques and sanatoria (Anon. 1933).

Short informational films, then, were a regular part of anti-tuberculosis campaigns in Scandinavia before World War II, informing the public about the scale of the public health threat, its prevention and treatment. A key task for the films was to overcome popular scepticism about the existence and effect of germs as well as resistance to hygienic measures which infringed on everyday activities (Posner 2012: 90). However, from the mid-1940s, the population had to be persuaded of yet another set of new concepts underpinning the fight against tuberculosis. The development of mass screening prompted legislative change mandating new collective behaviours and, concomitantly, the need for a new generation of films.

Medical screening on the small screen

As is often the case when medical and media technologies intersect, the semantic and material connections between public health screening and film screenings are not circumstantial – but they are language-specific. The term ‘screening’ was used in English from the 1930s to denote large-scale studies identifying latent disease, especially tuberculosis. The term referred to the screens on which radiographic images were viewed, and to other metaphors used in public health circles, especially the notion of sifting out cases of disease through a figurative sieve or mesh (Armstrong 2012: 17–18, 27). Display

screens are present in the mid-century Norwegian and Swedish terminology for radiography (*skjermbildefotografering*, *skärmbildsfotografering*), but not the Danish term *røntgenfotografering*, which highlights Wilhelm Conrad Roentgen, the discoverer of x-rays themselves. The metaphor of ‘screening out’ did not extend to the terms adopted in Scandinavia for medical screening programmes, which instead emphasized mass investigation. Though cognizant that the ‘screening’ pun does not obtain in the Scandinavian languages, I nevertheless want to suggest that the material conditions in which informational films were screened affected how medical screening was mediated in its early years. Scandinavian tuberculosis screening cannot be separated from broader post-war international developments in the “mediatization” of the medical sphere’ (Jülich 2016: 202).

Put differently, how and where informational films about screening were screened is important. The films discussed in this article were part of a much broader ecosystem of non-fiction film in mid-century Scandinavia and worldwide. One condition of possibility for their commissioning, production and distribution was the burgeoning informational film sector. The relationship between state and film was organized differently in the three Scandinavian countries (see Diesen 1998; Jönsson 2016; Thomson 2018). Nonetheless, in the immediate post-war period, short films for screening in cinemas and as part of a travelling media package would typically play a crucial role in any government campaign, making use of theatrical (cinema) screenings as well as local access to projection facilities in libraries, clubs and schools. National film libraries engaged in exchange programmes; sharing of films was facilitated by embassies; documentary film

festivals proliferated; and international organizations such as the cooperative movement and the United Nations had their own film networks. Within Scandinavia, a transnational library of some 300 medical films was taking shape in Gothenburg around 1950 (Holmgren 1952). All this was possible because of the introduction of non-flammable narrow gauge film – 16mm in 1923 and 8mm in 1932 – and the associated proliferation of portable projection equipment (Wasson 2017: 370). Also crucial, on the national and international scales, was the proliferation of a ‘mass, civic-minded audience willing to view regularly [...] thousands of instructional films’ (Ostherr 2011: 114).

The distinction between theatrical and non-theatrical screening networks was often taken into account at the commissioning stage, such that shorter *forfilm* or *annonsfilm* (pre-feature films, announcements) would be written for cinemas, while more complex films meant to inspire discussion were made for the non-theatrical circuit. If need be, distribution could be planned quite precisely. For example, a 1945 film on tuberculosis screening made by Sandrew Ateljéerna for SNMT was placed in cinemas in those counties where medical screening was due to take place (Önner 1946). In practice, films crossed between different circuits, often staying on central film library hire lists for years (Ostherr 2011; Thomson 2018).

The role of screens themselves as a condition of possibility for exhibition tends to be overlooked. Screens are intended to be unobtrusive and passive, ‘surfaces designed to be animated whether by live performance, artisanal inscription, technological reproduction, or some mix of the three’ (Wasson 2017: 368). They become visible only when they go wrong; they are mentioned in historical documentation only when they

collapse or are badly arranged. We thus have little idea of the scale or resolution at which films using small screens, in church halls, libraries or other improvised venues, were experienced. What we do know is that by the end of the 1930s portable projectors were being used to screen films on a wide variety of surfaces, ranging from back projection to ceilings and from a few centimetres to several metres across (Wasson 2017: 378–83).

Archival documentation on where and when tuberculosis films were screened around Scandinavia and elsewhere thus gives us only one part of the picture. When examining films of the time, we should bear in mind that implicated in their advocacy for collective action is the collective viewing environment, often in the same kinds of makeshift facilities (schoolrooms, church halls, marquees) where tuberculosis screening itself took place. The screening and educational environment is often actually staged in the films, projecting the audience back upon itself. And the properties of the projection screen, I want to argue, are often exploited to explain or suggest the techniques of tuberculosis screening.

Alle i fare! (All Endangered!), Norway, 1948²

1948 was a watershed in Norway's fight against tuberculosis. A new law made BCG vaccination and attendance at x-rays compulsory (Harthug 2016: 931). There were still around 10,000 new cases annually, 4000 of them infectious, accounting for around 10 per cent of all deaths nationally (Anon. 1948a). The law was implemented using more of a carrot than a stick: educational work was prioritized over legal action against refuseniks (Harthug 2016: 931).

1948 was also a significant year for the use of film by the Norwegian state. Statens Filmsentral (the State Film Centre) was established to expand and coordinate the preservation and distribution of educational films commissioned by government ministries as well as foreign informational films (Diesen 1998: 48). As for health films, there was a productive ambiguity and overlap between popular education and persuasive measures (Harthug 2016: 931).

This was the context in which a new film about tuberculosis was commissioned in spring 1948 by Helsedirektoratet, Norway's national health authority. Entitled *Alle i fare!* (*All Endangered!*), the screenplay was written by Per Borgersen, a consultant at Helsedirektoratet, and the director was Lorenz Falk. *All Endangered!* was filmed in Flekkefjord, west of Kristiansand, but based on an actual epidemic in the municipalities of Odda and Høyanger in Vestlandet a few years previously (Anon. 1948a; K. W. 1948). The film's task was to communicate complex statistical information about herd immunity: as morbidity fell, the risk of infection from the remaining cases was higher amongst the broad tuberculin-negative population. The answer was BCG vaccination. Despite its documentary basis and the complexity of its message, *All Endangered!* was 'framed artistically' (Anon. 1948). Indeed, the film gestures to contemporary stylistic and generic tropes, but is also artistically ambitious in its presentation of facts.

The film begins with a sceptical man on his way to be vaccinated. The doctor on duty reminisces about his earlier posting to a town where there was a tuberculosis outbreak. This device makes the film more intimate, confided by a doctor in the confines of his surgery. The outbreak story is book-ended by extreme close-ups of the doctor's and

patient's eyes, a hypnotic staging of Ostherr's 'medical gaze'. By the end of the doctor's tale, the patient is convinced, and smilingly rolls up his shirtsleeve. The bodily intimacy created by the extended moment in anticipation of the injection uses a common device in public information films: a sceptical character who articulates the viewer's doubts and fears. Also important is the effect of staging the encounter with the vaccination so intimately that the possibly nervous viewer has already experienced it affectively.

All Endangered! is particularly impressive in its communication of data.

Animations superimposed on street scenes make a striking visual connection between statistics and the audience. One sequence shows the health authorities moving into the doctor's town to test, vaccinate and x-ray the population. Queues of people have tuberculin reactions measured with a ruler and nurses record vaccinations in neatly organized card indexes. Stick figures, upright and in bed, represent numbers of vaccinations against morbidity and mortality. As the statistics show improvement, images of people walking in line transform from a queue of downcast-looking individuals moving downhill into a jaunty upwards line, smiling and illuminated. The trudging or skipping townsfolk appear multiple times, not least towards the end: the main character's vaccination is visually echoed in a series of anonymous arms offered up for quick and efficient injections against a background of healthy-looking people going about their day and a voice-over enumerating statistics.

A distinctively Norwegian detail is that a portable x-ray machine arrives with Hurtigruten, the coastal ferry. Yet again, the emphasis is on efficiency and mass action, with shirtless men being x-rayed and aerial shots of the bustling facility. The resulting

images are shown scrolling past the diagnostic team on a continuous roll of film. The inspection of the x-rays becomes a visual metaphor for illumination, coming just before the doctor's sudden brainwave: the outbreak is due to a travelling circus! This plot point is typical of the film's almost self-conscious adoption of detective film tropes: there is an intimate, first-person voice-over and a film noir aesthetic, using shadows in bright sunlight and stairwells. One thriller-like sequence has the young doctor trailing potential infectious suspects (and effectively the germs themselves) through the town, with a postal worker, a waitress, a barber and a bus driver framed as possible sources of infection through skin contact or coughing. Such gestures to popular style in a public information film are not frivolous: they increase the chances of maintaining attention by speaking a narrative and visual language that corresponds to the cinema goer's horizon of expectation.

The national health authority saw film as integral to its work: 'we hope to liquidate this grave threat to the people by way of enlightenment' (Anon. 1948a). This was a national ambition, but *All Endangered!* also circulated internationally. The film piqued interest at the 1948 Health Congress in Geneva; copies were ordered for use in Britain and France and it was screened at the United Nations in Paris (K. W. 1948).

Hagen Hasselbalch's UNICEF films, Denmark, 1948

Interest at the United Nations in Scandinavian informational film was not unusual in the late 1940s. The UN Film Board's Paris office was headed by a Danish civil servant and filmmaker, Mogens Skot-Hansen; its tasks included filming UN-related meetings and

events, coordinating film distribution, and commissioning documentaries to support the work of the United Nations. National film projects were often ‘adopted’ by the United Nations, and footage re-purposed across a range of productions (Thomson 2018: 94–97; see also Orgeron 2012: 310–11). Our Danish case study is a particularly interesting example of this recycling of images.

The contributions of Scandinavians to the United Nations’s early years need hardly be rehearsed here, but less well remembered is Denmark’s medical leadership. In autumn 1946, Danish medical teams embarked on vaccination campaigns in Poland and Yugoslavia, overseeing the screening of two million people and vaccinating 600,000 European children in two years (FN-Hjælpen 1948: 1). From summer 1948, the International Tuberculosis Campaign (ITC) was formed by the Danish government and Red Cross, Norwegian Help for Europe, the Swedish Red Cross, UNICEF and WHO, testing around 30 million people and vaccinating 14 million across the globe in just three years (Comstock 1994: 535).

Danish filmmaker Hagen Hasselbalch was commissioned to make two films for the ITC, to be versionized into various languages. Both dated 1948, one is an informational film entitled *Your Enemy...Tuberculosis* (Hasselbalch 1948b), and the other is an untitled detailed instructional film for medical practitioners (Hasselbalch 1948a). The two films share some footage, and they were re-purposed later the same year to make a further two films in Danish: *Giv dem en chance* (‘Give them a chance’, Hasselbalch 1948c) and *Hvert syvende sekund* (‘Every seven seconds’, Hasselbalch 1948d). In practical terms, such recycling of footage was facilitated by film exchange agreements:

the agency Dansk Kulturfilm and Minerva Film had agreed with the ITC that material could be freely shared (Witte 1949). More interesting is how the same material can be reused for different narrative purposes.

An early challenge for the ITC was to achieve procedural uniformity (e.g. Danish and Norwegian teams used different tuberculin tests), in order to maintain standards and facilitate statistical research (Comstock 1994: 534). This need for practitioner training explains why one of Hasselbalch's original films for UNICEF (Hasselbalch 1948a) focuses on techniques of tuberculin testing, injections and record-keeping by medical staff. The intertitles contain specialized language clearly aimed at medics, for example: 'The Mantoux-reaction is considered positive when the diameter of the infiltration is 6 millimetres or more'. Most of the film consists of close-ups of syringes being prepared, different reactions to tuberculin tests, and codes to be inserted on record cards. These are interspersed with long shots of orderly queues of docile children, occasionally with animated arrows showing how the groups should be filtered by reaction. There are also shots of the vaccine being prepared in a laboratory, with close-ups of equipment such as retort stands, filtration devices and vials, often being inspected by the scientist's eye. Towards the end, the orderliness is shattered by an altercation in the screening facility: a woman who does not want to have her daughter vaccinated struggles with a nurse. Intertitles provide reasoned arguments to be used in such situations: 'Not a single case of tuberculous disease has been reported as a consequence of BCG vaccination'; '[p]roper information and personal discussion can persuade parents'.

The same footage of the struggle in the inoculation queue is re-used in *Your Enemy...Tuberculosis* (Hasselbalch 1948b). This time, a voice-over appeals directly to the ordinary viewer: ‘But, our enemy has allies. People who spread stories about vaccination, and people who listen to them, like Maria’s mother’. ‘Maria’ was introduced at the start of the film in a photograph against the Acropolis. The child is a heart-wrenching test case for the viewer: ‘Every seven seconds, someone dies of tuberculosis. [...] This is Maria. [...] Will she be alive a few years from now?’. Maria’s body becomes an animated landscape in which black bomber-like crows attack her antibodies, rendered as hard hats armed with syringes. The imagery, and the version’s title, exemplify the military analogies that dominated post-war informational film (Ostherr 2011). Maria is inoculated and cartoon rivulets of white vaccine meander through her body. The animated sequence is beautiful and compelling in its own right, but co-exists in this film with re-purposed footage: the laboratory shots and the montage of vaccine being driven, shipped and flown from Copenhagen to the world. These are edited together, so that the State Serum Institute scientists become part of a heroic effort rather than an informative sequence for medical professionals.

Having addressed medical staff and patients in target countries, some of this footage was reused to appeal to a third audience: the Danish public. Hasselbalch crafted two three-minute fundraising films to be shown in cinemas, *Giv dem en chance* (‘Give them a chance’, Hasselbalch 1948c) and *Hvert syvende sekund* (‘Every seven seconds’, Hasselbalch 1948d) in conjunction with a campaign in November 1948 to fund the tuberculosis programme.³ With the aim of raising 10 million kroner, 3000 volunteers in

Copenhagen alone went door-to-door to ask for donations; local committees had organized tombolas, sporting events and concerts; Statsradiofonien (the national radio) featured a concert and an address by Queen Ingrid, the prime minister and the UN Secretary General; and the National Theatre held a charity concert (Anon. 1948b). Hasselbalch's short films, then, were just a small part of an enormous, complex and multifaceted effort, both on the ground by medical practitioners and in relatively wealthy European nations funding the programme. In addition to reprising the theme of 'Every seven seconds' and the images of individual children, the fundraising films employ military metaphors (as per the animation) and reflect the cinema audience back at itself.

The same temporal trope is echoed in a campaign leaflet. Like the film voice-over, the leaflet makes use of the temporality of its medium to force the reader to relate to the statistics of tuberculosis mortality. 'Watch the second hand on your wristwatch for a moment! Every seven seconds, someone dies of tuberculosis. That's 9 every minute, 540 an hour, around 13,000 a day or between 4 and 5 million a year' (FN-Hjælpen 1948: 1). How many have died while you have been reading this, the leaflet asks rhetorically? The numbers involved are so bewilderingly large, and the urgency so great, that breaking down the statistics into the lived time of the viewer or reader is a recurring strategy – one also adopted by a Swedish film made a few years later.

Medan det ännu är tid ('While there's still time'), Sweden, 1952

In conjunction with the expanded voluntary tuberculosis screening programme of 1945–46 in Sweden, Nationalföreningen mot Tuberkulos (the National Association against

Tuberculosis) commissioned two short advertisements for use in cinemas from Sandrew producers and distributors. One film focused on vaccination and the other on x-ray screening; the latter targeted theatres in the regions and cities of Sweden where screening was planned (Nationalföreningen 1946: 3).

However, the need for a more ambitious *upplysningsfilm* (enlightening film) remained, and in 1951, first-time director Martin Söderhjelm was commissioned to make a longer film that would both inform its audience about the work of SNMT and persuade viewers to be screened. Söderhjelm was a dramaturge and screenwriter who went on to make a short film for UNESCO as well as feature films. His calling-card was films that aspired to entertain whilst also making the audience think (Planthaber 1956) and gained a reputation for experimenting with genre to make effective informational films (Stjernholm 2017). The result in this case was ‘While there’s still time’, a twenty-minute film, which broke with the traditions of the subject matter with its ‘thoroughly light and hopeful character’ (Planthaber 1956). The short featured on the programme of Stockholm cinemas in September 1952, playing alongside newsreels and a western (Anon. 1952).

Söderhjelm’s film combines the established motifs of crowds being screened and individuals being inoculated with a framing narrative borrowed from a canonical Swedish novel and schoolbook, Selma Lagerlöf’s *Nils Holgersson’s underbara resa genom Sverige* (*Nils Holgersson’s Wonderful Journey*) (1906–07). On Söderhjelm’s behalf, SNMT sought and obtained permission from Lagerlöf’s estate to include a sequence from the novel (Andén 1951). The resulting film visualizes the national map as the territory across which the campaign against tuberculosis marches. But, a decade into tuberculosis

screening in Sweden, the film also historicizes the achievements so far and projects the battle into the future.

The first five minutes dramatize Lagerlöf's chapter 'Åsa gåsapiga och lille Mats' ('Åsa goose-girl and little Mats'). The eponymous children are from a poor Småland family. Their siblings and mother are infected by a traveller and die one by one, and their father flees. Åsa and Mats attend a lecture explaining the symptoms, prevention and treatment of tuberculosis, and they realize that their family died of the disease, not of the sick traveller's curse. Åsa and Mats embark on their own journey through Sweden – here the film overlays the walking children on a national map – and along the way they spread the word about the need for good hygiene in combating the spread of tuberculosis. The film thus stages the historical phenomenon of travelling lecturers, already embedded in the novel by an author who was herself a founding member of SNMT. The viewer is thus implicated into a national community bound by geography and literary heritage, while the film gestures to its own role as disseminator of information.

The voice-over remarks that it is 50 years since Lagerlöf wrote *Nils Holgersson*, since when 500,000 Swedes have died of tuberculosis. Scientific and socio-medical breakthroughs of the same half-century are dramatized with scientists in period costume. A tree is felled, and the line of its fall across the sky traces a graph showing a steady reduction in mortality: 14,000 in 1900, 9500 in 1920, 5800 in 1935, 1500 annually by 1951. On-screen, 1500 people disappear as a street empties itself, then a football stand. That vaccination has been underway for a decade is underlined by a variant on the inoculation scene: a young girl who has been vaccinated remembers the doctor in

question and returns as a glamorous woman to ask him if she should train as a nurse, injecting a little romance into the narrative.

‘While there’s still time’ also situates itself within the broader media landscape of the tuberculosis campaign. Under the auspices of SNMT, this included the popular *majblomma* or mayflower, a lapel pin sold to raise funds, and a forest of posters and brochures. Most interesting is the appearance of a so-called *skärbildsbus*, a mobile x-ray studio in a bus that took advantage of miniaturized x-ray technology to implement screening across the country (Jülich 2016). This episode focuses mostly on an elderly farmer who declares he has managed without being x-rayed until now. As Jülich argues, this is an example of tuberculosis propaganda’s construction of (new) social groups, in this case the elderly ‘x-ray objector’ (2016: 211). But it is also noteworthy for its implication of the viewer in the joke, persuading by flattery: the farmer is fooled by the doctor brandishing a rotten apple, demonstrating that even the healthiest-looking apples can be blemished inside. This is a visual pun on the by now well-worn image of the x-ray, which, as Cartwright shows, had been functioning at the intersection of ‘specialized knowledge and popular fantasy; and scientific discourse, high art, and popular culture’ since the 1890s (1995: 107).

A final sequence echoes the established patterns: a montage of the inoculation and x-ray ‘assembly line’, scientists working in laboratories, invalids in modern, gleaming sanatoria. The voice-over projects progress into the future: preventative work is most effective. There is a direct appeal for solidarity with survivors of tuberculosis, who face the frustration of a long convalescence and rehabilitation. A montage of fifteen to twenty

different social types, filmed from heroic low angles against modernist architecture and factory grit underpins an appeal to fight together. Underlining the practice of recycling footage in informational cinema, some of the shots in this montage have clearly been lifted from Arne Sucksdorff's Oscar-winning city symphony *Människor i stad (Rhythm of a City)* (Sweden, 1948). In closing, Åsa and Mats are again referenced: like them, the voice-over says, we must all contribute to spreading information about tuberculosis – 'while there is still time'.

Conclusion

If the role of films in early twentieth-century tuberculosis campaigns had been to convince audiences of the reality of germs and the necessity of hygiene, a new wave of films in the immediate wake of World War II mediated yet another advance in the battle against the disease: mass population screening. While the x-ray was as old as cinema itself, images of radiography as a process now unfurled across the screen in cinemas, schools and community halls.

Such images reflected the population back upon itself as serial ranks of indistinguishable bodies, punctuated by characters and types who emerged into the narrative. Animated graphs and statistics transposed individual lives and fates into epidemiological and demographic data, and shots of card record systems, white-coated scientists and teams of medics functioned as shorthand for the rationalization of public health. In the Scandinavian context, it is hard not to read the 'mass, civic-minded audience' (Ostherr 2011: 115) on-screen as an expression of the emerging citizen of the

welfare state, making his or her most private bodily spaces available for ‘the project of community prophylaxis’ (Cartwright 1995: 152).

But the films are not just national projects. In explaining the spread of tuberculosis and the programmes against it, the films must necessarily dramatize interpersonal contact and the tactile mechanics of contagion, as well as gesturing to the global reach of the campaign. Implicated in stories about tuberculosis are multiple scales; the vaccine sample viewed through a microscope is also filmed as it traverses the globe on a plane, while the x-rayed lungs of a Greek child and a Swedish adult elide in all their two-dimensional uniformity the outward markers of identity. As Posner notes, ‘a disease can function remarkably like a story: by knitting diverse people and places into a reciprocal, if unequal, relationship’ (2012: 91).

Finally, in films that explain and promote public health screening to the population, it is striking that the citizens’ bodies themselves appear as screens, in multiple ways. Radiography rendered visible what lay beneath the skin: the iconic x-ray images of healthy versus tubercular lungs, held against an on-screen light box by the doctor’s hand in an act of reverse projection, display signs of disease rather than of class or gender. Sequences showing mass Mantoux testing and vaccination focus on the epidermis as a kind of screen upon which the healthy or infected status of the individual was displayed. In some footage, notably Hasselbalch’s medical films, the skin and the reaction that develops upon it fill the whole screen in extreme close-up. And in several statistical sequences, graphs are overlaid upon footage of crowds or more stylized shots of moving bodies, literally projecting demographic information onto the populations they represent.

Such films are rich examples of the complex ecologies that obtain whenever media encounter medicine or, as in this case, where screening is screened.

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Notes

1. This seems likely to have been the Ufa educational feature film *Die weiße Seuche. Entstehung, Gefahren und Bekämpfung der Tuberkulose* ('The white plague: Emergence, dangers and control of tuberculosis') (Kaufmann, 1921), but I have not been able to verify with certainty that this particular film circulated in Norway with the title *Folkefienden*.
2. *All Endangered!* is dated to 1949–50 in the Norwegian National Library (Nasjonalbiblioteket) film database. However, as discussed in this article, national and

international screenings of the film were reported in 1948. The film is available to view via the link in the list of Film references.

3. Viewing links for both *Giv dem en chance* ('Give them a chance', Hasselbalch 1948c) and *Hvert syvende sekund* ('Every seven seconds', Hasselbach 1948d) are included in the list of film references.

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