

Guest contribution



An injection against fiendish germs: picture from a 1950s polio pamphlet.

The age of immunity

What the history of vaccination can teach us about changes in modern societies.
An article by Malte Thießen

We live in the age of immunity. The "pandemics" of the past like diphtheria, smallpox or tuberculosis no longer scare us. The idea that we are protected against infectious diseases has become the norm, as everyday expressions about being "immune" to this or that confirm. Even the exceptions to this norm actually corroborate it. Again and again we hear about the imminent discovery of a vaccine for cancer or AIDS. Nowadays it is unthinkable, or at the very least hard to accept, that there might be diseases that we can't vaccinate against. The debates about an Ebola vaccine or the introduction of compulsory measles vaccination are two particularly current examples. Immunity has become part of everyday life, or even an attitude towards life.

This finding is not as trivial as it

initially seems. Because this attitude is relatively new. It has only been prevalent in Europe and the US since the 1960s and 70s – and for many other nations immunity is still by no means the norm. So the history of vaccination is a history of the modern age, with all its contradictions. It raises questions that provide insights into the changes in modern societies. What fears and hopes fuelled vaccinations? How did they change perceptions of risk and safety? Which norms, hierarchies and social orders were negotiated in connection with vaccination programmes? The findings of an ongoing research project are providing some answers to these questions. In this article I examine the history of vaccination in the light of four trends that explain how, since the nineteenth century, im-

munity as an attitude towards life has become the norm: firstly through the politicisation of immunity, secondly through its mediatisation, thirdly through its marketisation, and fourthly through the internationalisation of vaccination.

Vaccination programmes are one of the most powerful weapons in the public health policy arsenal. This was not always the case. As late as the 19th century, doctors were still wandering around Europe on their own initiative, selling vaccines to the wealthy. For a long time vaccination was a private matter. That changed in Germany in the 1870s. Following the founding of the German Empire vaccination moved to the top of the political agenda. Immunity promised to protect the "body of the German people" and ensure a

healthy workforce and growing population. In the times of the German Empire vaccinations became a kind of locational advantage in the race between nations, as the nationalist liberal MP Wilhelm Löwe once put it during a debate in the Reichstag: "We are talking here about preserving an incalculable number of workers and working days, which enhance the individual's quality of life and contribute greatly to the development of society and the state." For these reasons compulsory vaccination against smallpox was introduced in 1874. From then on, all German children aged one and twelve had to be vaccinated against smallpox – and if necessary this was enforced by the police.

Regulating Immunity: The Politicisation of Vaccination

This "compulsory vaccination" met with opposition from social democrats, liberals and the Catholic Centre Party. August Reichensperger, a member of parliament for the Centre Party, used a vivid example to underpin his criticism of compulsory vaccination in the Reichstag: "People are being threatened with prison sentences! Gentlemen, it seems to me there are already more than enough opportunities to be locked away in the German Empire; but to send a mother who is convinced that vaccination is harmful to prison for refusing it – that, gentlemen, does not tally with my concept of a civilised nation."

One rubs one's eyes in amazement at how familiar this debate sounds. Do we not hear almost identical arguments in today's debates about compulsory vaccination? As recently as the summer of 2013, the growing number of measles cases prompted Federal Health Minister Daniel Bahr to threaten to introduce compulsory vaccination, for which he was heavily criticised. Legal expert Ulrich Gassner, for example, spoke out clearly against such plans in the German daily Tages-

spiegel: "Compulsory vaccination is the unimaginative approach of a total prevention state."

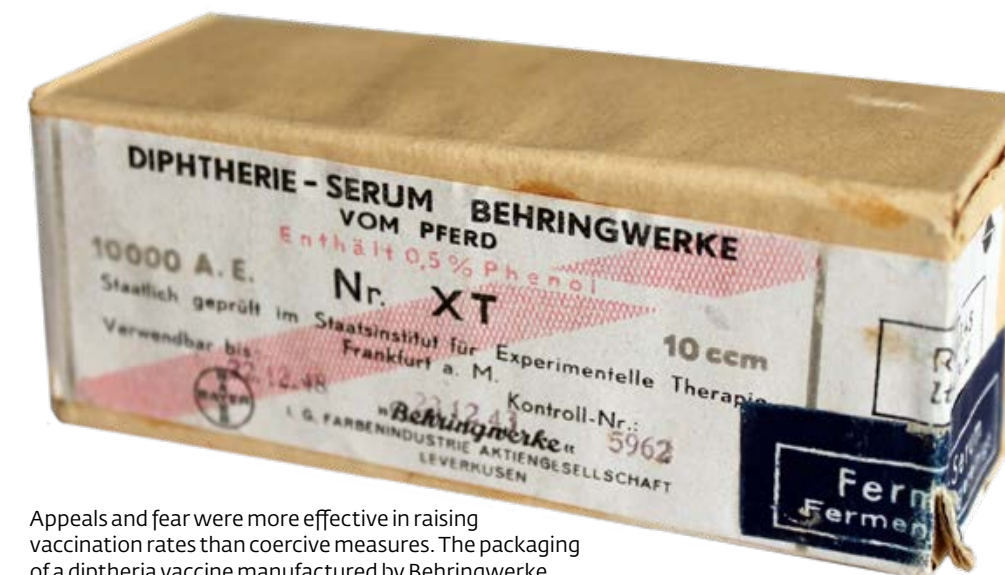
It is not my intention to draw easy parallels between the German Empire and the situation now. Nonetheless, I find the persistence of fundamental debates on the subject of vaccination remarkable. Because these debates were not 'just' about life and death. They were about society as a whole, about what is more important: the freedom of the individual or the safety of society? The history of vaccination therefore provides insights into concepts of society and how they have changed. And that is what is meant by the politicisation of immunity: the constant discussion about risk and safety, about the common good and individual wellbeing. Indeed it was this process of negotiation that made vaccination an ubiquitous point of reference for the Germans.

Seeing Immunity: The Mediatisation of Vaccination

A second trend, the mediatisation of vaccination, emerged at the start of the 20th century. Thanks to new forms of

media people could read, see and soon even hear about immunity everywhere. Pictures, pamphlets and reports on the radio "translated" expert knowledge into everyday life. Mediatisation spread information to more people and changed the level of knowledge as well. At exhibitions, in magazines and radio broadcasts, medical knowledge was condensed into simple images that made immunity comprehensible to everyone. On the radio or in diagrams, immunity became tangible and personal, translating the hopes and fears of parents into everyday conversation.

The most important medium was film. From the late 1930s onwards, Germans could watch immunity at the cinema. These films were rated as "educational", probably as a result of the clarity of their depictions. The Mayor of Munich praised a film about vaccination against diphtheria in 1942 not only for showing "with particular clarity" the administration of a vaccine, but more importantly in his opinion for showing the threat, namely a child suffering from diphtheria. Precisely that was the crucial aspect of the mediatisation process, that it gave a face to people's fears and hopes – quite literally. Images of happy and sick children made a more



Appeals and fear were more effective in raising vaccination rates than coercive measures. The packaging of a diphtheria vaccine manufactured by Behringwerke.



The media condensed medical knowledge into simple images that made immunity comprehensible to everyone. A late 1950s poster from the Federal Republic of Germany and an illustration from a GDR calendar of vaccination from the 1970s.



convincing argument than laws and punishments.

In short, the history of vaccination is a media history with social consequences. The mediatisation of immunity not only transformed the channels through which it was conveyed to people, it also changed knowledge itself. Popular images incorporated vaccinations into everyday life, so that they became part of the German pool of experience. The most recent example of this process is a media campaign by Germany's Federal Centre for Health Education (BZgA). The campaign references the popular TV talent show "Deutschland sucht den Superstar" [Germany Seeks the Superstar] using the slogan "Germany Seeks the Vaccination Certificate" for its poster, internet and film advertising campaigns.

Selling Immunity: Marketisation

A third trend is tied up with the media: the marketisation of immunity. Many posters, pamphlets and films on vaccination came from pharmaceutical companies with a specific interest in popularising immunisation. The marketisation of vaccination began in Germany in the 1930s, which is significant for two reasons. On the one hand, pharmaceutical companies introduced a new tone when addressing the public under National Socialism. While the German Empire and the Weimar Republic had often relied on state decrees, the Third Reich took a more pragmatic approach, no longer forcing new vaccines onto the population but relying on the influence of advertising to make people voluntarily accept vaccines. But how to explain that the discovery of voluntary action should come about, of all times, under this "bio-dictatorship"?

The involvement of pharmaceutical companies provides an answer. In the 1930s, large companies like "Behringwerke" coined a new brand of mar-

keting. They not only worked closely with the press, but also made films, radio programmes and even plays for the public that played luridly on the fear of disease. This marketing was highly successful. By the end of the 1930s, voluntary vaccinations against diphtheria often reached higher levels of participation than compulsory vaccination against smallpox had. Appeals and fear were clearly more persuasive than coercive measures.

The marketisation of vaccination highlights another trend, namely a shift in public health care that continued until privatisation began in the 1970s. While the production of vaccines and organisation of vaccination programmes had previously been in the hands of the state, under National Socialism, companies gained more influence. The so-called "vaccination certificate", in which the public health department registered vaccinations against diphtheria from the 1930s onwards, testifies to this growing influence. Such vaccination certificates had a long tradition in Germany and were nothing unusual. Only when you look at the reverse of the document, which features an advertisement for Behringwerke, does it become clear why the document was unusual. The public health departments' vaccination certificates were not issued by the state but directly by the companies selling the vaccine. So by the 1930s, the connection between certain trends was clear: the marketisation of vaccination was promoted by its mediatisation and based on its politicisation, since pharmaceutical companies used state infrastructures for marketing and distribution.

It would be naive to describe this interaction between market, media and state as a harmonious relationship. At the very latest by the time the Federal Republic of Germany was established, major tensions became apparent, as the introduction of the polio vaccine illustrates. In 1958, Behringwerke presented a new polio vaccine for immediate launch on the market. When

officials of the Federal Health Agency (BGA) demanded to inspect the production of the vaccine, they were shown the door – on the grounds of suspected "industrial espionage". This provoked outrage in West German newspapers. Interestingly the anger was directed more at the BGA than at the pharmaceutical company. "The BGA back-pedals" was one of the accusations levelled in the *Süddeutsche Zeitung*. At a time when polio diagnoses were rising all of a sudden, the state was viewed as a "naysayer" that was neglecting its duty to protect its citizens.

This case not only highlights the ties between the media and pharmaceutical companies, it also points to disputes over fundamental questions regarding the production of vaccines. Who was responsible for the safety of the German people now? The state, or private

industry? The fact that this question is still controversial today, as the scandal over the swine flu vaccine in 2009 demonstrated, highlights the continued relevance of this trend: interactions between the market, media and state are still a problem today.

Exchanging Immunity: Internationalisation

The Germans took the final step towards the normalisation of immunity in the 1960s. During this period they witnessed the internationalisation of vaccination. At first glance this statement appears confusing; after all, infectious diseases don't stop at national borders, and international exchange had been observed since the 19th century.

And yet in the 1960s, international cooperation in the area of vaccination took on a new quality. Only then did continuous international collaboration really get started, only then did international standards for vaccinations begin to apply, and only then did the whole world become the target of the systematic vaccination programmes of the World Health Organisation (WHO). Proof of this internationalisation can doubtless be found in most households in the form of the yellow "International Certificate of Vaccination" that was introduced in the Federal Republic of Germany in the 1970s. But why did the process of internationalisation start so late?

A key reason for internationalisation was a threat that wasn't all that new: the airplane. Airplanes were proving to be a nightmare from a health



Proof of the internationalisation of vaccination: a yellow Certificate of Vaccination like the one the author of this article also – naturally – owns.

perspective. Until that point, long sea journeys had played into the hands of immunisation concepts. To a certain extent they guaranteed that diseases broke out before being introduced into a new country, and could therefore be isolated. The airplane destroyed such safety concepts. In 1965, Berlin's health senator even warned that diseases like smallpox that were believed to have been eradicated had "once again become a constant threat because of modern travel." In the 1960s, several cases of smallpox in Germany made it clear that this warning was not exaggerated. Globalisation brought a new set of problems, for which different solutions were found by the experts.

First of all, advertising for vaccinations changed. The focus was no longer on the obligation to protect the "body of the German people" but rather on the safety of the individual. Vaccination programmes appealed to the interests of the individual, who was eager to become immune to global threats.

Secondly, the Germans, who were now participating in WHO programmes in Africa and Asia, were broadening their horizons. The vaccination programmes in those countries were not driven solely by humanitarian motives. The immunisation of "developing countries" was more a result of self-concern, because if distant centres of epidemics were brought under control, it lowered the risk of infection at home. International cooperation therefore created a win-win situation, as the BGA pointed out in 1961. In reaction to a case of imported smallpox in Düsseldorf, the agency demanded stronger commitment to vaccination campaigns in Asia and Africa because they were aimed at "fighting epidemics at their main places of origin rather than taking defensive measures predominantly in countries threatened by imported disease."

A third response to global threats was international cooperation between the US and Europe. However, the consensus on joint vaccination standards and the intensified exch-

ange of scientific knowledge not only encouraged collaboration. It also increased the competition, and even fuelled new conflicts. This competition was particularly obvious in Germany. While from the late 1950s onwards, the GDR scored several victories against former "endemic diseases" thanks to systematic vaccination programmes, the West Germans had difficulties introducing new vaccination programmes. And naturally the GDR made no secret of its success, boasting in pamphlets, posters and reports of its vaccination victories and contrasting them with the problems West Germany was experiencing. Higher rates of vaccination served as proof that it was in the lead in the race for a healthier or "better" society.

The internationalisation of vaccination is also a trend that still shapes everyday life today. On the one hand, vaccination has become more flexible and individualised, increasingly tailored to estimated personal risk and conforming to international standards. On the other hand international collaborations have intensified international competition. Nowadays vaccination rates have become a kind of yardstick that measures a state's progress or failure. Debates about "failed states" in Africa, which have been unable to fight off malaria, polio or tuberculosis through vaccination are current examples of this.

Summary

The history of vaccination is not only a history of health and disease, of life and death. It is a history of modern society and the changes it has undergone. These changes can be understood by examining four trends: the politicisation of vaccination, its mediatisation, the marketisation of immunisation and its internationalisation. A study of the history of vaccination therefore makes us immune to over-simplified success stories of the modern age. It draws our attention to ambivalences and areas of tension in modern societies, to the fraught relationship between the state and its citizens, between safety and freedom, between us and the big wide world.

An investigation of these areas of tension confronts us with a double challenge. Firstly, the history of vaccination can be examined only from interdisciplinary perspectives. Historians and medical experts, sociologists, political scientists and cultural scientists are all called on if we want to explore immunity as a concept of the modern age. Secondly, immunity is a borderless project. We should look beyond national boundaries and observe international collaborations or conflicts to gain insights into the negotiations with fear and safety that still accompany us today.

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