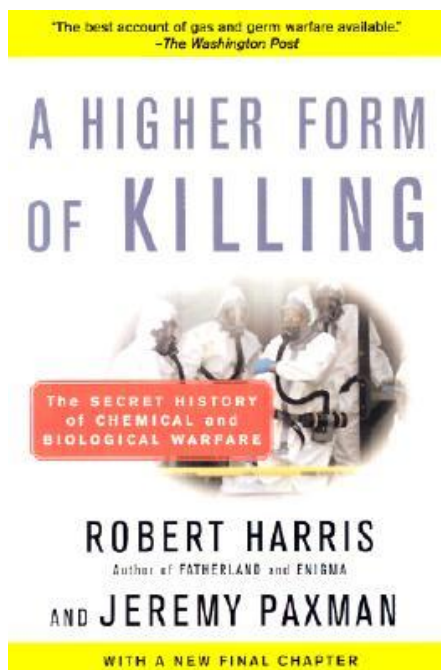




A Higher Form of Killing: The Secret History of Chemical and Biological Warfare

Robert Harris , Jeremy Paxman

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A Higher Form of Killing: The Secret History of Chemical & Biological Warfare opens with the first devastating battlefield use of lethal gas in World War I, and then investigates the stockpiling of biological weapons during World War II and in the decades afterward as well as the inhuman experiments conducted to test their effectiveness. This updated edition includes a new Introduction and a new final chapter exposing frightening developments in recent years, including the black market that emerged in chemical and biological weapons following the breakup of the Soviet Union, the acquisition of these weapons by various Third World states, the attempts of countries such as Iraq to build up arsenals, and--particularly and most recently--the use of these weapons in terrorist attacks.

A Higher Form of Killing: The Secret History of Chemical and Biological Warfare Details

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From Reader Review A Higher Form of Killing: The Secret History of Chemical and Biological Warfare for online ebook

Jeremy Cox says

Not a fast read. But well told history, and there is more to the subject than most people today understand or appreciate. This topic should be much more widely understood.

John Lindsey says

Overall this is a pretty enjoyable history of chemical and biological warfare in the 20th century. I have a few problems with it, however, the least of which is that it's a bit dry and repetitive.

I was annoyed that the authors sort of glossed over the human experimentation conducted by the US Army Chemical Corps at Edgewood Arsenal. I realize this book is fairly broad in its scope, but one would imagine that a chemical weapons testing program that lasted more than 20 years and utilized over 7,000 human test subjects would merit more than a few paragraphs.

I also found it troubling that the final chapter, written in 2001, also states that "much of Iraq's CBW arsenal remains intact" and that "it may be regarded as almost certain that Iraq has continued to develop CBW." Baloney.

Kevin Butler says

This is a good read with some very interesting/scary facts throughout. However I did feel after a while you were just reading the same thing over and over, they made these new chemicals but they never used them, they improved them but never really used the.

Tom Kammerer says

Starts off fascinating, becomes somewhat repetitive and boring, and then finishes with a flourish although quickly sketched out

Janice says

i read this book 13 or 14 years ago. really! (yes! i'm just adding it now!) not that it was forgotten. it has lived in the back of my brain ever since. when the anthrax scare happened, when i saw mr. death, whenever the X-files had episodes about strange diseases, whenever i think of sheep on rocky scottish islands (for reals! look up Gruinard Island), whenever W mentioned imaginary WMD's, and now, yesterday, when i listened to the new episode of radiolab (<http://www.radiolab.org/2012/jan/09/>) and found out that fritz haber, father of biowarfare, lived in the city where i now live. in fact, the title of the book is from a quote by this lovely piece

of work. this is what you get when you invent, and USE, chlorine gas: your wife kills herself in protest of your actions, your government is taken over by nazis, who first drive out jewish people like yourself and then take another of your inventions, zyklon A, and make it even deadlier, zyklon B, and more effective at killing off your relatives. that's just part of it. i'm beside myself and a little angry. just, i dunno, read the book. if you can stomach the fact that in WWI the opposition had no idea what mustard or chlorine gas were, so when they were hit with it they would run. the gas would overtake them and they would run, and then they would be gasping for air, so they would remove their gasmasks. gasping = quicker, more painful death full of mucus and blood and drowning in your own saliva and seriously, this book had an effect on me. duh.

Rune says

I only read up to pg 132, which is why this is a freeze it. I'll most likely come back to the book again, but right now, I really enjoyed what I did read.

Science (Fiction) Comedy Horror and Fantasy Geek/Nerd says

The consequences of "natural" epidemics have been burned into the collective memory. Now imagine artificial plagues.

Please note that I put the original German text at the end of this review. Just if you might be interested.

It began with pest corpses catapulted into besieged cities, contaminated wells and gifted blankets. The history of biological warfare is ancient. And with the help of technology, their potential for a wildfire is fully developed.

Thus, the genome of the causative agent of the Spanish flu was recovered from exhumed corpses, decrypted, rebuilt and brought back to life. Incidentally, it is related to the ordinary flu. This is in contrast to the targeted panic about bird and swine flu. Extinct smallpox still exists in laboratories of the Russians and Americans. For research purposes, because of the defensive biological warfare and because of the prevention and deterrence idea. So it is a good thing that the Americans unilaterally canceled some parts of the biological weapons convention, have already registered some patents and intensified their research in this area again. Several properties make mushrooms, bacteria, and viruses interesting for researchers. Among other things, high infection rates with long incubation times, survival outside of a host, insensitivity to weather influences and, in particular, the mortality rate are in demand. The more percent, the better.

Every illness has its advantages and disadvantages in this regard. Although hemorrhagic fevers are among the absolute leaders regarding lethality with up to 90 percent, they are highly contagious due to droplet infection. However, they survive only very briefly in the open air and do not tolerate cold at all.

The plague is psychologically highly efficient but loses its horror due to its excellent treatability with antibiotics.

At this point, biochemistry and genetic engineering come on the scene. Because it can iron out annoying Achilles heels such as lack of resistance to UV radiation, weather conditions, and antibiotics as well as low risk of infection with the conveniences of modern technology. There is intensive research in this area. Well-known examples are the ebolapox, on which the Russians allegedly worked, UV-resistant germs or chimeras from antibiotic-resistant hospital germs and plague. One only has to look at all abilities and transmission paths of known pathogens and come up with a combination of wishes. With the advancement of research and technology, numerous varieties will be opened the door. As not only new artificial life forms are produced, but also with previously unknown, unique germs experiments are made. For example, from the undeveloped rainforests or from thawing permafrost soils. These will increase the range of possible variations even

further.

Ethnic weapons are specializations in the genetic characteristics to fit a particular population group. Based on the fact that lactose intolerance and other peculiarities that occur almost only on individual continents and in their population, common genetic characteristics such as lactose tolerance or immunity to malaria can be used as the target. This will make it possible to individually create these tailored diseases, against which other peoples are immune. One can go into more detail and expand or contract the target group. The human genome project has already established a basis, and initial successes are already showing its feasibility. For terrorism, in addition to the conventional release of germs, it offers the option of living, biological bombs. A suicide bomber infected with a new super-agent, already acting as a carrier. Because of a more extended incubation period of several weeks, he has no symptoms whatsoever and can travel everywhere. He can precisely infect as many people as possible in airports, subway and train stations, shopping malls, significant events and critical political, military and economic points and centers. Before he falls ill himself, he disappears to die without the outbreak being reported, and as soon as the first symptoms appear in the population, one expects an ordinary flu episode.

Since many diseases such as smallpox are now considered extinct, vaccines are no longer administered for decades due to the associated risk. Thus, the immunity of the entire population decreases in various diseases and therefore attracts their re-use as a weapon.

At the end of the First World War Germany was a leader in biological and chemical warfare, but these programs were discontinued within the following years and not resumed. Imagine what would have been possible, for example in cooperation with the allied and active Japanese working people, if the research had been actively promoted. The Japanese were so leading in this field that senior medical professionals contributed significantly to the development of similar programs among Russians and Americans after the war.

Since most of today's applications are subject to military secrecy, the actual state of research can only be guessed. There are hardly any official data on biowarfare programs, apart from sparse fragments. Except, for example, the fact that genetically modified organisms have been used for research for years.

That many of the research would be very interesting for medicine, is tragic. Military secrecy prevents peaceful use. Not only that the existing diseases are not cured. On the contrary, instead vast sums of money are invested and worse plagues created.

The psychological factor makes biological weapons superior to chemical weapons. A perfidious pathogen, with a week-long incubation period, would lead to the collapse of public order. Paranoia would spread. Besides, if the symptoms are similar to those of the typical flu in the cold season, the chaos is perfect. Whether it's terrorist regimes, regular terrorists or official governments, they are the producers.

A primary focus of development is always on the demanding recognition of the warfare agents. So that they can work as long as possible. And then it is already too late. It is only a matter of time until the beginning age of bioterrorism.

Die Folgen von „natürlichen“ Seuchen haben sich ins kollektive Gedächtnis eingebrannt. Jetzt stelle man sich erst künstliche Plagen vor.

Es begann mit in belagerte Städte katapultierten Pestleichen, verseuchten Brunnen und geschenkten Decken. Die Geschichte der biologischen Kriegsführung ist uralt. Und mit Hilfe der Technik wird ihr Potential für einen Flächenbrand voll entfaltet.

So wurde das Erbgut des Erregers der spanischen Grippe aus exhumierten Leichen gewonnen, entschlüsselt, nachgebaut und wieder zum Leben erweckt. Er ist übrigens mit der normalen Grippe verwandt. Das steht in Kontrast zur gezielten Panikmach rund um Vogel- und Schweinegrippe. Die eigentlich ausgestorbenen Pocken existieren noch in Laboratorien der Russen und Amerikaner. Zu Forschungszwecken, der defensiven biologischen Kriegsführung wegen und um dem Präventions- und Abschreckungsgedanken gerecht zu werden. Da trifft es sich gut, dass die Amerikaner den Biowaffensperrvertrag einseitig aufgekündigt, bereits einige Patente angemeldet und ihre Forschungen in diesem Bereich wieder intensiviert haben.

Es gibt verschiedene Eigenschaften, die Pilze, Bakterien und Viren für die Forscher interessant machen.

Begehrte sind unter anderem hohe Ansteckungsraten bei langen Inkubationszeiten, Überleben außerhalb eines

Wirts, Unempfindlichkeit gegenüber Witterungseinflüssen und im speziellen die Mortalitätsrate. Je mehr Prozent, desto besser.

Jede Krankheit hat diesbezüglich ihre Vor- und Nachteile. So zählen hämorrhagische Fieber zwar in punkto Tödlichkeit mit bis zu 90 Prozent zu den absoluten Spitzenreitern und sind per Tröpfcheninfektion hoch ansteckend. Allerdings überleben sie nur sehr kurz in freier Luft und vertragen Kälte überhaupt nicht. Die Pest ist zwar psychologisch hochwirksam, verliert aber durch ihre gute Behandelbarkeit mit Antibiotika das meiste an Schrecken.

An diesem Punkt tritt die Biochemie und Gentechnik auf den Plan. Denn es lassen sich lästige Achillesfersen wie mangelnde Widerstandskraft gegen UV-Strahlung, Witterungseinflüsse und Antibiotika sowie zu geringe Ansteckungsgefahr mit den Annehmlichkeiten moderner Technik ausbügeln. Es gibt intensive Forschungen in diesem Bereich. Bekannte Beispiele sind die Ebolapocken, an denen die Russen angeblich arbeiteten, UV-resistente Keime oder Chimären aus antibiotikaresistenten Krankenhauskeimen und Pest. Man braucht sich nur alle Fähigkeiten und Übertragungswege bekannter Erreger anzusehen und sich eine Wunschkombination auszudenken. Es werden mit Voranschreiten der Forschung und Technik etlichen Spielarten Tür und Tor geöffnet. Da nicht nur immer neue künstliche Lebensformen hergestellt werden, sondern auch mit bisher unbekannten, neuen Keimen experimentiert wird. Beispielsweise aus den unerschlossenen Regenwäldern oder aus auftauenden Permafrostböden. Diese werden die Bandbreite an Variationsmöglichkeiten noch weiter erhöhen.

Ethnische Waffen sind eine Spezialisierung auf die genetischen Eigenschaften einer bestimmten Bevölkerungsgruppe. Von der Tatsache ausgehend, dass Laktoseintoleranz und andere Besonderheiten, die fast nur auf einzelnen Kontinenten und bei deren Bevölkerung vorkommen,

Weit verbreitete, genetische Besonderheiten wie Laktosetoleranz oder Immunität gegen Malaria können als Zielinstruktion heran gezogen werden. Damit wird es möglich werden, individuell auf diese zugeschnittene Seuchen zu kreieren, gegen die andere Völker immun sind. Man kann noch näher ins Detail gehen und die Zielgruppe erweitern oder verkleinern.

Im Rahmen des Humangenomprojekts wurde bereits eine Grundlage geschaffen und es sind bereits erste Erfolge zu verbuchen, die die Machbarkeit belegen.

Für den Terrorismus bietet sich neben der konventionellen Freisetzung von Keimen, die Option der lebenden, biologischen Bombe. Ein mit einem neuen Supererreger infizierter Selbstmordattentäter, der bereits als Überträger fungiert. Der allerdings wegen einer längeren Inkubationszeit von mehreren Wochen noch keinerlei Symptomatik aufweist ungehindert reist. Er kann gezielt in Flughäfen, U Bahn- und Bahnhöfen, Einkaufszentren, Großveranstaltungen sowie neuralgischen politischen-, militärischen und wirtschaftlichen Punkten und Zentren möglichst viele Menschen infizieren. Bevor er selbst erkrankt, verschwindet er um zu sterben, ohne dass der Ausbruch gemeldet wird und sobald die ersten Symptome in der Bevölkerung auftreten rechnet man mit einer normalen Grippewelle.

Da viele Krankheiten wie die Pocken mittlerweile als ausgestorben gelten, werden aufgrund des damit einhergehenden Risikos seit Jahrzehnten keine Impfungen mehr verabreicht. Somit sinkt die Immunität der Gesamtbevölkerung bei diversen Krankheiten und attraktiviert damit ihre erneute Nutzung als Waffe.

Am Ende des ersten Weltkriegs war Deutschland führend im Bereich der biologischen und chemischen Kriegsführung, diese Programme wurden allerdings innerhalb der folgenden Jahre eingestellt und nicht wieder aufgenommen. Man stelle sich vor was, etwa in Zusammenarbeit mit den verbündeten und in diesem Sektor aktiv arbeitenden Japanern, möglich gewesen wäre, wenn die Forschungen aktiv gefördert weiter getrieben worden wären. Die Japaner waren so führend in diesem Bereich, dass leitende Mediziner nach Kriegsende maßgeblich zum Aufbau ähnlicher Programme bei Russen und Amerikanern beitrugen. Da die meisten der heutigen Programme militärischer Geheimhaltung unterliegen lässt sich der wirkliche Stand der Forschung nur erraten. Es gibt zum Beispiel über das deutsche Biowaffenprogramm, außer spärlichen Fragmenten, kaum offizielle Daten. Außer etwa, dass seit Jahren gentechnisch veränderte Organismen zur Forschung verwendet werden.

Dass viele der Forschungen für die Medizin hoch interessant wären, ist tragisch. Die militärische Geheimhaltung verhindert eine friedliche Nutzung. Nicht nur, dass die bestehenden Krankheiten nicht geheilt werden. Es werden im Gegenteil stattdessen mit Unsummen noch schlimmere Plagen erschaffen. Der psychologische Faktor macht die Biowaffen den Chemiewaffen überlegen. Ein perfider, mit einer

wochenlangen Inkubationszeit ausgestatteter Erreger, würde zum Zusammenbruch der öffentlichen Ordnung führen. Die Paranoia würde um sich greifen. Wenn die Symptome zusätzlich denen einer normalen Grippe in der Erkältungssaison ähneln, ist das Chaos perfekt.

Egal, ob es Terrorregime, normale Terroristen oder offizielle Regierungen die Produzenten sind. Ein Hauptaugenmerk der Entwicklung dürfte immer auf der schweren Erkennbarkeit der Kampfstoffe liegen. Damit sie möglichst lange wirken können. Und es dann längst zu spät ist. Bis dahin ist es nur eine Frage der Zeit im beginnenden Zeitalter des Bioterrorismus.

Rebecca says

I mean, even the title is bone-chilling (it's a quote from Fritz Haber, commercializer of the Haber nitrogen-fixation process, eerily enough). A great, detailed read on the history of chemical weapons from Yves to today.

Ben Taylor says

Robert Harris's [A Higher Form of Killing](#) is filled with history on the use of chemical and biological warfare. WW1 started the first usage of lethal gasses on the battlefield and was soon evolved into more effective chemical weapons. It never gave a straight story line on the past events toward chemical warfare but instead talked about how chemical warfare was used in society. This book went slowly due to the fact it seemed to just be facts instead of a story with facts incorporated in it. However, if you are trying to learn more about the reasons and places to use chemical warfare then this book would be very interesting for you to read. One thing that is interesting about this book is that it talked about other countries who are trying to recreate these killing devices. It's amazing how fast third world countries can catch on but it's also very dangerous. Through reading this book, you get to learn about the interesting and somewhat secretive facts about how chemical warfare is used in terrorist attacks and other dangerous circumstances.

Jane Walker says

An updated version of a book first published 30 years ago. It's a history which most of us know nothing about, apart from the use of gas in WWI. Crisply written, absorbing.

Jasmine says

Equal parts fascinating and terrifying

Paul says

An interesting read. It answered all my questions I had on the subject (when were chemical weapons first used, were they used in WW2, what did people at the time think of the weapons, what has happened since

etc.). This seems to be one area that however much nobody likes the weapons there is never enough trust with other countries (especially known unstable countries) for the major powers to be able to give up stockpiling or research for the sake of defence.

Some of the writing could have been smoother as at times it appeared to go back on previous events described which for me caused some confusion, but a worthwhile read on a little understood subject.

Lucy says

It feels odd to give 4 stars to a book that gave me the creeps. Why do I read these things? Will it ever be possible to "un-read" something? CBW (chemical and biological warfare) really began with the use of gas in World War I and things continued to escalate from there. The major world powers agreed that they wouldn't initiate the use of chemical or biological weapons. But since they didn't trust each other they dedicated a LOT of resources toward defending against their use. In the name of defense they did a lot of research into newer, more lethal weapons and produced them in quantities that would annihilate anyone who tried to attack them first. It's all very disconcerting to think about. One small consolation is that the bulk of this book was written 35 years ago, which makes some things feel so ancient that they surely aren't applicable anymore, right?

Tara says

Terrified.....
