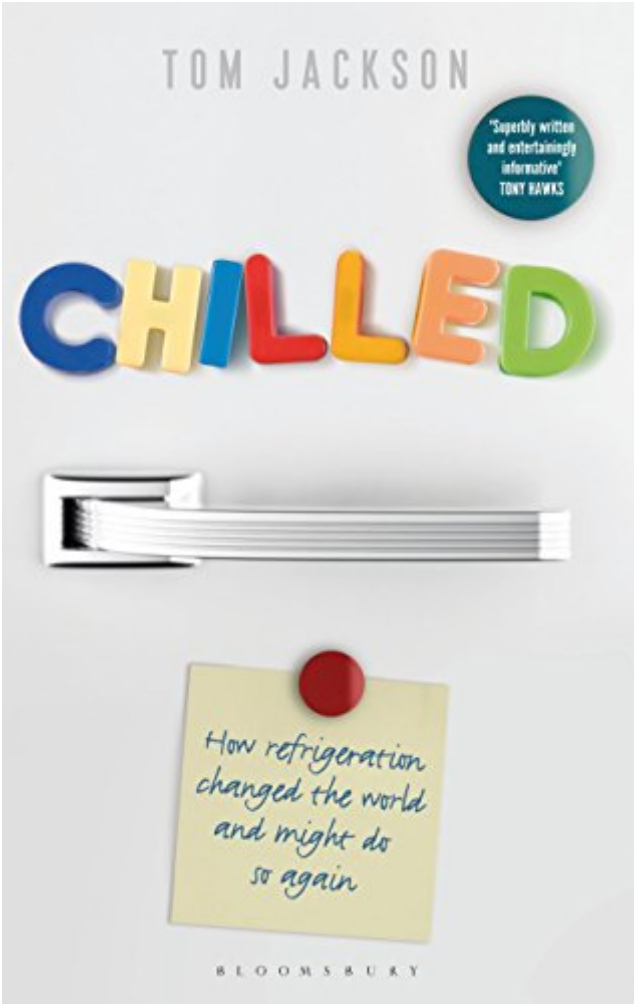
Chilled: How Refrigeration Changed The World And Might Do So Again



Synopsis

The refrigerator. This white box that sits in the kitchen may seem mundane nowadays, but it is one of the wonders of 20th century science â “ life-saver, food-preserver and social liberator, while the science of refrigeration is crucial, not just in transporting food around the globe but in a host of branches on the scientific tree. Refrigerators, refrigeration and its discovery and applications provides the remarkable and eye-opening backdrop to Chilled, the story of how science managed to rewrite the rules of food, and how the technology whirring behind every refrigerator is at play, unseen, in a surprisingly broad sweep of modern life. Part historical narrative, part scientific mystery-lifter, Chilled looks at the ice-pits of Persia (Iranians still call their fridge the 'ice-pit'), reports on a tug of war between 16 horses and the atmosphere, bears witness to ice harvests on the Regents Canal, and shows how bleeding sailors demonstrated to ship's doctors that heat is indestructible, featuring a cast of characters such as the Ice King of Boston, Galileo, Francis Bacon, and the ostracised son of a notorious 18th-century French traitor. As people learned more about what cold actually was, scientists invented machines for making it, with these first used in earnest to chill Australian lager. The principles behind those white boxes in the kitchen remain the same today, but refrigeration is not all about food â “ for example, a refrigerator is needed to make soap, penicillin or orange squash; without it, IVF would be impossible.Refrigeration technology has also been crucial in some of the most important scientific breakthroughs of the last 100 years, from the discovery of superconductors to the search for the Higgs boson. And the fridge will still be pulling the strings behind the scenes as teleporters and intelligent computer brains turn our science-fiction vision of the future into fact.

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Customer Reviews

Chilled is one of my favorite types of books. It deals with a subject that, until I opened the book, I didnâ ™t even know I was interested in. Few things in the house seem more boring than the lowly refrigerator, it just sort of hums along, keeping things cold, and holding up the household messages. And yet, as Tom Jackson shows, it can trace its lineage back further than even the most dedicated genealogist. Finally, modern civilization is only possible with inexpensive and ubiquitous refrigeration.=== The Good Stuff ===* The title is almost a bit of a misnomer. The book certainly talks about the history of keeping things cold, starting with the cooling towers of the ancient Persians and ending with ultra-cold science and maglev trains. But a good portion of the material is also the history of science. To understand the modern refrigerator, you have to understand basic thermodynamics and chemistry. Jackson takes us through mankindâ ™s struggles, from the rudimentary science of the ancient Greeks all the way to the 21st century.* While a lot of the book is â œscienceâ •, the book is designed for the layman. For example, there is a bit of the history of the discovery of various gaseous elements such as hydrogen, oxygen and nitrogen. The author does a marvelous job of describing the detective work that went into these discoveries, but doesnâ ™t get bogged down in the technical details. As a reader, you can appreciate the cleverness even if you donâ ™t understand, or care to understand, the characteristics of ideal gasses. Jackson also touches on the showmen of the day, using rudimentary science to astonish kings and commoners. The performances have become grander, but any fan of modern magicians would recognize the techniques.

Chilled: How Refrigeration Changed the World and Might Do So Again by Tom Jackson, is a mostly interesting and always informative look at the science of cold, at first in general application and then with specific regard to our modern idea (though it turns out to be not all that modern) of refrigeration. Though it perhaps misses some opportunities, it’s an easy one to recommend for those interested in the specific concept or just the general history of science.Jackson begins with a general overview of

the basic refrigerator, its place in thecold chain" (the links of cooling science/application that can send food around the world to our homes), and very basic science regarding entropy. He has an excellent voice from the very beginning, able to convey information both clearly and stylishly, as this passage shows:" A refrigerator is a 'heat pump', which on the face of it is perhaps an uninspiring term. However, dig a little deeper into the concept and it reveals something rather amazing--tiny acts of rebellion against the conformity of the universe." After this very quick overview, he jumps into the history of chilling beverages and creating ice.This part of the story begins probably a few thousand years earlier than most might expect, with explanations of how ancient cultures (Sumerians, Persians, Egyptians) used evaporative cooling to chill their wine and other drinks or make ice to do the same. Interestingly, there seemed little interest in using it with food, though Jackson explains, clearly as always, the benefits of doing so.

Why do schools teach only political and military history, when our lives have been made much different from those of our ancestors not by politicians or generals, but by experimenters and tinkerers. Why can you name (at least some of) the wives of Henry VIII, but â " considering how you are able to read this â " you have no knowledge of the late Doug Engelbart. Did Millard Fillmore change the way we live to the degree that Edwin Howard Armstrong did?That's why, despite its faults, I enjoyed Chilled so much. It's a feast of science trivia. Tom Jackson writes with a dry British wit, and he dumbs such abstruse topics as quantum mechanics down enough for me to almost understand. Quantum mechanics? Be advised that modern mechanical refrigeration is only discussed in a small portion of this book, beginning at page 161. More of the book is devoted to what heat and cold actually are, beginning with the four elements of the ancient Greeks, Earth, Air Fire and Water. He then goes off on a further tangent by discussing the ancient theory of disease as an imbalance of temperaments. I found the most interesting chapters to be those discussing the scientific and engineering advances in ultra-cold, near absolute zero.Americans seem to think that we invented everything (there are many perfectly awful book for sale here which state with confidence that Thomas Edison invented the light bulb and movies), so it's good to get such history from a British perspective, but it turns out that, while humans have always been trying to keep things cool, the modern practice of refrigeration through transporting and selling ice was mainly a Yankee enterprise. (We in the Blue states have 55 words for snow and ice â " that is, 53 in addition to snow and ice.

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