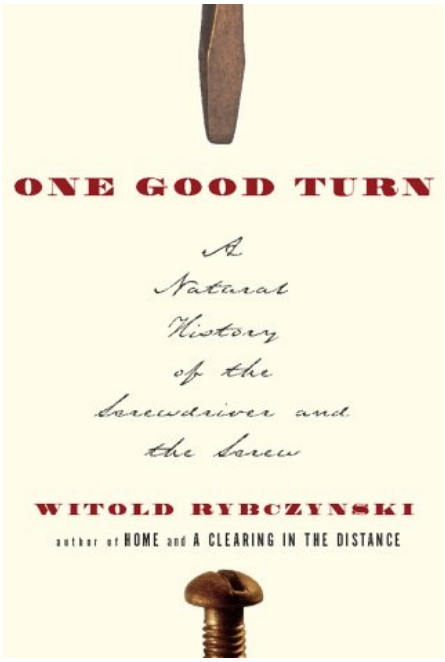

One Good Turn: A Natural History of the Screwdriver and the Screw

Witold Rybczynski

One Good Turn: A Natural History of the Screwdriver and the Screw

Witold Rybczynski

One Good Turn: A Natural History of the Screwdriver and the Screw Witold Rybczynski
When editors at The New York Times Magazine were designing millennial issues and wanted a viable answer to the query, they wisely turned to Witold Rybczynski -- renowned social and architectural historian, author of Home and The Most Beautiful House in the World, a man who built a house by hand. Rybczynski's quest to identify the tool that changed the course of civilization became a story of mechanical discovery and genius as illuminating and engaging as Dava Sobel's Longitude. One Good Turn tells the tale of the screwdriver and the screw. Leonardo da Vinci sketched a machine for carving wood screws and the rest is delightfully compelling history. Rybczynski demonstrates exactly how, without screws, there would be no telescope, no microscope -- in short, no enlightenment science -- and why the Industrial Revolution would still be waiting in the wings. The screwdriver, perhaps the last hand-tool in a world gone cyber, represents nothing less than the triumph of precision and mass production. "Savvy and highly readable", (San Francisco Chronicle) Witold Rybczynski renders an uncommonly incisive and lively portrait of human endeavor.

One Good Turn: A Natural History of the Screwdriver and the Screw Details

Date	:	Published September 19th 2000 by Scribner (first published March 28th 2000)
ISBN	:	9780684867298
Author	:	Witold Rybczynski
Format	:	Hardcover 176 pages
Genre	:	History, Nonfiction, Science, Technology, Microhistory, Engineering

From Reader Review One Good Turn: A Natural History of the Screwdriver and the Screw for online ebook

Joanie Sompayrac says

About 15 years ago, micro-histories were the rage. I don't remember how many various books I purchased on the history of the pencil, spices, chocolate, numbers, etc. This book was one of those many purchases. For some reason, I never read it. So, I read it this week. I don't know why I thought I would be interested in this -- a history of some tools. I don't really even use tools except in extreme emergencies, and even then, I usually misuse tools. Anyway, the author assumes a level of knowledge in discussing the history of the screwdriver and the screw that I just do not have. He did briefly discuss the history of the button, and I found that interesting. He had illustrations of different screwdrivers like the Undertaker's screwdriver, the Scotch pattern screwdriver and the London pattern screwdriver. He also talked about the history of the saw which was sort of interesting. All in all, it wasn't a bad book, just not the book for me.

Jennifer says

An entire book about a screwdriver works because Witold Rybczynski is such a great writer.

Stephany says

I have picked up and put down this book several times before, but read it through quickly. It is FASCINATING (though you may not think the screwdriver and screw could be so) and absolutely delightful for the thinking and research process described. Though I've read other books by Rybczynski, I didn't appreciate what an excellent researcher he (and let's be honest, the team of researchers noted in the back of the book) is. Many of the paths Rybczynski follows begin with close examination of the tools or presence of screws in images from the 1400s and later, which he follows backward all the way to Archimedes. The narrative felt very much like a detective novel after a certain point.

If you read this, please note that there is a Glossary of Tools in the back of the book, which I did not see referred to from the main text. I may have missed it, but I truly did not see a footnote or reference to the glossary, which contains images of tools mentioned that one may not be familiar with. I wish I'd noticed this before the end of the book!

Koen Crolla says

Garbage.

The book starts with Rybczynski relating how he was disappointed to be asked, in 2000, to write an article on the ``the best tool'' of the last millennium, then disappointed again when the asker wanted it to be about a tool-tool and not eyeglasses. Very begrudgingly, he goes over every woodworking tool he knows (which isn't many) but realises almost all of them are much older (though how old, he has no idea; he consistently

credits the Romans for inventing everything from the try square to the hand plane, despite all being at least centuries older than Rome itself). Eventually his wife suggests the screwdriver, which he chagrinedly accepts.

The rest of the book is a laborious account of the research he did for the article with all the enthusiasm of a sullen teenager (because fuck synthesizing information—he hated writing this, so by gum, you're going to hate reading it), while constantly being distracted by things he would much rather be reading or writing about, like the arquebus† or the early history of machining.
Along the way it becomes clear he doesn't actually know how to do research, or even really know how screw fasteners *work*, be it in sheet metal (where he thinks they require a threaded hole) or in wood (where he thinks they're a mechanical bond, in contrast to nails' friction bond; in fact, the whole point of screws is that they increase friction compared to nails, and the only mechanical bond in this area is the one provided by clinched nails).

In the final chapter he finally suddenly discovers that screws are actually much older than he had assumed and were known to the Romans and the Greeks (as fasteners, not just as the Archimedes screw), but rather than rewrite anything in that light and maybe be forced to acknowledge the screwdriver wasn't actually invented in the last millennium, Rybczynski just types up some free association on the topic of Archimedes before ending the book abruptly, without any sort of conclusion.

A lot of garbage topical histories have been written in the last couple of decades, and failures of research tend to be the rule rather than the exception, but at least the authors most of the others have the decency not to complain about being forced to write them all through the book.
A solid, interesting history of the screwdriver can certainly be written. I guess it won't be now, though, since this exist.

---

† The name of which he thinks is from the Italian *arcabugio* (which he claims means ``hollow crossbow", somehow) through the Spanish *arcabuz*. In reality, those words and the English all came from the Dutch *hakebus* (``hook tube"), through the French *harquebuse*.

Elizabeth says

This book appeals to me in a number of ways. The first appealing aspect was the author. Rybczynski's style and reputation would make me inclined to read works of his on any number of subjects. I first encountered his writing as part of the architecture curriculum at UL, so I went in to his works expecting to be impressed. If those guys give it a stamp of approval, it must be exceptional.

The subject was, in fact, the next most appealing part of the book. As Rybczynski points out, the screw is a "small but hardly trifling' device. It's one of those objects that is seen so often that it almost becomes invisible. It's also one of those small things that makes its importance known much more profoundly by its absence.

The thing that I found most appealing, though, was the manner in which Rybczynski organized One Good Turn. This is a text that I would actually be very interested in using as a supplement to the Research and Writing about Culture course that we teach in UL's English Department. The author describes the function of

a number of the writing methods that we try to cultivate in our writing students. For example, he writes in a recursive manner, explaining that this book began as an essay for The New York Times. In addition, he describes his research methods which include searching various texts (starting with the OED!) for references to earlier texts, and so on.

Various illustrations and antidotes make the subject matter more relevant to the average person, engaging, and easier to understand. I would recommend this book to anyone with an interest in woodworking, design, mathematics, mechanics, engineering, history, or writing and research processes.

James Williams says

There's not a whole lot to say about this book. It's pretty much exactly what it says on the tin: A popular history of the screwdriver and (somewhat necessarily) the screw.

Unfortunately, as important as the screw is to our modern civilization, there's not been a lot of academic work around it. So the majority of the book's prose is the author's descriptions of his visiting museums and libraries to try to find out as much as he can about the the history of this little marvel of the simple machines.

The best way to say it might be that this book reads like a travel book recounting the adventures of a traveling historian. It's a short, easy read and it passes the time wonderfully on a Sunday afternoon. It's not a deep literary work or a serious piece of nonfiction. But, it never claimed to be so I certainly won't hold that against it.

Coqueline says

I don't particularly enjoy history, but I love reading the history of humble, useful everyday things, like the longitude, curry sausage, and in this case; the screwdriver and the screw (who cares about battles if you can learn how screws came about?).

After reading it, I feel this book can use a lot more illustrations. Some of the machinery described is just way too complicated for mental visualisation.

Tim says

Very good book. Takes a bit to really hit its stride but if you know very much about any of a number of historical eras it will connect some seemingly not related dots. I especially found the chapter on the screw interesting. Reminded me a bit of the old Connection series by James Burke.

Firat Tarman says

Günümüzde kullan?lan pek çok el aletinin kökeni eski ça?lara kadar uzanmaktad?r. Yak?n zamanlarda

ke?fedilen önemli bir el aleti bulmak için yola ç?kan yazar?n vard??? nokta vida ve tornavida olmu?.

Pek çok bulu? için yaz?lm?? çok çe?itli kitaplar bulabilirsiniz. Ancak vida ve tornavidan?n tarihi üzerine yaz?lm?? ba?ka bir kitap var m?d?r bilemiyorum, varsa da ben görmedim.

Vida ve tornavida gibi pek de önemsemedi?imiz alet edevat hakk?nda 161 sayfal?k bir kitap ç?kmas? enteresan. ?lgi duyarsan?z okuyabilirsiniz. ?tirah edeyim ki ben ba?lay?nca bitirmek için baya?? çaba sarfettim. Biraz a??r dilli bir kitap. Ak?c? bir dilde yaz?lm?? bir?eyler ar?yorsan?z pek denemeyin.

Yorumun tamam?n? a?a??daki ba?lant?dan okuyabilirsiniz;

http://www.teknomani.com/2016/09/kita...

---

ccccurt Heimbuck says

If a book has "natural history" in the title, I'm going to love it.

I found this book at Goodwill, and it's exactly the type of book I'm looking for when I go on my book hunts--specific but while saying something about the entirety of human knowledge, quirky, and something that will lead me to lots of other books.

1.1 says

A nice and quick overview of the invention that changed everything forever, brought us to the moon and back, and let one man pull 60 tons of weight without breaking a sweat over two thousand years ago. So the subject, at least, is a very cool and often overlooked one. The writing is mostly agreeable but very much standard for this genre of book, the research is present and account for, and a lot of interesting things are covered, though this book could easily be 150 pages longer and go into a bit more detail—but then, it is kind of a fluff book, and beyond that just an overview, so that can be excused.

Harry Chua says

If you are an engineer or you are interested in mathematics, this is a good book for the weekend. The author has done a good job tracing back the history of screw and threaded devices... Keep this book away from your girlfriend ha

---

Steve says

This book has evoked an odd response in me, one that I am not fully able to characterize. I *should* like this book more than I do, but overall, it leaves me somewhat flat. It is not the writing as such, I wish more

popular authors sought this level of prose style as opposed to a more glib and pop-pandering style which is all too common.

Oddly, I suppose it is in large part the book's brevity. Usually I think authors are too prolix, but here I think Rybczynski is going too fast and failing to take his time with the material. As I understand it, the book evolved out of a magazine article, and I think that is the primary weakness. Rather than use the book to bring out a different, fuller story, Rybczynski has produced a work that has the feel of an extended magazine article. For instance, it completely lacks a conclusion, even of the most cursory sort.

Also, I am left bemused by his decision to place the discussion of Hero, Archimedes, and the screw thread at the *end* of the book. I suspect the author did not spend the time to fully outline his argument here. While a strict chronological account is not always the best, I think he should have discussed the screw thread much earlier and woven it into the story of the screwdriver.

I suppose that, having read quite a lot in the literature of science and technology studies in the last few years I am expecting a higher level of analysis, but such analysis does not have to be of the forbidding academic kind. Rybczynski has revealed just how much stuff (culture, history, pragmatic concerns) is packed into even so simple a tool as the screwdriver, I just wish he had spent more time and produced a more definitive account. This is a great start, but there is further to go.

Mary Catelli says

For a rather modern tool, it takes a good amount of hunting to track down the history and origin of the screwdriver.

It opens with an account of his being asked to do an article on the tool of the millennium. This is somewhat complicated by his hunt through his wood-working tools to find those that aren't millennia old. To be sure, there are some. Like the brace.

And as he finally realizes, the screwdriver, which indeed seems to be 18th century.

It takes some hunting. A French reference, older than the oldest English one by half a century, talked about the tournevis. English ones were called "turnscrews" -- a direct translation -- for a while, though the author, who ran across the assertion, didn't really believe it until he stumbled on a page of such "turnscrews" in a catalog.

There were screws in the medieval era, in armor and machinery. Not many. Usually the screwdriver would be improvised, probably. Even in the early modern era, screws were so difficult to make by hand that they were not sold in lots but individually; the rarity of usage argued against a dedicated tool. Still, like the button-and-buttonhole, the screw as a fastener seems to come from this era. A writer talked of how they were better in making a bellows than nails were.

But in the chapter on lathes -- which are used to make screws as well as using them -- he found what might be the first screwdriver. German, not French, and used to adjust the cutter on the lathe. A useful tool, especially when you want to make regulating screws, which require great precision in cutting, and as soon as they were made, spread out through many, many, many applications for measurement.

It also goes into the importance of industrialization for their spread, and the invention first the Robertson and then the Phillips head screw.

The last chapter talks about such screws as the Romans used. There was no reason why they couldn't have invented the screw as fastener, but they didn't. They used screws in presses -- olive presses, for instance -- in a form that would later appear as the printing press. And Archimedes, of course, invented the water screw. It feels a little tacked on, but it does have interesting stuff.

Josh says

Chapter Six, Mechanical Bent, felt like a shift. Earlier chapters chronicled the natural progress of the authors research. The subsequent, final chapter (7), recapitulates the evolution of the screw and screw driver as twin inventions with

My geometric take-away or reminder: a spiral is flat (2D) whereas a helix is not flat (3D).

It must have been a decision by the publisher to include some illustrations, relegate others to an appendix, and (I think) skip some more. I enjoyed the illustrations and would enjoy more and in greater detail (perhaps patent drawings?).

Julie H. says

If you've ever hung a door, planed wood, built a Morris chair that was custom-fit to a family member's dimensions--or even fantasized about doing so--this book is for you. Likewise, if you're an archaeologist well-versed in such riveting details (sorry) as the history of such ubiquitous and oft-encountered items as nails, then this, too, is the book for you. Why? Because it demonstrates how to write thoroughly, intelligently, and with passion about even the most quotidian of items: in this case, the screw and screwdriver.

Challenged by an editor to compose an article featuring "the best tool of the Millennium," Rybczynski had to first determine which tool that might be. While presumably that short article is now a thing of the past, this small book (weighing in at less than 150 pages, excluding its scholarly endnotes) is a lovely rumination on that task. To be sure, this is no off-the-cuff, end-of-millennium rumination. The author credits the labor of three research assistants, numerous visits to museums, public and private archives, and a tremendous amount of actual work--all while making it appear seamless.

While mindful not to spoil the ending (i.e., and not so much the *what* as the title reveals that, but the deeper question of *whom* we might accurately credit with that tool's invention), *One Good Turn: A Natural History of the Screwdriver and the Screw* is a well-crafted testament to innovation, curiosity, and human ingenuity. It's also a fun romp through history, working quickly backward from the present to antiquity. (At times, it brought to mind science detective James Burke's leaps, segues, and fascinating tangents in the *Connections 2* series.)

I provide an extended quote here as testimony to the considerable thought Rybczynski gave his topic. It is likewise indicative of his own innate curiosity and the adroitness with which he can handle both hand tools

and words:

> Mechanical genius is less well understood and studied than artistic genius, yet it surely is analogous. "Is not invention the poetry of science?" asked E.M. Bataille, a French pioneer of the steam engine. "All great discoveries carry with them the indelible mark of poetic thought. It is necessary to be a poet to create." Nevertheless, while most of us would bridle at the suggestion that if Cezanne, say, had not lived, someone else would have created similar paintings, we readily accept the notion that the emergence of a new technology is inevitable or, at least, determined by necessity. My search for the best tool of the millennium suggests otherwise (p. 110).

Read this book, and you'll consider it time well spent. Plus, you'll never look at your toolbox the same way again.

Jeremy German says

Not bad, ended really abruptly. I was a little wary because some of the tool descriptions in the beginning were ever so slightly off. It made me question the accuracy of what was to come.

Chad says

I learned of Rybczynski from Nick Offerman's *Gumption: Relighting the Torch of Freedom with America's Gutsiest Troublemakers* and have been meaning to read his stuff since then. This is one of those books where the title and subtitle will tell you right away if you will enjoy it or not. If you aren't immediately repulsed by it, you'll probably like it.

For me, I dug it. A good half of this short book is basically describing the discovery and research process he undertook for the subject, which included consulting old reference books and dictionaries—which, again, some people would rather die than read, but I ate up all the tasty historical tidbits, like the Antikythera mechanism and the word *arquebusier*.

---

guiltlessreader says

Originally posted on my blog, Guiltless Reading

You always need a screwdriver for something!

The book in one sentence: Let me take you on a quest to find out why the screwdriver is the best tool of the millennium.

My thoughts: I won One Good Turn: A Natural History of the Screwdriver and the Screw by Witold Rybczynski at a Christmas party (with some other goodies) and being the "read-anything" type of gal, I jumped into this one quite easily. This is so short (only a 143 pages) that I read it in two sittings.

First thing, isn't that title rather cute? And doesn't the topic seem quite trivial? Really, who cares about the screwdriver? Which is precisely the point: how did it become such a permanent fixture in all our toolboxes? It really got me wondering ... so where did the screwdriver and screw originate? Was it the Chinese (like so many things?)

When Rybczynski is asked to write the history of the most important tool of the last millennium, he couldn't decide what that tool was. Until his wife simply said: "You always need a screwdriver for something." And that's the germ of this book.

One Good Turn: A Natural History of the Screwdriver and the Screw feels like being on a scavenger hunt! Rybczynski gamely lets us all tag along as he turns detective - poring over old books, manuscripts and museums, and following up on little leads. He has such an air of excitement about him that I couldn't help but enjoy myself!

The history of the screwdriver and the screw is quite fascinating. My initial thought of the screw/screwdriver being invented by the Chinese was wrong - it is in fact the only major mechanical device that the Chinese did not independently invent!

Some cool bits of info, and this is just a smattering of what Rybczynski digs up:
- Archimedes had a water screw which was used for irrigation.
- Leonardo daVinci has sketches of a screw making machine!
- Screws were used in the 15th century to secure breastplates, backplates, and helmets on jousting armor.
- Screws were used widely in firearms, particularly the matchlock.
- Screws were individually made and extremely expensive to produce before the First Industrial Revolution. Job and William Wyatt developed a method of producing the screw in a machine that cut the slotted head first, then carved the helix.
- P.L. Robertson first commercialized the socket-head screw but was stingy with his patents. In stepped Henry Phillips with the cruciform screw which were widely used in the automotive industry. (Yes, you guessed it, these guys are the namesakes of the screw types and screwdrivers.)

The book is peppered with detailed drawings and has a full glossary of tools (and notes) in the back.

Verdict: I will never look at the screw and the screwdriver as ordinary again. Fascinating, fun, and a satisfying read, great for trivia buffs and handymen (and women) alike.

Snail in Danger (Sid) Nicolaides says

I was all set to give this four stars but then it ended kind of unexpectedly, without really wrapping everything up. (Also there is a typo in at least one of the references — Dumas instead of Daumas — that made it hard to track down.) It's still a really excellent book for people interested in the history of tools and technology.

I forgot to mention — there are several pages at the beginning where he muses over which tool he should pick to write about for a magazine article (said article having been the starting point for this book). Those

can be safely skipped or at least skimmed, in my opinion.
