



Periodic Tales: The Curious Lives of the Elements

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Everything is made of them, from the furthest reaches of the universe to this book that you hold in your hands, including you. Like you, the elements have lives: personalities and attitudes, talents and shortcomings, stories rich with meaning. You may think of them as the inscrutable letters of the periodic table but you know them much better than you realise. Welcome to a dazzling tour through history and literature, science and art. Here you'll meet iron that rains from the heavens and noble gases that light the way to vice. You'll learn how lead can tell your future while zinc may one day line your coffin. You'll discover what connects the bones in your body with the Whitehouse in Washington, the glow of a streetlamp with the salt on your dinner table. From ancient civilisations to contemporary culture, from the oxygen of publicity to the phosphorus in your pee, the elements are near and far and all around us. Unlocking their astonishing secrets and colourful pasts, Periodic Tales will take you on a voyage of wonder and discovery, excitement and novelty, beauty and truth. Along the way, you'll find that their stories are our stories, and their lives are inextricable from our own.

Periodic Tales: The Curious Lives of the Elements Details

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From Reader Review Periodic Tales: The Curious Lives of the Elements for online ebook

Ryan Vaughan says

In a past review I confessed that I was for the most part scientifically illiterate. I'm not sure how far this book went in curing that but I do know a bit more about the periodic table than I used to. I can name the elements designated as halogens ,fluorine, chlorine, bromine and iodine as well as a few of the noble gases ,xenon, radon, and krypton. I'm not sure if this really counts as scientific knowledge or just knowledge of scientific terms though.

While their chemical properties of the elements in the periodic table are important it is the cultural baggage these substances have accumulated that the author is most concerned with. This is particularly true when talking about the things we value and esteem. Gold and silver are not only objects of worth but symbols of it as well. Just ask the guy who gets the bronze medal. However there was a time when aluminum was so highly valued that the guests at Napoleon III's table were given cutlery made for it to eat with while the less favored were given silver or gold.

All in all a very enjoyable book my only complaint was that the author's storytelling is hit and miss at best. The books saving grace is that the author's enthusiasm for his material really shines through.

Will Byrnes says

Updated 6/29/13 - see link at bottom

This book is one of the reasons people will occasionally look at you, slack-jawed, and say “How did you *know* that?” There are a few greater feelings in life, but not many. A-W picks a few dozen of the 118 known elements and tells us a bit about them, offering stories that might be about their discovery, how they are used, or other cultural looks-see. There is unevenness, to be sure. Some stories are more interesting than others, but the overall level is quite good, informative and entertaining.

But wait, there's more. For those of us with an affection for literary treasure-hunting, it is time to pick up some of the glowing tablets suspended in the air. A-W offers explanations and reference points for how certain materials are viewed culturally. For instance gold goes with power, iron with strength, grave lead, honest tin, virtuous silver, this is feminine, that is masculine, and so on. This is mother's milk for those trying to ferret out elements of meaning in literature.

You will learn about the first use of carbonated water, the derivation of the word tinker, which substance is known as “liquid fire”, some alarming facts about things that glow in the dark. We think of titanium as a material used in jets or rockets, but did you know that titanium oxide is widely used to make white paint? Metals come into and pass out of fashion. One particular poison was in such widespread use that it became known as “inheritance powder”. Why was there such a concentration of element discoveries in Norway? A-

W has enough material here about color that he could write an entire book on the subject, and I hope he does.

If you enjoy learning new things, *Periodic Tales* will tickle your brain, right down to the atoms. It's elementary.

=====EXTRA STUFF

An article in the May 2013 issue of National Geographic looked at what was happening with creation of new elements. Fascinating material.

^ says

An extremely enjoyable book. To date it's the closest I've found to one of my absolute favorite childhood books, passed down to me, long since mislaid; the title and author of which I cannot remember. That book had a red cover. Inside there were the most marvelous stories of the discovery of (amongst others) the composition of air (Scheele, Cavandish, Lavoisier), the alkali-earth metals (Davy), and helium (Kirchoff & Bunsen) in our Sun.

Mr Aldersey-Williams' select bibliography now strongly and helpfully points me in the direction of I Nechaev's 1942 book "Chemical Elements" (or rather of the translation from the Russian), as being my long-lost book.

'Periodic Tales' adopts Nechaev's central thesis; to describe the sheer human and technological excitement of the discovery of the chemical elements. Unsurprisingly, there is considerably more to say in 2011 than in 1942; and not only about the fleeting fascinating existences of the man-made transuranic elements; where physicists have gracelessly elbowed the chemists out of the party.

Mr Aldersey-Williams' writes for an adult, or interested teenager, audience, whereas I was reading Nechaev whilst still in primary (age 6-11) education. 'Periodic Tales' is wider, deeper, and longer; dipping into literature, mining, cookery, war, oceanography, classical history, Christianity, art, materials science, architecture That is by no means a comprehensive list.

I was aware of reading this book in a slightly detached manner, probably because much of the fact contained was not new to me. After I graduated in analytical chemistry I found rewarding work as a research scientist. Within the pages of this book I experienced the very same interest, excitement, and knowledge which first sparked my interest in chemistry (and associated sciences) all those years ago.

Therein too, lay my only disappointment. A very serious disappointment. Why, oh why have the illustrations been printed in low resolution black and white; and within the text too. OK, I do know why. It's considerably cheaper to do that in preference to bound-in high resolution black and white images on high quality gloss paper. But by choosing to make such false economies the publisher has not only grave insulted the author's fruitful work, but also every reader of this book. So 4 stars, not 5. With quality illustrations I would have bought a copy of this book; instead I borrowed a copy from my local public library.

Returning to the author's wonderful text; this is a book to read and savor at leisure, not in haste. I usually hate over-frequent picking up, reading, and putting a book down, but I think 'Periodic Tales' actually

benefits from periodic pauses, so as to enable the brain to fully enjoy thinking through what has just been read, together with associated connections and ramifications. Like a box of good chocolates, this book is definitely best savored and long-lingered over.

Just keep the 'phone number of a good independent travel agent to hand. I'd never before thought of 'Element' tourism (see pg 378 on) ... but after nowt but a modicum of thought, I can clearly see the appeal.

Andrew says

I will admit that I am starting to get a bit weary of popular science books. Do not get me wrong being trained as a chemist and working in science and engineering for many years I find these books fascinating.

The problem lies in the fact that the subject is so huge they have to give a hook, something personal that will get the reading not only interested but also to connect with the book. Now I will admit I have read my fair share of this type of book only to realise I either have nothing in common with the writer or worse still I actually disagree with them - so why would I waste my time and effort in reading their book. Sadly it seems that there are more than their fair share of these books out there.

But not with this one.

Basically you have a scientist who not only knows what he is talking about but also how to present it in an accessible and fun manner he has also had experience on how to create displays and exhibits so he knows how to keep your attention.

So what of the book then - well you have several layers to this book. The first is that of the story of him deciding to create his own collection of elements from periodic table, now some are incredibly easy to source others are near on impossible.

But you also have historical stories of the elements. However rather than just dry stories of their discovery and who made them there are also side stories about how they were used or even how they became famous and had their 15 minutes of fame (from St Pauls cathedral to Napoleons death).

Each chapter and even each sub-section tells a fun and fascinating tale along the way while we watch the author try (and sometimes fail) to add another element to his collection.

I will admit this was a total gamble although I am sure I recognised the title from somewhere - however I am very glad I did and I am sure I will be referring back to this book again in the future.

Nikki says

This wasn't quite as engaging to me as the blurb and the reviews quoted on the cover suggests -- in fact, it started to feel rather meandering -- but it is quite an interesting read, covering both the scientific history of elements, how and when they were discovered, and the social histories, why they were used and for what. Some facts I didn't know; other parts I got impatient with: yes, yes, I know all that.

Overall, worth a read if it sounds interesting to you, but be prepared to skip bits where he's telling you things you're not interested in/already know.

J.P. says

It must be tough to write a book on science. Make it too simplistic and it may have wider appeal but the people most likely to buy it will think it stinks. Go gung-ho into the subject and in this case chemists will love it while it cures the insomnia of the general public. Ultimately, this book is a bit of both.

I thought the background on elements could have been done better. The author leaves out some of the basics to sail off on tangents that aren't nearly as interesting. For instance with zinc, he never mentions the most common usage as plating for steel but goes on for pages trying to figure out why bars in France were originally called zincs. There was also too much time spent on oddball references, namely the use of certain elements in art and literature.

That the author is way into his topic is proved by the line "...we should all have a little piece of spent uranium to keep in the garden as a momento of our reliance upon it for our energy." I'd rather opt for a gnome.

And with all the colorful elements on the planet, all the tiny illustrations are in black and white.

I liked it in certain respects, but not in others.

Bryan Nguyen says

Hugh Aldersey-Williams's *Periodic Tales* tells the story of the cultural history of the elements separated in five topics, the subjects of the book which are: power, the richness of the element or how valuable it is; fire, the changes of compounds when they react with other compounds like water; craft, the way people can manipulate the elements; beauty, the appearance of an element and how elements color our world, and earth, how an element affected a certain place or how the place affected an element. The book is set in from way back earlier than 1600 B.C.E. to 2011, when the book was published, at no particular place, but mostly in Europe, where many pure elements were discovered and where several elements were synthesized, because multiple scientists from different countries contributed in the world of science. Telling many stories about the elements, including his own, Aldersey-Williams researches information about the elements, conducts a few of his own experiments, and presents us many elements' histories. He speaks about the history of the elements and his past related to the them, interesting stories about elements that we use today like gold, silver, and mercury, which was used in movies for a certain special effect.

A very memorable event for me was a short section called "Pee is for Phosphorus." After telling us a story of how a scientist used fifty liters of urine for an experiment to see if phosphorus is in our urine, Aldersey-Williams conducted a similar experiment with his old teacher, but with less than fifty liters for a quicker completion rate. He followed the same procedure with some modifications but can't seem to extract the phosphorus out. He then theorizes that phosphorus was extracted, but in very small amounts. This was memorable because of the experiment and the weird title of the section.

Ultimately, the story of the history of the elements is a story of scientists, like Marie Curie, discovering new elements, updating Mendeleev's period table to the periodic table we know today, experimenting with elements to learn new things, and manipulating elements for our personal gains, like using arsenic either for medication or assassination. It all adds up to a tale of cultural history, a subject that our generation wouldn't

be very interested in, but it does educate readers of the usefulness of everyday elements or elements we used to use in the past. *Periodic Tales* tells that story very descriptively, reminding us how often we take advantage of our everyday objects, and how little we know about them, like how do they work, who invented them, or what they are made of.

I learned a lot of things thanks to this book. It is practically a science book for college students. I learned what explodes when reacted with water, what makes our streetlights glow, what makes an object a certain color, and what possibly killed Napoleon (undetermined if it was the actual cause of death). Also, I learned some chemistry terms. This book made me change what I read because I really want to read interesting facts now, either from the internet or from a book. I need to expand my horizon of what I read because someday, the information I gained could help me later in the future.

Unfortunately, this book isn't one of those books that's like an emotional roller coaster ride. This book is somewhat monotone, but I felt amazed, confused, and bored while reading this. Of course, I had "Whoa, really?" moments when I read something very interesting, but I also had "Huh?" and "Zzz" moments because of the uninteresting facts or the complicated chemistry terms that I don't understand. Even though I had confused and bored moments, I enjoyed reading about a quarter to half of the book, but the rest gave me a headache like the after-effect of a sugar rush.

Periodic Tales is a rather lengthy book that talks so much about the elements. This book has too much information for an average person, especially someone who doesn't understand chemistry that well. Generally, I would not recommend this book because it has so many facts, confusing segments, and requires some knowledge of chemistry. Although some of the information was interesting, most of the other information felt boring to me. I would recommend this book to people who wants to grow up to be some type of scientist, people who's great in science, or people who really want to learn more about the elements.

Julia says

Very interesting. This book definitely tells a different story about the elements than what I, with a chemistry background, usually got. It assigned genders to a lot of the metals and talked about the colors and smells and sounds of the elements and the effect those things had on the way society viewed them before we could define them by their atomic structure. I learned a lot, not just that British people pronounce a lot of the elements weirdly, not just aluminum. Favorite fact: UPPU, a club that you could only join if there was enough Plutonium in your system for it to be detectable in your urine.

Favorite quote: "Civilization, it is immediately apparent, is simply organized resistance to oxidation...The gas brings life, and in doing so, brings death closer."

Celtria says

This book sits on my science shelves but it should inhabit a shelf of its own, labelled *Biographies of the Inanimate* (a section for Borges imaginary Library of Babel?).

To quote the author: "My aim in this book has been to show that the elements are all around us, both in the material sense that they are in the objects we treasure and under our kitchen sinks, but also around us more

powerfully in a figurative sense, in our art and literature and language, in our history and geography, and that the character of these parallel lives arises ultimately from each element's universal and unvarying properties."

Aldersey-Williams reaches that aim in a well-written, easy-read, book of surprises that takes the reader from the trenches of WWI to the swimming baths, from the teacher's chalk to the dentist's chair, from limelight to Las Vegas and on many other adventures for which you don't need any previous knowledge of chemistry. Though you may find yourself tempted to acquire a poster of the Periodic Table to stick on your kitchen or bedroom wall!

A warning: reading Periodic Tales may turn you into an irritation to the other reader on the sofa with your interjections into the silence, "Listen to this..." "Did you know..." "I would never have thought...." :)

D Books says

The author goes off in too many directions with his story-telling for me to want to stick to reading his book. I read over a hundred pages and can't seem to find it interesting due to how the author goes about writing it. From memories of gathering as many elements of the periodic table during his childhood, to drawn out stories of how a present day person is producing charcoal, to historical tales of elements, and then to the author personally experimenting to abstract an element. It makes you want to beg the author to please pick a style of writing and stick with it. I'm going to find it hard to pick this book up again to finish.

Andreas Schmidt says

Godibile e interessante

Con questo testo si comprende quanto tutto sia interconnesso: materia, luce, energia. In particolare, è singolare notare quanto gli elementi della tavola periodica, nei loro composti e nelle loro forme pure, abbiano inciso sui modi d'essere dell'uomo e nel suo linguaggio figurato. I vari elementi chimici hanno contribuito a creare una vasta gamma di colori, dai fuochi d'artificio ai prodotti di bellezza per il corpo, con le loro caratteristiche di tossicità e pericolosità nel corso della storia. Come i vari elementi chimici sono la chiave del progresso per capire il funzionamento dell'universo. Alla fine, questo testo è un gran bel viaggio, anche se occasionalmente l'autore è un po' troppo immodesto nel presumere di avere la chiave per la conoscenza finale della vita: scivoloni su aneddoti, leggerezze sulle armi e il modo con cui sono sviluppate, leggerezze sulla spiritualità (bollare la cabala come scempiaggine mi pare un po' eccessivo). Ma del resto l'autore è un chimico, che forse commette l'errore di scegliere come unica via per la verità quella che si trova nella tavola periodica degli elementi ed è convinto che nella sua collezione di elementi chimici puri da aggiungere a un barattolo per completarla, ci sia l'unica verità dell'universo. Nel complesso rimane comunque un buon libro, come non ne leggevo da tempo.

Tweedledum says

Periodic tales is one of those books that grabs you by the throat and will not let you go. Full of extra-ordinary stories, co-incidences, twists and turns Hugh Aldersley-Williams meanders through the arcane history of the elements and in so doing encourages the reader to want to find out more and more. I have always been jointly fascinated by chemistry and the extra-ordinary people behind the knowledge we so take for granted and on which our civilisation hangs. Many of the people involved in the elements recent history are, of course, well known and celebrated for their work, Curie, Davy, Mendeleev are three that instantly spring to mind. But many others are unsung, unrecognised by the world at large and often forgotten even within the scientific community. Who now knows the story of the genius behind the discoveries at Ytterby or is able to name even 2 of the seven elements that were discovered there or even locate Ytterby on a map? Unlike an encyclopaedia or a chemistry textbook Periodic tales reads more like a mystery story and I found myself keen to keep reading and eager to follow Hugh's trail. It is hard to think of a topic or theme that is not touched on somewhere in this book but everything is handled with a deft lightness of touch and great literary skill. The history of the elements is intimately entwined with the history of humanity and in taking us to the trenches and the use of Chlorine as a weapon he keeps our eyes firmly fixed on the patriotic chemist, Haber, who proposed that the gas be released from ground based cylinders allowing wind to carry it over to the enemy lines. Hugh follows the Haber story through telling of the suicide of Haber's wife (also a chemist) in 1915, following the attacks, and of his own visit to Haber's son and daughters who retired to Bath of all places.

Hideous as this particular bit of history is Hugh dances his narrative along now showing the comic, now peeping into the ancient craft of sword making, now revealing the unsung hero. Any review of this book cannot begin to do it full justice. All I can say is Read it. You will not be disappointed and you will find that your view of the world has expanded exponentially.

Ints says

Man, iespējams nepamatoti, ir šķitis, ka populāri zinātniskās grāmatas latviski tiek izdotas daudz par maz. Un tādēļ man ir nevēlota sajūma ieraugot grāmatu veikalu plauktos kādu zinātnēji vērtīgu grāmatu latviski. Ieraugot šo grāmatu, man uzreiz radās vēlmi to izlasīt. Pirmkārt tādēļ, ka tā bija latviešu valodā un otrkārt, vieta man labu laiku stāvēt izlasīmo sarakstā.

Grāmatas pamatā ir mūsu elementu periodiskā tabula. Autors lasītājam pavēsta zināmu un ne tik zināmo elementu vēsturi. Savulaik jau cilvēki pazina tikai dažus elementus -zeltu, dzelzi, alvu, sēru, dzīvsudrabu, varu. Pārējie elementi bija pazīstami tikai savienojumu veidā. Mūmijās pirmskumi noteikti meklējami alūminijā, cilvēku centienos jebkuru vielu pārveidot zeltā. Katra jauna elementa atklāšana radīja pavērsienu cilvēces attīstībai vēsturē. Mākslinieki meklēja veidus, kā šo novitāti iekļaut savos darbos, jaunie elementi kļuva par modes simboliem un beigu beigās par sacensību elementu, lai noteiktu, kura sabiedrība iekārta ir pārāka – komunisms vai kapitālisms. Dažādas ražošanas nozares savukārt iekārta jaunus elementus savos ražojumos. Nekas nedod skaistāku zaļo krāsu par arsēnu, un hlors ir tāri labs pamats mūsu mūsdienīgai ražošanai.

Tā kā šī daļa tipa grāmatas es jau pāris esmu izlasījis, man grāmata lielāko devumu sniedza mākslas un kultūras vēstures kontekstā. Sakot ar to, ka alva reiz bija tāds pats stratēģiskais materiāls kā mūsdienās urāns. Ne visur zelts ir bijis vērtīgs, un reiz alumīnijs tika uzskatīts par jauno zeltu. Un tas ir tāri vai brīnums, ka cilvēkam indīgākie elementi rada tik spilgtas krāsas. Cinka un svina salīdzinājums namu apjūšanā un no

kāda materiāla vislabāk izgatavot skulptūras. Dažu no stāstiem es jau biju dzirdējis – skābeklis un flogistons, Kirā pāris un viņu vājību pāc vakariņām vārot radioaktīvo elementu spuldzi, Mendēlejevs un viņa periodisko elementu tabula, Napoleons un arsenā krāsas tapetes, gallija karotes, tie ir tikai daži.

Autors pastāsta arī dažus savus eksperimentus, uz kuriem viņu ir pamudinājis grāmatas sarakstīšana. Tad nu varam uzzināt kā no urāna iegūt fosforu vai no asinīm dzelzi.

Ja lasītājs neko no šiem tematiem iepriekš nebūtu daudz lasījis, tad šīs grāmatas vieta būtu zināšanu krātuve. Fakti un notikumi te tiek pasniegti interesanti un saistoši veidā. Te nav sausas zinātniskas valodas ar metālu kušanas temperatūru un elektronu uzskaiti rādītājiem elektronu ātrumu. Te viss tiek piesaistīts sadzīvē. Kas interesanti, dažu no metāliem, kuru nosaukumi šķiet eksotiski, patiesībā ikdienā mums ir visapkārt. Lasot šo grāmatu patiešām ir jāuzmanās, lai nekātu par elementu kolekcionāru. Tie ir cilvēki, kas cenšas iegūt savā pašumā visus iespējamus elementus. Man šāda doma galvā iešaujas laiku pa laikam, bet pagaidām esmu tam turpējies pretī.

Grāmatai lieku 8 no 10 ballēm. Iesakām izlasīt visiem, kurus interesē vēsture, ģeogrāfija un ģeozinātniskie elementi. Jācer, ka reiz latviski tiks izdota arī grāmata „Elements: A Visual Exploration of Every Known Atom in the Universe” by Theodore Gray uz kuru „Periodiskās tabulas” pāris reizes atsaucas.

Andrew says

A disappointment. I picked this up thinking it might be weirdly informative and entertaining, like Bill Bryson's wonderfully entertaining science history "A Short History of Nearly Everything." But in the end I found almost all the anecdotes lifeless and pointless. Ultimately I gave up and put it back on the shelf about two-thirds through.

Bettie says

[Bettie's Books (hide spoiler)]
