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Lena’s Shoes are Nervous (Atheneum Books for Young Readers, 2018) (Picture Book for 4–7 year-olds)
by Keith Calabrese and Juan Medina
reviewed by: Nori Morganstein, Youth Services Librarian/Assistant Director

There are a lot of Back-to-School themed books out there. For the most part, they are all the same, or at least have very similar plots. As a Youth Services librarian, I’ve read a lot of them, and it’s rare for one to stick out to me as much as this one does.

This book is about Lena getting ready for her first day of Kindergarten. She’s very excited to get started, but there’s one problem; her shoes are nervous. She goes to her father to explain the situation, and he takes the problem very seriously. He sees if they can try talking to the shoes, but Lena explains they can’t talk to shoes. He tries seeing if her excited dress can talk to her nervous shoes, but Lena remembers an incident in the mud, and explains that her dress and her shoes don’t get along. Finally, Lena remembers that all her clothes love her headband and her headband can talk to her shoes. Her dad goes along with everything, even allowing a moment for the headband and the shoes to talk it out.

The headband reminds the shoes of all the times they were scared, but decided to be brave together, and how things always worked out okay. But, her shoes need more convincing. Lena then picks up different shoes and says, “Looks like I’ll have to wear…my slippers.” And of course her shoes then decide they are brave enough to go to Kindergarten. Her dad walks her to her first day, and the shoes are scared at first, but not for long.

What makes this book stand out is the simple act of making the shoes be the nervous ones. Lena still has to problem-solve. She has to remember moments when she was brave. And she eventually has to trick her shoes into going. But, making the story be about the shoes allows Lena to be the true brave one. I can see children placing their own feelings on to something inanimate like a toy or a pair of shoes, and being able to better express their own emotions. I can see this book helping a lot of children with first day jitters. It can open up a lot of discussion about emotions, fears, and worries.

One of my favorite things about the story is how seriously the father takes everything Lena says. He never comments on the ability of inanimate objects conversing. He never laughs at Lena’s feelings. And he tries to problem-solve with her, without taking over and forcing anything. He’s a great dad, but also a great listener and teacher.

The illustrations are bright and colorful. Lena’s expressions show how she is feeling throughout the whole process. The father’s expressions are always honest and true to his dialog. I can see kids being pulled in by the illustrations. I can also honestly see this book helping a lot of children with their nerves and even opening up discussion for emotions and feelings in a new way. I recommend this highly to all parents and families with children nervous about going to school. I also recommend it as a teaching tool for getting kids to open up about their feelings.
FEAR is probably the most talked about book this year. It is part of a slew of books about our current President. One thing that sets it apart is the author. Bob Woodward is the author of many books associated with the Washington scene over several years. He is respected as a truthful reporter going back to the Watergate scandal. He is strictly reporting, not judging.

Historically this book is one of the most graphic and sensational of any I have read. Trump is certainly the most unique president our country has ever had. For whatever reason Woodward was given free access to the White House and all its inhabitants for a period of time. Because of administrative miscues he never got to interview the President. Trump says he would have been happy to be interviewed.

For each chapter the source notes state “The information in this chapter comes primarily from multiple deep background interviews with firsthand sources.”. What is meant by “deep background” is that the information is OK to be repeated but the source remains anonymous. The book is written in the first person and the dialogue sounds verbatim. The focus is on the fierce debates and decision making in the Oval Office, the Situation Room, Air Force One and the White House residence.

Every facet of government is covered including foreign affairs, domestic issues, particularly trade and tariff disputes, immigration and tax legislation, etc. The book goes into great detail about the Mueller investigation and the relation his attorneys had with Trump and Mueller. In all these instances Trump is depicted as very difficult to deal with. As a result there are more personnel turnovers in staff in a short period of time than has ever been seen. Of the staff people who remain there is a number who feel it necessary to curb Trump’s volatile reactions such as withdrawing from a trade treaty with South Korea. In this case his directive announcing the withdrawal was removed from his desk surreptitiously. Since his attention span is brief he failed to notice it. His obsession with what, in his estimation, are exorbitant costs demonstrates the phrase “he knows the cost of everything and the value of nothing”.

Trump’s attitude is that he knows everything, including more than his generals. He flies by the seat of his pants, so to speak. He feels that his negotiating ability and intuition can get him what he wants. He loves to say “Fear is power” thus his typical bullying tactics. My personal opinion is that he is seriously deranged. That is supported by a conference of psychiatrists and psychologist wherein they concluded that his behavior is sufficient evidence to warrant a professional investigation of his mental competence for the job. The dialogue in the book is coarse and vulgar and probably emblematic of how these conversations commonly are. Today we are all inured to such things. The book is revelatory of a chaotic White House. There is too much at stake to ignore it. Trump’s former lawyer, John Dowd, had urged him to cooperate with the investigation and finally gave up trying to convince him not to interview with Mueller saying he would perjure himself. He had had enough of Trump’s terrible behavior. The last line in the book is:”Dowd could not bring himself to say to the president, “You’re a f——-ing liar” Read it and draw your own conclusions.
Factfulness  
by Hans Rosling  
reviewed by Doug Wilcock

Hans Rosling was a professor of Public Health at the Karolinska Institute in Sweden prior to his death in 2017. He was perhaps best known for the innovative graphics that he and his colleagues developed to illustrate the many misconceptions that we, the general public, carry around about the state of the world. Interested readers might like to google some of his TED talks. They are among the most entertaining and enlightening videos available on the Internet.

In Factfulness, Rosling generalizes from the TED talks to suggest a way that we can understand the state of the world while minimizing our biases and outdated conceptions. Each chapter is organized as an instinct, an instinct that if followed leads to an incorrect conclusion. In some cases he is simply providing lessons that any decent statistics teacher would give: don’t rely on averages and don’t extrapolate trends in data. But he uncovers much more than that. For example, in the chapter entitled The Negativity Instinct, Rosling points out that it is not contradictory that things can be getting better but still be bad. He takes this idea further by suggesting that good news is not news. When was the last time you read a headline telling you that 138,000 people’s lives had been saved in the last year because cars had seat belts?

In 2014 Rosling went to Liberia to help in the fight against Ebola. As a public health practitioner, he understood Ebola could be a global pandemic. One aspect of his team’s work was to assemble and merge all the disparate streams of data about the spread of the disease. This data unification gave keen insight. When the disease appeared to be at its worst the data suggested that the number of new cases had peaked, that the actions taken were turning the course of the disease. The other feature of the fight against Ebola was that while UNICEF and Doctors without Borders operated heroically in treating sick patients, the fight against Ebola “was won prosaically and undramatically by government staff and local health workers, who created public health campaigns that changed ancient funeral practices in a matter of days; risked their lives to treat dying patients; and did cumbersome, dangerous and delicate work of finding and isolating all the people who had been in contact with them. Brave and patient servants of a functioning society, rarely ever mentioned- but the true saviors of the world.”

Over the last few years there have been several writers who have written how much better the world is now than it was at any time in the past. Stephen Pinker is perhaps the best known among that group. Hans Rosling joins him in that view. Rosling points out that since World War II the world has grown richer and healthier. He points out that half the increase in child survival rates has come about because mothers can read, because of the existence of primary schools, because of the proliferation of nursing education courses, and because of availability of vaccinations. This has led to a dramatic increase in the number of children who survive to adulthood. Paralleling this, apart from the poorest billion people on earth, the number of live births per family has dropped to 2.

Does Rosling have a Panglossian view of the world? No. He identifies five global risks that must be addressed for the progress he cites to continue. They are a global pandemic, a world financial collapse, a world war, climate change, and extreme poverty. Consistent with the approach he outlines in Chapter 10, The Urgency Instinct, Rosling would suggest that we take a breath, insist on good, up to the minute data, be wary of dramatic actions, and realize that what seems to be incremental change can over the years produce spectacular results.

As someone who was familiar with Rosling’s Gapminder Project as presented in his TED talks I was initially disappointed with the book because it cannot convey data the way his live presentations can. But as I read, I came to appreciate what this book meant. Hans Rosling had assembled notes for a book and when given a diagnosis of pancreatic cancer he cancelled all his speaking engagements and outside work to concentrate on this book. It was close to completion when he died. How does it fit with his other activities? This book provides the structure and context for his work, a framework for looking at the world.

How should this book be read? I would suggest that the reader first take the quiz that begins on page 3 of the introduction. Then, if you are not familiar with Rosling’s work, google his name and TED talks. For a very quick introduction there is a BBC interview that lasts about four minutes that beautifully illustrates the fabulous graphics that he uses as well as the startling conclusions that he reaches. Then, I would recommend the longer twenty-minute TED talks, especially the 2006 talk that was his dramatic introduction to world audiences. After that I think you are ready for the book, the framework behind this remarkable person’s life work.
Ten Hills Farm; the forgotten history of slavery in the north
by C. S. Manegold
reviewed by Susan Carr

Having always lived in Massachusetts, I have developed a stubborn pride of place - the self satisfied feeling that the state has usually been on the right side of history. From the courageous Pilgrims who foraged a home for themselves in Plymouth to escape the religious persecution in England to the patriots who rebelled in Boston...Massachusetts has been on the forefront of the quest for freedom.

Unfortunately, there is a big stain on that history...the shameful mistreatment of the native Americans and the people imported from Africa as slaves. CS Manegold, in her book Ten Hills Farm, illustrates this very thoroughly. In 1629, John Winthrop, a leader of the Puritan settlement in Boston stated, in defense of their going to NE - "God had already consumed the natives with a miraculous plague whereby the greater part of the country is left void of inhabitants"... "Miraculous", no less.

In 1637 the colonists massacred the Pequot Indians. This "victory" was another signal to the Puritans of their god-given right to possess and settle new land. Some of the captured native people were shipped to Antigua in the West Indies and exchanged for a group of Africans. These people were shipped to Boston in1638 ...The slave trade had begun.

By tracing the owners of Ten Hills Farm in Medford, starting with John Winthrop and continuing through Isaac Royall Jr, including much information about the connection with Antigua, she draws a paradigm of colonial life for some and shows how slavery was the center of the colonial economy. The owners' increasing high-life expanded the need for slaves. When Isaac Royal decided to leave Massachusetts, as war with England became obvious in 1775, he had to make arrangements for distributing 36 slaves.

Manegold's grasp of colonial history is extensive. The personal details of the familiar characters of that period fill in the story one doesn't get in history class. The overriding irony is, however, that we learn nothing about the native or African Americans in the process. The records of white people are quite complete - the records of the others are non-existent. It's as if they were never here. When the slaves in Massachusetts were freed after the Revolution, some 5,000 souls, the event didn't even make the newspapers. The irony of the patriots battling for freedom for whites only, surely was not lost on the blacks

"In the Atlantic economy of the 1600s the sails of commerce were stitched with the skins of slavery and blown by the winds of greed."

The author has rounded out what for me was a very incomplete history of Massachusetts. It's an eye-opening book.
There has been much hype about the new fantasy epic *Children of Blood and Bone*; some are calling it “the next Harry Potter,” while others say it belongs in a league all its own. One thing was for sure: I had to get my hands on a copy, pronto. And what I discovered between the pages of Tomi Adeyemi’s debut novel didn’t disappoint.

Adeyemi’s first installment introduces us to the magical realm of Orisha, which is loosely based on the topography and culture of Nigeria, Africa. In this world, magic has long been outlawed and anyone with the power to perform it has been methodically stamped out, including our main character Zelie’s own mother. However, Zelie is a diviner, meaning she has the ability to awaken her latent magic if magic ever returns to Orisha. This ability casts her as an outsider, a victim of endless discrimination brought upon all diviners by the decree of King Saran. When the King’s own daughter goes rogue, Zelie finds herself in the position to be able to bring magic back, making her Enemy #1 for the royal family and their band of followers. Together with her brother Tzain, Princess Amari, and an unexpected foe-turned-ally, Zelie and her friends set out on a mission to right wrongs and change the future of Orisha.

As a fantasy aficionado and a lifelong Harry Potter fanatic, I loved the magical world Adeyemi created. She provided just enough backstory and color to make Orisha a living, breathing place, and I found myself quickly swept up in its mystical allure. What differentiates this novel from most fantasy epics, however, is the heaviness of its subject matter. Orisha is not a happy community of wand-bearing wizards learning their first spells in the safety and security of a Hogwarts classroom; it is a dark, dangerous world plagued with violence and prejudice from the very first page. Adeyemi wastes no time immersing us in the twisted reality of these characters, and with a passing glance at her afterword, it becomes clear why. This book has a strong political motive behind it that binds the fantastical world of Orisha to the very real world we currently live in, making it a relevant read not just for young adults, but for adults as well. In fact, I daresay that adults might even find more value in this book than the young adults it’s marketed for.

*Children of Blood and Bone* is not for the faint of heart—at a whopping 525 pages, the sheer mass of this book can intimidate even the most voracious YA readers. But what it lacks in brevity, it makes up for in action-packed, suspense-ridden plot. The story never drags, and always keeps its readers guessing, with more plot twists and turns than I could count. Furthermore, the book switches points of view rather frequently, making it a quicker read than one might assume just looking at its scope. Adeyemi has a gift with language, and her writing is exquisite. I especially loved the incantations, written in an African tongue and peppered amongst the pages. They really added to the mythical feel of the book, and were beautifully rendered at just the right moments. Another major strength of this book is the characterization of Adeyemi’s heroines, Zelie and Amari. They are both strong women who undergo major growth and change over the course of the novel. The author takes her time developing their character arcs and making us genuinely care about them. I wish she would have devoted the same amount of time to her male characters, who didn’t feel as fleshed out and sometimes appeared one-dimensional.

Prince Inan started off as an interesting antagonist/love interest for Zelie, but the more he waffled and went back on his choices, the less interested I became. And Zelie’s brother, Tzain, doesn’t progress any further than the stereotypical protective big brother, making it hard to invest in him as a character in his own right. In a similar way, the romantic relationships in this novel didn’t have quite the impact Adeyemi was going for, at least for me. Always a sucker for romance, I couldn’t help but feel ambivalent towards Tzain and Amari’s blossoming affection; for the first fifty pages, I actually found myself wondering if Amari was homosexual, due to the passionate words she has for her female friend Binta. And the main couple in this story, the Romeo and Juliet of Orisha, went from trying to kill each other to sharing secret glances and illicit touches in a matter of hours. The rapidity at which they fell for each other seemed almost too forced to buy into, and I wished Adeyemi had allocated more time to let their chemistry unfold naturally.

All in all, *Children of Blood and Bone* is an exciting beginning in a fresh, time-sensitive trilogy. While fans of romance might want to look elsewhere, lovers of fantasy will be entertained from start to finish. The book demands a mature audience, but should it follow the trend of other YA series, I wouldn’t be surprised to see a big-screen adaptation in the years to come.
Seymour Hersh has been a prominent investigative journalist for six decades. In Reporter, Hersh tells the story of the ups and downs of his career over that period. His work first came to prominence in the late 1960s with his reporting on the massacre of Vietnamese civilians (350 - 500 mostly old men, women and children) by American troops in the village of My Lai. The account of Hersh’s efforts tracking down the My Lai story is a fascinating one. Starting from a rumor that Hersh overheard, the author, step by step, determined that the massacre had actually occurred and who was involved. Going to the massive US Army base in North Carolina, Ft. Benning, he used various repertorial ploys to gradually piece the story together. When he determined that the Army was planning to court-martial a Lt. William Calley, Hersh found out where Calley was staying and managed to interview him for his article in the New Yorker magazine. The viciousness and the unprovoked nature of the My Lai story was shocking to most Americans and had a big impact on public views of the Vietnamese War, contributing to the forces that were pushing to end that war. In 1971 Calley was convicted by a Courts-Martial and served 3 1/2 years of house arrest.

Hersh’s career has been replete with news scoops of major proportions and has not been without controversy. Many of his disclosures were considered to be damaging to those in position of power. His reporting on the Watergate scandal in the 1970s, on the Iran-Contra affair in the 1980’s and on the American use of torture on prisoners, as in the Abu Ghraib prison, revelations in the 2000s triggered strong opposition from the Nixon, Reagan and George W. Bush administrations respectively. During these years Hersh worked for the New York Times and for the New Yorker and received strong backing from his editors in these confrontations. Hersh was never a shrinking violet and his aggressive reportorial style tended to alienate individuals involved. Through the years, the accuracy of his allegations has repeatedly protected him from potential legal suits.

Hersh’s style of aggressive investigative reporting seems to be dying out as the funding available for independent journalism from newspapers and magazines has been declining. These trends do not bode well for keeping a close eye on the activities of government and holding our elected officials to account for their behavior in office. Even with an active journalistic pursuit of rumored malfeasance, changing government behavior through revelation has had an uneven result, despite this the actions of a curious and independent media has been a cornerstone of our democracy. The continuation of a healthy investigative press is in all of our interests. Hersh’s story is a fascinating one and one that should inspire those who are considering a career in journalism.

Seymour Hersh
The Tangled Tree: A Radical New History of Life
by David Quammen
reviewed by Doug Wilcock

Carl Woese? Lynn Margulis? Archaea? Endosymbiosis? Horizontal Gene Transfer (HGT)? These are not exactly household names or concepts, as common to us as Charles Darwin, Crick and Watson, or the DNA double helix, say. But in David Quammen's fine new book, The Tangled Tree, the characters Woese and Margulis take center stage along with the aforementioned biological concepts. For someone interested in biology this book is a must read.

Quammen begins the book with history, tracing the concept of a tree of life back to the Bible, Aristotle, and, more recently, Linnaeus's morphological classification system. He quickly takes the reader through the elements of Darwinian evolution with its three-pronged emphasis on hereditary continuity, variation, and competition for scarce resources. The stage is now set for the main story. Quammen begins with Emile Zuckerkandl and Linus Pauling who suggest that the information part of the cell, DNA, can determine a molecular phylogenetic tree. Carl Woese, a biologist at the University of Illinois, picks up on this theme by sequencing ribosomal RNA (rRNA), viewing it as the "rabbit hole to the beginning of evolution." What does he find? He finds methanogens, halophiles, and thermophilic acidophiles, all existing outside the two known kingdoms of life: prokaryotes and eukaryotes. They are part of a third kingdom, a kingdom eventually named archaea. Thanks to Woese, the tree of life must be redrawn.

Enter Lynn Margulis, professor of biology at the University of Massachusetts, to upset this neatly drawn tree by introducing (or re-introducing) endosymbiosis, the concept that outside organisms invaded the cell and stayed, forming a symbiotic relationship between invaders and invaded. Margulis used this endosymbiotic mechanism to explain the existence of chloroplasts, mitochondria, and flagella in cells. The horizontal gene transfer mechanism suggested that the tree image was not accurate. David Quammen writes that this rocked the foundations of evolutionary theory so that "evolution as understood in the future would be much more about mergers and acquisitions and collaboration than about change within isolated lineages." He adds that endosymbiosis and HGT are to Darwinian evolution what Einstein was to Newton.

Woese did not take this easily. Here he had just discovered a third kingdom and redrawn the tree of life and it was already being torn down. How could he reconcile HGT with the three trunked tree? His solution was so controversial that his former colleague Ford Doolittle split with him, even suggesting that Woese's reliance on rRNA for tracing evolutionary history was flawed.

Where does this leave us? Quammen takes us on a tour of contemporary biology, moving us through transposons (the work of Barbara McClintock on maize), endosymbiotic gene transfer, retroviruses, and ultimately to CRISPR (clustered regularly interspersed short palindromic repeats- now you know!). He uses CRISPR as an exemplar of the bacteria/archaea invasion of the cell and the implied evolutionary history of DNA, not for its role as part of the gene editing toolkit. Quammen also tries to help the reader make sense of antibiotic resistance in bacteria, using HGT as the explanatory variable as to why antibiotic resistance develops so rapidly.

In some sense this book is a biography of Carl Woese. He is clearly a giant in the field of evolutionary biology, his discovery of archaea a crowning achievement. But he was also largely ignored. Membership in the National Academy of Science came late, a Nobel Prize never. Quammen uses his access to Woese's material and the network of former students and colleagues to try to draw an accurate picture of who Carl Woese was. His characterization of Woese is subtle and nuanced. Woese is a complicated individual, some might say almost schizophrenic, but his story is central to this book and through Quammen's efforts we get a better sense of the human side of the science story. Likewise, Margulis is a complicated figure. Never one to duck a controversy, she was always willing to challenge established wisdom. In her personal life she was married to Carl Sagan and then to Thomas Margulis. She allowed that she could not be a wife, mother, and serious scientist all at the same time so she happily took the latter two.

Let me go out on a limb (no pun intended) to say that The Tangled Tree may be the best science book recently published. David Quammen is an engaging writer. While he does not shy away from some pretty hard-core science he has a talent for making that science intelligible and fascinating. This is an excellent book.
Chasing New Horizons. Inside the epic first mission to Pluto
by Alan Stern and David Grinspoon
reviewed by Don Boink

This is a very interesting book about the mission to Pluto. There has been recent controversy over Pluto’s status as a planet. It turns out that Pluto is part of a cluster of objects that had formed in the vicinity of the Kuiper Belt at the edge of the solar system. It wasn’t until 1930 that Pluto was discovered, when Claude Tombaugh, a Kansas farm boy with no technical training got a job in an observatory in Arizona. The telescope Claude used was sponsored by the Percival Lowell family to search for the Planet X that Lowell, who died in 1916, had predicted existed but could not find.

The system used in the search was to photograph a small patch of sky repeatedly and compare the photos with one another to see if any dot appeared to move. He used a device called a “blink comparator”. It was a tedious process. After a year of arduous hunting, on January 21, 1930, conditions at the observatory turned out to be a horrible night because of intense winds that came up shaking the telescope making the photos blurry. Remarkably, though he didn’t know it at the time, Clyde had photographed his long sought target. Because of the blur he decided to repeat photographing the same area again and that was when he recognized what he had been seeking. The unusual story of this remarkable discovery is detailed in the book.

The interest in planetary exploration began in the 60s. Because of the complexities it especially attracted adventurous scientific types and a new distinct field was born,: planetary science. Of all the planets- Pluto the farthest and hardest to reach remained the most obscure and cryptic and most difficult to study. This challenge led to the formation of a sub community called Plutophiles. The book recounts the lengthy, difficult, frustrating saga of what eventually became the mission to Pluto. Actually it is a “fly by” and at the incredible speed of 32,000 miles per hour. And it is still going, maybe forever.

Described in detail is the special equipment in the New Horizon’s spacecraft that had to be designed both with the tight weight restrictions and with ruggedness to withstand the tremendous G forces at launch. The spacecraft was designed with redundancy in case of failure and had to survive the torturous political battles that occurred which was complicated by the intense competition between several contractors for mission priority.

Building the bird chapter tells of the necessity of fitting into the NASA “cost box”. Funds were scarce making the competition fierce. “ The clever design system for telecom is an example of the many decisions made, from propulsion to guidance to data storage to thermal control to create an outer planetary spacecraft that broke the mold on cost”. Senator Mikulski of Maryland (where the mission contractor APL was located), being on the Space Exploration Committee, came to the rescue on a number of occasions when funding had been withdrawn. The ups and downs were so numerous over the years it’s a tribute to the stamina and perseverance of the scientists involved that held it all together.

In the final stage the launch booster rocket chosen was the Lockheed Martin Atlas V with Russian built engines. A second stage Centaur rocket was chosen because it had stop and go capability needed to maneuver to Jupiter to utilize the gravitational assist needed to increase speed which shortened the time to get to Pluto. There was also the third stage Star 48 and a plutonium reactor. Plutonium batteries were necessary for long duration flight (the great distance from the sun negated the use of star panels for power) this was contained in an oil-drum size barrel to contain the plutonium in case of a crash and also to contain the heat generated. Electricity to run the equipment was generated by use of a thermocouple, one element internal, one external, the temperature differential generated the 250 watts needed.

Alan Stern was the lead scientist through the entire excruciating journey to the final encounter with Pluto. To read his account of the final phases of the launch is to relive the experience yourself because he makes it so graphic and realistic. Describing his feeling on seeing the 200 foot tower blast off literally, with the relatively small New Horizon space ship in its nose cone and realize the journey will take ten years is a fascinating story to go along with the space exploration program run by NASA.

Now Elon Musk, head of Spacex, is adding a new chapter with his inventive design of reusable rockets together with his visionary plan to colonize Mars. He has already sent one of his Tesla cars on ahead into deep space. Obviously there is no end to what can be accomplished.
The Glass Universe: How the Ladies of the Harvard Observatory Took the Measure of the Stars
by Dava Sobel
reviewed by Jim Mills

During the last few decades of the 19th century and the first few of the twentieth, the Harvard Observatory was one of world’s leading astronomical centers. Key to its success was the early use of women in supporting roles and later on as leading astronomical researchers. Prior to the digital age, a major time consuming activity involved repetitive mathematical computation. Those who provided that function were actually called “computers”.

Many of the women computers continued their education receiving degrees in astronomy up to the doctoral level. An early effort involved the classification of star types. Harvard led in breaking up the light from a star and measuring the color spectrum for tens of thousands of stars. The spectrum of a star is a useful tool allowing determination of the star’s composition and information on its movement either towards or away from the Earth. One of the computers, Annie Jump Cannon, devised the O,B,A,F,G,K,M star classification system based on the measured spectrums showing surface temperatures, ranging from the highest in the “O” category to the lowest for “M” stars. As a memorization tool thousands of astronomy students learned the mnemonic aid, “O’ Be A Fine Girl Kiss Me” to remember the sequence of the categories. Our favorite local star is a “G” type. A star’s category is related to its size (mass) and its life cycle. Some hotter stars live only a few million years but some of the cooler ones could last for periods up to a trillion years. Our sun is good for around ten billion years or so.

The basic technology employed in stellar research, at the time, were large (12 inch square or larger) glass plate photographs. Each plate contained thousands of stellar images or spectra. Eventually the Harvard photographic plate collection numbered half a million images. This historical record allowed astronomers to compare images taken over time to detect any relative motion or changes in light intensity. Stars who’s light intensity changes over time are called variable stars. Some of this variation comes from double stars that orbit and who, from our vantage point, eclipse each other. But most variable stars actually vary their light output over time.

Another of the women working at Harvard, Henrietta Leavitt, between 1905 and 1912 made one of the major astronomical discoveries of all time. Leavitt studied a certain type of star called Cepheid Variables. She recorded the period of the light variability cycle for thousands of these stars. Many of these Cepheids were found in two dwarf satellite galaxies of the Milky Way called the Magellanic Clouds. These stars are very far away but are roughly at the same distance from the Earth. This meant that the variation in apparent brightness of these stars reflected their variation in absolute brilliance. With this information she discovered that the star’s cycle period correlated with the star’s real brightness. This meant that an astronomer by determining the light cycle period of a Cepheid could by measuring its apparent brightness calculate its distance from the Earth. This discovery was a powerful tool in determining the size of the Universe.

The historical record represented by Harvard’s photographic plate collection was one that was irreplaceable. Harvard treated these assets accordingly taking great pains to protect the plates from potential damage including fire. Today Harvard is in the process of creating a computerized digital copy of this astronomical asset. The process will take decades. This record represents more than a half century of tireless effort of hundreds of computers, primarily underpaid women, who were so dedicated to their job and who so believed in the importance of their work. In The Glass Universe, Dava Sobel has brought the diligence and genius of these women to our attention and has told the fascinating story of their contribution to our scientific knowledge of the universe around us.

The Female Staff of the Harvard Observatory (1918) - Henrietta Leavitt 6th from Left - Annie Jump Cannon 5th from Right
There is great irony when the events depicted in a novel foreshadow and parallel reality. As I read *Crimes of the Father*, a novel centered on pedophile priests and their victims, the saga of Christine Blasey Ford's accusation of sexual assault by Supreme Court nominee Brett Kavanaugh was unfolding. One particularly vexing issue in the Supreme Court case was why someone who is a victim of unwanted sexual aggression does not immediately take action, blowing the whistle on the perpetrator. In the masterfully written *Crimes of the Father* that question is answered. As readers we are witness to the powerful forces that weigh down on anyone who has been a victim of sexual predation. Taking on the Catholic Church, a nominee for a high office, or an important business or entertainment figure is not done lightly. Powerful institutions will bring their full institutional weight to cast doubt on your story. Be wary, be very wary before you accuse, says Keneally.

The action of *Crimes of the Father* takes place in Sydney, Australia where in 1996 Father Frank Docherty returns to lecture about celibacy and child abuse in the Catholic Church. Docherty had been a priest in Sydney during the Church's progressive heydays under Pope John XXIII. But his outspoken opposition to the Vietnam War had rankled the conservative hierarchy, landing him in Waterloo, Ontario where he pursued and obtained a doctorate in developmental psychology. Although he remained outspoken there, his research and clinical work on how the church dealt with abuse cases gave him a measure of renown and support by the (somewhat) more progressive diocese. It was on the basis of that work that he was invited to lecture in Sydney.

When Docherty returns to Sydney he uncovers evidence of malfeasance among his priestly peers. He also finds, as mentioned, great reluctance on the part of the victims to take any action. Will they act, or will the pain of recollection and the psychological risks of reopening old wounds inhibit them? That is the core question of the story.

Keneally has written an excellent novel. He jumps back in time to tell the back stories of the characters he introduces, giving each a three dimensionality that powerfully moves the story along. The pain his characters feel and the conflicting emotions they endure are powerfully expressed. When the action focuses on 1996 the tale he tells is a gripping one. In a little over three hundred pages the reader gets a tightly drawn picture of the subtlety and nuance surrounding priestly pedophilia. I could hardly bear to put this book down. In the context of the #MeToo movement, of the takedown of many public figures for unwanted sexual advances, and of the ongoing revelations of priestly abuse, this is an excellent and timely novel.
The Woman In The Window. A novel
by A. J. Finn
reviewed by Don Boink

If you enjoy psychological thrillers here is a good one. The woman in the window is a sad mess whose life has been traumatized by a failed marriage of her own making combined with a tragic auto accident that seriously affects her family. Despite her professional practice as a psychologist she lapses into a post traumatic stress condition known as agoraphobia, fear of the outdoors. She secludes herself in a large mansion in Harlem, abuses herself mixing medication and alcohol and loses herself in binge watching old black and white movies. Mostly murder mysteries.

Her one preoccupation is looking across the street at the homes of her neighbors. With her expensive zoom camera she is able to literally see into their lives and track their habits. Living in an almost constant alcoholic haze does not do her physical condition any good. Directly across from her house a new family moves in, father, mother and a teen age son. Alastair, Jane and son Ethan Russell. This family is to play a large role in the life of Dr. Anna Fox. The chapters are quite brief, sometime only a single page. There are just 100 chapters.

Gazing out her window one night she sees something that causes her world to start to crumble. Calling 911 her fuzzy intellect makes it difficult to communicate with the dispatcher. All sorts of complication arise from the confusion that ensues. From there it seems to be one twist after another that keeps the reader entranced and surprised. Several incidents occur that, in time fill in the reality that constantly eludes her.

Continually being told that she is hallucinating finally beats her down to accepting this as the case. Then something shows up that convinces her that it is not just her imagination. From that point she struggles to piece together the truth of the matter. It is well written story that puts the reader through an amazing maze of revelations and horrifying confrontations.

The Death Of Truth
by Michico Kakutani
reviewed by Don Boink

This is a very disturbing book to read. It’s message is dire, it’s tone is not encouraging nor optimistic. Nonetheless it is an important message and deserves to be taken seriously. It is quite self evident that we are in a time of unprecedented turmoil and, to say the least, uncertainty and confusion. The situation is murky and difficult to process. The clamor for our attention is intimidating if not threatening. Normal recourse to sources of information are besieged by controversy and insidious influences. Sorting out fact from fantasy has become a conundrum of shapes and shadows. Purposeful obfuscation is prevalent and ubiquitous. Our much vaunted social media has become a quicksand of peril and betrayal.

Kakutani is a journalist of good repute and vast experience of wide ranging literary erudition. In her book she identifies the nature of the danger we face and relates it to past episodes in history that led to calamitous regimes and personalities. Demagogues played on the fears and prejudices of susceptible people to convince them that they held the answers to their problems. One quote from the book is : “I also hope to highlight some of the prescient books and writings from the past that shed light on our current predicament.” There are several instances where authors and books are cited that pertain to the problems posed by the current administration and its controversial leader.

This is a rather short book of 175 pages and then a lengthy section of notes and bibliography. Those interested in a broader understanding of the current dilemma that we are facing will find this book a great insight and source of addition material.
Certainly one of the great disasters of the twentieth century was the rise of the Nazis to power in Germany in 1933. Just how that event occurred is the subject of Benjamin Carter Hett’s newest book, *The Death of Democracy*. The Weimar Republic established democracy in a post-WW 1 Germany that had known only autocracy in the form of centuries of Monarchy. Germany’s defeat in the war in November 1918 came as a great shock to a German people who had been fed only glowing reports during the four year long war. In addition to the shock of defeat, Germany also suffered an unbounded economic liability in the form of war reparations that were stipulated by the 1919 Treaty of Versailles. Throughout its life (1919 - 1933), the Weimar Republic was beset by problems that the Western Powers did little to alleviate.

The Nazi Party started up soon after the end of the war with Adolf Hitler joining and becoming the leader of the movement in the early 1920s. In 1924 the Nazi made a failed attempt to seize power resulting in Hitler spending a short time (9 months of a five year sentence) in prison. Germany had experienced a run-away inflation in 1923 but in the latter part of the decade the economy improved and the prospects for the Nazis went into decline. The start of the depression in 1929 led to a chain of events resulting in an increased number of right wing party members in the Reichstag, the German Parliament. By 1932 the Nazis became the largest party, though still a minority, in the government. The German leaders of the time, including the German President, the war hero Paul von Hindenburg, had to consider if and how the Nazis should be included in the government.

The Nazis tended to represent more rural areas, particularly the German farmers who felt imperiled by expanding world trade that would bring in cheaper agricultural products from abroad. There was a movement at the time to expand world trade, what we would now call Globalization, as a way to tie nations together economically and reduce the prospects of another war. This was an issue that the Nazis fought vehemently, arguing in favor of a policy of relying only on German products, a policy that eventually necessitated an expansion of the German Reich to include much of the agricultural areas in the East such as in Poland and the Ukraine. At the same time the Nazis fought immigration into Germany. Past immigration had increased the Jewish population in Germany, as they had fled from repression in Russia and other countries. From the start Hitler had imbued the party with a dominating anti-semitic ideology thus turning them against immigration.

Much of what the Nazis would do once in power was telegraphed by pronouncements they made years earlier as they jockeyed for power. Many of the Weimar leaders thought that they could make use of the Nazis to push conservative issues while keeping them under control. The viciousness that the Nazis displayed in eliminating any opposition once they were in power meant that any rival parties would disappear within two years. Some of those who eased Hitler’s rise to power would pay for their indiscretion with their lives. Some trends in our country today, anti-immigrant agitation, the distrust of press reports and opposition to expanded world trade, today seem to mirror events in Germany a century ago. Democracy is a very fragile construct. It takes constant commitment on our part to maintain the values that we treasure.
Facts and Fears: Hard truths from a life in Intelligence
by James R. Clapper - Former Director of National Intelligence
reviewed by Don Boink

The book is very current as it comes after the election of Donald Trump. James Clapper is not a well known person and that is the way he likes it. As Director of National Intelligence he oversees a tremendously large organization concerned with the safety of our country. He is in his seventies now but just as energetic as he has always been. He’s a duty person just as Bob Gates, the former head of the Department of Defense, is. It was Gates who selected him because of his lengthy service in the military.

His appointment came just before the savage attack on 9/11. To me the interesting co-incidence is that the destruction of the Trade Center was a failure of intelligence to recognize the strangeness of foreigners learning to fly but neglecting to learn how to land big planes. Clapper’s job would be to coordinate the several intelligence agencies to communicate effectively so that the dots could be connected. The book contains many instances which illustrate the man’s sense of humor. When asked to accept the job he told Bob Gates he would have to call Clapper’s wife Stephanie and get permission. This Gates did and was able to get her agreement.

Clapper and President Obama got along very well. They seemed to appreciate one another. Clapper’s team was responsible for briefing the President each morning on the latest developments. Since the President usually read the reports prior to the meeting it became possible to supplement the report with additional insights. The most onerous task was, as Gates had found, appearing before congressional committees. Politicians loved to grandstand before the TV cameras. Off camera they were usually more business like. Gates had said, “When the little red light comes on it’s like a full moon to a werwolf.”

Perhaps the most secretive mission was the tracking of Osama Ben Laden. Through “truly stellar work by some dedicated analysts from CIA, NSA, and NGA had tracked him to a small compound in Abbottabad, Pakistan”. This was in spite of the difficult relations we had with Pakistan. “CIA rightly received a great deal of credit for their incredible work”. It was months of intense investigation before the final decision was made to send in a Seal team to apprehend or capture Bin Laden after several alternatives were considered. The entire saga of the operation is fascinating to read. Other CIA covert activities are referred to. Clapper had been Director of Intelligence for nine months now and felt that this situation was the highlight of his career.

Next came the much politicized Benghazi episode. Tragically two American officials were killed by demonstrators. Much has been made of this, mostly for political reasons. The book has a full discussion of the matter. Clapper is very candid in admitting some errors on his part. Funding for the Intelligence Department became a nightmare for the Director. With the advent of the Tea Party and the ill conceived Sequestration provision being enacted the enforced cuts were a drastic obstacle to deal with. Effective intelligence operations were seriously curtailed.

Some of the most troubling passages in the book tell of the intelligence breaches that involved Bradley (Chelsea) Manning, Julian Assange, and Edward Snowden. It was heartbreaking for Clapper to see this disastrous disclosure of his secret organization so bluntly revealed. What ensued was a long period of damage control. To this day controversy rages over some misunderstandings and miscues. Our allies were not pleased to learn that the U.S. was “spying” on them. Other than the fact that all governments spy on one another. During this period the nature of Russian subterfuge and interference in many governments became evident. The recent indictment of twelve Russian intelligence officers by Robert Mueller demonstrates that it persists today. Surprisingly our President insists on defending Putin because he, Putin, simply denies it. The age of cyber warfare is upon us. That became a consuming concern for Clapper. The North Korean situation was foremost on his list. This matter has recently been highlighted by Trump’s meeting with Kim. That outcome is also controversial.

The final portion of the book is his great disappointment with the election of Trump and the immense danger he is to our country. The many problems that the country faced during Clapper’s service, over 50 years, were met with varying degrees of success. He is very candid in assessing how they were handled. His oft used phrase he uses in stating his position is “speaking truth to power”. He was meticulous in avoiding policy decisions, leaving those to elected officials.

James R. Clapper
The Darkening Age: The Christian Destruction of the Classical World
by Catherine Nixey
reviewed by Jim Mills

In *The Darkening Age*, Catherine Nixey tells a story that has not usually been covered by historians. Christianity grew very slowly during its first 300 years. Many stories have been told about the persecution of Christians by Roman Emperors over this period but the author feels that the magnitude of these persecutions has been greatly overstated. Many different beliefs were practiced in the Roman world and in general were tolerated. A few Emperors such as Nero were less tolerant but that lack of tolerance went beyond that expressed just against Christians.

The key date in the history of Christianity is 312 AD. In that year the Emperor Constantine converted to Christianity. It has been estimated that Christians only represented about 10% of the population at that time. Within the next century that figure increased to nearly 100%. All of those conversions could not be considered to be voluntary. Toleration of differing beliefs declined markedly during that century. Paganism was made illegal by an edict of the Emperor Theodosius I in 391. Accompanying that lack of toleration was a wanton destruction of the ancient culture going back to that of the Greek Philosophers. Many ancient sculptures were defaced during this time including the loss of limbs, noses, etc. Much of this art did not survive at all. A significant proportion of ancient literature was lost during the next few centuries. Book burnings of what was considered heretical texts became more common. As a result a very small part of this cultural and scientific heritage has come down to us today. These few scraps of knowledge were preserved in scattered monastic strongholds scattered across Europe, Africa and Asia while it was being eradicated elsewhere.

From the 4th century on, the state of the Roman Empire fell increasingly into decline. Continuing assaults upon the Empire from bordering barbarian tribes had an increasing impact breaking up the Roman world into smaller and smaller entities. From around the year 500 Europe descended into what has been called the Dark Ages. It took nearly 1,000 years for the state of art, science and culture to begin to rise again during the Renaissance to equal or exceed the levels achieved during Roman or Greek times. The loss of scientific knowledge accrued during antiquity during the period preceding the Dark Ages certainly prolonged that era, delaying the rise of society into our current more tolerant, equitable and prosperous age.