

## ✧ ✧ Upcoming AOF Events ✧ ✧

### ➤ Free Movie Nights!

**Fridays, Feb 5 and Feb 19, 7pm – 10pm**

Twice a month, Reason Center (RC) and AOF show you the love by treating you to a free movie under an excellent MPLC License (basically, a show-movies-for-free license). The License prohibits us from naming the movie. Sometimes we can hint, sometimes not - and plans change. But if you contact Reason Center (see below), they'll tell you, then you can tell anyone.



*Hints.* On Feb 5 movie, it's a 2019 comedy with Amy Poehler and Maya Rudolph, set in Napa Valley, about long-time friends who reunite and revisit past choices. Then on Feb 19, a 2020 original about fiery blues singer Ma Rainey, who joins her band at a music studio in 1927 for a recording session (it is full of great music).

The regular movie venue, [Reason Center](#) (RC), is closed (temporarily we hope). So how can you attend? You'll need a personal Netflix account + a laptop or desktop computer with the [Google Chrome web browser](#). If you don't have these we apologize -- please be patient until RC can open its doors. Else, here's how to join us:

1. Open your Chrome web browser right now and install the "Netflix Teleparty" Extension. Get it at: <https://www.netflixparty.com/>. (Really, do it *now*, don't wait till movie night!)
2. Just before show time, fire up the Chrome browser again and go to the very special Netflix Movie Teleparty link, which will appear on the [AOF website calendar](#) about a half hour before show time.
3. **Click the Teleparty link.** The Teleparty page will open. Log into Netflix (if not logged in already). At the top right of the browser frame check your "Extensions" list. Find the letters **TP** in red. You may need to click on the letters.
4. The Netflix movie party should begin. You'll be watching it along with the rest of us. As it plays we can chat on the side of the screen and make silly, snarky comments.

Free Movie Night was meant for Reason Center members, but non-members are welcome too. RC *may* beg a small (voluntary) donation to cover costs. How can you be a Reason Center member? See <http://reasoncenter.com/donate/>. A measly \$5 a month, membership is tax deductible if you itemize. And the perks (like this one) are ... cinematic.

**Location:** A Netflix movie party link, see above.

**Contact:** See <https://reasoncenter.org/contact/> or email <programs (at) aofonline (dot) org>.

*Free Movie Nights generally occur two Friday evenings each month. You can suggest your own fave flick for next time, how cool is that?*

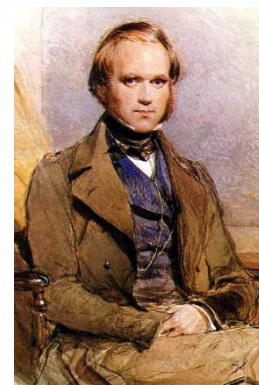
### ➤ Sacramento Darwin Day

**Saturday, Feb 13, 2021, 2:30 pm - 5:00 pm**

***The Evolution of STEM Education and Why Diversity Matters***

Presenting the 23<sup>rd</sup> fabulous year of the **Darwin Day Birthday Gala**, Sacramento's coolest, most singular, most go-to event of science and humanity, brought to you by area science advocates, civic groups and nerds on too much coffee, and marking Charles Darwin's 212<sup>th</sup> birthday. A free, online event, open to all.

[Darwin Day](#) is a science-rush like no other, a celebration of scientific inquiry honoring of the life and work of the great Charles Darwin (b. 12 February 1809), sponsored worldwide by community and educational groups. Not exactly an AOF event, but AOF helped found the local gala, and continues to support it and commend it to all friends in the Sacramento community of reason. Because science! And what's science but reason in the trenches?



The 2021 program will begin at 2:30 o'clock *post meridiem*. This special year you can attend by video from the cozy comfort and lockdown safety of your home. The key speaker will be [Kelly K. McDonald](#), Professor of Biological Sciences and Director of the Center for Science and Math Success at California State University Sacramento. Her talk will focus on diversity and inclusion in STEM education (STEM = Science Technology Engineering Math), with an emphasis on social justice and anti-racist practices.

Admission is free, that's right *free*, via online Video. To attend, simply RSVP ahead of time (also free). Then you will receive a convenient Videoconference link by email. RSVP here:

<https://paybee.io/vevent.html?action=openrsvp&eventId=600e45f6365fca29c29a202d>

For more details, see <https://www.sacdarwinday.org/>

See the event flyer at <https://www.sacdarwinday.org/wp-content/uploads/2021/01/Darwin-Day-Flier-2021-1.pdf>

Finally, to support Sacramento Darwin Day (i.e., donate, so next year's event can be even better), visit <https://paybee.io/quickpay.html?handle=sacdarwinday&ppid=1#optionList>.

Professor Kelly  
McDonald



## ➤ Love in the Time of the COVID

**Sunday, Feb 28, 2021, 2:00 pm**

Isolation doesn't work for humans, most of us anyway. But nor do nasty germs. So what's a person to do?

How do you meet possible significant others when face to face contact can kill you -- or make you sick as a dog after guzzling Godiva chocolates? What compromises can you make for health and safety? And s- s- (gulp) sex, what about that?

Join us for an informal conversation, an open mike event, a brainstorm and jam. We'll dissect ideas and you can offer your thoughts too. Attendance is free as ever. And the meeting will not be recorded, so speak without fear. Even about s- s- ...



Note, Reason Center is currently closed, so this meeting will be by online videoconference. "Attend" as follows:

- **(Optional) Any time before the event**, go to <https://zoom.us/download>. Install the "Zoom videoconference tool" if you haven't already. (Do it just once; it will be good for all future online Zoom meetings. It just makes attending a bit easier.)
- **Moments before the meeting**, click this link: <https://us02web.zoom.us/j/85160333586?pwd=UjJqRmRXbzE0bUE5cldtZnVRcWRldz09>. It will take you to a "Zoom Page." Click the blue box that says **Launch Meeting**
- **If it asks you to sign in**: If you have a Facebook or Google account, or even an SSO account, just click one of the buttons for those, then sign in with your Facebook or Google info. Or create your own free Zoom account, but this is not necessary.
- **If it wants a Meeting ID** (it probably won't), the ID is **851 6033 3586**.
- **If it wants a passcode** (it probably won't), the passcode is **175964**.
- If necessary, click the line that says **Join from Your Browser**.
- The videoconference should begin. Speakers on, please! Sit back and enjoy.

Or listen in by phone at 1-669-900-6833. Same meeting ID (**851 6033 3586**) and same passcode (**175964**).

**For details contact** : Email "programs (at) aofonline.org", or see <https://www.meetup.com/SacFAN/events/276064925/>.

## ✧ ✧ Other Upcoming Events ✧ ✧

### ➤ Sacramento-area Online Meetings

During the lockdown, other groups meet via online videoconference. Join them and share your thoughts!

- **Sundays, Feb 7 & Feb 21, 10:30am – Noon: Online Coffee & Community**. Join fellow freethinkers on the 1st and 3rd Sundays for coffee (BYOC) and conversation. Link: <https://us02web.zoom.us/j/84984111659?pwd=cThkaGdTK0FCdXJpWnB3MVZ1R213Zz09>.
- **Monday, Feb 8, 5pm – 7pm: Suffering and Martyrdom. Recovery From Religion, Sacramento chapter**, will discuss the psychology of suffering and the "Martyrdom Effect," and how self-inflicted suffering and martyrdom can lead to unhelpful core beliefs. Link: <https://us02web.zoom.us/j/186729414>.
- **Tuesdays, Feb 9 & Feb 23, 7pm – 9pm: Porch Talk**. A social gathering on a virtual front porch, a chat about topics of the day. Your topic suggestions are welcome. Link: <https://us02web.zoom.us/j/86401692746?pwd=NWVhRdHpEellNblRiR0w4RGtmQ2ZLUT09>.
- **Wednesdays, Feb 10 & Feb 24, 6pm – 8pm: Black Lives Matter and Me**. Talk, read, watch videos; discuss social justice, reforms, privilege, power and oppression. Link: <https://us02web.zoom.us/j/82590278514?pwd=K1pzaXA0dGVESzlvS1lUcEs4RnE2UT09>.
- **Monday, Feb 15, 6:30pm – 8:30pm, and Sunday, Feb 28, 3pm – 5pm: Online Book Clubs**. For details see <https://www.meetup.com/SacFAN/events/cmqldsyccdbtb/> and <https://www.meetup.com/bhnb-sacramento/events/275974340/>.
- **Wednesdays, Feb 17 & Mar 3, 7pm – 9pm: What's Your Story?** Meet other freethinkers, atheists, agnostics, nonbelievers and humanists in the greater Sacramento area, to discuss belief and philosophy, and what led you to this place. Link: <https://us02web.zoom.us/j/85489607519?pwd=a1V2eEVKb3hnWXhZMVZRMm04Wk5BQT09#success>.
- **Thursday, Feb 18, 7pm – 9pm: Recovering from Religion Virtual Support Group**. Providing personal support to individuals as they let go of their religious beliefs. You may share or just listen. Link: <https://us02web.zoom.us/j/82268955990>.
- **Friday, Feb 26, 6:30pm – 9:30pm: Virtual Skeptics in the Pub**. A social meeting for the Sacramento Area Skeptics. It welcomes new Skeptics and like-minded folk who champion the methods of science and critical thinking. For details, see <https://www.meetup.com/sacskeptics/events/tsvpxyrccdbjc/>.
- **Saturday, Feb 27, 7pm – 9pm: Wine, Cheese, and Litera-cheer**, hosted by Nancy Sneed. Share your ideas about any book(s) of choice. BYO beverage & snacks. Link: <https://us02web.zoom.us/j/87470173472?pwd=ckxFOHRXYzdFUXVxOWgzZzFicktRdz09>.
- **Secular Arizona Speaker Series**. Presentations through the month; see <https://secularaz.org/2021/01/30/secular-az-speaker-series/>.

## ➤ More Events

But there's more! For other freethought events in the area please see the Sacramento Coalition of Reason general calendar at <https://unitedcor.org/event-calendar-2/>. Click an event for details, and try not to be overwhelmed.

*You can help. Here's how.*

### Support Reason Center

Reason Center is closed, you might know. Temporarily, we hope. But it has hosted hundreds of events and accrued twelve partner organizations. Its mission is to support a social and intellectual community for freethinkers, contribute to society through education and community service, advance the civic understanding and acceptance of freethinkers, and uphold the separation of religion and government. All good work.

If RC will ever reopen, it will be because of support from members and donors. Please stand up for Reason Center, because it stands up for you. To set up a monthly or one-time donation, visit [ReasonCenter.org](https://ReasonCenter.org).

### Support AOF

You can support AOF *without spending a dime*. How? When you purchase goods at Amazon.com, simply use this link: <https://smile.amazon.com/ch/68-0325762>. Bookmark it now! Prices & service will be the same, but AOF will receive a small kickback for whatever you purchase. Sweet!

### Suggest a Meeting

Know a compelling speaker, have a great meeting idea? The AOF Program Committee wants to know! Go to <http://www.aofonline.org/contact.html>, click "Program Committee" in the drop-down line, and enter your thoughtful suggestion. (Reasonable honorariums paid to speakers.)

### Volunteer?

We suggest it meekly. See <http://www.aofonline.org/learn/committees.html> for opportunities.

## ✧ ✧ A Secular Holiday ✧ ✧

### ➤ Darwin Day

**Friday, Feb 12, 2021**

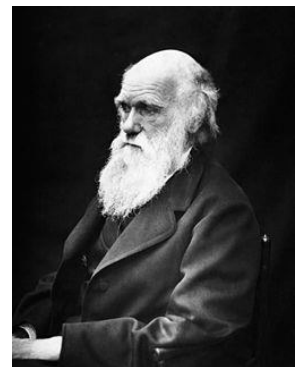
[Darwin Day](#) celebrates the life and work of Charles Darwin, a secular holiday widely celebrated within the global community with participation from all sectors of society. Even mainline churches have participated, celebrating the day as [Evolution Sunday or Evolution Weekend](#) (see the [Clergy Letter Project](#) for details).

Under any of these names, this day celebrates the wonder and beauty of both science and humanity, and serve to recognize and celebrate the achievements of a man who cast a bright, explanatory light on reality, our self-knowledge, and on the world of which we are part.

Charles Darwin contributed to our understanding at the deepest level, forever changed how we see ourselves within this vast, impersonal universe, and brought us a paradigm shift of seismic proportions. He symbolizes the brave, human enterprise of science in confronting the mystery of existence. His life and work exemplify the spirit of wonder, curiosity and adventure along with the excitement that the quest for knowledge and understanding can provide.

[The Darwin Day Program](#), an educational non-profit organization, encourages interested groups and individuals throughout the world to participate in the annual celebration of Darwin Day by coordinating events and activities in their area on or around February 12. The program also offers a year-round educational outreach project to help in reaching the goal of improving the public's understanding of science and foster an appreciation for our shared humanity.

Darwin Day, Evolution Sunday and Evolution Weekend encourage us to come together to champion science and humanity. They let us celebrate the astonishing engagement of our common intelligence with the wonder and excitement of life in the universe. If you agree, visit the [National Darwin Day](#) site and sign the petition calling for national recognition of this day. Then, visit [Epic of Evolution](#) for a great adventure.







... the theory of natural selection was itself such an extraordinarily beautiful and elegant inference engine. Wearing its theoretical lenses was a permanent revelation, populating the mind with chains of deductions that raced like crystal lattices through supersaturated solutions. ...

The world given to us by physics is unrelievedly bleak. It blasts us when

it is not burning us or invisibly grinding our cells and macromolecules until we are dead. It wipes out planets, habitats, labors, those we love, ourselves. Gamma ray bursts wipe out entire galactic regions; supernovae, asteroid impacts, supervolcanos, and ice ages devastate ecosystems and end species. Epidemics, strokes, blunt force trauma, oxidative damage, protein cross-linking, thermal noise-scrambled DNA—all are random movements away from the narrowly organized set of states that we value, into increasing disorder or greater entropy. The second law of thermodynamics is the recognition that physical systems tend to move toward more probable states, and in so doing, they tend to move away from less probable states (organization) on their blind toboggan ride toward maximum disorder.

Entropy, then, poses the problem: How are living things at all compatible with a physical world governed by entropy, and, given entropy, how can natural selection lead over the long run to the increasing accumulation of functional organization in living things? Living things stand out as an extraordinary departure from the physically normal (e.g., the earth's metal core, lunar craters, or the solar wind). What sets all organisms—from blackthorn and alder to egrets and otters—apart from everything else in the universe is that woven though their designs are staggeringly unlikely arrays of highly tuned interrelationships—a high order that is highly functional. Yet as highly ordered physical systems, organisms should tend to slide rapidly back toward a state of maximum disorder or maximum probability. As the physicist Erwin Schrödinger put it, "It is by avoiding the rapid decay into the inert state that an organism appears so enigmatic."

The quick answer normally palmed off on creationists is true as far as it goes, but it is far from complete: The earth is not a closed system; organisms are not closed systems, so entropy still increases globally (consistent with the second law of thermodynamics) while (sometimes) decreasing locally in organisms. This permits but does not explain the high levels of organization found in life. Natural selection, however, can (correctly) be invoked to explain order in organisms, including the entropy-delaying adaptations that keep us from oxidizing immediately into a puff of ash.

Natural selection is the only known counterweight to the tendency of physical systems to lose rather than grow functional organization—the only natural physical process that pushes populations of organisms uphill (sometimes) into higher degrees of functional order.



## Not yet an AOF member? Please join us!

**Atheists and Other Freethinkers** is a 501(c)(3) non-profit association, FEIN 68-0325762, incorporated in 1993. Meetings are free and open to the public. AOF also hosts civic service projects, dinners, movies and parties! See what awaits you at [www.aofonline.org](http://www.aofonline.org).

AOF President & Editor: Fantastic Fran Evanisko

Vice-president: Marvelous Mynga Futrell

Secretary: Rapid Ruth Rezos

Treasurer & Registrar: Kinetic Ken Nahigian

Webmistress: Palpable Pat Kelley

Program chair: Super Susan McLean

Facebook page: Keen Kaeleigh Pontif

Directors at large:

Roger Zabkie, Pamella Rivers, Christine Tweet,

Linda Ostrofsky (Jetta), Kaeleigh Pontif

### How to Contact AOF:

- Call 916-304-3796 (voicemail)
  - Or write to PO Box 15182, Sacramento, CA 95851-0182
- Or visit <http://www.aofonline.org/contact> to e-message us

### How to Join AOF:

Visit <http://www.aofonline.org/join>, or come to a meeting. We have forms.

### AOF's Facebook page:

<https://www.facebook.com/pages/Atheists-and-Other-Freethinkers/533365556831322>

### AOF Mission Statement:

"The purpose of Atheists and Other Freethinkers (AOF) is to promote the civic understanding of atheism and the acceptance of atheists in our community. Through educational programs, projects, and publications, AOF will extend secular perspectives, including the separation of religion and government and the right to think and speak freely on these perspectives."

*What is a Freethinker?* One striving to form opinions of life, religion, politics and philosophy on the grounds of reason and experience, rather than tradition, authority or custom. He or she need not be an atheist, though in a religious society most atheists do tend to be freethinkers.

AOF supports a benign separation of Church and State as the best means to protect the liberty and intellectual commerce of citizens. "... to keep forever from these shores the ceaseless strife that has soaked the soil of Europe in blood for centuries" (James Madison, 1803).

Our vision: to be a venue where secular and unchurched citizens can socialize, dialog, develop friendships and enjoy shared company. AOF does not discriminate on such grounds as race, sexual orientation, age, gender, class, physical debility or (\*cough\*) religion. We welcome the fair-minded of all political persuasions and preferences. Be respectful, and you may join.

Donations to AOF are tax deductible, and the newsletter is free by email. Please share with sympathetic friends.

Letters, submissions? We love them! See:

<http://www.aofonline.org/read/submission-guide.html>.

# Have any mathematicians calculated whether it is possible for random mutations to create the orderly complexity of living beings?

Answer by Krister Sundelin from [Quora.com](https://www.quora.com)

Do yourself a favour: skip the idea that random mutations create orderly complexity of living beings. The book is called *On the Origin of Species by Means of Natural Selection*, and **not** *On the Origin of Species by Means of Random Mutations*.

So by asking about random mutations, you just show that you don't know about the theory of evolution, and likely were never interested in even looking at the book that creationists so loathe.

"But selection doesn't matter if there is random mutations at the bottom, right?" I hear you say. Well, to illustrate how much it matters, get the Yahtzee set that you only play with Grandma on Christmas.

Do you know what the chances are to get five sixes? I do. It's 1:7,776. You can roll thousands of time before you succeed. If you roll the five dice a million times, you ought to only get five sixes about 128 times.

But that's not how you play Yahtzee, remember? You roll the dice, and then you keep the dice you like and reroll the rest. So let's do that: let's keep the sixes. In fact, I'll play that game right now and type the results here.

1. 2-3-3-4-5
2. 1-1-3-4-6
3. 3-4-5-6-6
4. 1-3-3-6-6
5. 2-3-3-6-6
6. 2-5-6-6-6
7. 1-3-6-6-6
8. 3-6-6-6-6
9. 3-6-6-6-6
10. 4-6-6-6-6
11. 6-6-6-6-6

Eleven rolls! Not thousands of rolls

And if you don't trust me on this, do play it yourself. It only takes a few minutes, and usually takes between 10 and 15 rolls. And that means that you will get on the order of 65,000 five-sixes in a million rolls, not 128. That's how much a game-changer selection is.

"But, but, the blind watchmaker", I hear you say.

Well, yes. But watches don't have sex, and thus are not subject to either random mutations or selection.

However, we could *simulate* watches having sex, and the consequential random mutations and selection. And lo and behold, the entire matter of this question is so old that someone has already done that.

See: <https://www.youtube.com/watch?v=mcAq9bmCeR0>



## Why creationism bears all the hallmarks of a conspiracy theory

By Paul Braterman, Professor Emeritus in Chemistry, University of Glasgow; from [The Conversation](#)

Many around the world looked on aghast as they witnessed the harm done by conspiracy theories such as [QAnon](#) and the [myth of the stolen US election](#) that led to the attack on the US Capitol Building on January 6. Yet while these ideas will no doubt fade in time, there is arguably a much more enduring conspiracy theory that also pervades America in the form of [young Earth creationism](#). And it's one that we cannot ignore because it is dangerously opposed to science.

In the US today, [up to 40% of adults](#) agree with the young Earth creationist claim that all humans are descended from Adam and Eve within the past 10,000 years. They also believe that living creatures are the result of "special creation" rather than evolution and shared ancestry. And that that Noah's flood was worldwide and responsible for the sediments in the [geologic column](#) (layers of rock built up over millions of years), such as [those exposed in the Grand Canyon](#).

Such beliefs derive from the doctrine of [biblical infallibility](#), long accepted as integral to the faith of numerous evangelical and Baptist churches throughout the world, including the [Free Church of Scotland](#). But I would argue that the present-day creationist movement is a fully fledged [conspiracy theory](#). It meets all the [criteria](#), offering a complete parallel universe with

its own organisations and rules of evidence, and claims that the scientific establishment promoting evolution is an arrogant and morally corrupt elite.

This so-called elite supposedly conspires to monopolise academic employment and research grants. Its alleged objective is to deny divine authority, and the ultimate beneficiary and prime mover is Satan.

Creationism re-emerged in this form in reaction to the mid-20th century emphasis on science education. Its key text is the long-time best seller, The Genesis Flood, by John C Whitcomb and Henry M Morris. This provided the inspiration for Morris's own Institute for Creation Research, and for its offshoots, Answers in Genesis and Creation Ministries International.

Ken Ham, the founder and chief executive of Answers in Genesis, is also responsible for the highly lucrative Ark Encounter theme park and Creation Museum in Kentucky. As a visit to any of these websites will show, their creationism is completely hostile to science, while paradoxically claiming to be scientific.

### ***Demonising and discrediting***

These are common conspiracy theory tactics at play. Creationists go to great lengths to demonise the proponents of evolution, and to undermine the overwhelming evidence in its favour.

There are numerous organisations, among them Biologos, the American Scientific Affiliation, the Faraday Institute, and the Clergy Letter Project, which describes itself as “an endeavor designed to demonstrate that religion and science can be compatible”, that is, promoting evolution science within the context of religious belief. Even so, creationists insist on linking together the separate topics of evolution, materialist philosophy, and the promotion of atheism.

According to Answers in Genesis, evolution science is a work of Satan, while former US Congressman Paul Broun has described it as “a lie straight from the pit of hell”. When he said that, by the way, he was a member of the House of Representatives Committee on Science, Space, and Technology.

Like other conspiracy theorists, creationists immunise themselves from fact-based criticism. They label the study of the past as based on unprovable assumptions, thus disqualifying in advance the plain evidence of geology.

They then attack other evidence by focusing on specific frauds, such as Pitldown man – a hoax skeleton purportedly of a missing link between humans and other apes that was debunked more than 60 years ago – or the dinosaur-bird amalgam “Archaeoraptor”, discredited by sharp-eyed scientists before ever making it into the peer-reviewed literature (although not before making it into National Geographic).

One favourite target is Ernst Haeckel, whose pictures of embryos, published in 1874, are now considered to be seriously inaccurate. However, they do correctly draw attention to what most matters here: the features shared during development by different organisms – including humans – such as gill arches, a long tail, and eyes on the side rather than the front of the head, confirming they have a common ancestry.

Haeckel's name appears on the Answers in Genesis website 92 times. He is also the subject of a lengthy chapter in Jonathan Wells' Icons of Evolution: Science or Myth?. This book, which even has its own high school study guide, was what first convinced me, back in 2013, that creationism was a conspiracy theory.

It is a splendid example of creationist tactics, using long-rectified shortcomings (such as those in early studies on Darwinian evolution in peppered moths, in response to changing colours following reduced pollution) to imply that the entire science is fraudulent. Wells has a real PhD in biology, a PhD acquired with the specific goal of “destroying Darwinism” – meaning evolution science – from the inside.

Wells is a senior fellow at the Discovery Institute, a conservative thinktank which promotes creationism under the banner of “Intelligent Design”, and is also linked to other conspiracy theories, such as claims that the consensus on climate change is bogus, and that last November's US presidential election was stolen.

### ***What next?***

Conspiracy theories are always driven by some underlying concern or agenda. The theory that Obama's birth certificate was a forgery, or that the 2020 US election was stolen, are about political legitimacy and will fade as the politicians promoting them fade from memory. The idea that COVID-19 does not exist is proving a little harder to dislodge, but scientists, such as those behind Respectful Insolence, are organising to fight back on science denial and misinformation.

I fear that the creationist conspiracy theory will not be so short-lived. It is driven by a deep-seated power struggle within religious communities, between modernists and literalists; between those who regard scripture as coming to us through human authors, however inspired, and those who regard it as a perfect supernatural revelation. And that is a struggle that will be with us for a long time to come.



**Making a choice**