



June 29, 2020 newsletter.

Dear Grey House team and esteemed colleagues,

118 days into our protracted team-building adventure. It's been so long that Av's wild flowers planted in winter are blooming. Definitely summer!

This week's newsletter theme is: How working from home in the pandemic is changing our world of work. I've kept the newsletter light-hearted inasmuch as is possible, but this theme is a bit more heavy-duty. Food for thought. Comments welcome!

Meanwhile, here is the all the news I have that's fit to print since 22 June:

FIRST THE HAPPY NEWS!

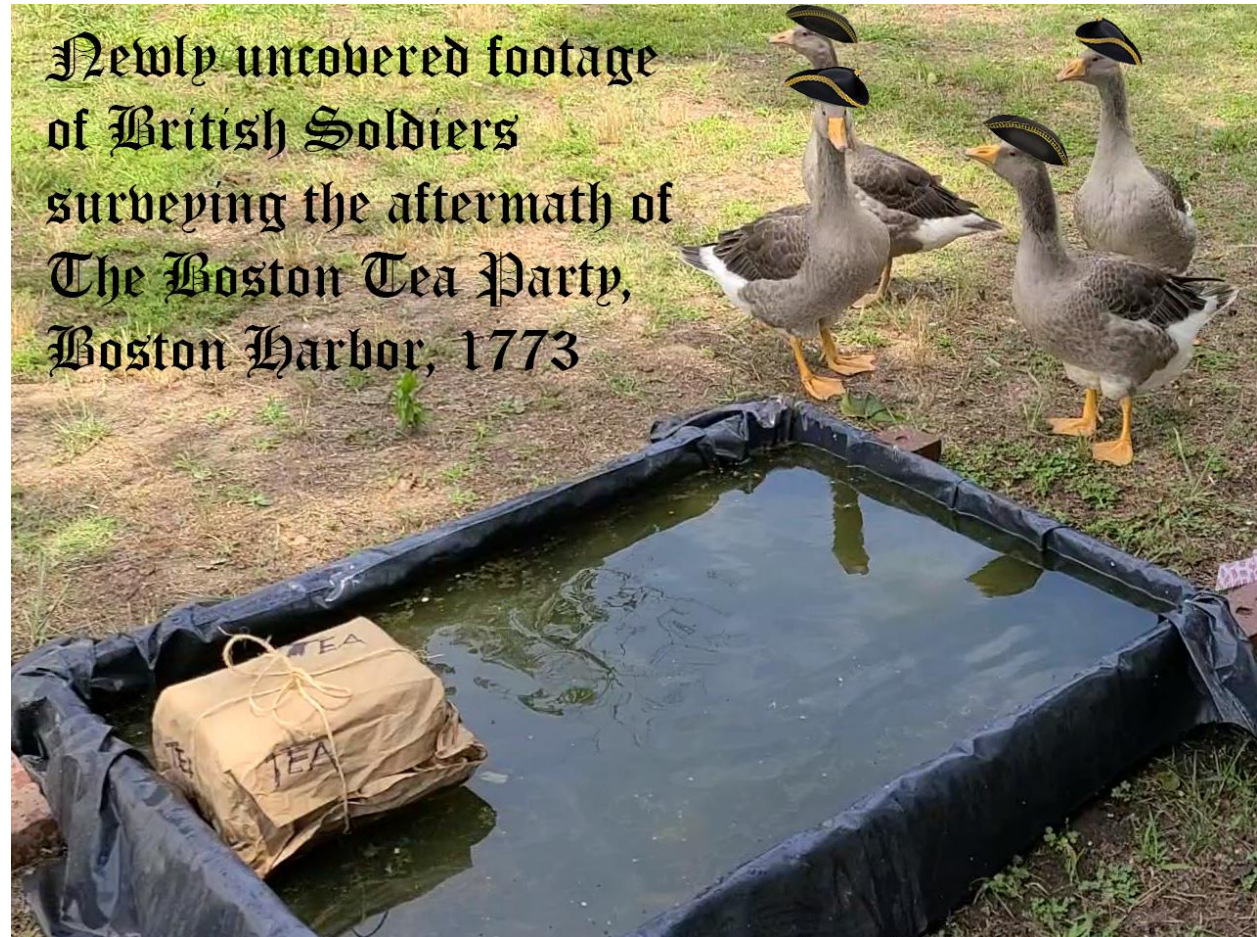
Aaron Reuben and Helen Fisher have coverage in *The Conversation*, for their E-Risk paper on neighborhood disadvantage and epigenetic DNA methylation. Nice! <https://theconversation.com/your-childhood-neighbourhood-can-influence-how-your-genes-work-new-study-141543>.

Susan received good news after President Trump's ban on visas for foreign workers: While the proclamation cites the J-1 category (cultural and exchange visitors), the subcategories listed do not pertain to Duke's J-1 program. In other words, the J-1 Student, Researcher, Professor, Short Term Scholar, and Specialist subcategories are not affected. That's our **Line, Jasmin, and Stephanie**.

Alice Gregory in London has been informing the public about COVID19 and sleep. <https://acamh.onlinelibrary.wiley.com/doi/full/10.1111/jcpp.13278>

We have an idea for Leah's send-off party! Leah and Curt leave Durham to start their new lives in Ann Arbor Michigan in August. So one weeknight between 13 July and 31 July, we are hoping to drive our cars to Grey House, park them facing the east side of Erwin Mill (thus in the shade), and have a pizza delivered to each car. Friends of Leah can exit their cars one by one, mount the stairs, and toast her with a limerick, haiku, poem or song. Please e-mail to let me know what you think of this idea, and any nights off-limits for you. Susan is investigating logistics: can we get permission from the property owner, and will Mellow Mushroom Pizza deliver? Stay tuned! **And get going writing your limerick or haiku!**

Its independence day week, marking America's independence from perfidious Albion. Ben and Karen's Huey, Dewey, Louie, and Webby re-enact the history.



And Maria Gehred plans the red, white, and blue holiday menu:



NEXT, THE UNHAPPY NEWS:

Temi's knee saga. After more than 5 months of pain, spine injections, and physical therapy, at last I got an MRI of my right leg, and the formal ICD diagnosis is "knee torn to smithereens." Lateral and medial meniscus both have "complex tears." I felt like saying to the doctor "I TOLD y'all my knee hurt!" Happily, Duke Sports Medicine says surgery is not required, some more knee injections should do it. This means Avshalom continues to do all the household chores and yard work. Hoping to stretch this out thru the hottest season of July and August. But I will be back on the football field for September!

Prize competition Name Avshalom's chickens!!!! There are 5. Ben and Karen are our judges (as they did so well with the goose names). **Well done team! Clear evidence of our sparkling creativity and staggering innovation!**

From Alice Gregory in London: After a bit of Wikipedia stalking, I was thinking the chickens should be called: **King, Duke, Cruz, Cornell and Otago.**

From Honalee and Robin in Durham: Temi used to call our black cat 'snow ball'. In honor of that; For the hens: **Snowflake, Flurry, Glacier, Blizzard.** Rooster: **Avalanche.**

From Adam Schmidt in Texas: My wife and I like the names **Henrietta and Chiclet.** 😊

From Idan in State College, Pennsylvania: **David**, after Israel's Prime Minister David Ben-Gurion, who used to wave and say 'shalom yeladim' to Av and the other kids on their walk to school in Sde Boker (the first story Av told me when we first met at the Hebrew U.. will never forget it!). This name is for the rooster, will have to think about names for the other 4...(Temi adds, the seller thinks all 5 chickens are females, but one does have a red comb, but this one could be trans, time will tell!)

From Jay Belsky in San Francisco: Giving names to the chickens depends on whether you intend to slaughter them eventually for chicken soup. If not, let me suggest: **Abraham, Isaac, Jacob, King David, and Moses.** But I guess those only work for roosters. So perhaps **Miriam.**

From Helen Fisher in London: **Marty McFly**, From Back to the Future...
https://en.m.wikipedia.org/wiki/Marty_McFly

From Karen Sugden in Durham: **Kiev, Tikka Masala, Nugget, Parmigiana, and Fried Steak** (the curve-ball rooster, this one's not like the others...) 😊

From Ben Williams in Durham: the Big 5 personality traits: Chickens: **Open, Conscientious, Extravert, Agreeable.** Rooster: **Neurotic.**

AND THE WINNER IS (drum roll here): Sidra, Alex, and Sabine Goldman-Mellor in Merced, CA: Pepper, Poppysed, Aleppo, Clove, and Nigella. Spices (dark in color, like the hens) that complement Av's love of cooking! Winners receive the dinner of their choice from <https://takethemameal.com/store/>

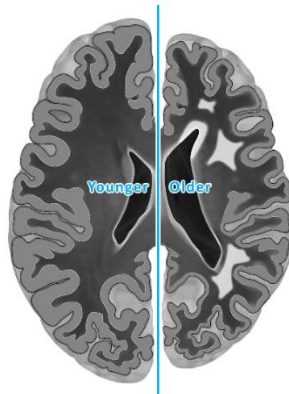
And more good news: All other chicken names submitted are now runner-ups, who will be assigned to JC Barnes' new chicks in Kentucky. See next page.

Speaking of chickens, JC Barnes and wife Sara in Cincinnati will be using all of the runner-up chicken names:



Science-visualizations:

From Annchen: Nothing personal, but....



From Helen Fisher: The artist's behind-the-scenes story of how this **Coronavirus Science** cover was created.

<https://blogs.sciencemag.org/vis/2020/06/19/capturing-corona/>



RESEARCH-PROJECT PROGRESS SINCE 22 June:

With more than 30 papers in review, delays can feel dispiriting, so I'm only reporting papers here that have made progress this week. Chin up! Patience builds character.

Maria Gehred's first-year project paper was submitted to Neuron. It was bounced without review from Nature Neuroscience. "Long-term neural embedding of adverse childhood experiences: a population-representative birth cohort followed for five decades." Better luck there Maria!

Jon Schaefer's paper got an R&R from J of Abnormal Psychology. Wow! It's a tough one: the nasty old editor wants a replication sample, which will have to have twins, childhood maltreatment data, family history data, and polygenic scores, which is a tall order. Jon is on it! No evidence for genetic moderation of the effects of adolescent victimization exposure on general psychopathology in the Environmental Risk Longitudinal Twin Study

Aaron and Max Elliott's paper got an R&R from JAMA. 12 single-spaced pages of revision requests. The Dunedin age-11 lead-exposure data are the gift that keeps on giving. Association of childhood lead exposure with structural brain integrity in midlife.

Renate this week helped Aaron and Max with complex analyses for the revision at JAMA. Thanks heaps!

Helen Fisher and Rachel Latham for an R&R from Social Psychiatry and Psychiatric Epidemiology, for Childhood maltreatment and poor functional outcomes at the transition to adulthood: A comparison of prospective informant- and retrospective self-reports of maltreatment. Hurrah! At last!

JC Barnes' paper got knocked back from Criminology. Boo! Hiss! I'm sure he has ideas for a plan B. The Development of Perceptions of Punishment Risk from Adolescence to Middle Adulthood.

Jessie Baldwin's paper got transferred from JAMA to JAMA-Pediatrics this week. Population versus individual prediction of poor health from Adverse Childhood Experiences (ACEs) screening. Better luck there Jessie!

Joseph Dowsett's paper was submitted: Eleven Genomic Loci Affect Plasma Levels of Chronic Inflammation Marker Soluble Urokinase Plasminogen Activator Receptor. Thanks to Ben, Karen, and Line for your work on this project.

Eilis Hannon's paper was submitted: 'Assessing the co-variability of DNA methylation across peripheral cells and tissues: implications for the interpretation of findings in epigenetic epidemiology'

Jenny Van Dongen and Dorret Boomsma's paper was submitted: Identical twins carry a lifelong epigenetic signature from gastrulation.

Max and Avshalom's paper will be submitted to Nature Aging soon: Disparities in the pace of biological aging among midlife adults of the same chronological age: Implications for early frailty risk and policy.

Christina Carlisi and Essi Viding's paper finished mock reviews this week: Associations between life-course-persistent antisocial behavior and subcortical brain volume in a population-representative longitudinal birth cohort. THANKS TO ALL WHO DID MOCKS!

Projects underway and making good progress on the march toward mock review:

Aaron Reuben and Helen Fisher, air pollution and mental health (E-Risk).

Leah Richmond-Rakerd, Barry Milne, Stephanie D'Souza, mental disorder predicts physical disease and mortality (NZ-IDI)

Jasmin Wertz, Little p psychiatric history and pace of aging (Dunedin)

Leah and Signe Andersen, education disrupts the intergenerational transmission of disadvantage (Danish registers)

Jasmin Wertz, parenting genomics in multiple cohorts (many cohorts)

Kyle Bourassa and Line Rasmussen, stressful life events and suPAR (Dunedin)

Max Elliott & Line Rasmussen brain and suPAR (Dunedin)

Karen Sugden, education and the methylation pace of aging (many cohorts)

Geli Ronald and Lizzie, Autism Q and p (Dunedin)

Franky Happe and David, Autism Q and midlife health (Dunedin)

Tim Matthews in London is writing a proposal to UKRI for a short survey to see how E-Risk twins cope with the 'new normal' after lockdown.

Aaron wrote a proposal to the NIA Telomere Research Network for a small grant to test whether childhood exposure to lead leaves a signature in telomeres in Dunedin Study members. **Idan Shalev and Karen Sugden** will help, as will **Ben Williams**.

Barry and Stephanie in Auckland are doing the final runs in the NZIDI for the new paper with Leah on mental health and physical health.

Ben is creating new polygenic scores: for Jorim Tielbeek's antisocial meta-GWAS in E-risk and Dunedin. He's also deriving the education³ polygenic score in the ALSPAC data that Jasmin has obtained. Thanks Ben!

Ben is further investigating brain biomarker plasma assays, investigating UK data sets that have methylation data for validating the DunedinPoAm, and reviewing methodology for Dunedin and E-Risk telomere work. **And choosing chicken names!**

Karen, Chloe, and Helen are testing whether DunedinPoAm can be derived from cheekswab DNA, not just blood. This would allow wider export of the technology.

Karen is doing a server clean-up of HARDAC, to make room for incoming mega-datasets for our team's polygenic and methylation studies.

Antony Ambler in London is finalizing the data set for family history of dementia, collected by the Dunedin Unit team through phone-call interviews with Study Member's mums. **Variables ready soon!**

Sean Hogan in Dunedin is searching admin register data for Dunedin Study members.

Annchen did the reproducibility stat check for Christina Carlisi. Thanks Annchen!

Susan has been processing our finances for end of the fiscal year on 1 July. And also helping Aaron, Leah, and Jasmin with grant materials, working on Stephanie's visa, and maintaining our website. www.moffittcaspi.com

Honalee's creating a spreadsheet table of reasons for missing data at Phase 45 in Dunedin. Yes, 94% of Study members took part at 45, and Renate's great attrition analysis figures show these 938 represent the original cohort. However, variable by variable, there are data missing for many reasons: equipment failure, session chronically running overtime and last measure skipped, staff mistakes that crept in after training, Study member reluctant to try a task, lab tissue samples lost or given wrong SM ID number, software glitches, interview booklet pages not printed by the printer, skip patterns incorrect on interview forms and items skipped wrongly, Study member's foot or hand injury precluded a functional test, etc. Before phase 52, we want to inform PI's about opportunities to improve their data-collection and avoid missing data.

Renate's thinking about how to get little p out of the NZ psychiatric hospital and pharma prescription data sets.

Antony Ambler in London is doing the reproducibility stat check for Stephanie's paper on trauma.

Annchen, Maria, Max are working on characterizing gradients of brain organization.

Jasmin's working with Sara Jaffee on an application to study the Next Gen sample of Study member's children in Dunedin.

Tracy is working on her dissertation proposal. It will be all about physical fitness and the brain.

If you are working on something you want others to know about, but I missed it, please let me know.

This week's theme: How working from home is changing our world of work.

How long we will all work from home is among the many things that remain uncertain. Our team has pivoted from office-based working to home-based working extremely well, and has remained highly productive, as these newsletters attest. As knowledge workers, we are privileged compared to essential workers and workers who lost their jobs. Meanwhile, although many had expected campus offices to open in July ahead of students returning to campus on 10 August, North Carolina has joined Texas, Florida, and Arizona with steadily escalating hospitalisations this month. Moreover, new research has emerged confirming that for every American who has symptoms from the virus, 9 carriers remain asymptomatic, and asymptomatic people are contagious and do infect others. Following legal advice, Duke and other universities have said that each of us can make our own decision, it is not necessary to give a reason, and we can change our decision, and then change it back. Each team member's views about working from home are very different; we have the full range of views. Yet, if working-at-home remains the new normal option for longer-term it is worth trying to anticipate the risks.

Here are a few speculations from the experts about risks.

- If knowledge workers stay home and do not commute to towns and cities, urban economies may not recover. Typical firms (including Duke) spend ~\$10k per annum on office-space per employee. Firms will gladly shed this expense, leading to boarded-up downtowns. Cities and towns are sustained by knowledge workers spending money on services that provide jobs (restaurants & bars, shops & stores, coffee shops, salons, printers, museums, live entertainment, transportation, fuel, building maintenance).
- Many firms are announcing their employees will work from home permanently. But so far no firm has mentioned \$10k annual pay rises to reimburse employees for the firm's use of their private home as its place of business. Home-workers are traditionally considered subcontractors, so firms may take this opportunity to make staff subcontractors and thereby shed responsibility for benefits. Duke has already shed retirement contributions. I periods of high unemployment, like now, workers lose their leverage over employers.
- Some people prefer separation between work-life and home-life, and some dislike the invasion of privacy when supervisors zoom into their homes. Most people rely on the workplace for some part of their social network.
- Creative firms have tried telecommuting, but report their impression that innovation, creativity, and serendipity declined. They make the interpretation that these require spontaneous get-togethers and informal group brainstorming (this is the driver behind the lavish and highly social campuses of Google, Amazon, Facebook, and Grey House). On the other hand, knowledge jobs that require technical skills and intense concentration to produce can benefit from long periods of working in isolation.
- The success of telecommuting seems to depend on intrinsic motivations inherent in the work. For our research team, either you are building your own career (students,

postdocs), or you know that your job depends wholly on our productivity as a team, because we live on 5-year grant cycles. That's pretty motivating. Even if our offices reopen, I suspect trying a mix of workplaces in turn would be stimulating: work from the office, work from home, work from somewhere else, vs. spells of total vacation with no work. It's what Avshalom and I have done for years. We find it refreshing.

- Women's productivity is reduced more than men's by working from home, largely due to child-care and parent-care. Early journal submissions and pre-print server submission rates suggest COVID-19 is reducing women researchers' productivity. "The next person who tweets about how productive Isaac Newton was while working from home gets my three-year-old posted to them!"
- Maintaining the esprit de corps that makes a team work requires trust-building. Teams in place before the pandemic are functioning OK. But bringing on new team members or setting up new working groups goes poorly when people have not met each other. Zooms are too task-focused, they don't allow for casual fun and sharing. Research shows that virtual teamwork lacks the communication richness available to face-to-face teams, physical distance reduces helping, and conflict can escalate quickly in virtual teams. People on virtual teams become increasingly prone to misconstrue others as competitors even when they are not. Our team already works hard to overcome these issues, bec our team is spread overman countries. Will work harder.
- Staying home from meetings and conferences fosters group-think. Zooms afford little opportunity to encounter opposing views. From Avshalom: The one area where covid has really interfered with my work is that I am not able to go out and talk about this work outside our team. The problem is that people out there who don't like our work on the p factor are not really telling me, so I'm having a hard time addressing them.
- Pandemic attrition. A third of early-career respondents to a June British Neuroscience Association survey said they were considering leaving the field. 90% of respondents were working from home, half had lost their research projects or been unable to make progress before their funding ended, and all were concerned that hiring freezes will make science jobs impossible to find.
- Working from home in the pandemic risks a mental holding pattern that is inimical to making progress. Researchers are people whose very nature is horizon scanning, brainstorming the next big thing, having a five-year work plan and life plan, admitting students and postdocs on a multi-year commitment, strategic planning-ahead. Essentially, scientists live our lives in the future. We are not mindfulness types who strive to be in the present. There is a film about the friendship between David Ben Gurion, prime minister of Israel, U Nu, prime minister of Burma. Nu advised Ben Gurion that people should meditate, empty the mind, and not think. To which Ben Gurion replied "Forget that, we need people to think more, not less!"

- Organisations' cultures can be characterized as tight versus loose. Tight cultures who value order (Singapore, South Korea, airlines, hospitals, the military) cope well with disruptions like pandemics. Loose cultures who value personal latitude (USA, Italy, Brazil, universities), not so well. Historically, loose cultures have fostered more creativity and scientific innovation. We must tighten up Grey House to stay well, without getting so uptight that we lose our creative edge.
- Leadership: Remote leaders of virtual teams must provide reassurance through a balanced mix of confident optimism and practical realism about the team's future. They are more successful if they can (a) articulate the values that guide team actions; (b) openly discuss the travails of the team; (c) communicate the goals the team will head toward; and (d) demonstrate confidence that goals will be achieved. (I'm trying to do this via this newsletter; I'm trying.)

Sources:

The Pandemic & the Female academic, from Nature.

<https://www.nature.com/articles/d41586-020-01135-9>

Great short YouTube from the Economist: Covid-19: is working from home really the new normal? | The Economist – YouTube

https://www.youtube.com/watch?v=MxDVucUZCnc&utm_campaign=coronavirus-special-edition&utm_medium=newsletter&utm_source=salesforce-marketing-cloud&utm_term=2020-06-27&utm_content=

COVID-19 and the Workplace: Implications, Issues, and Insights for Future Research and Action, <https://psyarxiv.com/gkwme/>

COVID-19 Survey Shows One-Third of Researchers Could Leave Neuroscience | from Technology Networks

<https://www.technologynetworks.com/neuroscience/articles/covid-19-survey-shows-one-third-of-researchers-could-leave-neuroscience-336365>

The long, unhappy history of working from home from the New York Times.

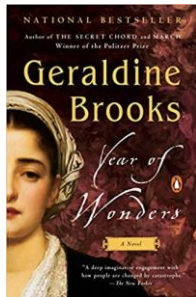
<https://www.nytimes.com/2020/06/29/technology/working-from-home-failure.html?referringSource=articleShare>

A few late entries for books and streaming:

From Jasmin: “**The best of enemies**” recounts the true story of how black Durham, NC civil rights activist Ann Atwater and white Durham KKK president CK Ellis ended up becoming friends and working together to desegregate Durham schools, in 1971. Free on Amazon prime. It’s also a great book.

Barcelona’s Opera house opens to play a concert for an audience of 2,292 house plants, which will be donated to hospital workers in Spain. Applause was muted, but the listeners were attentive. No coughing, and no mobile phones going off!

<https://www.cnn.com/style/article/barcelona-opera-plants-scli-intl/index.html>



Pandemic-perfect! Year of Wonders. An unforgettable tale, set in 17th century England, of a village that quarantines itself to arrest the spread of the plague, winner of the Pulitzer Prize. Inspired by the true story of Eyam, a village in the rugged northern hill country of England. When an infected bolt of cloth carries plague from London to an isolated village, a housemaid named Anna Frith emerges as an unlikely heroine and healer. Through Anna's eyes we follow the story of the fateful year of 1666, as she and her fellow villagers confront the spread of disease and superstition. As death reaches into every household and villagers turn from prayers to murderous witch-hunting, Anna finds the strength to confront the disintegration of her community and the lure of illicit love.

To keep in mind:

The Economist is publishing its statistical forecast of an American presidential election.



Its projection charts will be updated every day at <https://projects.economist.com/us-2020-forecast/president>.

Next week’s theme is **animals**. Wild or domestic, interpret this theme as you wish.

Have a lovely week everyone! Temi

