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## Web Roundup: In the clouds

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By Lily Shapiro

As I'm sure many of you saw, this month started with the successful launch of SpaceX's [Falcon Heavy](#), giving a boost (sorry) to privatized space travel, and providing us all with a few days of very strange [photos](#). On that note, here is a Web Roundup about flight, flying objects, and clouds of all kinds.

Staying with the space-travel theme for a minute, this is a best guess of what life on Saturn's moon, [Enceladus](#), might look (if it existed).

Moving to flying animals, [here is](#) a nice review of a new book called [First in Fly: Drosophila Research and Biological Discovery](#), about fruit flies, their use in genomic research, and the work that goes into caring for them, and attempting to translate research about them into human bodies. Very interesting from an interspecies-affinity sort of angle. In fact, just a few days later an article was published in *Developmental Cell* about how fruit fly fat cells respond to an injury site, [here's](#) a synopsis in the *New York Times*.

A *Washington Post* write-up of a new research article about [woodpeckers](#) is worth taking a look at. These birds hit their heads into trees at 15 mph, up to 20 times per second, for hours each day. A rollercoaster ride will give you an acceleration of about 6 G (six times the force of gravity), at most. "Concussions occur at 90 to 100 G. A woodpecker's head, when it connects with a tree trunk, decelerates by as much as 1,200 G." Yet, these birds have been around for 25 million years and (although there are important differences between human and bird heads), the biomechanics of woodpecker heads and skulls have long been inspiration for the development of helmets.

"There have been all kinds of safety and technological advances in sports equipment based on the anatomic adaptations and biophysics of the woodpecker assuming they don't get brain injury from pecking," said Professor Peter Cumming, a neurobiologist at the Boston University School of Medicine [and one of the study's authors]. "The weird thing is, nobody's ever looked at a woodpecker brain to see if there is any damage." This new study in [PLoS ONE](#) aimed to do just that, and found a build-up of tau in the brains of woodpeckers as well. Tau is a protein

associated in humans with chronic traumatic encephalopathy (CTE) and Alzheimer's. The build-up in the birds is not necessarily indicative of damage—at some levels, the researchers say, tau can be protective, but, the results are provocative.

Shifting gears to flying machines—do [delivery drones](#) reduce emissions, and if so, how much? *The New York Times* proudly proclaims [flying cars](#) are coming! *The Verge* says, [Don't call them flying cars!](#) They are more like quiet helicopters, and they're probably not coming, and even if they do they probably won't be very useful. But a bunch of tech and transport companies seem willing to spend millions on ventures into them.

[Smithsonian](#) has an interesting article on how our fears about UFOs—what exactly they are, and what they look like—change both political movements and technological changes, and [Chernobyl](#) is being transformed into a solar farm. Last, for anyone whose deepest ambition, like Arthur Weasley's, may be to understand how airplanes stay up: [this](#) video and short article.

In light of big [changes](#) coming to data privacy regulations in Europe, here are a few timely pieces that raise questions about online privacy (and how the US is trailing Europe in terms of updating regulations). First off, [Google](#) is being taken to court in London over the ["right to be forgotten."](#)

[Marcelo Gleiser](#) wrote an op-ed about Yuval Noah Harari's speech at the World Economic Forum in Davos last month. Harari posits a third revolution (the first two being agricultural and industrial) that is data-driven, and in which everything a person does—all of their biodata (pulse, eyelid movement, heartrate, etc.)—can be collected (and presumably transmitted back to a government or corporations for purposes nefarious or beneficent, but, let's be honest, probably nefarious). Gleiser, who is a professor of natural philosophy, physics and astronomy at Dartmouth College, says that, although Harari's view probably overstates the impending gloominess, it asks important questions about who has access to and control over this data.

Speaking of which, *The New York Times* has a piece on how your technology use is being mined for information about your health—with or without your consent. And, the Supreme Court today began hearing arguments in [United States v Microsoft](#), a case which is trying to sort out the logistics of where data lives and who has jurisdictional access to it. This piece in *Wired* details the [implications](#) of this case for data storage and data science in general. Although, to be fair, the Supreme Court case will probably be mooted by the fact that the US Congress is likely to pass the Cloud Act, which would basically serve to update laws on jurisdiction of warrants for the internet age (the law that the Supreme Court will be

basing their decision on was written before the internet existed).

[Palantir](#), the data-mining firm co-founded by Peter Thiel, apparently partnered with the New Orleans's police department to test its predictive policing system without the knowledge of city council members, residents, or public attorneys.

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And, of course, we lost Ursula Le Guin about a month ago. [Anand Pandian](#) has a nice tribute to her in anthro{dendum}, as does [The Verge](#). And here's a nice long biography/interview with her in [The New Yorker](#) from 2016.

"We live in capitalism, its power seems inescapable – but then, so did the divine right of kings. Any human power can be resisted and changed by human beings."

– Ursula K. Le Guin (1929-2018)

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