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[XL-Files: COVID Coping and The Law of Most People](#)

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Xiao-Li Meng writes: The arrival of COVID-19 has ignited global anxiety about how we deal with uncertainty and risk. Uncertainty blurs our collective vision, and risk takes our breath away—alas, sometimes literally. Since we statisticians and probabilists have always been proud of being at the forefront of studying uncertainty and risk, two questions naturally arise. First, in our daily lives, are we coping with uncertainty and risk better, on average, than are people in other professions? Second, how can we use our knowledge and expertise to help others during these unprecedentedly unsettling times?

Regarding the first question, I am unaware of any study. But being a statistician, I can offer my $n=1$. You can then add yours, so we will have a chance to claim replicability. I suffered from aviophobia for a while. Any turbulence or unexpected noise during a flight would immediately wet my palms (thank God, only my palms). I am now cured (almost surely) thanks to (A) a psychologist's suggestion to listen to music, (B) some poorly written theses, and (C) my statistical sanity. I gather (A) requires no elaboration, other than that its essence is to distract my fearful mind; (B) then comes in handy, especially for very long flights. I still recall how I wished desperately for a 14-hour flight to China not to land while I was still “red-inking” the final chapter. The ultimate cure, however, came from (C), when I finally internalized the fact that flying is far safer than any other means of transportation that I take, yet none of the others had triggered any fear. Therefore, it would be insane for me as a (reputable) statistician to fail to reason myself out of aviophobia.

Each of us lives in fear during some periods of our lives—fear of losing a loved one, of a terrible diagnosis, of major financial or reputational loss, not to mention the fear of rejection in its various guises. Humans seem to be biologically wired to give irrationally high weighting to extreme outcomes when we contemplate decisions under uncertainties, whether those outcomes are desirable (winning lotteries) or disastrous (plane crash). In the current crisis, fear of the worst outcome may motivate some of us to wash our hands and practice social distancing with more seriousness. But it can also put excessive strain on others, depriving them of their sleep and weakening their immune systems. A healthy mental state is always about moderation and balance: be prudent but not frightened.

Since I overcame my aviophobia by drawing upon the resource of statistical sanity, reflecting upon “The Law of Most People” has been therapeutic whenever I fear my fear is going to consume me. This law stipulates that *the worst fears (or best dreams) of most people cannot be realized*. This simply restates that extreme tails of a distribution have far less mass than the middle portion. (When tails have more masses than the middle portion, then the phrase “extreme” loses its meaning.) The thought that I am most likely to be one of the “most people” provides the firewall I need to keep my anxiety at bay, permitting me to live without excessive fear. Please help to spread this free self-help pep talk faster than any virus can, as you, my fellow uncertainty experts, know far better than others that it will apply to most of the people you talk to (except you won't know to which ones). And that suggests a partial answer to the second question.

The other part of the answer comes from a mix-up that may have already irritated you: I have mixed population frequency with personal probability. But this is an unavoidable mix. All numbers reported about COVID-19 are for measuring *population risks*, from infection percentages to the risk of death. But as individuals, we tend to focus on *individual risks*. What's the chance that I will get infected? What's the chance that a loved one will die from COVID-19? Whereas population percentages and risks are easy to define—but not easy to estimate, especially given all kinds of dark data [*see the [previous XL-Files](#)*]*—individual risks are a much more nuanced concept. What does it mean that my chance of infection is 5%? Does it mean that I will get it if I shake hands with 20 virus carriers? Or by taking 20 flights?*

We, the uncertainty experts, can help others understand the concept of their individual risk, and that this can be quite different from what they read online, depending on which sub-population they judge themselves as belonging to. Careful consideration of individual risk can control extreme thoughts that may lead to reckless behavior or excessive fear. Dealing with uncertainty and fear is never easy, but having an informed and rational internal dialogue can tame our ill-considered impulses or catastrophizing tendencies. We can all help others to conduct such internal dialogs. The process of helping others is also therapeutic in and of itself. The more our minds are engaged in helping others, the more easily we will get through this most stressful time of our lives. May our community of statisticians and probabilists draw strength from the inherent sanity of our discipline, and energy from the opportunities we have to help others.

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