

Improving national security through research on emotion and decision making

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National calamities as distinct as (a) the 2015 Measles outbreak at Disneyland and (b) the internment of individuals in the United States who possessed (even as little as 1/16th) Japanese ancestry during World War II share a common feature. Namely, they reveal that fear about an imagined possibility sometimes biases decision makers so much that decision makers ignore readily-available facts. Ignoring the facts in these cases led to concrete, lasting -- yet totally-avoidable -- harms.

In the case of Measles, more children in the United States are needlessly falling victim to this disease. And this disease is no mere nuisance. Complications from Measles can cause pneumonia, brain damage, and death. The vaccine for Measles (known as MMR) has been deemed very safe, according to the Centers for Disease Control – the highest scientific authority on these matters, and the same vaccine is also effective at preventing mumps, and rubella. All major experts, including the American Academy of Pediatrics (AAP), agree that the MMR vaccine is not responsible for increases in the number of children with autism. Nonetheless, due in part to the fact that signs of autism typically appear around the same age that children receive the MMR vaccine as well as to a shoddy study that falsely claimed a causal link, parents have unknowingly confused co-occurrence of vaccine and autism with causation. Due to panic and fear of autism, fewer children are being vaccinated for Measles, the potentially deadly disease that was once nearly eradicated.

In the case of the Japanese internments, nearly 130,000 individuals of Japanese ancestry living in the U.S. mainland were forcibly – and needlessly -- relocated due to fear that such individuals would assist Japan in attacking the U.S. again. Fear drove this extreme form of risk aversion even though 62% of the interned individuals were American citizens. Only in distant hindsight, once emotions cooled, did the truth about senseless fear surface. Under President Jimmy Carter, the U.S. Commission on Wartime Relocation and Internment of Civilians (CWRIC), titled *Personal Justice Denied*, found little evidence of Japanese disloyalty at the time. It recommended that the government pay reparations to the survivors. In 1988, President Ronald Reagan signed into law the Civil Liberties Act of 1988, which apologized for the internment on behalf of the U.S. government and authorized a payment of \$20,000 (equivalent to \$41,000 in 2016) to each camp survivor – a surprisingly small amount. The legislation itself admitted that government actions were based on "war hysteria, and a failure of political leadership," among other factors.

The power of fear to bias both individual citizens (e.g., parents) and governmental bodies (e.g., FDR's administration) toward irrational, fear-driven choices remains insufficiently understood. Yet this phenomenon is more relevant today than ever.

The main tool terrorists possess is fear, hence their name. Typically, vast asymmetries in scientific and technical knowledge exist between terrorist organizations and the United States.

But that asymmetry does not stand in their way. Fear of an attack can be almost as devastating as an actual attack. What would happen today if a terrorist group pretended to release a deadly gas and authorities rightly issued statements claiming that it was not, in fact, deadly? Would mass hysteria, panic, aggressive hoarding of supplies, and flooding of cars on U.S. highways occur? Would fear create a narrowing of the perceptual field, skewed policy preferences, and a willingness to forego human rights? Or would our national security organizations have a sophisticated understanding of risk communication strategies for effectively neutralizing the fear? Would our service men and women be able to effectively de-escalate once they have mobilized for action? What emotional regulatory processes would need to take place at a national level?

Once a dormant field, research examining the effects of emotion on judgment and decision making (JDM) now abounds. As shown in Figure 1, the number of scholarly papers on emotion and decision making has increased exponentially, and this increase arises not merely from the fact that JDM research itself has grown. As the dotted line below shows, the proportion of decision research that incorporates emotion has increased by more than an order of magnitude. Indeed, researchers published more than triple as many papers on emotion and decision making in the year 2016 alone (581) than researchers published across the three decades spanning 1970-2000 (167).

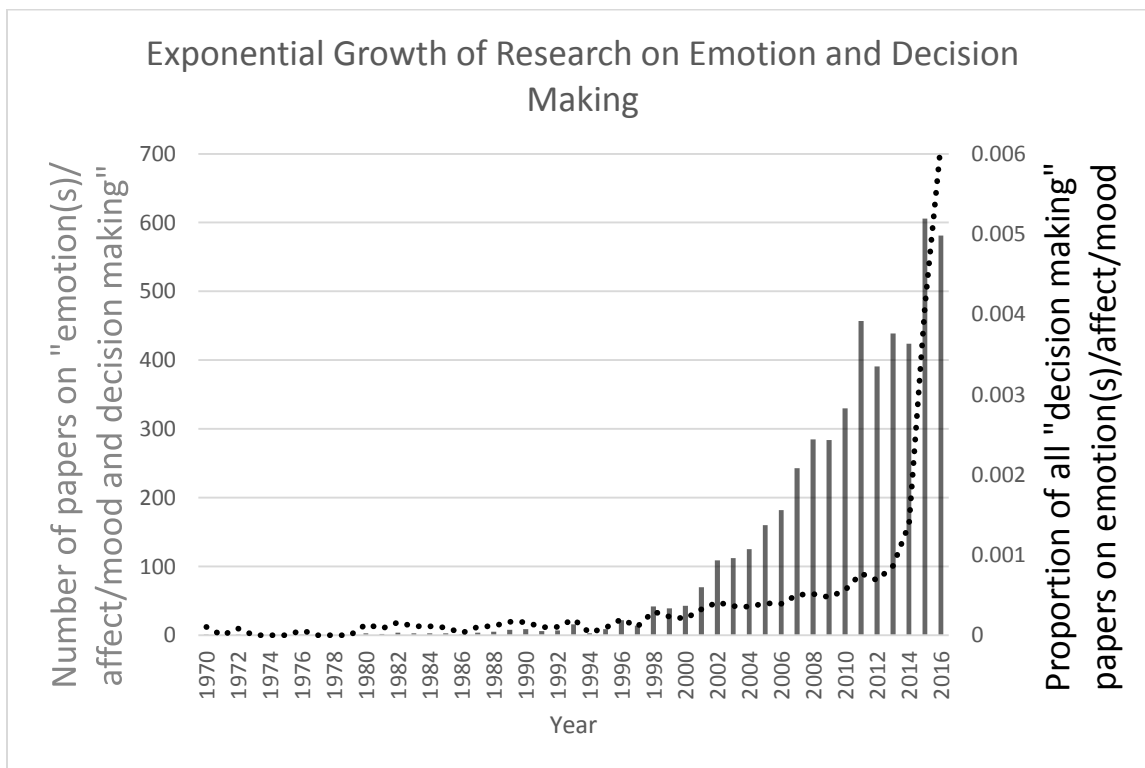


Figure 1. Number of scholarly publications from 1970 to 2016 that refer to “emotion(s)/affect/mood and decision making” (solid bars) and proportion of all scholarly publications referring to “decision making” that this number represents (dotted line). (Figure adapted and updated from Lerner et al., 2015).

Now is the ideal time to harness insights from this burgeoning field to address critical questions like these:

1. What are the best ways to teach emotion regulation skills at national scale so that citizens can respond optimally in a crisis? Research by Eran Halperin and colleagues suggests that this is indeed possible to do.
2. What are the best ways for US armed forces to employ emotion regulation skills when working under extreme pressure and sleep deprivation?
3. How exactly do specific emotion states like anger bias military decision making and how can such biases be prevented?
4. Under what limited conditions should gut instinct, or what the US Navy's Office of Naval Research calls "Spidey Sense," be considered a valid input for decision making?
5. What are the best ways to build resilience in response to terrorism?
6. How should security forces design optimal decision environments in terms of emotion?
7. How do certain positive affect states like happiness undermine systematic thinking?
8. Why do fear and anger trigger opposing patterns when it comes to risk perception and risk taking?
9. In which countries are emotions like group pride especially central for successful negotiations?
10. How are stress hormones related to leadership effectiveness?