

The Mind of a Misanthrope

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I become misanthropic every February. I avoid social gatherings, and really just want to hole up at home. I always assumed it was the dark evenings and slippery sidewalks and general misery of venturing outside. But truth be told, I don't want guests visiting me either. Not until the crocuses come through.

Or not until cold and flu season is over, more accurately. New research suggests that my anti-social ways may have little to do with friendliness or lack of it. Indeed, my attitudes and actions may be self-protective, part of an ancient, hard-wired psychological immune system, shaped over eons to help humans steer clear of germs.

Think of it from an evolutionary point of view. Group living conveyed many survival benefits for early humans, but it also carried risks—most notably the spread of harmful disease. The body's immune system is very good at fighting off germs, but it's a costly system to operate. In the parlance of immunology, people are vectors, and another way to avoid sickness is simply to avoid disease carriers in the first place. In this sense, extraversion is costly and introversion is adaptive—especially during flu season.

That's the theory at least, which psychologist Chad Mortensen of Arizona State University has been investigating in his lab. He and his colleagues wanted to see if exposure to germs—or at least the idea of germs and illness—would change people's basic perceptions about themselves as social beings. To test this, they showed a group of volunteers a slide show about germs and contagious disease, while control subjects watched a slide show about architecture. Afterward, all the volunteers completed a personality inventory, which includes measures of extraversion, agreeableness and openness to experience. Finally, the researchers assessed each volunteer's feelings of vulnerability to disease— basically, how much they fret about getting sick.

They anticipated that the volunteers with disease on their minds would see themselves as more reclusive. And that's just what they found. The infection-minded volunteers saw themselves as less gregarious than did controls, and the hypochondriacs in the group also saw themselves as less open-minded about people and less cooperative. In other words, the more intense the volunteers' worry about infection, the less they desired the company of others.

That's striking in itself. But attitudes and self-perceptions are only an effective defense if they change people's actual behavior. So in a second experiment, the scientists came up with an ingenious way to measure actual avoidance. As before, they primed only some of the volunteers with worries about infection and illness. Then they exposed all the volunteers to pictures of faces, while measuring their arm movements. Very subtle pushing away is an indicator of social avoidance, as when we push away something undesirable; flexing similarly indicates acceptance. As expected and reported on-line in the journal *Psychological Science*, those primed to fret about germs were more avoidant; and the chronic

hypochondriacs were the most avoidant by far.

So that's a pretty nifty defense mechanism. Or at least it was at one time. But these evolved tendencies are often blunt instruments, and this hard-wired bias against germs may go awry in the modern world. For example, sensitivity to disease threats can be indiscriminate, causing people to judge and avoid not only sick people but also obese people and people with disabilities. And because people who are unfamiliar pose an especially potent threat of unknown diseases, the psychological immune system might also foster xenophobia toward foreigners, anti-gay attitudes, and right-wing authoritarianism. That's a big price to pay, just to dodge a sore throat and sniffles.

For more insights into the quirks of human nature, visit the [“Full Frontal Psychology” blog](#) at True/Slant. Excerpts from “We’re Only Human” appear regularly in the magazine *Scientific American Mind*. Wray Herbert’s book, *On Second Thought: Outsmarting Your Mind’s Hard-Wired Habits*, will be published by Crown in September.