

# The Epidemiology of Emotion

Bill Schneider, [wlschneider09@gmail.com](mailto:wlschneider09@gmail.com)



As plant pathologists we are most likely pretty familiar with the concept of epidemiology. Epidemiology is the study of disease spread and all the factors that go along with it, like inoculum sources, environment, vectors, geography, susceptible/resistant host density, and pathogen load. But did you know you can track the epidemiology of emotions as well?

The capacity to associate with the feelings or emotions of those around you is called empathy. Empathy is innate in humans; babies cry when they see other babies cry. Scientists recognize that the transfer of emotions between people is a very real phenomenon, coining the term “emotional contagion” (Schoenewolf, 1990). Researchers have found that monkeys watching someone pick up a banana demonstrated neural activity nearly identical to a monkey picking up the banana itself. The same sympathetic brain patterns exist in humans and carry over to emotions. Observing someone else’s emotions activates regions of the brain involved in experiencing similar emotions and facial expressions. It doesn’t even have to involve words; while our assessment of other people’s feelings is based on their words, our own emotional state is more dependent on nonverbal cues of those around us. Emotional contagions don’t even need face-to-face contact to spread, recent research has shown that the content of Facebook can shape the moods of readers (Kramer et al., 2014). Bottom line, much like plant diseases, emotions can initiate from a focal point of one individual and then spread throughout a room by empathy.

We’ve all seen it happen in both positive and negative ways in the workplace. It’s fun

to be in the lab when people are relaxed, laughing, and having a good time. In contrast, maybe you’ve been in a meeting when someone comes in who is clearly distressed. The emotional tone of the room changes quickly, and you can cut the tension with a knife. How does this relate to leadership? As leaders, we have to be especially careful of how we affect the emotions of others. Sy et al. (2005) determined that the mood of leaders and managers was more influential than the mood of peers in determining the emotions of a group.

What does this mean for you? Well, the easiest way to contribute to a positive working environment is to utilize some of the same approaches we apply to the epidemiology of plant pathogens:

#### **Don’t be a negative emotion source:**

This is simple enough in principle; smile and the world smiles with you. If you maintain a positive outlook and positive energy, you stand a good chance of spreading the right vibes. However, nobody can be cheerful all the time. Eighty percent of everyone’s thoughts contain some sort of negative content (Harris, 2008) and difficult emotions (e.g., sadness, disappointment) are normal and necessary. It’s just as important to recognize these and limit your negative impact on those around you in whatever way you can.

**Control the vectors:** You are the average of the people you spend the most time with. There are diverse people in every working environment. Most people around you rarely have a profound impact on your mood. There are always people who support you and, conversely, those that you may feel undermine you, in subtle or not so subtle ways. The latter can make you feel depleted, angry, or anxious. You can’t change their behavior, but you can

change how you respond to them by setting boundaries, establishing a more productive relationship for you.

**Recognize the environment:** Being able to pick up on the emotional cues of individuals or groups is very useful. Stopping the spread of negative emotions may be as simple as recognizing that person that could use a kind word or using a well-placed joke in a stressful meeting. Judge less and encourage more. This takes some practice, as everyone responds a bit differently to attempts at encouragement, but with practice you can improve the way you recognize and ameliorate negative emotion outbreaks.

**Deploy resistance:** This can be both internal and external. Once you’ve learned to recognize when you’re getting down, it’s time to figure out some ways to reverse the process. Watch cute cat videos, go for a walk, and figure out that one thing that can re-center you. Identify those around you who make your life better, and stick with them.

It sounds cliché, but you can affect the change you want to see in the world. These are just a few ways you can affect your world in a positive way, and even more so as a leader. ■

#### **LITERATURE CITED**

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