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## WHY A DORM ROOM IS LIKE A CLIMATE TREATY

Nathan Chan shows how  
economic principles are at  
play in our everyday lives

By Mariam Khan



Assistant Professor of Economics Nathan Chan likes to study situations in which the participants, acting in their own interest, aren't necessarily creating the best outcomes for the group. In economic theory, it's called the "tragedy of the commons." It's applicable to climate treaties—and dorm rooms.

"Why is the common room not being cleaned up when you have students living together? That's a tragedy-of-the-commons problem that economics can help us characterize and solve," Chan said.

He should know.

Chan is a faculty resident, living on campus where, yes, there are a fair number of dorm common rooms in need of picking up. He is often seen with cleats in hand heading for a pickup soccer game, in conversation in the dining halls, or taking part in various organizations on campus, including the men's soccer team (he's faculty liaison), Asian Student Association, and Men of Color Alliance. But mostly Chan advises his own students, telling them that economics isn't just a set of facts but a way of thinking.

"A lot of times people come into economics class assuming that you're going to teach them how to balance a stock portfolio, and I try to emphasize to my classes from the outset that's not what we're about," said Chan, whose specialty is environmental economics. "A huge part of economics is using analysis to improve public policy and to improve management for societal gain rather than personal gain."

Personal gain comes, however, as students from all disciplines find their way to Chan's classes and realize that this new way of thinking complements

other subjects they're studying, from government to sociology and environmental studies. "In some of my intro classes, I see that light bulb clicking on," he said.

Chan's own light bulb clicked on when, after studying environmental science and engineering and English at Cal Tech, he was introduced to environmental economics in a master's degree program at Columbia. He went on to earn his Ph.D. in the subject from Yale.

His own serendipitous path to teaching economics is much like that of students he interacts with, he said. "I see a lot of students coming in with certain proposed interests. They come in as a chemistry major or an econ major, but what's cool about a place like [Colby] is it really gives you time to discover what you're interested in," Chan said.

Chan's research at Colby involves studying incentive structures through lab experiments on computer interfaces. Student participants are allocated virtual currency and decide how much they want to keep for themselves and how many should be distributed to the group. If the money is given to the group, there is a "multiplier effect" and everyone benefits; if they keep the money for themselves, only the individual benefits. The economic principles are similar to those at play when Chan studies climate treaties, considering how negotiations can be structured to create better outcomes. Countries are similar to the roommates with a messy common room; by giving up something individually, they benefit as a whole.

Chan illustrates these principles with examples from everyday life, and knowing students outside

of the classroom allows him to make economics relevant to their other interests.

"Maybe some of them are working on marine conservation," Chan said, "so I can bring in examples using marine conservation into the classroom."

That, he said, allows him to create what Colby does best—"a tailored education."



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—Nathan Chan,  
assistant professor of economics