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In the Netherlands, Eat, Drink and Be Monitored

By [MARLISE SIMONS](#)

WAGENINGEN, the [Netherlands](#) — At first sight, nothing betrays the strange happenings at the Restaurant of the Future, a spacious, bright university canteen where scientists and students stop in for food and lunchtime chatter.

The chef, Jan Kiewied, is stir-frying peppers at a glowing stove, his staff is scrubbing pots, and clients are scooping up salads and lentil soup. Yet everyone and everything is being recorded by hidden sensors and cameras.

Carry that soup to the cash register and the customer may activate a pair of invisible floor scales. Sit down to eat and the chair may start to measure one's heartbeat. And as a diner munches on that salad, a researcher on another floor may be watching how fast — or slowly — the diner chews.

The restaurant, set on the leafy campus of Wageningen University, feels friendly enough, but it is fitted with hidden wiring and switches worthy of a battleship. In reality it is a new research center, devoted to exploring a question that is both simple and complicated: what makes people eat and drink the way they do?

Food companies and chefs have pondered the question for years, and test kitchens and taste labs have mushroomed along with the fast-food industry in the search for answers. What distinguishes the Dutch project is the scale of the experiments, unrivaled in Europe, said Rene Koster, its director.

Over the next 10 years, a team of more than 20 scientists, including psychologists and physicists, will be monitoring diners as they come for lunch each day. Close to 250 students and staff members have already signed up to participate in the project, which began in November.

Mr. Koster, an economist who works for the university's agrotechnology and food sciences group, said he hoped that the findings would help policy makers, health experts and food executives who wanted to understand and influence eating habits.

“We are all getting too heavy,” said Mr. Koster, who looks rather trim and athletic. “But

telling people they may become ill, or even die from their habits has had limited effect.” So have food labeling and information campaigns, he said.

So to analyze the behavior of the human adult at lunch, the new lab-restaurant has prepared an arsenal of hidden cameras and a substantial menu of tricks. Researchers will examine environmental influences on eating behavior by making small changes in the color of the lights, in accompanying sounds, in the scents or the furniture.

“How will people behave if we put out fresh flowers, or shine a red light on a dish?” asked Nico Heukels, research director of Sodexo, a leading food services company and partner in the project. “What if we put out square or colored plates? Will they choose healthier things if we spray fruity scent in the air?” But the lab also tries to mimic normality: it offers candy bars, sugary soft drinks and fatty French fries along with healthier choices.

Financing for the \$4 million lab has come from the university and three companies: Sodexo; a manufacturer of kitchen equipment; and the company that developed the monitoring system.

Some 35 groups have applied to participate or run their own tests. The lab directors said they would welcome the money such tests would bring in, but would bar any experiments that went against the lab’s values.

The throbbing heart of this newfangled restaurant, then, is not the kitchen but the high-tech control rooms where researchers direct two dozen cameras hidden in the restaurant ceiling. They can zoom in on minute details, like where a client lingers at the buffet, how well he or she chews, how much is left on the plate. New technology includes “face readers” that automatically analyze expressions like staring, surprise, a smile or a frown.

“This can all be stored and kept for reference,” said Lucas Noldus, who designed the system.

Eating under the nose of Big Brother might have horrified diners of an earlier age, but the surveillance camera as a fixture of modern life — in lobbies, doorways, airports and shopping malls — seems to have lowered expectations of public privacy.

During a recent lunch, several diners said they were not bothered by the snooping. “In a cafe on Saturday night I saw security cameras everywhere,” said Ilse Polet, a researcher. “It’s getting normal. I like this project. Everyone is interested in eating and drinking.”

Bert Meurs, a plant scientist, said he had joined “because this research is a good idea, and the food is better than in the other canteens.” But he had read the small print assuring diners that their images would be kept private. “I don’t want to appear on the evening news swallowing my food,” he said.

Some studies will focus on waste — one-third of all food is thrown out in the Netherlands, Mr. Koster said. On a tour of the restaurant's many secrets, he pointed out a storage tank beneath the lawn. Kitchen waste will be kept and taken to a farm, he said, to be mixed with animal dung to produce biogas.

If this works, the solution could be used in large institutions like schools, hospitals or prisons, he continued. "We'll call this an experiment in green catering, if you will," he said.

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