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NUTRITION NEWSLETTER

# THE GRAPEVINE

TEACHERS COLLEGE, COLUMBIA UNIVERSITY



## How the Promotion of the Med Diet Reflects Systemic Racism: Insights From Dr. Kate Burt

By: Cindy (Luyue) Zheng

For health professionals, the Mediterranean diet (Med Diet), characterized by a high intake of plant-based food (i.e., fruits and vegetables), fish, seafood, and olive oil, is widely accepted as the gold standard diet for cardiovascular disease prevention. Just this past January, the U.S. News & World Report's team of expert panelists ranked the Med Diet first in overall best diet for the fourth year in a row. However, a wide acceptance of the Med Diet as the healthiest cultural diet raises concern around systemic racism.

Dr. Kate Gardner Burt's latest analytic article, titled "The Whiteness of the Mediterranean Diet: A Historical, Sociopolitical, and Dietary Analysis using Critical

Race Theory" provides us a keen insight on the deep-rooted racism intrinsic to the sweeping promotion of the Med Diet. A TC alumnus and assistant professor in Lehman's Dietetics, Foods, and Nutrition program, Dr. Burt is committed to researching systemic racial bias in the dietetic profession and in dietary guidance/recommendations. The Med Diet, Dr. Burt noted, "is actually a white diet" and its adoption and promotion has "resulted in an unscientific hyperfocus on the Med Diet over other cultural diets." She further pointed out that promotion of the Med Diet as the healthiest cultural diet indicates our failure to serve Black, Indigenous, and People of Color (BIPOC).

*Continued on page 4*

### In this issue...

#### Letter From the Editor

Page 2

#### Fresh Off The Vine Student Highlights

Page 3

#### How the Promotion of the Med Diet Reflects Systemic Racism: Insights from Dr. Kate Burt

Page 4

#### How I Used Social Media (And a Risky Investment) To Launch and Run My Business

Page 5

#### On The Dietetic Internship Front: Interview with Jamie Gershel

Page 7

#### Op-Ed: Climate-Driven Dietary Recommendations Carry Different Burdens Based on Income

Page 10

#### Determinants of Human and Corporate Behavior: Insights from Drug Development Research

Page 12

#### A Throwback to My Trip Before the Pandemic: Food Tours of Brazil and Peru

Page 14

#### Recipe Corner: Earth Day Friendly Recipes

Page 17

## LETTER FROM THE EDITOR

Dear Students, Faculty, Alumni and Staff,

We have successfully made it through another academic year during a difficult time. While we continue to face uncertainty in what lies ahead, I have continued to be inspired by the support, uplifting attitude, and open-mindedness of our peers and faculty. And as we face civil unrest in our country, I am proud to be a part of a community that celebrates differences, pushes for cultural humility, and stands for equity and social justice across the many facets of our food system.

So for this Spring 2021 edition of *The Grapevine*, I wanted to call on its readers to question their personal biases and role in our food system as health educators. Throughout this issue, you will find: Cindy Zheng's summary of Dr. Kate Burt's article on the racial biases inherent to our promotion of the Med Diet; Evan Shaulson's connection of his research on feeding circuits in rats and the corruption that occurs at the corporate level; and my piece calling on those of higher income to take on the burden of responsibility of climate change through dietary choices. While this issue is filled with articles highlighting some of the problems that occur across various steps of our food system and nutrition education, I still hope it leaves you uplifted. We have intertwined pieces that highlight the individual differences of our peers and offer them support in their accolades. Abigail Stasior opens up about the path to her successful business venture, offering tips to her peers along the way for how to maximize social media; TC dietetic intern, Jamie Gershel, provides reflection and advice for upcoming DI students; and Jiakun Yi discusses his cultural food experience in Peru and Brazil, tying it to the influence of Asian culture in these countries. This issue of *The Grapevine* is more personal than others, often calling on its writers, and thus our peers, to discuss their experiences and takeaways as nutrition students. And, in turn, I hope we can take the time to celebrate the diverse backgrounds, schools of thought, and paths in our community that come through in this edition.

I want to thank everyone who contributed to this issue. I wish everyone a healthy and happy summer, and congratulations to those that have recently graduated. We will miss you!



Amanda Wahlstedt

A handwritten signature in black ink that reads "Amanda Wahlstedt". The signature is written in a cursive, flowing style.

Editor-in-Chief

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## Fresh Off the Vine: Events and Announcements

### Save the Date:

**SENB Annual Conference - Raising Reliance and Resilience:** The Society for Nutrition Education and Behavior Annual Conference is the premier event for nutrition education professionals around the world. Attendees have the opportunity to interface with influential nutritionists from extension, public health, government, academia, industry, and community settings. Throughout the conference, attendees will be able to experience education sessions featuring the latest information on dietary guidelines, educational strategies, nutrition policy, technology advances, and wellness initiatives with a focus on putting research into practice. The virtual event will take place August 8-10, 2021. For more information, visit <https://raybourn.force.com/SNEB/s/!t-event?id=arYIU000003DhqbUAC#/Overview>

**Spring Conference, Nutrition Education in a Changing World:** On Friday, May 21st from 1:00 - 5:00 pm, “Nutrition Education in a Changing World” will celebrate and honor our beloved Professor, Dr. Isobel Contento. Registration for the event is now open, at <https://www.eventbrite.com/e/nutrition-education-in-a-changing-world-a-celebration-of-isobel-contento-tickets-147792919601>

### Sending a Special Congratulations To Our Peers:

Jera Zhang for her article, “Navigating Celiac Disease and the Gluten-Free Diet in China,” published in Nutrition & Health.

To all of our classmates that recently matched with a dietetic internship program and have recently graduated - congratulations! We wish you the best in the upcoming year as you take a step closer to becoming a registered dietitian.

**Health Nuts Update:** The Health Nuts team wants to wish everyone a happy end of the semester and start to the summer! Our recent events have featured some of our fellow students, like Social Media Tips with Abbie Stasior, and a plant-forward Cooking Class with Sydney Navid, and a special event in partnership with NYCEN and Diversify Dietetics, “Exploring Diversity within Nutrition & Dietetics.” Our next focus will be recruiting committee members for the next school year, so please reach out to us if you are interested or have any questions at [healthnutsevents@gmail.com](mailto:healthnutsevents@gmail.com)

## SUPPORT YOUR TC PEERS AND COMMUNITY

See below for a few ways that you can connect with and support your peers.

**Caroline Driesman’s Born To Crunch:** “At the start of the pandemic, I decided to take my experience as an athlete and graduate student in nutrition and exercise physiology to create a weekly, Zoom workout for friends and family. I called it Fridays with Frieda. My middle name is Frieda and I hosted these high-intensity interval training (HIIT) style workouts (mostly) on Fridays. Over winter break I thought to transform the website for my granola company, Born to Crunch, into the platform to host Fridays with Frieda and once I’ve become an RD, nutrition offerings. The only equipment required for Fridays with Frieda workouts is a yoga mat and at least 1 weight - workouts last about 45 minutes.” For more information, visit Caroline’s website, <https://www.borntocrunch.com>

Do you have a business or project you want featured? Email me at [grapevineditor@gmail.com](mailto:grapevineditor@gmail.com)



## How the Promotion of the Med Diet Reflects Systematic Racism (continued from cover)

The history and sociopolitical context of the adoption and promotion of the Med Diet is well worth reading. In the article, Dr. Burt shared the creation of the (white) Mediterranean Diet in detail. Based on Dr. Burt's analysis, Ancel Keys' 1950s longitudinal Seven Countries Study (the 7 countries being the US, Italy, Yugoslavia, Greece, Japan, Finland and the Netherlands) brought forth the popularity of the Med Diet. Of note, Keys investigated mostly white or European countries and was criticized for using data from Greek participants during Lent (while they were fasting). In 1993, the Mediterranean Diet Pyramid (MDP), originating in white Mediterranean culture (Italy and Greece), was developed and introduced by mostly white, privileged men affiliated with Harvard University. Although the Mediterranean region is multi-cultural and multi-ethnic, touching countries from Turkey located in the Southern European coast, to Egypt located in the Northern African coast, the association between the Med Diet and cardiovascular disease prevention is concluded based on white, euro-centric Mediterranean culture.

The selection bias starting from Keys' study deeply influenced our health research. In nutritional epidemiology, chances are that you can hardly find culture-cross studies with large sample sizes. We commonly see results based on white participants of middle class or average socioeconomic status. This selection bias favors rigorous examination on white diet,

perpetuating white normativity and making the Med Diet a standard when compared to non-white cultural diets, such as traditional Chinese, African, and Mexican diets.

The whiteness of the Med Diet is also seen by the foods it recommends. In the article, Dr. Burt gave a vivid example: while vegetables and cereals play an important role in Mediterranean foodways, cassava/yuca and teff, which are indigenous to the Mediterranean region, are not depicted in the MDP. It seems only foods that fits into a traditional white diet and complies with white palatability was recommended.

A sobering question Dr. Burt invites us to consider is, "healthy for whom?" Understanding the limitations of the Med Diet is

essential to building our cultural humility as health practitioners. Power dynamics and whiteness as the normative standard are evident in Western health science research, "not just in dietetics," as Dr. Burt noted. She encouraged a deeper reflection on the way to eat and best food practices. "It is time for white dietitians to create space, give voice to, and share power with BIPOC dietitians," she added.

The popularity of the Med Diet has inherently marginalized the non-white population by maintaining white culture as normative.

In China, the Med Diet has recently been ranked as the gold-standard, receiving attention among the health-conscious population. Despite cheese and olive oil not being a part of the traditional Chinese diet, many now try and follow the Med Diet in an effort to have the best health outcomes. To better serve people from different ethnic backgrounds, we should first give a pause to its promotion and provide more inclusive dietary recommendations. This is an important step for moving forward in our vision of an equitable food system.

RESEARCH

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### The whiteness of the Mediterranean Diet: A historical, sociopolitical, and dietary analysis using Critical Race Theory

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## HOW I USED SOCIAL MEDIA (AND A RISKY INVESTMENT) TO LAUNCH AND RUN MY BUSINESS

By Abigail Stasior

I was on the phone for two hours upstairs in my childhood bedroom with a Sales Rep. I was about to invest in the 90-day program that he was pitching me to help launch my own online health and fitness coaching business. This program would provide me with all the marketing tools I needed, the sales scripts, the framework for creating a coaching program for clients, and accountability throughout the whole process. *"We make it so easy... a three year old could do it."*

But the program's investment was the entirety of my savings. At this point in my career path, I had already decided that I was not going to medical school like I had always planned to. And while making minimum wage as a medical scribe, I realized I was meant to be on the preventive side of patients' health and wellness. I had researched so many certification and degree programs that I could do in place of medical school, but this was the only offer that gave me an expansiveness feeling in my chest, a clear green light sign from my intuition to say *yes*.

So against my family's advice, I repeated the 16 digits of my credit card to invest my life savings into starting my business. I trusted my intuition, and kept reassuring my family members that I just needed 30 days. *Give me 30 days and I'll make my investment back.*

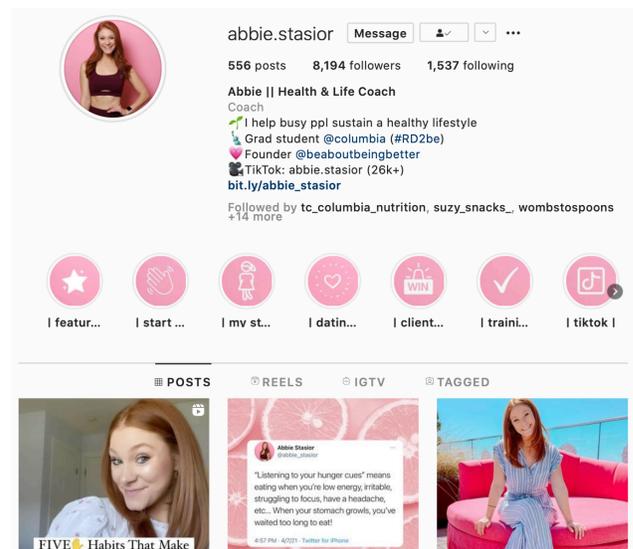
After I made this investment, I dove into action. I would wake up at 4 am, workout and complete my morning routine, medical scribe from 6am to 4pm, send messages to potential clients during my lunch break, and then as soon as I got home from work, I would be up until 11pm creating content and getting on the phone with potential clients.

It was a grind, but I more than doubled that initial investment in my first 3 weeks of business. I big reason I was able to do so was by leveraging social media. I started by making a video about my own health journey and encouraged people to reach out if they have had a similar experience. Then I made videos about what I do to stay healthy in light of a busy schedule. Then I made polarizing videos about things that bothered me in the health and fitness industry and took a stand. These initial posts and videos helped my social media audience start to see me as an authority, not just a peer, and I quickly became someone people wanted to learn from.

So I launched a free, 7-Day "Kickstart Your Health" Challenge within my first 2 weeks of business. I went live in a Facebook group each day and gave tips for healthy living, provided workouts, and fostered a sense of community. From that free 7-day challenge, I had a group of people apply to work with me privately, and from there, I signed my first group of clients.

Over the course of my first 90 days, I replaced my full time income so I could quit my job as a medical scribe. And in my first year, I hit 6 figures and hired my first employee. Now fast forward 3 years later...

- We've coached hundreds of clients, both men and women, across 4 different continents
- I've expanded my team to welcome 4 employees
- We've developed 5 different coaching programs of varying prices for accessibility
- We've generated \$300,000 in revenue
- We've grown to serve an audience of over 40,000 fans and followers across social media



Abigail's Instagram Page

The exponential growth of this leap of faith blows my mind every day. And I find all of my clients through social media (Instagram and TikTok mostly). And although it is not easy, I am able to balance working full time in my business while enrolled full time at Teachers College. I'm so grateful to be actively applying what I'm learning in the NEP program with my clients. Not only has it allowed me to gain practice using nutrition counseling skills and gain experience

## *How I Used Social Media (and a Risky Investment) to Launch and Run My Business (cont.)*

building exercise prescriptions, I'm making an impact and changing lives in real time.

I hear from a lot of peers at TC that they are hesitant to start working with clients before their schooling is complete. However, while I do understand the hesitation, I believe it is valuable to use this time while getting credentialed to optimize social media. When you are ready to work with clients, you will already have a primed audience who knows, likes, and trusts you. When you are ready to take on clients, they will be ready to work with you.

Additionally, there are so many influencers online that have large platforms and know how to go viral. Unfortunately, these individuals are usually not credentialed and post faulty health information. Us, as academics with the evidence-based information, have what people need to make sustainable health behavior changes but, in general, we struggle to get this information to go viral. Thus, there is a great sense of urgency to learn how to optimize social media in order to get the *correct* health information out to the masses!

So, if you want to get started on warming up your audience via social media so you don't have to wait to make an impact until after you graduate, here is where I'd recommend someone start...



*TC Student, Abigail Stasior*

1. **Optimize Your Bio!** Have a clear & professional profile picture and make it clear who you help, how you help them, and what working with you will do for them.
2. **Know Who You Help!** Blanket health information gets lost in the shuffle. Instead of speaking to the masses, you want to whisper into the ear of your ideal client, which requires you to know who you specifically help, their goals, fears, and struggles.
3. **Post Consistently!** You don't need to post a certain number of times per day or per week (or one every platform for that matter). Just start with one platform and one small step. Make it a small commitment that you can keep up with. Consistency compounds.
4. **Be Social on Social Media!** People buy from people they connect with! Show your face, let people into your life, be personable versus just knowledgeable! This will actually get you more traction on social media. And I can attest that we get more applications for our health coaching programs after I share a crazy NYC dating life story versus when I do a mini-training about how to handle food cravings.
5. **Invest In Help!** We know when it comes to healthy living that we can not make lasting or meaningful change single-handedly. We understand the importance of investing in professionals to expedite our growth and minimize the amount of pitfalls we go into. So I recommend investing in support on how to monetize social media and how to create content that converts into dreamy clients that *love* to work with you (and will pay you whatever you desire).

I'm always available to answer people's questions about this! Send me a DM on Instagram (@abbie.stasior) if you're looking for support in this area!

## ON THE DIETETIC INTERNSHIP FRONT: INTERVIEW WITH JAMIE GERSHEL

With this school year bringing an unexpected and devastating pandemic, the Teachers College Dietetic Intern class has, like the rest of us, moved primarily online to remote-based learning. I had the pleasure of speaking with current TC dietetic intern, Jamie Gershel, who will also receive her MS in Nutrition Education from TC this spring. Jamie shared her unique experiences about this past year as the DI program nears its final rotation – from navigating remote learning, her favorite rotation, some wonderful advice, and much more.

### **What sparked your interest in becoming a registered dietitian?**

I'm a career-changer. I worked in advertising for about 4.5 years for big food service restaurants, had seen a Registered Dietitian myself, and found the whole process really interesting. I hadn't really learned how to eat appropriately and, at the time, I was also working on a restaurant account where they listed all of the sodium and fat in their products. I remember thinking to myself, 'for most people in America those numbers don't mean anything unless they have been educated'. Upon reflection, I knew I had these great communication skills where I could sell this meal to someone, but I realized I would rather sell them something that is going to be good for them in the long term for their health.

### **Why did you choose TC's DI? Did you consider others?**

The only other DI I applied to was Lehman's because I took a lot of my prerequisites at Lehman and knew some people that went on to do their DPDs and DI there. It was also in New York, and leaving New York was not really an option for me. I applied to Lehman due to my great experience and connection with professors but did not seriously consider any other DI programs. TC was my first choice because I had such a great experience with my Master's education here, and I knew the DI program would be the same. I chose the program because I was attracted to the idea that you got exposure to the many different parts of nutrition, from clinical to nonprofit work and then

corporate wellness and private practice. Other programs do not offer the wide range of opportunities that TC does.

### **How has the pandemic altered your learning experience? How is remote learning?**

My DI experience has been entirely remote thus far. It's been really tough and not what we expected, especially as this internship is the immersive hands-on year. While it has been difficult, I don't know if I would have learned more in person. Jennifer, the TC DI director, has done an exceptional job at making our classes really interactive, using technology for all of its advantages, and bringing in speakers that are comfortable doing remote lectures. We're also meeting new people for the first time over zoom every five to ten weeks at the start of each rotation, so that part is tough as well.

### **What were your expectations going into the DI? Have they been met/exceeded/differed?**

A part from being in-person -as that is out of our control - I think everyone was a little bit nervous with a new DI director this year. You're nervous to meet your DI director on Zoom, but I cannot rave enough about Jennifer. She is also a TC alum and understands what it is like to go through this program. I was worried about remote learning at the beginning, but my experience has exceeded my expectations - with Jennifer guiding us through the process, my expectations of what the DI director does for the internship has also been exceeded.

### **How have experiences in the MS program classes prepared you for the DI? Are there things you learned "on the job" that could not be learned in the classroom?**

In my current rotation I am doing a lot of research - I use everything I have learned from the research methods classes and nutritional epidemiology like interpreting the odds ratio, and the confidence intervals, looking at food frequency questionnaires, etc. Knowing how to really understand the research has been really helpful. For nutrition education,

## Alumni Interview (cont.)

taking the principles from what we learned in Dr. Contento's class and thinking about the determinants, different structures, and social aspects you need to be aware of when planning for education has been helpful. I had the opportunity to do a little bit of counseling and while I reviewed the motivational interviewing information we learned, it is absolutely something you also learn on the job – figuring out your groove, your 'OARS', and your style. Also, shadowing and seeing other people's styles! For example, some RD's don't practice motivational interviewing - it just doesn't work for them. But it also depends on the structure and how much time you have. Sometimes you won't even talk about the food, and it's more focused on the behavioral aspect. Clinically, each clinical organization is so different and has their own way of doing things, such as pdf statements or formulas they use for tube feeds.



TC Dietetic Intern, Jamie Gershel

### **What rotations have you done thus far? What has been your favorite rotation or experience?**

We are getting towards the end, so I am on my second-to-last rotation. I have done all of my community rotations, and I will finish up with clinical in these last ten weeks. Picking my favorite is so hard - they are all so different! Your community rotations can be something with a nonprofit, or a private practice - it really ranges. I think one of my favorite and most rewarding experiences was the opportunity to work with Maya Feller, an adjunct at NYU and respected figure in the RD community who took the time to really teach me about a different side of community nutrition. We had this one-off project where we were able to help a non-profit secure funding for an after-school food nourishment program. Children would get these snack bags where if they qualified for school lunches, they would also qualify for this program in New York City. We helped put together the guidelines for what was in the snack bag, and this program reached about 8,000 children throughout New York City. That was definitely the most rewarding because you sit behind your keyboard all day and you kind of forget that what you're doing in the community setting is so important and is actually touching human lives. Things also don't typically move that fast in the nonprofit world so that was awesome.

### **What would be your advice for future students going through the DI application process?**

#### **Going through the DI once accepted?**

The application process can be very complicated – there's a lot of moving parts, and you have to make sure you assign your letters of recommendation and your essay to each individual application. So make sure your application is complete, pdf it, and read through it before submitting. Start early. Be organized. Don't freak out about it. During the DI, every experience is going to teach you something. Whether or not you like the site or it's what you want to do, every experience will teach you something that you haven't learned in the classroom, but that will make you a great RD. Try to not be upset about things if they are not 100% perfect.

## *Alumni Interview (cont.)*

**Which direction do you picture yourself heading in after the DI? Was this what you always wanted to do, or has it changed with your experiences?**

The looming question. After the DI, I don't necessarily see myself in the traditional clinical role, but I am open to it. For me, I see myself exploring all opportunities and taking my own advice I gave about the DI – it might not be my dream job, but any job is going to teach me something that I can take and find the perfect job later down the line. Personally, I would really like to work in women's health, in conjunction with an endocrinologist, or in a women's health practice. I've gotten more and more interested in diabetes care, and postmenopausal women, which is something I was not interested in to begin with. On the flip side, I am also very interested in productization, the intersection of nutrition and health because I think that is becoming an explosive area of pseudoscience and I would like to help that space not be as polluted.

It was exciting to learn about Jamie's experiences, resilience, and hopes for the future as a soon to be RD! Overall, she shared how excellent TC's DI program has been, with Jennifer being a great addition. She is excited to see what the future holds for herself as she enters her final rotation, as well as the future of the program and its students.



*Jamie enjoying nature on a hike!*

## OP-ED: CLIMATE-DRIVEN DIETARY RECOMMENDATIONS CARRY DIFFERENT BURDENS BASED ON INCOME

By Amanda Wahlstedt

In 2019, the United Nation's International Panel on Climate Change (IPCC) released a report that urged society to curtail their meat consumption in an effort to protect our planet. It found that if the population moved towards a plant-based diet and reduced their animal product consumption, it would vastly lower the carbon impact of the agriculture industry, currently a major contributor to climate change. In the last two years, countless headlines have regurgitated this information, calling on consumers to eat more plants and, in turn, less meat. However, having such autonomy over your dietary choices is a privilege that few in America have, making this recommendation feasible and relevant to only the highest earners of our society.

The United States is a leader in meat production and consumption. According to the World Resources Institute, in 2018, the US beef consumption was four times higher than the world's average, only outpaced by Brazil, Argentina, and Uruguay. The average American is estimated to consume around 58 lbs. of beef, 51 lbs. of pork, and 98 lbs. of chicken per year (that's about ½ a pound of animal meat a day). Even by the standards set by the Dietary Guidelines for Americans – which already raises eyebrows for its liberal recommendations around meat—urge Americans to eat a total of 26 ounces per week of *all* animal protein products (egg, chicken, beef, and turkey), a mere average of 0.2 pounds of animal meat per day, or 1.5 lb. per week. It is undisputed that Americans tend to overconsume meat.

And it is this very overconsumption of hamburgers and fried chicken that is a major driver in climate change. The livestock sector accounts for one third of global greenhouse gas emissions, and more than 40% of global methane emissions. This is a result of the over 70 billion animals raised for food globally that put strain on our resources of water and land, require inputs of antibiotics and fertilizers, and results in deforestation, ocean acidification, methane, nitrous oxide, and carbon emissions, and fertilizer runoff. While meat eaters and advocates will point to the benefits of regenerative agriculture as a justification for their dietary habits, this argument is weak at best, as its estimated that over 90% of all animal products in America come out of concentrated animal feeding operations. As a result, it has been well studied that a shift to a plant-based diet will result in a lowered carbon footprint than the typical Western diet. For example, a

mere 50 g. of protein from beef (about a 7 oz. serving size of steak) produces 17.1 kg of CO<sub>2</sub>, compared to 50 g. of protein from tofu (about 2.5 cups of tofu), resulting in 1 kg of CO<sub>2</sub>. In general, it takes more land, water, and energy to produce animal products than plant foods, leading to major environmental organizations such as the IPCC, FAO, WRI, and Eat Lancet to call on consumers to move towards plant-based diets, and away from their carnivorous habits. The IPCC has found that vegan and vegetarian diets have a higher GHG mitigation potential than any diet that frequently consumes animal products, ranging from the Flexitarian diet to the Mediterranean diet. The individual food choices do matter in this argument – if even one person goes vegan for two-thirds of their meals, it would cut their greenhouse gas emissions by nearly 60%. Moreover, if all Americans shifted to this predominately plant-based diet, it is estimated that there would be substantial per capita and whole-country reductions in both GHG and consumptive water footprints. So, if crops require fewer inputs and result in less ecological disruption than animal foods, then wouldn't a sweeping recommendation to cut down on meat in the name of our planet make sense?

The issue becomes more complex when we consider the availability and accessibility of other food options by low- and middle-income people. We currently live in a food system that is saturated with cheap, processed products and fast-food chains, many of which are dominated by meat and animal products. The most popular fast-food category is unsurprisingly burgers, with McDonalds and Burger King continuing to dominate this sector with their Big Macs and Whoopers. Glance at a fast food menu in some of the lowest income states and the issue of animal food accessibility and the lack thereof of plant foods is apparent. The McDonald's menu in Mississippi places their cheeseburger at \$1.96, compared to their salads clocking in at \$4.96. Similarly, Burger King's Whopper is \$4.11, compared to their Impossible Whopper, which uses the popular plant-based faux burger meat, priced at \$7.14. Similar issues arise when we look at supermarket prices - while the per weight prices of plant-based foods tend to be cheaper than their animal counterparts, the numbers get iffy when we compare nutritional value per weight, and the required time and education needed to properly prepare and shop for plant foods.

## Op-Ed (continued)

In response to these issues, some policy initiatives have emerged as a way to increase the barrier to meat consumption, and consequently move people towards a plant-based diet. Over the last three years, talk of a red meat tax has been underway in hopes it will curtail demand and thus decrease the carbon impact of the livestock industry. A 2018 study found that by increasing the price of meat by 20% and doubling that of processed meat, we could reduce the greenhouse gas emission by over 100 million tons. This sparked the United Kingdom Health Alliance on Climate Change proposal for a tax on food with heavy environmental impacts – and therefore, animal protein – by 2025 across the UK, as well as leading to major organizations like *Eat Lancet* and *New York Times* to discuss a potential carbon tax on beef. However, the issues with such a policy, similar to other taxation proposals such as the soda or sugar tax, is that they can be highly regressive, disproportionately impacting those of low income. And without access to healthier alternatives or nutrition education, we would be hindering those that are already food insecure or left without better options, while the wealthy could continue to maintain the status-quo of their food choices. Some reports have expanded on this issue, stating that while a reduction in meat consumption could reduce GHG emissions, it could also have negative impacts on the nutrition and livelihood of low-income individuals. Among those of low-income in our country, animal products can serve as a dependable source of calories and contribute to nutrients such as B12 and zinc in the diet.

The issue of urging people towards a plant-based diet expands when we further consider food deserts (regions where people have limited access to healthful and affordable foods), food swamps (areas where fast food and junk food dominate), and food mirages (areas where individuals live in close proximity to supermarkets with fresh produce, but are unable to afford these foods). We see that these areas, riddled with processed foods or void of nutrient-dense plant foods, are largely located in areas of low income and racial minority populations, and result in a higher disease risk among these vulnerable populations. Studies and thus proposals for legislation have been put forth to try and address these issues of food insecurity and inequity, such as zoning laws to create a minimum distance for fast-food outlets near schools and areas of low income. While such laws have been implemented in areas of Los Angeles and Michigan, the efficacy of such zoning laws have not been shown. One promising bill, H.R. 1717 – Healthy Food Access for All Americans Act, would incentivize grocery stores and food banks to locate to food deserts; however, this bill

has received little traction since its reintroduction in 2019. Moreover, while such policy implementations would remedy issues of food availability and potential health implication of low-income populations, it does little to address concerns around nutrition education, and incentives to limit meat consumption.

While amelioration in our food system across the board is necessary, from farming practices to food marketing and fresh food accessibility, in the interim, it is individual action that will drive down demand, and make a difference. But how can we ask those facing inequalities, poverty, racism, malnutrition and obesity in our food system to consider climate-friendly actions? Placing the burden of climate change on the society as a whole disregards the everyday food challenges that many of our Americans are facing, and allows those of us that have the privilege of excess choice off the hook.

If you are one of the few that does not consider price as the primary driver when grocery shopping, frequents restaurants on any given night, or has the privilege to choose their meal choice based on food cravings rather than location or access, then it is on you to make food choices that do right by our planet. Moreover, institutions and widespread public health recommendations that call for such reductions on meat intake should shift their message to target those of higher income, recognizing the autonomy that those of this income group have around food choices, compared to those of limited access and resources.

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# DETERMINANTS OF HUMAN AND CORPORATE BEHAVIOR - INSIGHTS FROM DRUG DEVELOPMENT RESEARCH

By Evan Shaulson

Before starting at TC in the fall of 2019, I spent three years studying the neural control of energy balance and related behaviors in the labs of Dr. Matthew Hayes and Dr. Bart De Jonghe, both of whom are nutrition professors at the University of Pennsylvania. While many of the lessons I learned in the lab seem to have little to do with the “farm to fat” philosophy we are taught at TC, many are highly relevant - some, unexpectedly so. Injecting rodents with anti-obesity drugs and characterizing their response is a far cry from counseling human clients, but I learned valuable lessons related to the primacy of energy consumption that clearly apply to humans and perhaps also to economies and corporations.

In the De Jonghe Lab, we mainly studied how the brain’s “feeding circuits” are involved in nausea, vomiting and anorexia. Most of this work involved trying to block the nausea/vomiting/anorexia response to chemotherapy or various anti-diabetes/anti-obesity drugs. For this work, we used rats, mice and Taiwanese musk shrews (*Suncus murinus*) as model species. The musk shrew is particularly useful

as a model species because rodents (rats, mice, etc.) cannot vomit, but the musk shrew, an insectivore, can. In the Hayes Lab, my work centered around characterizing the effects of satiation-signal mimicking drugs on the “feeding circuits” in the hypothalamus and brainstem. Most of this work involved rats, some very fat, and some with surgically implanted cannulas for intracerebroventricular drug delivery.



*Taiwanese Musk Shrews from the De Jonghe Lab*



*Obese rat being fed an Oreo by Evan in the Hayes Lab*



*Rate with implanted cannulas in the Hayes Lab*

## *Determinants of Human and Corporate Behavior (continued)*

More than anything else, my work in the lab taught me that biology tends to complicate even the simplest of behavioral goals. Moreover, I learned that our short-term survival instincts are often in conflict with our long-term well-being. Losing weight, for example, can be accomplished by achieving relatively simple behavioral goals - eating less and moving more. Yet anyone who's ever managed to lose 5-10% of their bodyweight knows the body and mind seem to actively resist demands to eat less and move more. Despite the fact that weight loss tends to reduce risk of chronic disease and improve quality of life in individuals with obesity, from the brain's perspective, weight loss represents a short-term threat to survival (we're running out of fuel!). The brain responds to this threat by lowering the resting metabolic rate, making physical activity less appealing, increasing hunger and enhancing the reward response to food, all of which lead to weight regain. While the main takeaways from my research are related to the biological determinants of human behavior, I found myself applying the concept of behavioral determinants more broadly as I was exposed to the TC Nutrition Program's "farm-to-fat-cell" philosophy.

Over the past two years, I've seen how my courses at TC's Nutrition Program has provided a framework for understanding why people and corporations do the things they do. Economies and corporations, like human bodies, must consume energy to survive and grow. Not surprisingly, the major stakeholders in our economy, like our brains, often respond to threats to the status quo as if they are short-term threats to their very survival. Unfortunately, the behavior of multinational corporations is determined almost exclusively by short-term financial considerations. When activism

threatens the bottom line, economic stakeholders respond with climate denialism, lobbying activity and a litany of other unscrupulous survival tactics. These short-term survival tactics are in conflict with everyone's long-term well-being, including the major stakeholders! When the agribusiness giants create "educational materials" that insist that more pesticides, herbicides and GE crops are needed to compensate for yield deficits that are themselves the result of input intensive agriculture, they are putting their short-term financial interests ahead of preserving humanity's ability to feed ourselves in the long-term. When the crops fail, we're all screwed - even the agribusiness giants.

Coca-Cola, Kraft and McDonald's employ armies of behavioral neuroscientists and food scientists to compete with each other (and nutrition educators/counselors!) to shape our behavior for profit. My time in the lab, which involved attending conferences funded by Mars (yes, the company that makes M&Ms) showed me the extent of the knowledge and funding gap that exists between nutrition educators/counselors and Big Food in the battle to influence the behavior of consumers. My time at TC made it clear to me that if we, as nutrition educators and counselors, don't engage in advocacy, allyship and activism, we will always be competing on a drastically uneven playing field. It follows that a *theory-based* (Strategies!) approach to advocacy, allyship and activism- one that seeks to understand and skillfully address *determinants of corporate behavior* while avoiding triggering short-term survival mechanisms - will be most effective at *changing the behavior* of multinational corporations and addressing related public health problems.

## A THROWBACK TO MY TRIP BEFORE THE PANDEMIC - FOOD TOURS IN BRAZIL AND PERU

By Jiakun Yi

To many of us from Asia, South American feels like “the end of the world” - located on the opposite side of the globe and taking more than 30 hours of flight from the eastern hemisphere to reach, it feels like a faraway dreamland.

During our winter break in January of 2020, I was lucky enough to be able to venture into this dreamland, and go on a two-week trip to Brazil and Peru. On the afternoon of January 6th, I landed in Rio de Janeiro, and stayed a few blocks away from the famous Copacabana beach. I spent the day riding scooters and enjoying the sunset and breeze from the Atlantic Ocean, until I finally had my first meal of the trip at *Restaurant O Peixe Vivo*. The restaurant is well known for its traditional Portuguese dishes: I savored their home-made spicy oil with their seafood pasta, bringing out of the freshness of the mussels and shrimp while neutralizing the heavy mouthfeel of the cream and cheeses; I tasted their *Bolinbos de bacalhau*, a traditional Portuguese dish of cod croquettes; and I enjoyed a beer with my Brazilian beef pastels. Overall, it was a great meal to jumpstart my food tour of these countries.



*Restaurant O Peixe Vivo*

Brazil is known for their high-quality beef, and is a major exporter of beef to the world. As a result, I tried to include some of their signature beef dishes at every meal. Unlike in the US, beef dishes in Brazil do not come with heavy sauces or gravies, and rather the

seasoning and flavor is minimalistic in order to emphasize the original flavor of the meat.

At *Cafe e Bar Macau* I tried a traditional beef dish called *Carne de Sol*, which was served with rice, beans, and fried manioc. At *Fogo de Chao* I enjoyed a feast of meats from various parts of the cattle in a Brazilian barbecue style, which uses a GO-STOP flipping card to indicate to the waiter whether I wanted more. At *Restaurante Garota de Ipanema* I tried their signature dish of *picanha*, a popular cut of the meat that is lesser known in the US. It is served on a hot iron plate and allowed to cook to your personal desired degree. The meat was very juicy and the proportion of lean meat to fat was exceptional, balancing the chewiness with the richness of the butterfat. Another highlight of my time at these restaurants was the traditional Brazilian cocktail, *caipirinha*. It uses whisky as its base, but has a mild and refreshing taste due to the lime juice and sugarcane that balance out the alcohol.



*Café e Bar Macau*

On January 9th, I then flew in the early morning to *Foz de Iguaca*, where the Iguaza Falls, one of the most grand waterfalls in the world, is located. While I started on the Brazilian side with an exquisite view of the entire waterfall, I then made my way across the border to the Argentinian side, where I actually got so close to the falls that I ended up getting wet! Back on the Brazilian side, I gave my GI system a break from all the beef in the previous days, and choose to eat

## *A Throwback to My Trip Before the Pandemic (continued)*

some sushi and a poké bowl. While the interaction between Japan and Brazil dates back to the 16th century, when Portuges traders used Brazil as a stopover between Portugal and Japan, their influx increased in the early 20th century. Due to increased difficulties in entering the US and rising labor needs in Brazil, Japanese immigration increased in this country. Now, Japanese immigrants are one of the most populated Asian immigrants groups in Brazil and their influence on the cuisine is clear. Currently, about 2 million Japanese immigrants and their descendants live in Brazil, and traditional Japanese food and festivals are well celebrated throughout the country.



*Poke Bowl at Maki Sushi by Iguaza Falls*

During my time in Brazil, I also enjoyed an array of their desserts, which are not different from those in the European countries and the US. However, Brazil is home to acai, the trendy “superfood” that is found to be high in vitamins and antioxidants. Acai is from a species of palm trees native to South America, and is a popular iced street food in Brazil. Unlike in the US, where popular acai bowls often include peanut butter to create a nutty flavor, acai in Brazil is consumed with condensed milk or chocolate sauce, and topped with chopped peanuts mixed with sugar, berries, banana slices, and puffed rice or quinoa. Some will even serve plain acai slush without additional fruits. The sweet and sour flavor plus the icy mouthfeel make acai a great summer dessert!

That concluded my trip to Brazil. I then flew to Lima, the capital city of Peru, on January 11th. The next

morning, I started a walking tour of the city from Kennedy Park and ventured to *Huaca Pucllana*, the pre-Inca pyramid historic site, and *Plaza Mayor*, surrounded by colonial architecture like the Government Palace of Peru and the Cathedral of Lima. While the historical tour was beautiful, the cuisine continued to remain inspiring. I frequented *Punto Azul*, an authentic Peruvian restaurant specializing in local and fresh ingredients from the pacific coastline. Here I enjoyed their ceviche, which is served with a few kernels of *choclo* (Peruvian corn) and sweet potato, and their *Lomo Saltado*, which is a Peruvian stir fry of beef tenderloin, onions, tomatoes, cilantro, soy sauce, and *aji* (a chili pepper native to Peru).



*Punto Azul - Ceviche with choclo*

Peru has a rich Asian immigrant culture, leading to the fusion of Peruvian foods with Asian cooking techniques and flavors. Of the 3.2 million population of Peru, at least 10% has Chinese ancestry, owing to the labor flood from China to Peru between the mid 19th and 20th century. Most of the Chinese immigrants came from Southern China, and their influence on the cuisine is apparent. During my time in Lima, I also tried the Peruvian Chinese fusion at *Chifa Titi*, where I had their *Chifa* (fried rice) and roast duck. As a Cantonese, I would say the Cantonese food in Peru represents about 80% of the flavor and tastes of the Cantonese food back home, and is even better than most of its counterparts in the US.

I concluded my trip in Peru by flying to the Andean region, the part that I looked forward to the most in this journey - the Sacred Valley, Machu Picchu, and Cusco, the capital city of the Inca Empire. The Andean region, at the altitude of 3,400 m on average, feels close to the clouds. People here adapt to the high altitude by drinking coca leaf tea. It is used to combat altitude

## *A Throwback to My Trip Before the Pandemic (continued)*



*Chifa Titi - Chifa and Duck*

sickness, and is important to the culture, seen as a celebration food for the great Inca feast of *Inti Raymi* (Sun God) in Cuzco every June. The tea tasted like green tea with an herbal flavor. After drinking the tea, my breath and heartbeat became more stable, and could walk at the same place as on a flat plain.



*Coca Tea in the Inca Sacred Valley*

After spending my time there visiting the Andean village *Chincho*, the Inca ruins dating back to the 15th century, and finally ascending the Inca Trail to the ruins of Machu Picchu, I ended up in Cusco. In Cusco, I tried many of the local foods, including *cuy* (guinea pig), llama steak, quinoa, and more ceviche based on fresh-water fish and local maize.

Interesting, in both Brazil and Peru, the food culture was rather heterogenous, as a result of their former colonial history, indigenous culture, and influence of Asian



*Green Organic - Shrimp Curry with Peruvian Quinoa*

immigration on the modern cuisine. Looking back on my eating experiences in these two countries, I was privileged enough to have a taste of their diverse cultures. While in both countries, beef is the main source of protein on the plain and coastline, in the Andean region, the protein was more diverse with native hunting and farming practices. Both countries have maize, potato, and sweet potato as important major foodstuff. And, like traditional Asian food, both cuisines used very simple flavoring and seasoning to emphasize the original taste of the ingredients. They also included many techniques brought from Asia by Asian immigrants, so for me, they tasted familiar and were readily enjoyed. The main difference for me between the cuisines was the influence of native ingredients on people's taste preferences and palates. In Brazil, they seemed to have more of a sweet tooth, likely due to the highly developed sugarcane industry, whereas in Peru, it seemed to be a sour and spicy like influence, with the incorporation of lemon and chili peppers.

I feel so lucky to have had this trip outside of the US before the pandemic hit. Three days before the end of the my travels, I opened by phone to Weibo - the Chinese version of Twitter - to numerous panic-stricken headlines around the "new type of coronavirus" that was spreading through the country. Even now, where we see the light at the end of the tunnel thanks to the hard work of the heroes on the frontline and the extensive vaccination program, normal international travel is still far away. Let's take the best care of ourselves and our loved ones and hope that the day will soon come where we can travel to another place to experience their rich history, culture, and food.

BY: VALERIE CHARLES

## Easy Peach Crumble

### Ingredients

- 7-8 peaches, sliced\*\*
- 3/4 cup whole wheat pastry flour
- 2/3 cup coconut flour
- 1/2 cup old fashioned rolled oats
- 1/2 cup chopped pecans\*\*
- 1 tsp ground cinnamon
- 7 Tbsp chilled, unsalted butter, cut into cubes (I use the vegan butter brand Miyokos)

\*\* Peaches can be substituted by other fruits, such as plums or apples

\*\* Pecans can be substituted by walnuts, almonds, or other nut of choice

### Directions

1. Preheat oven to 375°F (175°C).
2. Prepare peaches by removing the pit and slicing into 8 pieces.
3. Arrange peaches in a greased, 8x8 square baking dish.
4. Prepare the crumble by placing flour, sugar, oats, chopped nuts, cinnamon and a pinch of salt in a medium sized bowl and mix.
5. Add the chilled butter, rubbing ingredients together to form a pea-sized crumble mixture. Work quickly to avoid the butter from warming up too much. If the mixture is too buttery (forming larger pieces) add a bit more flour, 1/2 Tbsp at a time until you get desired consistency.
6. Top the peaches with the crumble mixture, spreading evenly to coat.
7. Bake on the middle rack for 45 minutes - 1 hour, or until the juices are bubbling and the top is golden brown. If the crumble gets too dark, lightly place aluminum foil over the top.
8. Remove crumble and let rest for at least one hour.
9. Serve warm or at room temperature. I enjoy mine with coconut milk vanilla ice cream!



“Fruit crumbles are so comforting to me! Not only are they just incredibly warming and homey, but it’s also the first dish I made with my mom when I was younger. Making the crumble topping in this recipe is a great way of involved little ones in the kitchen!”

- Valerie

BY: SYDNEY NAVID

“When I shop at the grocery store, I like to buy beets with the beet greens still attached so that I can sauté them with leftover rice, cilantro, and lemon. I love using the whole lemon, rather than just the juice, to add pops of brightness and acidity.” - Sydney



## Fried Rice with Greens, Cilantro, and Lemon Segments

### Ingredients-

- 1 cup rice, cooked
- 1 Lemon
- 3 cups Beet greens (or Swiss chard/kale), chopped
- 1 tsp. Lemon juice
- 2 Tbsp garlic-infused olive oil\*\*
- Red chili flakes, to taste
- 2 Tbsp cilantro, roughly chopped
- Salt and pepper to taste

\*\* If you do not have garlic infused olive oil, simply add in garlic when sautéing the greens. To make garlic-infused olive oil, warm 1/2 cup olive oil with 4 crushed medium garlic cloves for 5 minutes, or until garlic becomes crispy and light brown. Then cool and store in an airtight container.

### Directions:

1. This recipe calls for 1 cup cooked rice, so prepare rice accordingly.
2. Prepare the lemon by removing the rind and then cutting into small chunks.
3. Heat a non-stick sauté pan over medium heat.
4. Add the beet greens and lemon juice and sauté for several minutes.
5. Add in garlic-infused olive oil, chili flakes, and cooked rice. Sauté until rice and greens are well combined, and the greens are wilted.
6. Remove from heat, and add in cilantro and lemon segments. Season with salt and pepper to taste.
7. Adjust seasoning as needed, and serve alongside with egg or protein of choice.