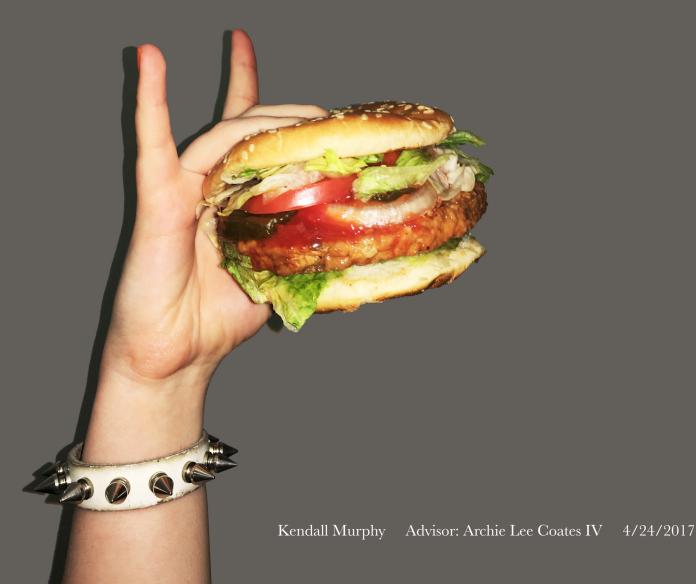
redemption HOPE

SAVE EARTH'S ASS FROM CLIMATE CHANGE W/ FOOD





Problem: High Consumption Rate of Animal Products

According to the USDA, the average American consumed 180 pounds of meat in 2014. As human population grows, it generates more demand within the food system, possibly disproportionately for meat products, as we are currently consuming more meat, eggs, and nuts than the recommended amount (Figure 1). As consumption rate increases, so do greenhouse gas emissions, strain on our fresh water supply, land use, and livestock waste, which contributes to ocean dead zones. Animal agriculture is responsible for more greenhouse gas emissions than all combined global transportation.^{1,2} About 44 percent of livestock emissions are in the form of methane (CH4).² The remaining part is almost equally shared between Nitrous Dioxide (N2O, 29 percent) and Carbon Dioxide (CO2, 27 percent).² CH4 has 25 times the global warming potential of CO2, while N2O has 298 times the global warming potential of CO2.³ Animal-based food products are also extremely water intensive compared to alternative high-protein foods. For example, it takes as around 12,139 more liters of water to produce one pound of beef compared to one pound of rice and beans.^{4,5} When animal waste is improperly managed, it could pollute waterways with excess nutrients, contributing to algae blooms which lead to

Estimated average U.S. consumption compared to recommendations, 1970 and 2014 Percent of 2015-2020 Dietary Guidelines' recommendations 140 2015-2020 Dietary Guidelines' recommendations 2015-2020 Dietary Guidelines' recommendations' Meat, eggs, Grains Vegetables Dairy Fruit

Figure 1

'Based on a 2,000-calorie diet.
Loss-adjusted food availability data are proxies for consumption. Rice data were discontinued and thus are not included in the grains group.
Source: USDA, Economic Research Service, Loss-Adjusted Food Availability Data and 2015-2020 Dietary Guidelines.

and nuts

the degradation of oxygen levels, and thus create dead zones. Most U.S. counties (about 75 percent) have at least one livestock farm that needs to move manure off the farm to avoid excessive nutrient applications.⁶ Meat and dairy animals now account for about 20 percent of all terrestrial animal biomass.⁷ Livestock's presence in vast tracts of land and its demand for feed crops also contribute to biodiversity loss; 15 out of 24 important ecosystem services are assessed as in decline, with livestock identified as a culprit.⁷ Americans must reduce their consumption of unsustainable animal products in order to alleviate these negative environmental consequences.

Limitations of Fear Appeals

Although the consequences of animal agriculture span beyond climate change, the use of fear appeals in climate change initiatives can be used as a case study for this issue. Fearful representations of climate change appear to be memorable and may initially attract individuals' attention. However, they can also act to distance and disempower individuals in terms of their sense of personal engagement with the issue. If perceived external danger—in this case, the impacts of climate change—cannot be controlled (or is not perceived to be controllable), then individuals will attempt to control the internal fear. These internal fear controls, such as issue denial and apathy, can represent barriers to meaningful engagement. Solely fear appeal has been the backbone of many environmental initiatives. Although they can be used, fear appeals need to be complimented by more positive and personalized narratives in order to incentivize sustainable behavior change.

Framing the Problem

For an intervention to work, the audience must be able to understand this problem without losing engagement due to fear from the complexity or intensity of the issue. I decided to condense the communication of the environmental consequences as simply "climate change" because it is a highly familiar term across the United States. Under that term, I focused on only a few principles: biodiversity loss, water use, Carbon Dioxide Equivalent (CO2e) emissions, and livestock waste. Looking at the data of those principles applied to food groups, I created a sustainable food spectrum that I would encouraged my audience to consider.



Process

I've explored several different approaches to create less consumer demand for red meat, until settling with my most promising approach in early December.

September 2016 December 2016

Physical Biology of Eating Habits

Vegan Drunchies Research biology of why we crave certain things when under the influence of alcohol, and if there could be a type of vegan food created to satisfy either better or on par with animal

products. Challenge

Food science/chemistry is not my expertise, and there was no developed incentive as to why people would want to choose a vegan alternative other than taste. There was no moral judgment-building.

Tool for Portion Control

Meat Filler

"Hamburger Helper" type of CPG food product which purpose is to act as a sustainable filler to cut meat consumption in half. The contents would be low sodium and high fiber.

Challenge

A consumer product doesn't necessarily inspire behavior change, especially when it is virtually useless in eating scenarios outside of the home.

Online Shopping Guide

eGrocery Eco-Filter

An online grocery retailer filter, likely Google Plug-in, that would show the shopper food products which main ingredients are below a determined threshold of CO2e emissions or water use.

Challenge

I lack coding abilities and it could be challenged by the retailers. Also it would take a long time and amount of resources to try to calculate the environmental footprint of every type of food product just in one category. How would the intervention be measurable, scalable or considered social design?

Tapping into a Cultural Niche

Brand Sustainable Eating for Metalheads in NYC/Long Island Uses the language and aesthetics common in metal music in a communications initiative and conversation space as a firm contrast to the fear appeal-using and often green

looking environmental sector.

Metalheads as a Target Audience

Social Life and Personality Traits

From personal experience, my first major diet change was sparked at Warped Tour in 2007. Warped Tour is series of annual nation-wide music festivals that feature alternative music, notably metal musicians. Me and my best friend made a promise together to go vegetarian after seeing one fact about the meat industry presented by People for the Ethical Treatment of Animals (PETA) at this music festival. We likely made that choice because our environment was so high energy and full of passionate people who share our interests. Thus, we were more open to change. Because of this experience, I recognized a cultural niche that I could design an intervention for.

In a recent study, favoring heavy metal songs was linked to higher "Openness to Experience" than users who favored other genres of music. Metal was also cited as the highest global listener loyalty genre by Spotify in 2015. In the New York City and Long Island area, it's common for the same groups of friends to see each other at either local or touring live performances which occur usually at the same venues bimonthly. Open-mindedness, passion for their culture, and a tight-knit sense of community could make metal music listeners good candidates for receiving new information about positive social change.

Aesthetics and Identity

A quick Google image search of the keyword "metalhead" will yield images of distinct and dark fashion as well as aggressive poses and macabre art. At first glance, these people may look hostile. But in many cases, they are far from it.

Metalheads often use a defense mechanism technique called sublimation. Freud coined the term sublimation as a mature type of defense mechanism where socially unacceptable impulses or reactions are transformed into socially acceptable actions or behavior. Philosopher Hanna Segal expanded on this concept, saying that "a satisfactory work of art is achieved by a realization and sublimation of the depressive position" (1952, 206). Art, for Segal is a form of sublimatory activity, a working through of the depressive position, which





allows us through symbolic representations to take objects toward which we have sadistic hostile impulses and reintegrate them into a world that is "whole, complete and unified" (1952, 204). The macabre art and violent sound of metal music is likely a sublimation of the listener's personal internal struggles. I would also argue that metalheads are not inherently actually violent or aggressive due to my own generally positive social experience in the community for over 10 years.

The aesthetics of metal music listeners are more than just graphic t-shirts. Often listeners adorn their bodies with tattoos and body modifications such as piercings and stretched ears as a biological mark of their identity in the community. Interest in these more permanent types of accessories shows their commitment and appreciation for visual arts. A significant reason why I chose this audience is because I see their attraction to artwork as a huge opportunity for branding in my intervention.

What Part of Diet to Intervene In

I thought about my original "drunchie" idea, but this time with a twist where the audience would be challenged to make vegan dishes using wine, beer, or liquor. I hypothesized this would add some flare in place of the stigma that vegan food is just plain salads. After prototyping a vegan drunchie cooking session with one of my friends, although we thought the food was delicious, I felt like this approach was lacking a strong narrative.

I then experimented with the idea of promoting the consumption of a specific type of general food item, like lentils. But I realized that only worked at a home cooking level, and that ingredient is not readily available throughout the day like when commuting to work. I wanted to make sure the audience could use my intervention's information to make environmentally positive decisions no matter their situation.

Lastly, I settled with intervening at fast food point-of-purchase. The audience should be able to make quick food choices, whether they're intoxicated and wandering around New York at 2am, if they're stuck at an airport, or if they're in a band on tour. My theory was that if a user can understand why a veggie burger is better for the environment than a beef burger, then that knowledge can trickle down into their grocery buying habits. I figured the inverse would be more difficult due to my own personal experience as a vegetarian where my family would know what grocery foods to buy me, but when it came time to eat at a restaurant, they would always try to help hunt down a menu item for me as if it was some sort of difficult and complex decision-making scenario. If my audience could take the guess-work out of prepared food, then grocery shopping habits would come as a no-brainer.



Vegan "drunchie" idea; beer soaked veggie burger & wine infused sweet potato fries



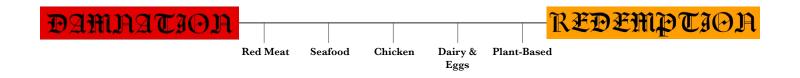
My intervention would allow users to connect data-driven food choices across all types of fast food chains.

Branding

Climate change is scary. That can be a bad or good thing depending on how a communications designer plays their cards. It could either be terrifying with the use of honest fear appeals and drive people to look away, or it could be self-mocking in the light of real statistics (a communications strategy used in news satire shows such as the Daily Show and the Colbert Report) to incentivize a more open attitude of the audience. I chose the latter.

Keeping in mind the use of religious themes in metal artwork, I created Redemption Food. Redemption Food exaggerates the definition of climate change to mean literally hell, which is defined as a category "Damnation", and a sustainable climate meaning "Redemption". The theme of Redemption Food is that we are all subject to Redemption or Damnation based on the foods we choose to eat. Thus we should eat more environmentally sustainable foods in order to be redeemed.





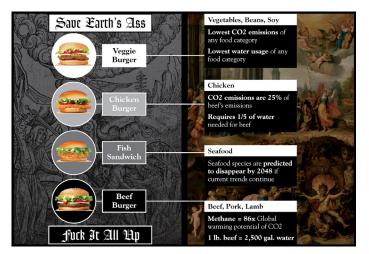
Redemption Food Prototype

Keeping in mind the goal to quickly and attractively communicate sustainable fast food choices, I prototyped a pocket-sized menu of burgers available at Burger King. On the left, it ranked burgers on a spectrum from "Save Earth's Ass" to "Fuck It All Up" while on the right-hand side of the spread, it described how the general food group the item belongs to is good or bad for the environment.

Menu Cover & Back

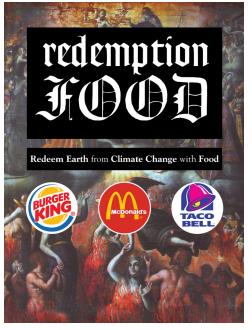


Menu Inside



I set up a 30" x 40" card board Redemption Food sign with LED lights and a Bluetooth speaker playing metal music at St. Mark's Place, a New York City street frequented by punk, alternative, and metal music fans. On top of the set-up was a tray of my burger menus as well as a band-sign up board for what would eventually be my final prototype: a sustainable food-themed metal show.

Signage & Set-up





St. Mark's Place



Results

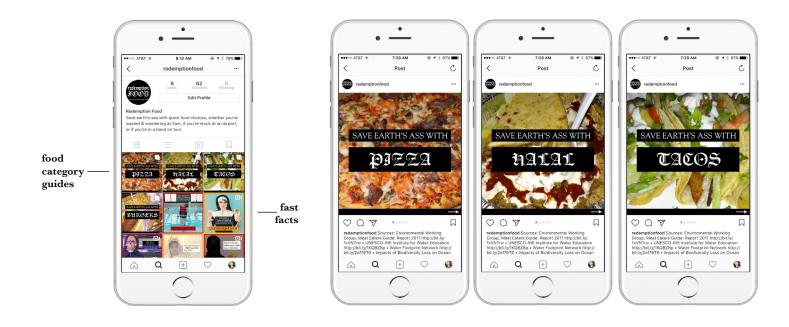
In a 2 hour time frame, around 8 people came to check out the concept and grabbed a menu. Many commented on how they thought it was a very "cool" project. The most interesting response I got that night was when one of the users exclaimed "Wow, I can eat beef and fuck it all up!" when reading the menu, took the menu away with him, but then later came back holding up a fast food bag and exclaiming "mushroom tacos!" as he passed by my stand. Even though the menu was talking about burger choices, he was able to take the data about the general food category to inform his decisions about other food types.

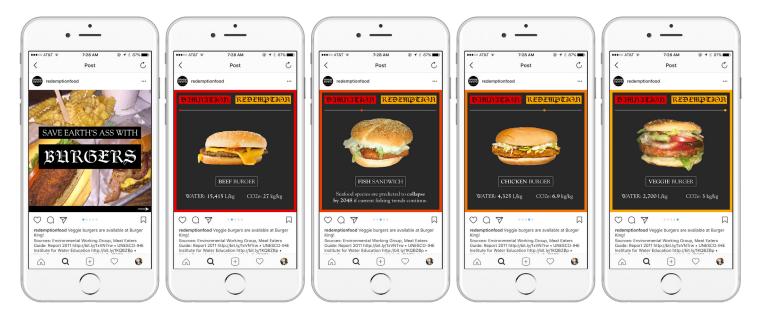
Final Prototype: Redemption Night & Instagram

Due to the positive deviance which occurred in my last prototype, I knew my menus were impactful. To further the potential impact, the next prototype of Redemption Food had to be more dynamic than just a print menu. I saw huge potential in making it an immersive and memorable experience rather than creating more designs for passively viewing. Thus, I decided to plan a metal and sustainable food concert called Redemption Night accompanied by a Redemption Food Instagram account for follow-up.

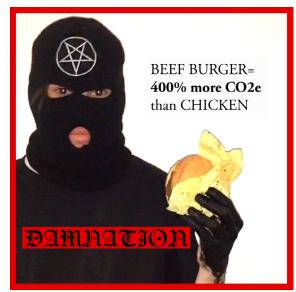
Instagram

My approach to immortalizing the data and increasing the likelihood of users sharing the data was Instagram. The page features two types of posts: food category guides (an expansion of the first menu prototype) and fast facts. The individual food category guides display types of a food, like for example beef burger, chicken burger, etc. and places them on a scale of Redemption to Damnation. The scale spans across several pictures within one post that the user can swipe through. Viewers can use these food category guides to inform a more sustainable food choice. Some featured categories include burgers, pizza, halal food, and tacos.

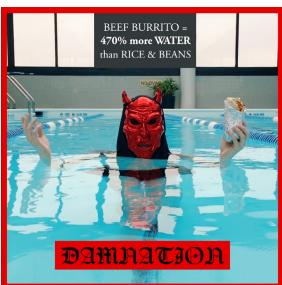




I wanted these individual fast facts to be impactful, so I developed a memorable theme. I dressed models up as either demons or angelic figures and posed them with respective foods that are good or bad for the environment. To highlight why these foods are good or bad, I paired them with a statistic like water use or CO2e emissions and I shot still loop videos of them holding these foods in situations that would narrate that statistic.











The Concert

This event would allow a conversation space about sustainable food in a context where they would not have expected it to be. Redemption Night had two main methods of communication- a free food table, and the fast facts being projected on stage.



Upon entry, attendees were given both a food ticket and a wristband with the Redemption Food Instagram user name written on it.









The attendees were able to redeem their food ticket for one free food item, either a beef or rice and beans empanada. I hid the empanadas behind a large sign that visualized the water use and CO2e of each empanada. Hiding the empanadas served as both a way to try to counter any bias from people seeing how many empanadas are left and also to get people to focus on the visuals. I wanted to see if seeing the water and CO2e information of the foods effected peoples' decisions.

Projected behind the bands were my loop videos of fast facts on individual food item sustainability.



The stage light colors were also adjusted according to the theme and color of the fact being presented on screen.





This show was no exception for the typical intimate behavior that occurs at metal shows. Often the performers would extend their microphone to the audience and offer a platonic touch on the head or shoulder, a non-verbal communication of comradery. Audience members would shout the lyrics with the band and even in come cases, impulsively get up on stage and perform a few verses.



Results

At the end of the night, 22 Rice and Beans empanadas were chosen and 23 Beef empanadas were chosen. This means that my data could have affected their decision because on average, only 5% of Americans identify as vegan or vegetarian.

I created an online survey which I sent out after the show, which I saw was mostly answered by general meat eaters.

It really blew my mind how even though nowhere did I say eat less red meat, people still came to that conclusion.

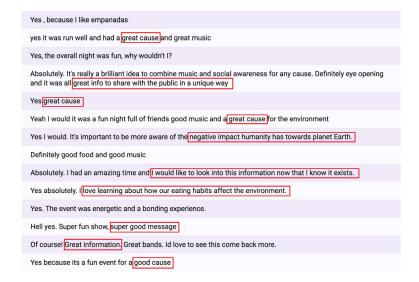
Based on what you had experienced at Redemption Night, do you plan to eat differently? How? If not, why not?

(14 responses



71% of respondents cited the sustainable food aspect as a key reason for attending another Redemption Night. This supports my initial theory that metal listeners are virtuous, thus being a good audience to drive change.

Would you attend another Redemption Night in the future? Why or why not? (14 responses)



Quotes

Signals success

- "My mom is interested in buying a food truck to sell authentic Spanish food. I've been trying to convince her to serve vegan or at least vegetarian food. I used Redemption Food as a way to shock to her about the environmental impact food has."
- 2. "I've been completely turned off by those terrible ads, and the aggressive way they literally throw the problem in your face; it's hard to take seriously. But the [designs] you had on the projector talked about relatively unknown things to people out of the loop, and it's shocking enough to grab attention. But not in a 'hey fuck you' kind of way."
- 3. "[I agree that] We need to resist individually...
 You should definitely expand on these [designs]."
- 4. "Please let me know if you're ever booking another show like this again. It was really cool!" [x5]
- 5. "So you tell me why should I care?" [non-sarcastic]
- 6. "Dude I used to book and run shows, and I've been around this whole scene for so long. That was probably the most fun and unified show I've ever been to."
- 7. "I thought the whole approach to this event was really unique and it ended up being one of my favorite things to have happened this year."

Signals improvement needed

- 1. [in reference to the empanada sign] "What does the CO2 in this food do to my body?"
- 2. "Is it better or worse if a food has more CO2?"
- 3. "For me, I would have chosen beef regardless because empanadas are something familiar to me. My family eats them, and I know beef empanadas taste really good."

Unexpected Situations

Empanada Commitment Issues

A behavior that really caught me off guard was when friends would each order a different empanada and them split them and share the halves of each. It was interesting how they couldn't commit to one type of empanada, and rather found a way to try both. I wonder that if they considered the environmental impact of both; did they think choosing one rice and beans empanada would offset the emissions of the beef one and therefore feel less guilty?

Performance Complications

One of the most challenging parts of Redemption Night was the issue that the second-to-last and very well-known band that I had been leading the show with for a month dropped off the lineup a little over 24 hours prior to the show. I had to adjust and confirm new set times with all other performers to accommodate for the gap and find a new opening act. Luckily, there was a progressive rock band on-hand that was willing to open for the show. They had been regularly in contact with me since I started promoting open slots for the show in the beginning. The reason I didn't add them onto the lineup at first was because I was afraid that their sound would be too different from the genres of other bands on the lineup.

Insights

People Will Find a Way to Break the Rules

This was something I've heard stories about at DSI but I never actually experienced it to a noticable extent in a prototype before. Gathering quantitative data can be frustrating when users break the rules, but this behavior is very useful data. It can be more valuable to see a user's completely honest feedback by breaking the rule than for a user to pick an option they don't really feel represents them due to being respectful of the rules. It can incentivize the designer to ask questions they would not have otherwise considered.

Appreciate People Willing to Help & Let Them Help

I should have been more receptive to the band who opened up for the show. I let my assumptions dictate my decisions, when in reality I had no idea of what people would actually think about their genre in context with the lineup. People loved them. When their performance was over, one of the attendees/other performer asked me "Did you get them on the lineup? Whew! They're phenomenal." This was truly a lesson learned in keeping an eye on personal bias and assumptions when designing for others.

Implications

A few people didn't see CO2e emissions as something to care about because they didn't know how it worked. They didn't keep in mind the biological cow methane as an equivalent in CO2e. The most surprising question I heard that night was "What does the CO2 in this food do to my body?" That person was actually under the impresson that my graphic meant that meat literally has more carbon molecularly than other foods. If I were to do this again, I would quickly and easily explain what the role is of CO2e and eating habits.

Future

Redemption Food would need numerous people to join the initiative from the inside in order for it to reach and impact many people. Some types of people needed would be a social media manager, events planners, and a creative team. Redemption Food can continue to live on in Instagram while bringing it's information to metal shows. Instead of hosting it's own shows, Redemption Food could operate more sustainably if it is added onto or sponsors other reoccuring events. The first most tangible events partner could be a Long Island or New York City booking agency. After enough shows are successfully run with that agency, Redemption Food could be picked up by medium-scale nationally touring festivals. And after the Redemption Food has worked with enough touring festivals, it could look to very popular national events like Warped Tour.





Thank you everyone who has contributed to this thesis project.

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