

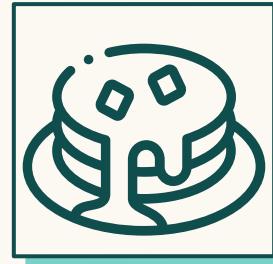
REDUCING CONSUMER FOOD WASTE IN RESTAURANTS

Rex Chng, Grace Lewallen, Dan Rosica, Bingling Wang, Emily Wen

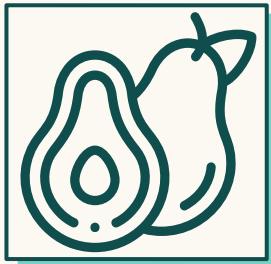
OUR TEAM



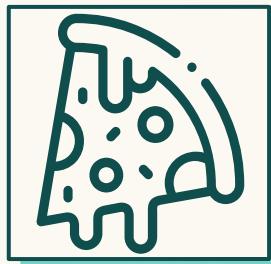
REX



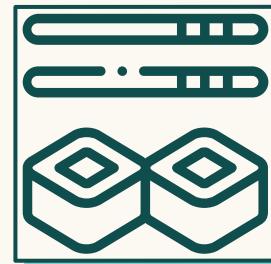
GRACE



DAN



BINGLING



EMILY

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01

PROBLEM & BACKGROUND

54 million

of the 229 million tons of food
available in the United States
went to waste in 2019¹





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\$152 billion

roughly 53% of \$285 billion which was attributed to restaurants and canteens alone¹



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\$152 billion

roughly 53% of \$285 billion which was attributed to restaurants and canteens alone¹

70%

of waste is due to plate waste from customers who don't eat everything that they're served¹

RESEARCH QUESTION

How can we use norm-based interventions to reduce consumer food waste behavior?



BACKGROUND LITERATURE



56 studies

examining behavioral
interventions on food
consumption and food waste²

20 studies

on food waste specifically²

9 studies

leveraged social norms²

5 studies

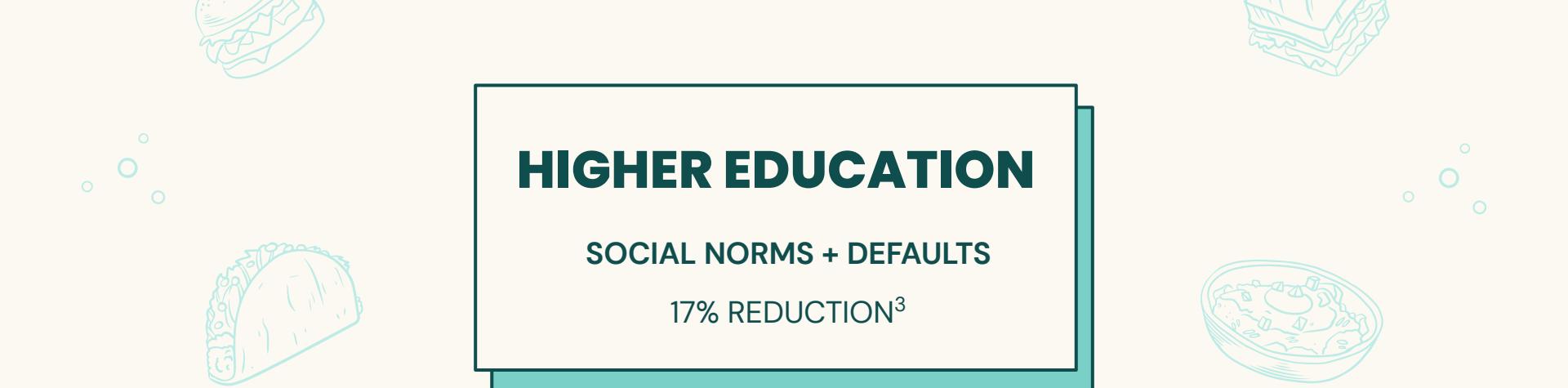
took place in the context of
canteen and restaurant
behavior²



HIGHER EDUCATION

SOCIAL NORMS + DEFAULTS

17% REDUCTION³



HIGHER EDUCATION

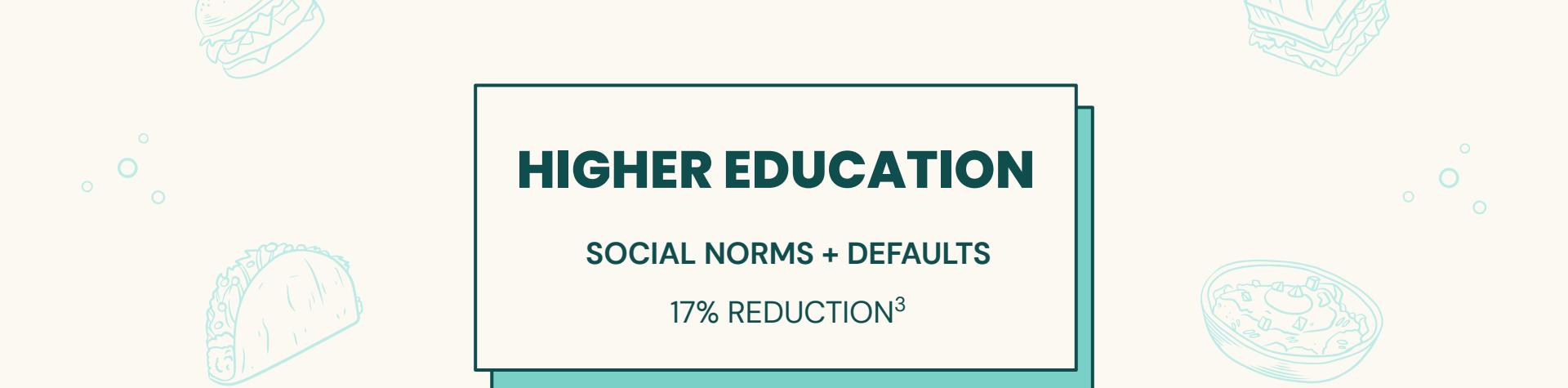
SOCIAL NORMS + DEFAULTS

17% REDUCTION³

HOTEL CHAIN

SOCIAL NORMS + DEFAULTS

20% REDUCTION⁴



HIGHER EDUCATION

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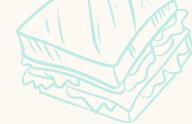
EUROPEAN RESTAURANTS

SOCIAL NORMS + DEFAULTS

32-44% MORE TAKEOUT
CONTAINERS⁵

02

PROBLEM DIAGNOSTICS





PEOPLE WASTE FOOD

Irrespective of
what others do

Custom, Moral
Rule, Legal
Injunction

If they have
social
expectations

Empirical
Expectations

Empirical &
Normative
Expectations

Descriptive
Norm

Social Norm

SURVEYS AND INTERVIEWS



Do you believe other diners take home leftover food?

EMPIRICAL

Do you believe people in the restaurant think you should take home leftover food?

NORMATIVE



VIGNETTES ON MTURK



Imagine that you are in your favorite fast casual restaurant. You are really enjoying your meal, but you are starting to get full...



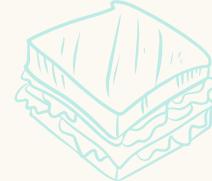


03

EXPERIMENTAL DESIGN



PARTNERSHIP



- JUST SALAD

36 US Locations

**just
salad**

- SWEETGREEN

109 US Locations

sweetgreen®



2 x 4 FIELD EXPERIMENT

TABLETOP MESSAGES	TO-GO CONTAINER AVAILABILITY	
	CUSTOMER ASKS	DEFAULT AVAILABLE
	NO MESSAGE	CONTROL
	GENERIC MESSAGE	INFO PROVISIONING
	DESCRIPTIVE NORMS	DESC. NORMS ONLY
INJUNCTIVE NORMS	INJ. NORMS ONLY	INJ. NORMS + DEFAULT



TABLETOP MESSAGES



TABLETOP MESSAGES

NO MESSAGE
GENERIC MESSAGE
DESCRIPTIVE NORMS
INJUNCTIVE NORMS

Leftovers? Grab a to-go box!

**Many of our customers bring their leftovers home to reduce food waste.
Grab a to-go box!**

**Many of our customers believe bringing their leftovers home reduces food waste and helps our environment.
Grab a to-go box!**

NOTE: "Grab" will be replaced with "Ask for" in the Customer Asks conditions.





FIELD EXPERIMENT LOGISTICS



**just
salad**

TABLETOP
MESSAGES

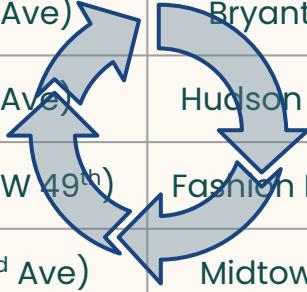
TO-GO CONTAINER AVAILABILITY

	CUSTOMER ASKS	DEFAULT AVAILABLE
NO MESSAGE	Hudson Yards (W 34 th)	Midtown West (W 49 th)
GENERIC MESSAGE	Fashion District (W 37 th)	Bryant Park (E 39 th)
DESCRIPTIVE NORMS	Midtown (52 nd + 6 th)	Murray Hill (3 rd Ave)
INJUNCTIVE NORMS	Chelsea (8 th Ave)	Lenox Hill (1 st Ave)

JUST SALAD LOCATIONS IN THE NYC AREA



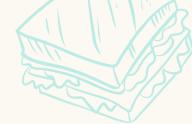
FIELD EXPERIMENT LOGISTICS

TABLETOP MESSAGES	TO-GO CONTAINER AVAILABILITY	
	CUSTOMER ASKS	DEFAULT AVAILABLE
	NO MESSAGE	Lenox Hill (1 st Ave)
	GENERIC MESSAGE	Chelsea (8 th Ave)
	DESCRIPTIVE NORMS	Midtown West (W 49 th)
INJUNCTIVE NORMS	Murray Hill (3 rd Ave)	 Bryant Park (E 39 th) Hudson Yards (W 34 th) Fashion District (W 37 th) Midtown (52 nd + 6 th)

JUST SALAD LOCATIONS IN THE NYC AREA

04

EXPECTED RESULTS & CONCLUSION



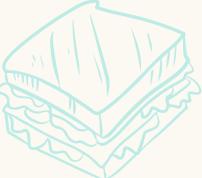
EXPECTED RESULTS

TABLETOP MESSAGES

TABLETOP MESSAGES	TO-GO CONTAINER AVAILABILITY	
	CUSTOMER ASKS	DEFAULT AVAILABLE
	NO MESSAGE	No Effect
	GENERIC MESSAGE	No Effect
	DESCRIPTIVE NORMS	Small Effect*
INJUNCTIVE NORMS	Small Effect*	Medium Effect**

*Small Effect: 5-10% Estimated Increase in Takeout Containers

**Medium Effect: 20-30% Estimated Increase in Takeout Containers



CONCLUSION



**INCREASE NUMBER OF
TAKEOUT CONTAINERS**

**REDUCE DECISION
FATIGUE**

**MINIMAL DISRUPTION
TO CUSTOMERS**

**REDUCE COST OF
FOOD WASTE**

THANK YOU!



Does anyone have any questions?



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