

New Frontiers (and New Findings) on Emotion in Customer Service

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Service Loaded with Emotions!



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Emotional Labor: Jobs Require Employees to Display “Expected” Emotions

Logic:

- Employee Emotions (Smile, Apology)
Essential for Sales and Service;
- Emotions are easy, do not require effort;

“Smile and Be Nice” Rule...

- Formal Expectation:
Pleasantness, Empathy to ALL Customers
- è Available Research:
 - è Based on Self-Report
 - è Limited External Validity
 - è Limited Operational Connections

A Social Context to Service Interactions



**Rafaeli (1989):
A Struggle for Control**

**Henkle, Rafaeli et al (2016):
When Marketplace
Interactions
Become
Social Interactions**

The Service Context



- **Physical Set Up**
- **Multiple Managers**
- **Multiple Causes of Stress**

What Do Queues Feel Like?



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Rafaeli & Munichor (2007), *Journal of Applied Psychology*

Lots of Customer Anger in Service: What is the Influence? What are the Implications?

I work in customer service, so by all means, please use me as a verbal punching bag. It makes me much more likely to do what you want when you scream your request at me.



your  e cards
someecards.com

New Platforms Create Great Opportunities

- **Service through interactive technology and social networks;**
- **Extensive NON-OBTUSIVE data.**

è **New tools and paradigms!**

No News in Terms of Emotion Labor Rules!



New Service Context

Customers Written Interactions
(through Tweet or Chat)



AnneLewis: **It's such a nightmare to reach you!**
Your service is horrible. Update my home phone
already to 03-7526654.

Do customer emotion displays influence employees?

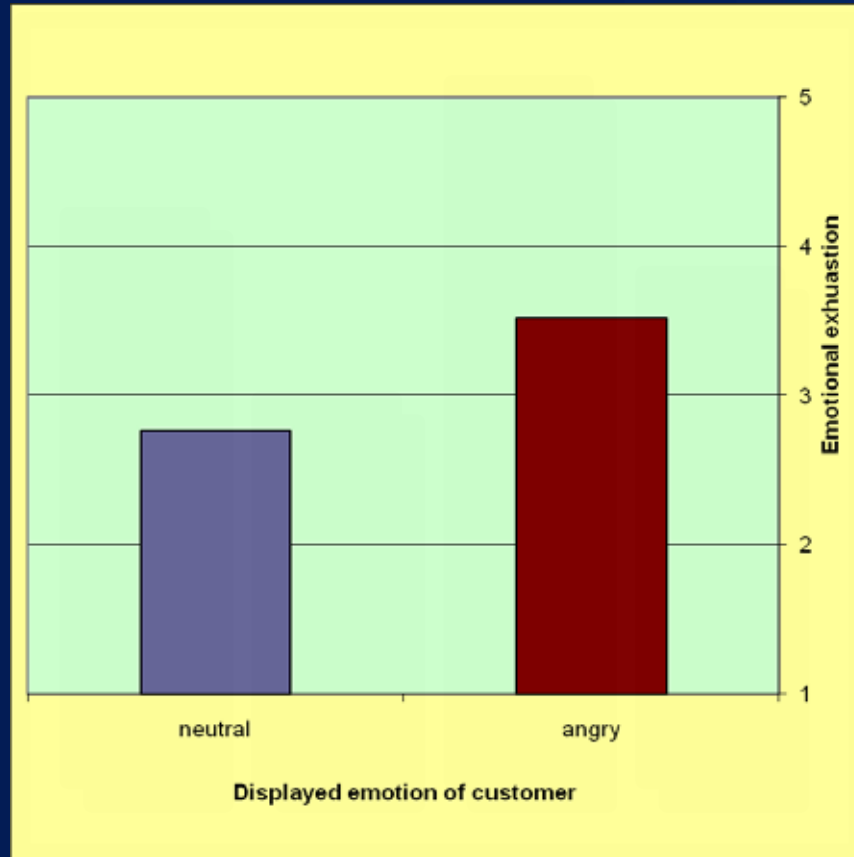
Experimental Research Paradigm

| Angry – Rude Customer | Polite Customer |
|--|---|
| <p>It's such a nightmare to reach you! Your service is just horrible. <u>Update my home phone</u> to 03-7526654. George Ashley</p> | <p><u>My home phone</u> number changed. Need to <u>update</u> it please. My number is 03-7526654. Thank you very much, George Ashley.</p> |
| <p>I am sick and tired of your lousy service. Move me <u>to the weekend deal</u>. Password is "Friends". Josh.</p> | <p>Hi please note my request to move me <u>to the weekend deal</u>. My password is "Friends". Thank you, Josh.</p> |

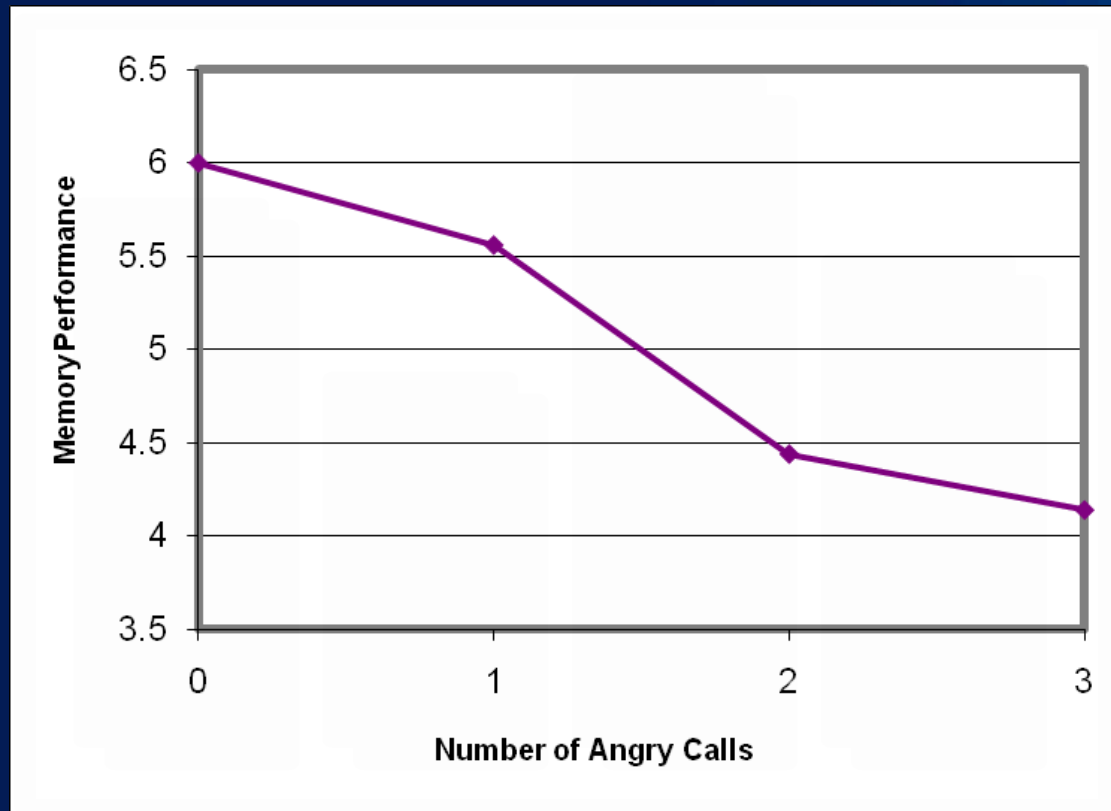
Customer Anger Reduces Employee Accuracy



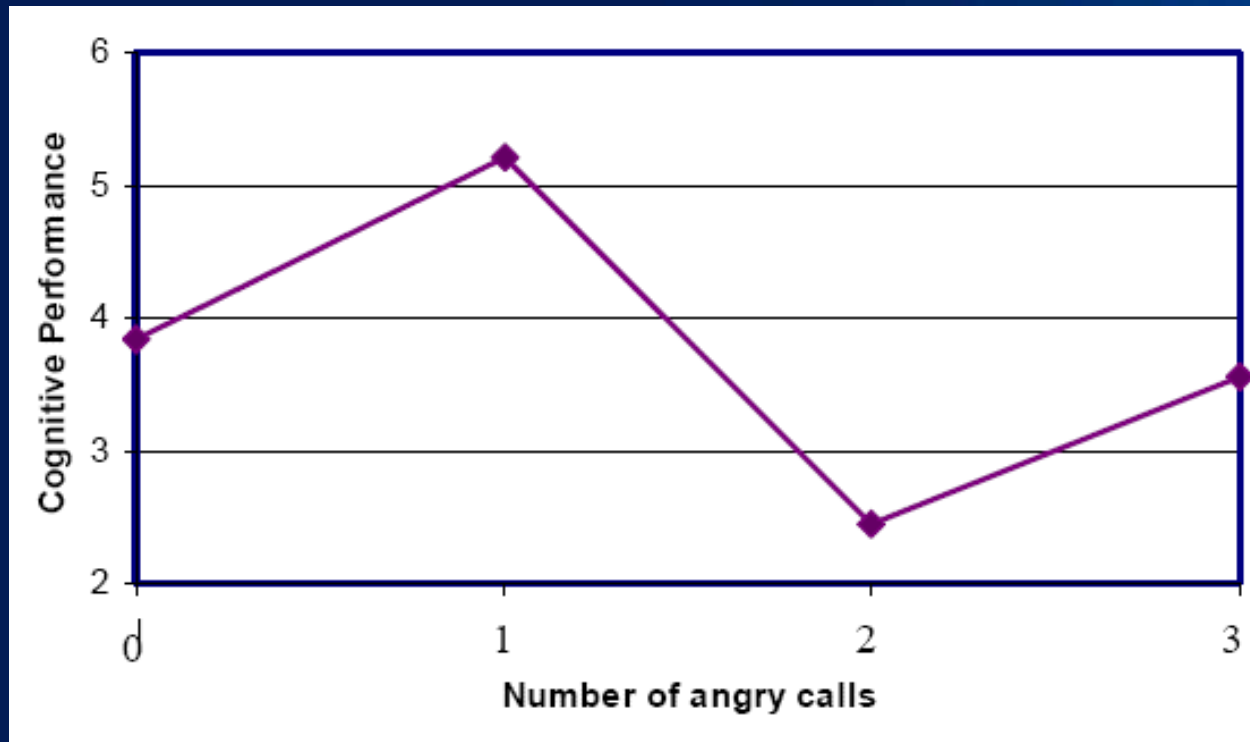
Customer Anger Increases Employee Fatigue (Burnout)



Cumulative Effects on Accuracy of Performance



Habituation Challenges



Field Research: Service Through Text

Chat with McAfee call center started @ 13:23:07. Full transcript can be found at :
<https://community.mcafee.com/thread/28171>

SYSTEM: Welcome to McAfee. How may I help you?

Customer (13:37:46):

Hi. I purchaed a disk and it doesn't work.

Employee (13:41:33):

Please let me know the locations you purchased the CD.

Customer (13:41:46):

I've been waiting for this info for 20 mins.

Employee (13:42:00):

You can contact the McAfee Sales team at +91 80 6656 9000 to renew the McAfee software.

Customer (13:42:17):

Come on.

Customer (13:42:29):

Don't pass the bill.

Customer (13:42:46):

You're not answering my question.

Customer (13:43:05):

Can I chat with your supervisor?

Employee (13:43:22):

I apologize for the inconvenience.

Customer (13:43:33):

Can I have a chat with your supervisor?



- Large scale data sets
- Actual customer and employee behaviors
- Non-obtrusive measures

@BestBuySupport



Focus: (High Arousal) Negative Emotions

Multiple Terms for Customer Negative Emotion

**Anger ... Abuse ... Bullying ...
Deviance ... Contempt ...
Irritation ... Rudeness ...**

Emotion in Tweet Service



 @VanDusenEthan

@BestBuy too bad your site keeps saying my email is invalid. You just lost a \$300 dishwasher sale.

Customer
Anger
Frustration



 @BestBuySupport

@VanDusenEthan I'm sorry you were unable to purchase. Indeed it is annoying.

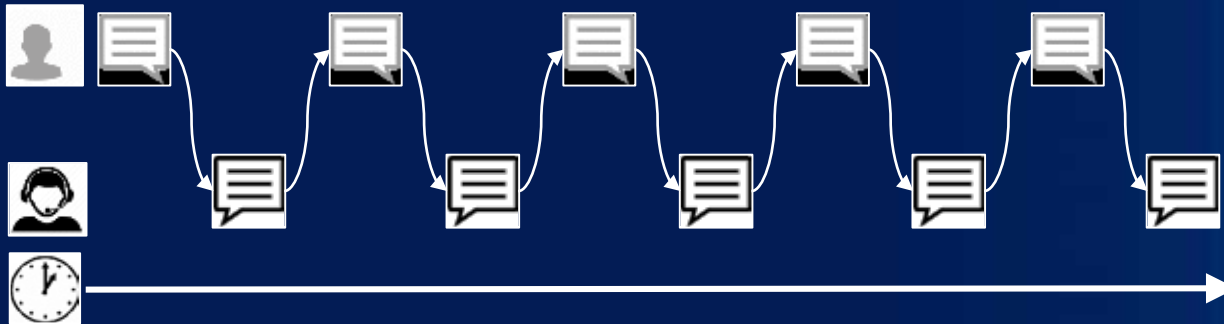
Employee
Apology
Empathy

Emotion in Tweet Service



Data Set 1:
N = 305 service conversations

Data Set 2:
N = 305



Customer
Satisfaction

Mturk Ratings



- Emotions expressed by customers
- Emotional labor strategies of employees

Mturk 1 Workers

Customer
Emotions

Employee
Emotional
Strategies

?

Mturk 2 Workers

Customer
Satisfaction

- 5 Raters per conversation;
- Agreement of raters;
 $ICC_2=0.73 - 0.94$



Results



Customer Emotions

Anger
Frustration
Disappointment



Negative
Emotions

Happiness
Gratitude



Positive
Emotions



Employee Emotional Strategies

Empathy
Apology



Support

Thanking
Being cheerful



Positivity

CFA confirmed model superiority over 2-factor model

$\chi^2[21 df] = 106.83, p = .001, CFI = 0.98, TLI = 0.96, RMSEA = 0.07$

Effects of Employee Emotion Strategies on Customer Satisfaction



Employee
Expressing
Positivity

1. Gratitude
2. Cheerfulness

+



Employee
Expressing
Support

1. Empathy
2. Apology

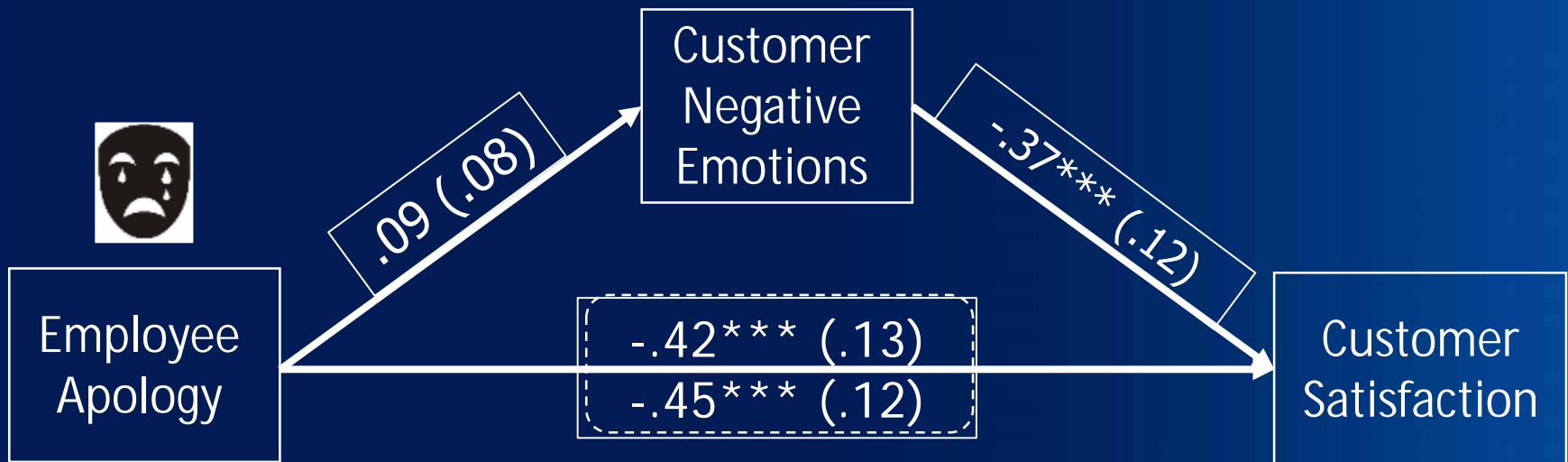
-

Customer
Satisfaction

Role of Customer Emotion?



Only Long Enough Conversations
 $N = 168$ conversations
Adj. $R^2 = .52^{*}$**



b (SE)



1 Visitor 4:04pm

Visitor 4:05pm
Hi, I can't understand my bill, why was I charged for overseas calls?

Beth A 4:08pm
Could you please provide with your account number and home address?

Visitor 4:08pm
Sure. It's 23254658, 24th Hudson st.

Beth A 4:09pm
Can you please wait for a moment while I find that information for you.

Thank you for waiting. I have some information for you. 4:14pm

B *I* U |   

| 

☰ 0 WAITING 1 Visitor 2 Visitor 3 Visitor 

Up to 3 customers at a time!



LIVEPERSON
LiveEngage 3 ENGAGEMENTS 8 min 30 sec AVERAGE ENG. LENGTH 2.7 ENG. PER

1 Visitor 4:04pm

Visitor 4:05pm

Hi, I can't understand my bill, why was I charged for overseas calls?

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Thank you for waiting, I have some information for you. 4:14pm

B I U | 📎 😊

4:04pm

ress?

4:14pm

ion process.

4:15pm

nd idea. I live in 1265 Broadway.

4:16pm

for you.

4:17pm

4:10pm

ip you?

4:11pm

4:13pm

4:33pm

4:21pm

0 WAITING | 1 Visitor | 2 Visitor | 3 Visitor | 2 Visitor | 3 Visitor | 1 Visitor 00:40

Automated Emotion Detection

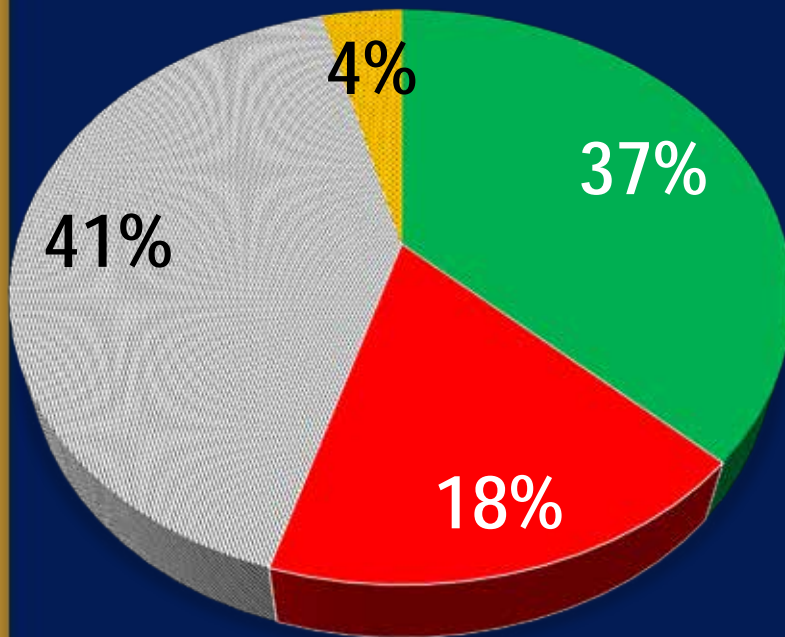
Natural Language Processing

- Dictionary of words defined as “emotional” (e.g., LIWC)
- Emoticons and CAPS
- Added rules (amplifier, negation e.g., Very, Not)

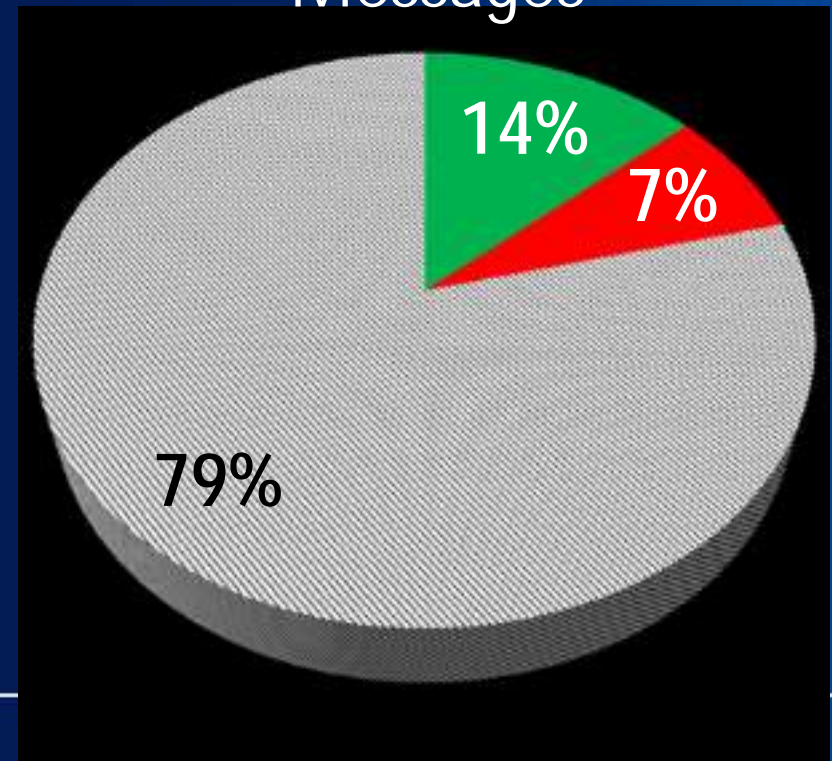
| | Negative | Positive |
|-----------|----------|----------|
| Precision | 0.72 | 0.87 |
| Recall | 0.24 | 0.57 |

Emotion in Chats (two weeks; airline sales and service)

7,147 Full Chats



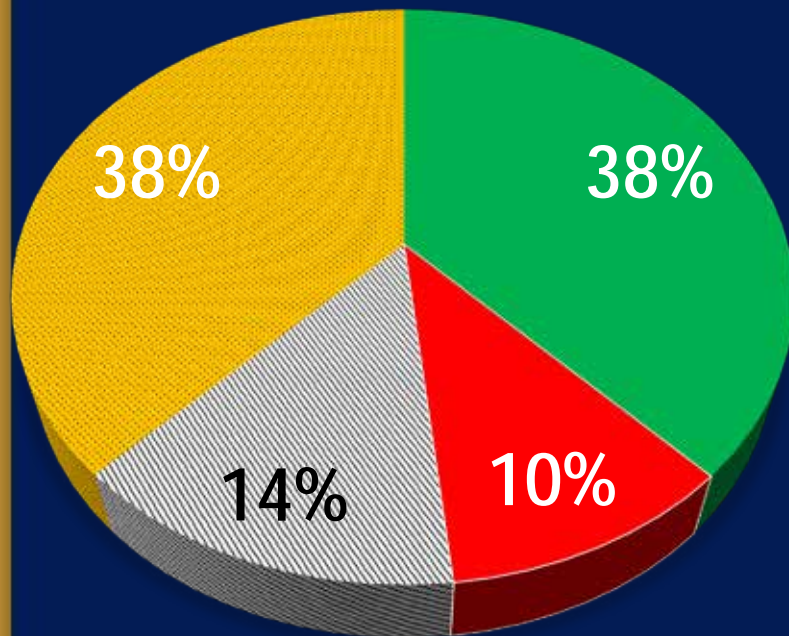
37,189 Customer Messages



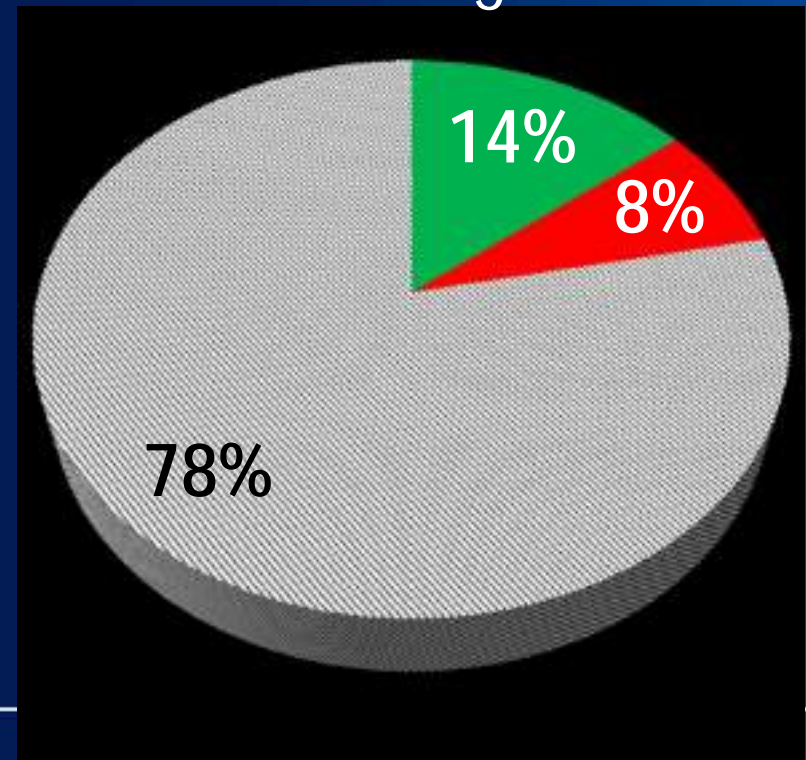
- Positive
- Negative
- No-Emotion
- Mixed

Emotion in Chats (11 weeks; telecommunication)

677,936 Full Chats

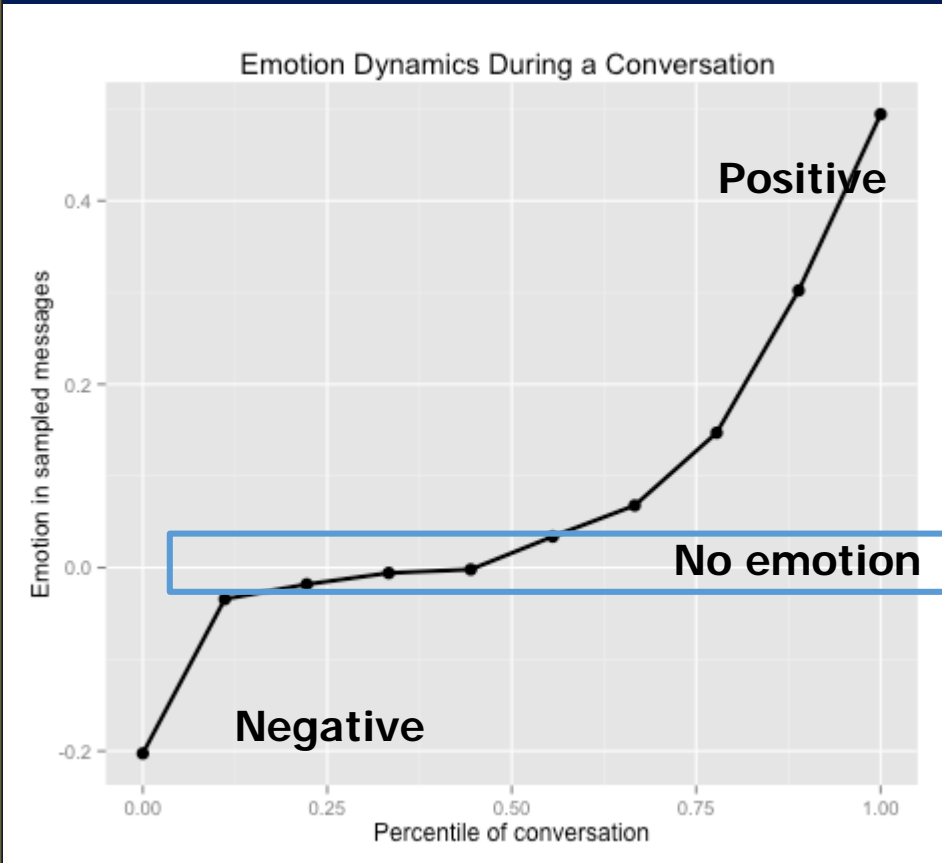


10,035,32 Customer Messages



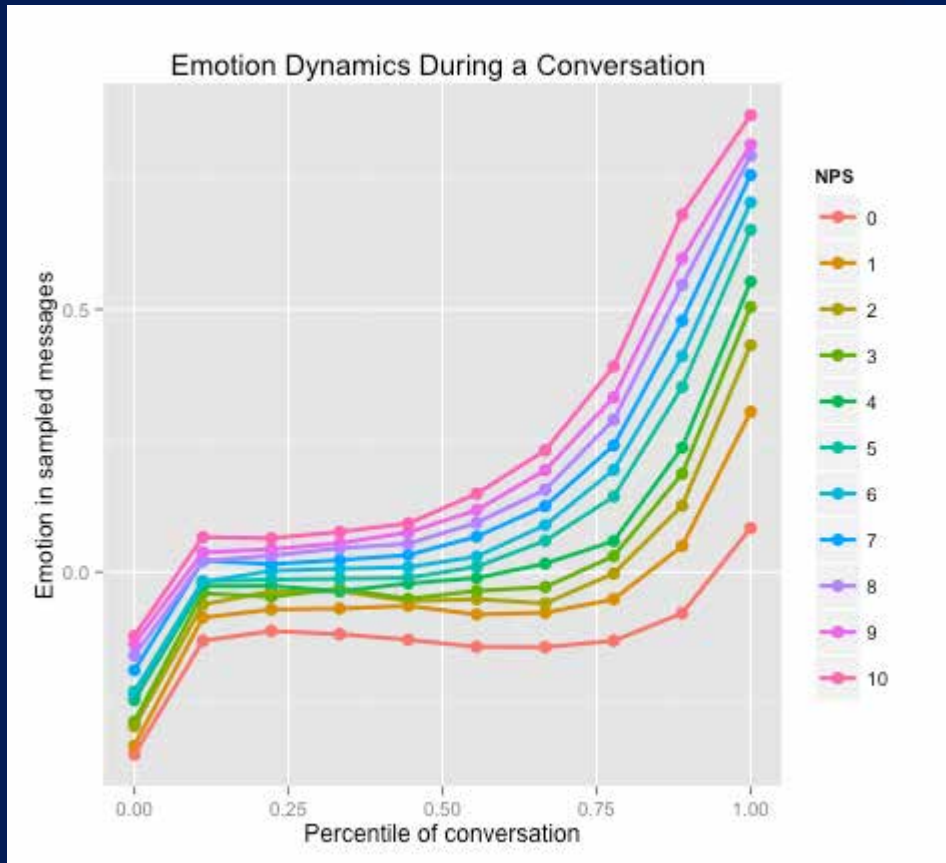
- Positive
- Negative
- No-Emotion
- Mixed

Unfolding of Emotion



- One week data;
14,700 conversations.
Sample 10 time points in each;
(messages at 0%, 11%, 22% ...);
calculate emotion at each point;
Average 10 sample points across
all company conversations;

Emotion Dynamics in Different NPS Scores



Emotion patterns of satisfied and dissatisfied customers;

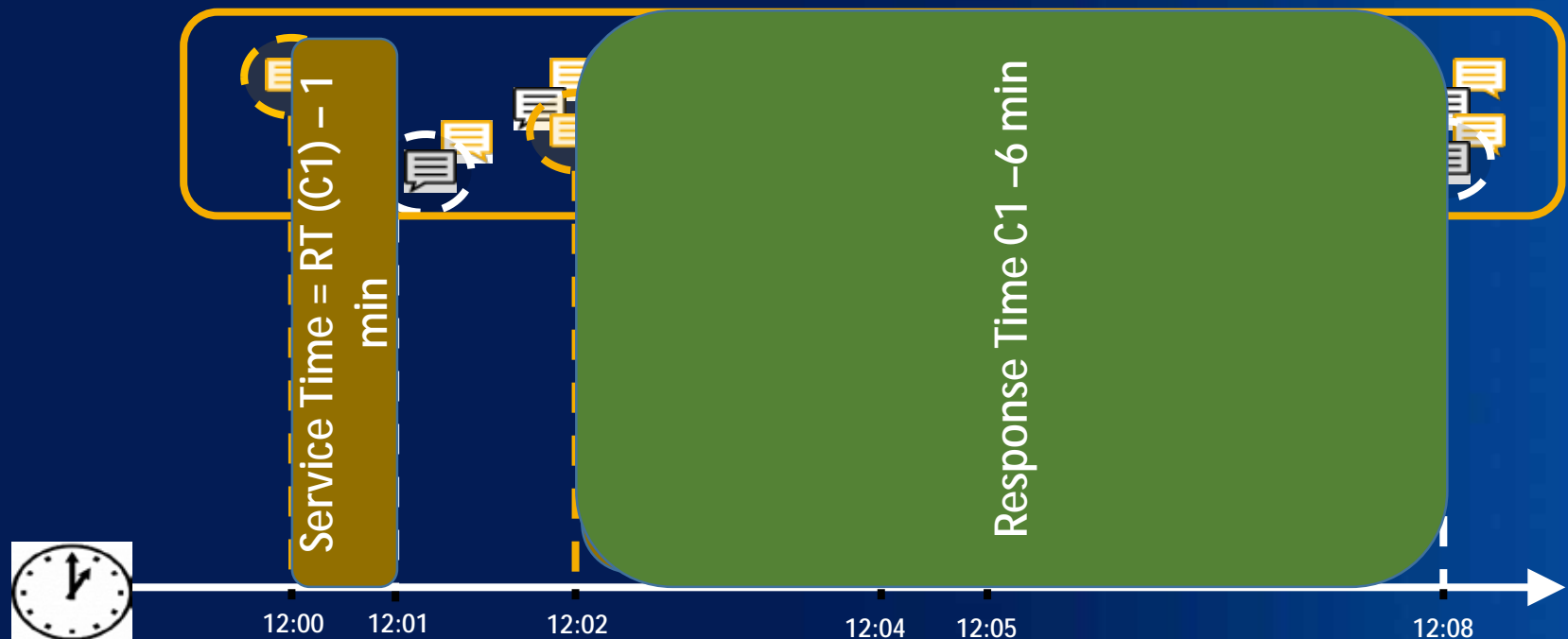
Tele-comm company chats;

Data of one month

26703 conversations with NPS = 10

9382 conversations with NPS = 0

Employee Response Time (RT) vs. Service Time (ST)



Note:

All  are from customer 1.

All  are from customer 2.

All  are from the same Employee.

 with no  represent earlier sent messages.

Airline Data (December 2015)



- 7,147 chats
- 65,536 messages
 - 37,174 customer messages
 - 28,362 employee messages
- Number of messages per chat (M= 12.3, SD=8.3)
- Removed system messages
- Employees simultaneously serve multiple customers

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Results – Chat Level Analysis

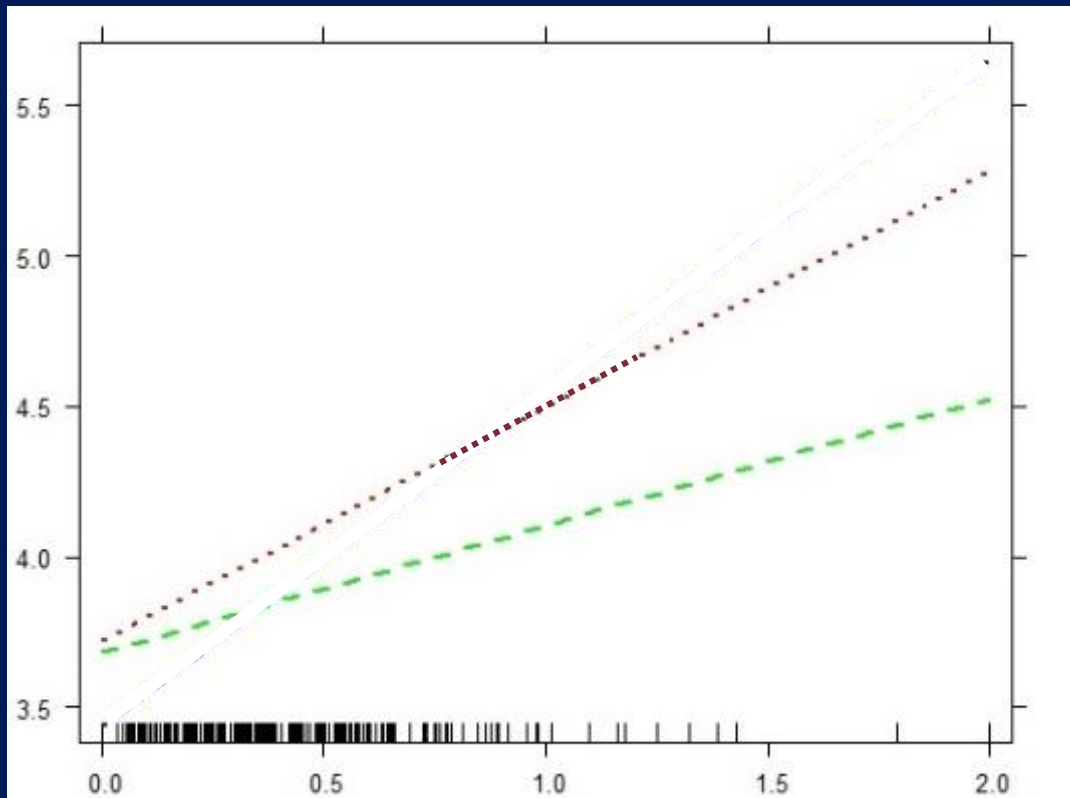
- Mere presence of customer POSITIVE emotion correlated with lower employee Response Time (RT) (30 seconds less for each employee message! ($b = -29.57$, $SE = 6.77$, $p < 0.001$)).
- NO correlation of presence of NEGATIVE emotion with employee Response Time ($b = -8.89$, $SE = 7.83$, $p > 0.05$).

Valence of Customer Emotion Moderates Effects on Employee Response Time

Positive Negative



Employee RT (log1p(sec))



Log1p (Emotion intensity)

HLM

(chats within employee):
n=7,147

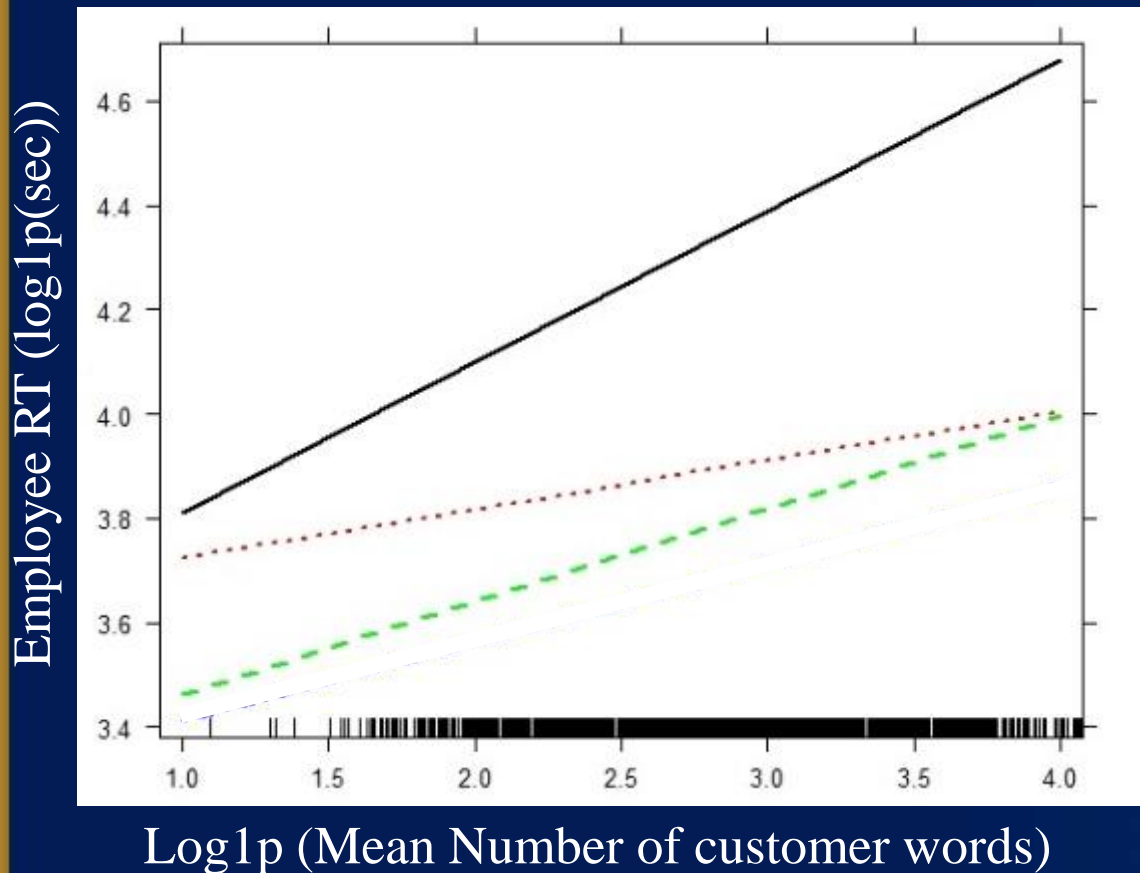
$R^2 = 40.08\%$

$b = -0.36$ ($SE=0.10$, $p<0.001$)

Analyses control number of words per message (customer and employee), time waiting for service, and service/sales

Emotion Moderates Effect of Workload (#customer words) on Employee RT

No Emotion Positive Negative



HLM

(chats within employee):
n=7,147

$R^2 = 40.08\%$

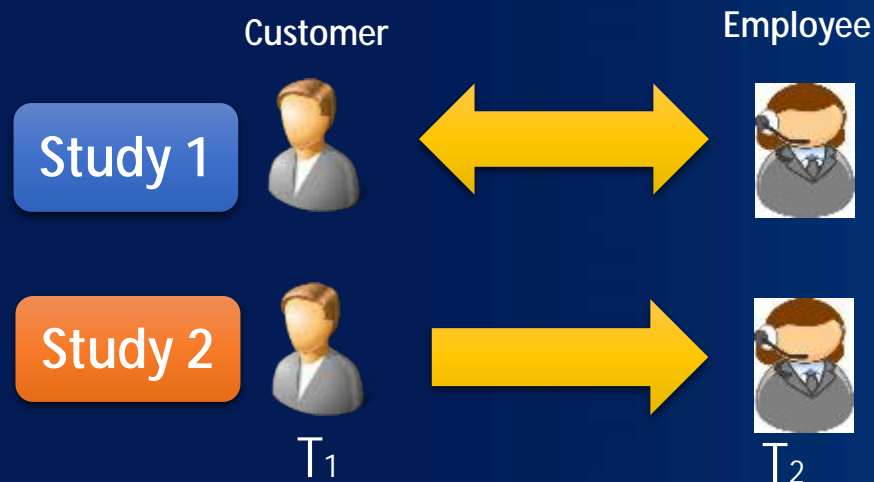
$b = -0.36$ ($SE=0.10$, $p < 0.001$)

Analyses control number of words per message (customer and employee), time waiting for service and service/sales

Problems and issues: What causes what?

Airline data and analyses (20,355 chats from January 2016):

Time based analysis (using T_1 customer behavior to predict T_2 employee behavior).



January 2016 Airline Data

Chats with at least 6 customer messages

N= 6,013 (from total of 20,355 chats)

Random point in chat with at least 4 customer messages before and 2 employee messages after

44 Employees

Study 2



T₁

Random breakpoint

T₂

Employee



1



Control Variables

2

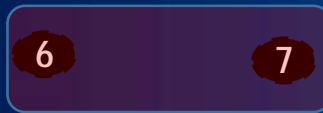
3

4



Employee Service Time to focal customer

6



7

8



1



Customer Emotion (Positive and Negative)

Customer number of words
Customer Response Time

2

3

4

5



6

7

8

Control Variables

Customer

....

Results

- Customer T_1 positive emotion REDUCES employee T_2 service time AND response time ($b = -0.78, SE = 0.20, p < 0.001$).
- No effects of T_1 customer negative emotion on T_2 employee Service Time or Response Time ($b = -0.29, SE = 0.26, p > 0.05$).

Study

Understanding Employee UNSCHEDULED Breaks (up to 15 minutes)



Likelihood
(1/0)

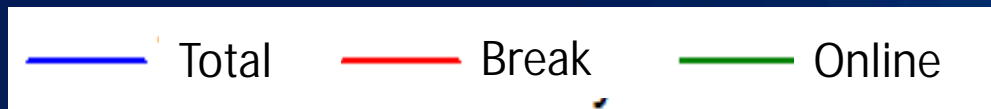
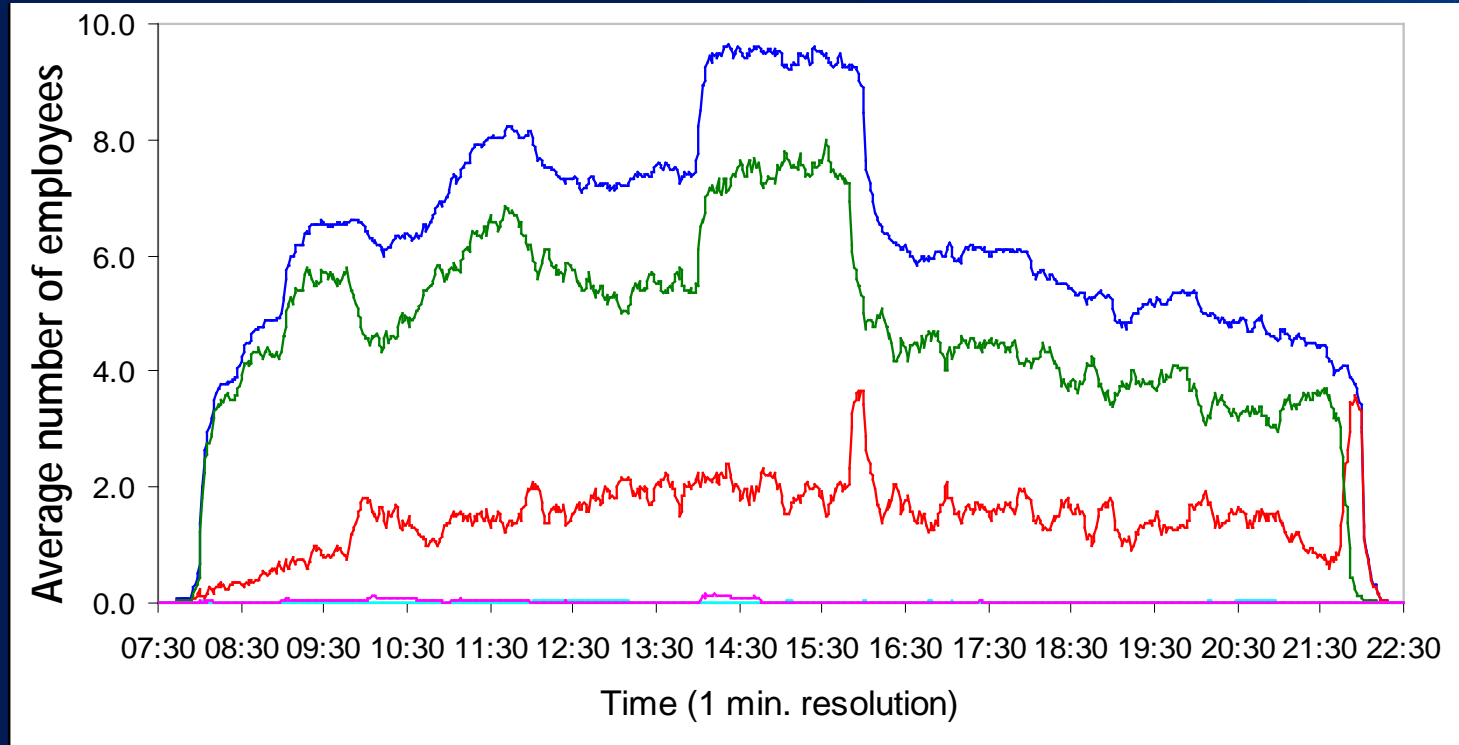
Length



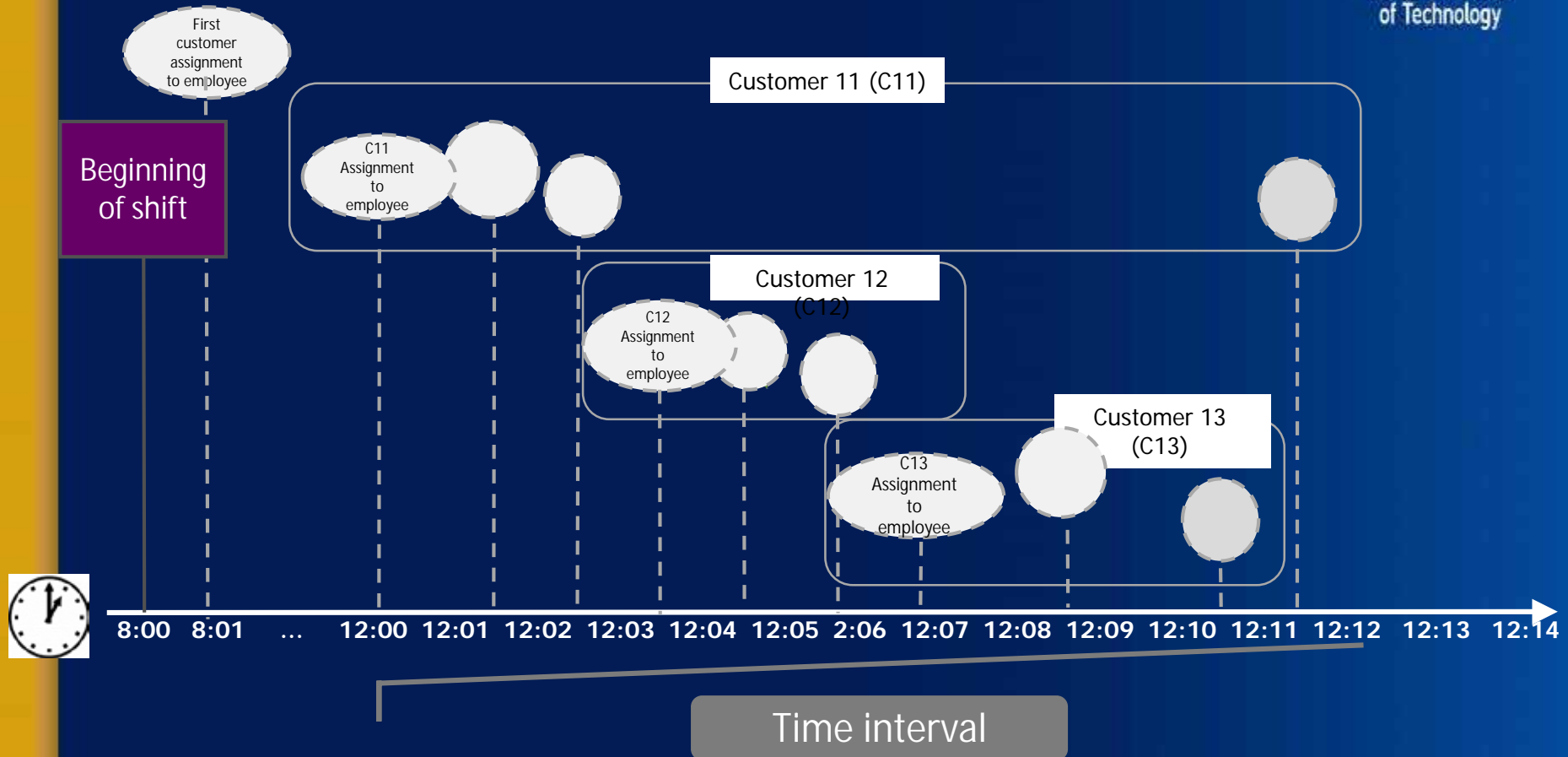
Employee Status During the Day



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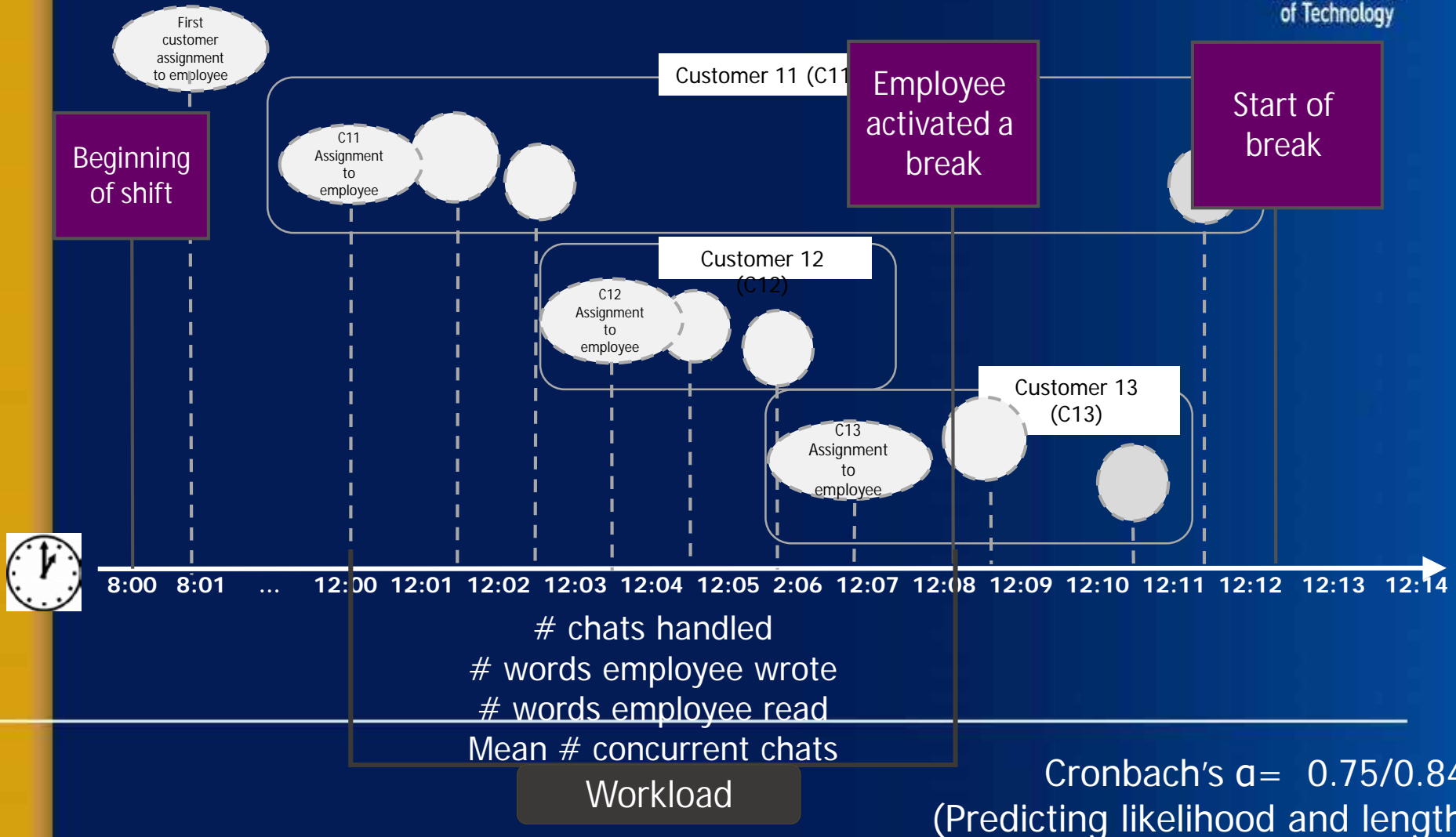
Customer Emotion and Employee UNSCHEDULED Breaks



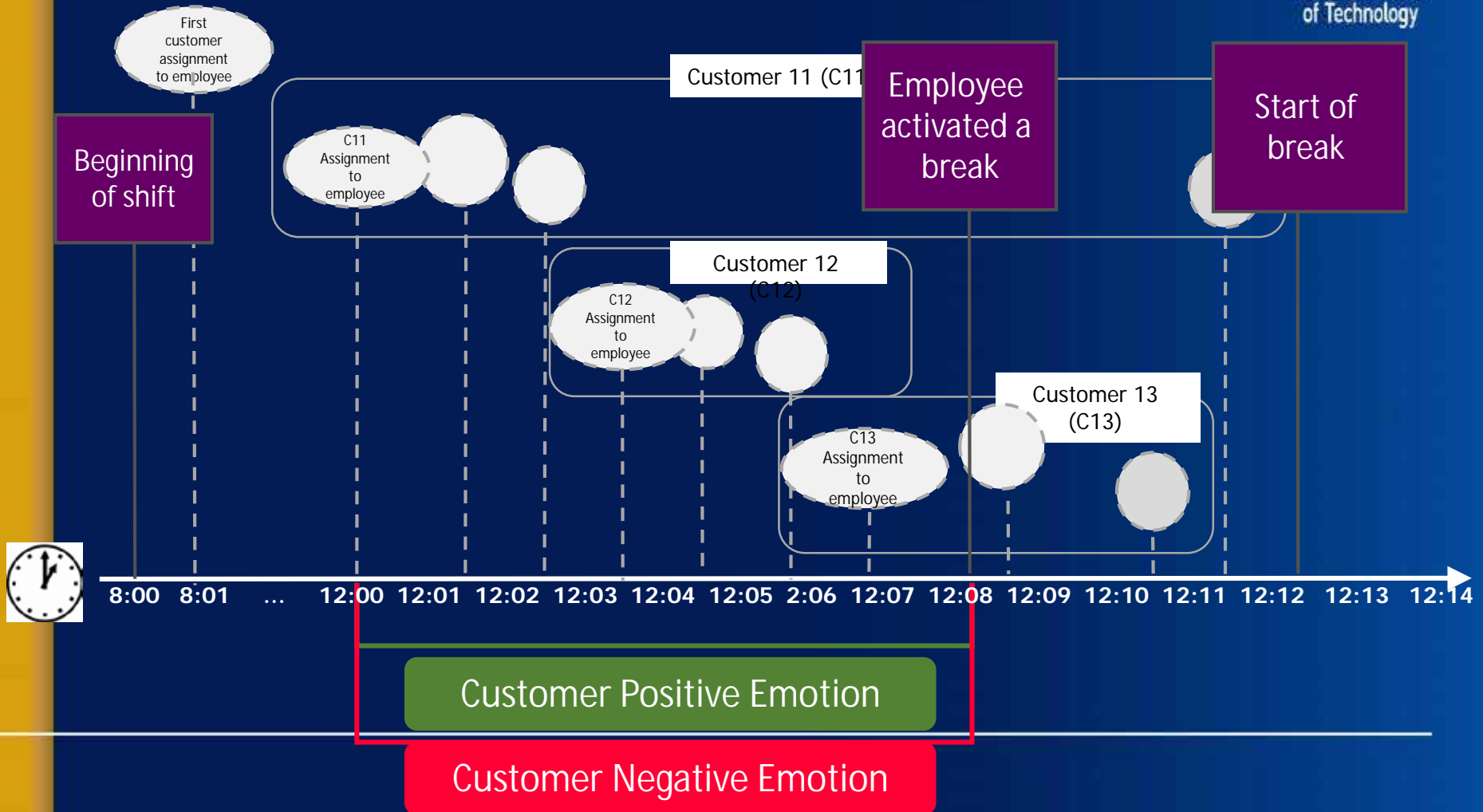
Two intervals:

- 12 minutes (length of average chat, predicting likelihood of break);
- 30 minutes (prior to break taken, predicting length of break)

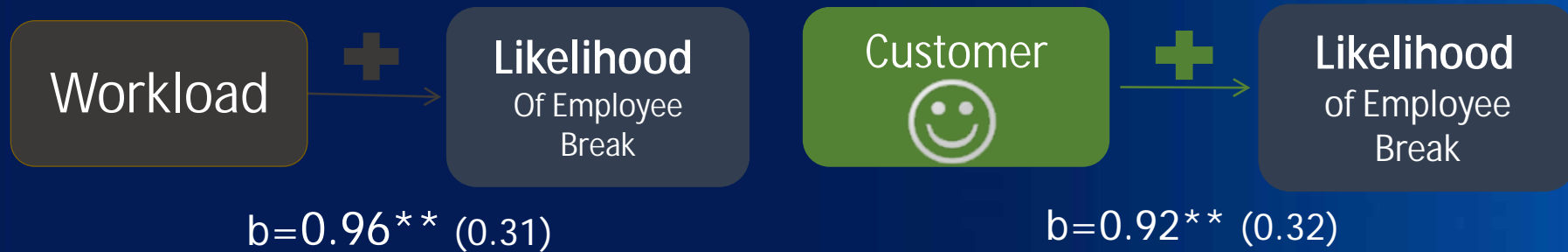
Customer Emotion and Employee UNSCHEDULED Breaks



Customer Emotion and Employee UNSCHEDULED Breaks

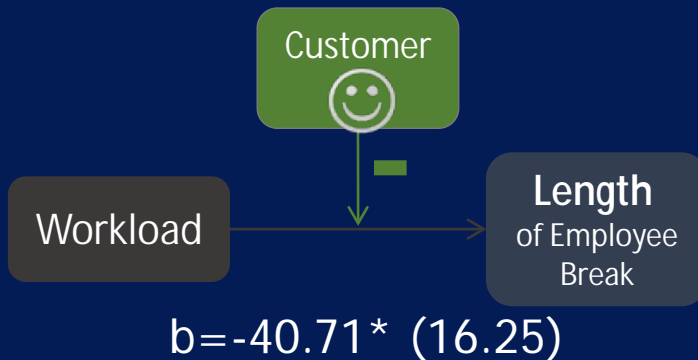


Workload and Customer Positive Emotion Increase Likelihood Employee Takes Break

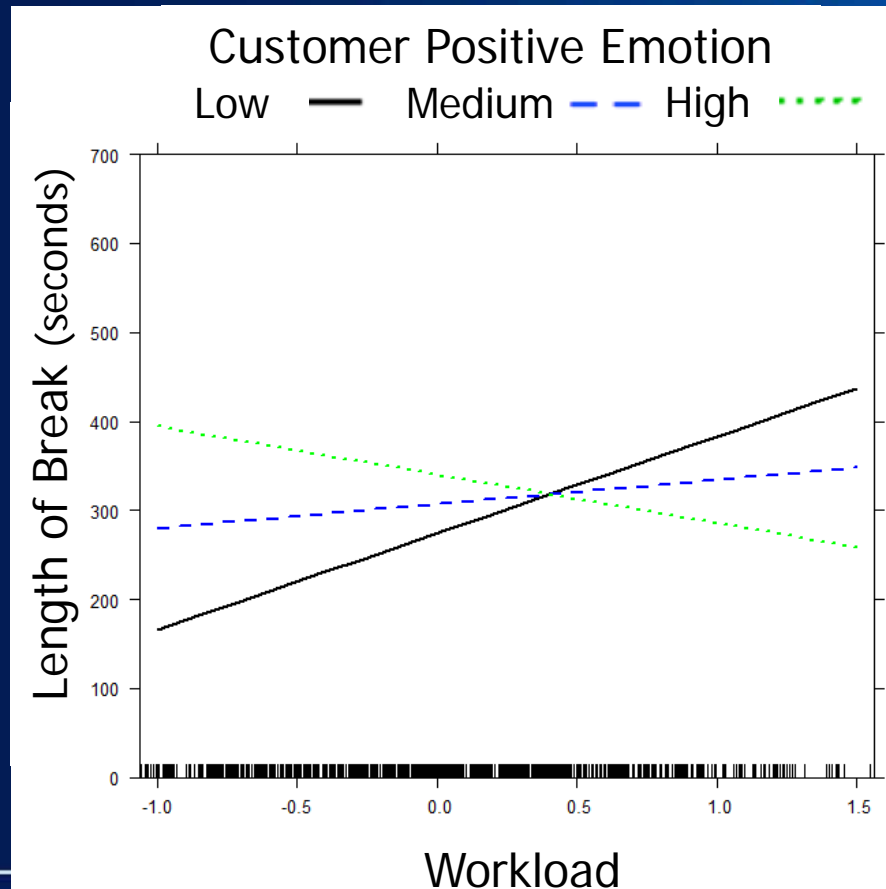


Employee workload and customer positive emotion increase likelihood employee will take a break

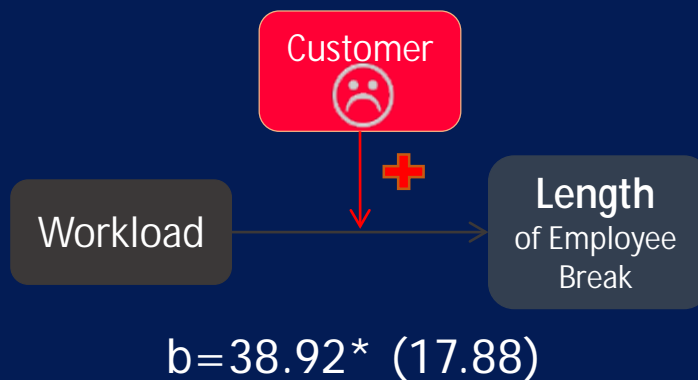
Customer Positive Emotion REDUCES Length of Breaks



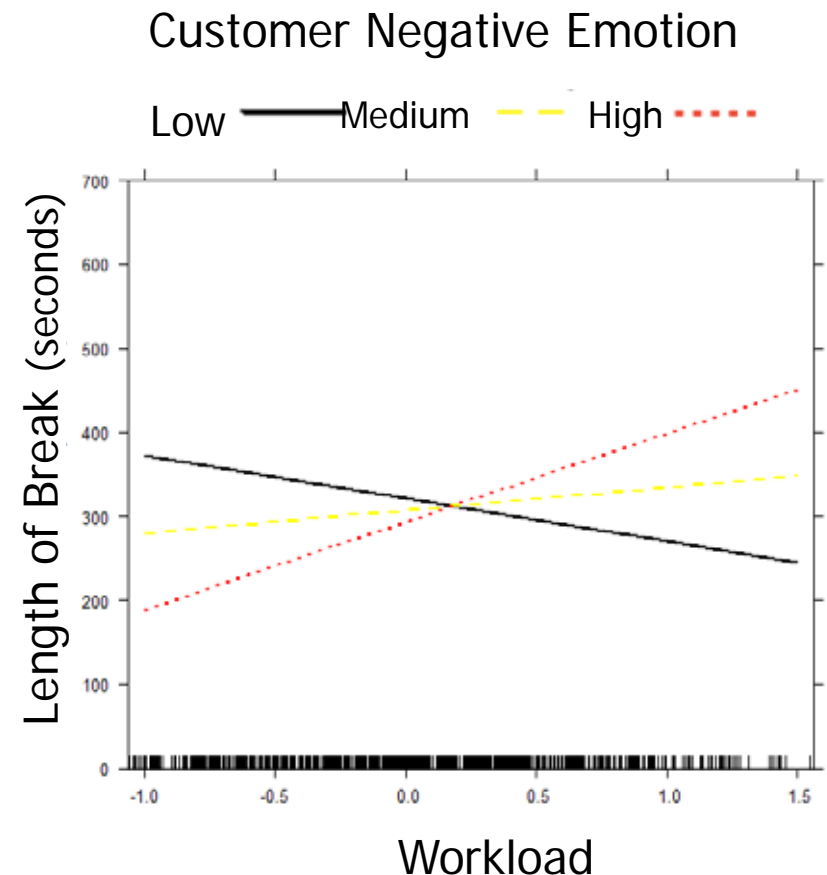
With higher customer positive emotions, high workload leads to shorter breaks



Customer Negative Emotion INCREASES Length of Breaks



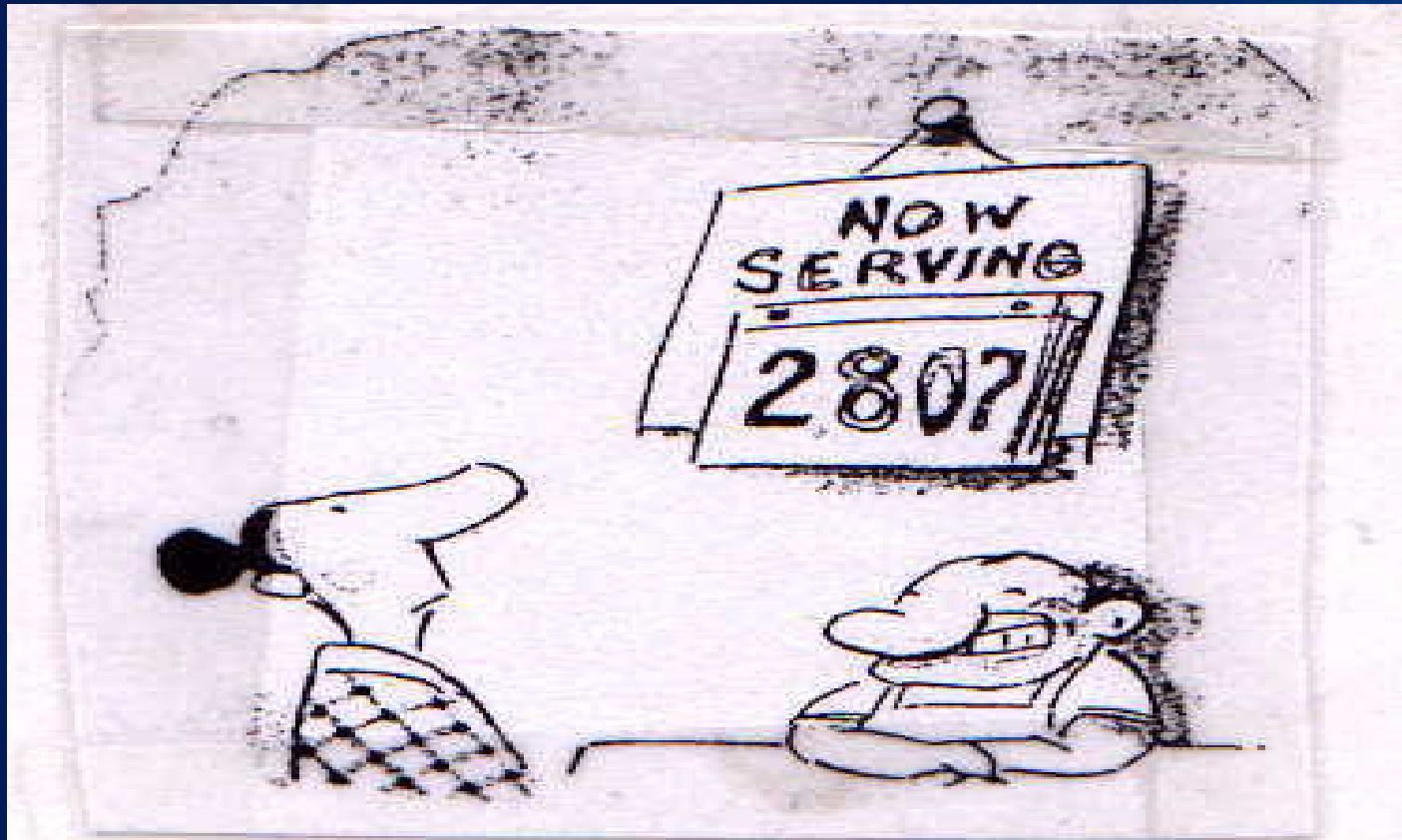
With higher customer negative emotions, high workload leads to longer breaks



What Have We Learned?



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Summary of Findings

Customer Positive Emotion:

- REDUCES employee Response Time;
- Stronger effects of LOW intensity than HIGH intensity
- REDUCES effects of work load on length of employee breaks;

Customer Negative Emotion

- LOW Intensity - NO effects
- HIGH intensity - INCREASES employee Response Time;
- In General...
 - REDUCES effects of workload on employee Response Time
 - INCREASES effects of workload on length of unscheduled breaks

Many open questions

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**"Thank you for calling Customer Service.
If you're calm and rational, press 1.
If you're a whiner, press 2.
If you're a hot head, press 3...."**

Where are we going?

- Affect based routing could increase contact centers' efficiency
- Including emotion to employee tasks, and fair division of labor
- New opportunities for research



Dr. Galit Yom-Tov



Monika Westphal



David Spivak



Galia Bar



Shelly Ashtar



Daniel Altman



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Thank You *Mahalo*
Kiitos
Tack **Thanks** *Toda*
Grazie
Obrigado
Takk **Gracias** **Merci**