

Is That Model Supposed to Look Like Me?

A Case Study in Measuring Emotional Engagement of Customers using a Virtual Dressing Room

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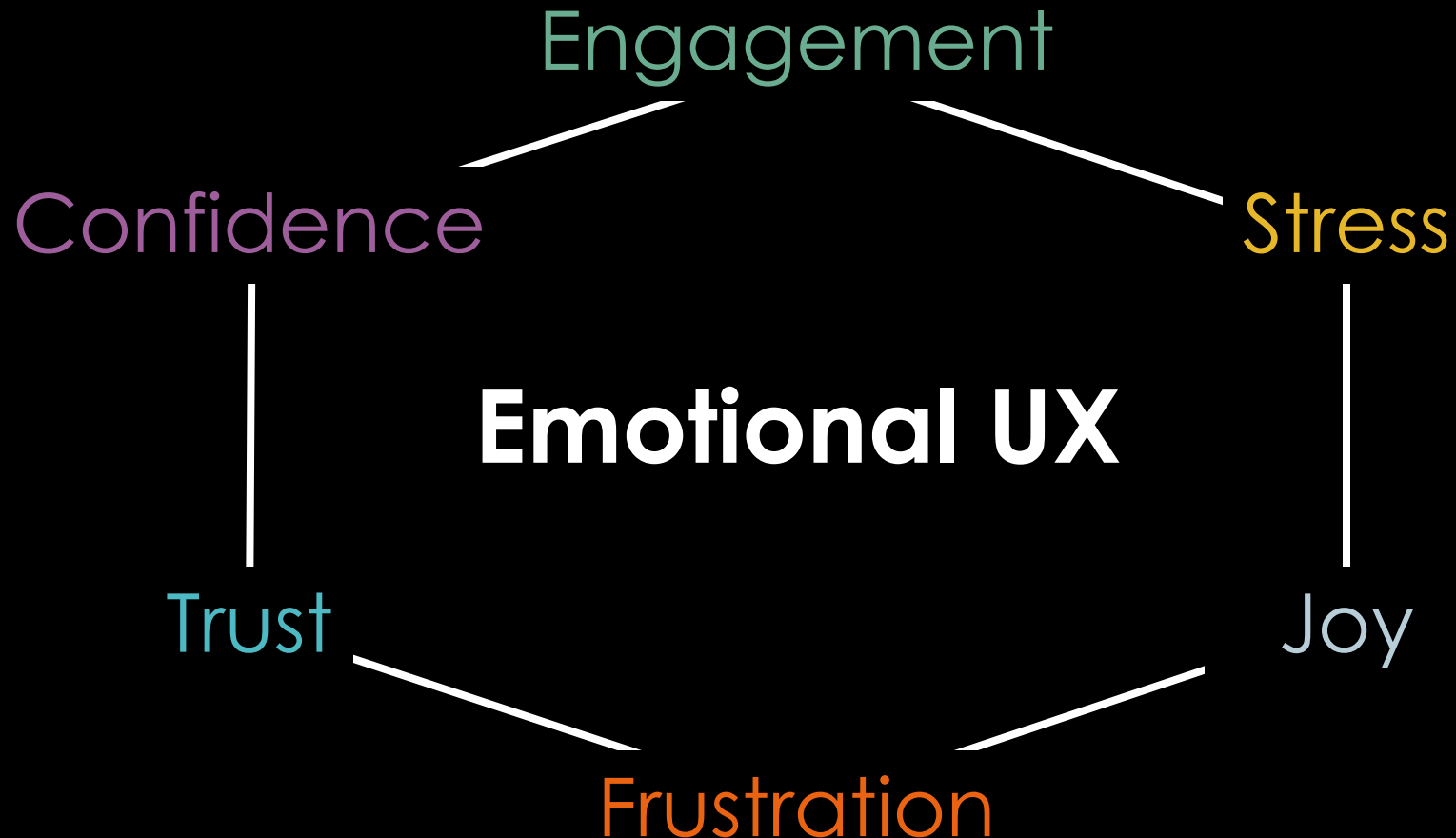


Bentley Univ. User Experience Center



Six dimensions of the emotional UX

3



Engagement

4



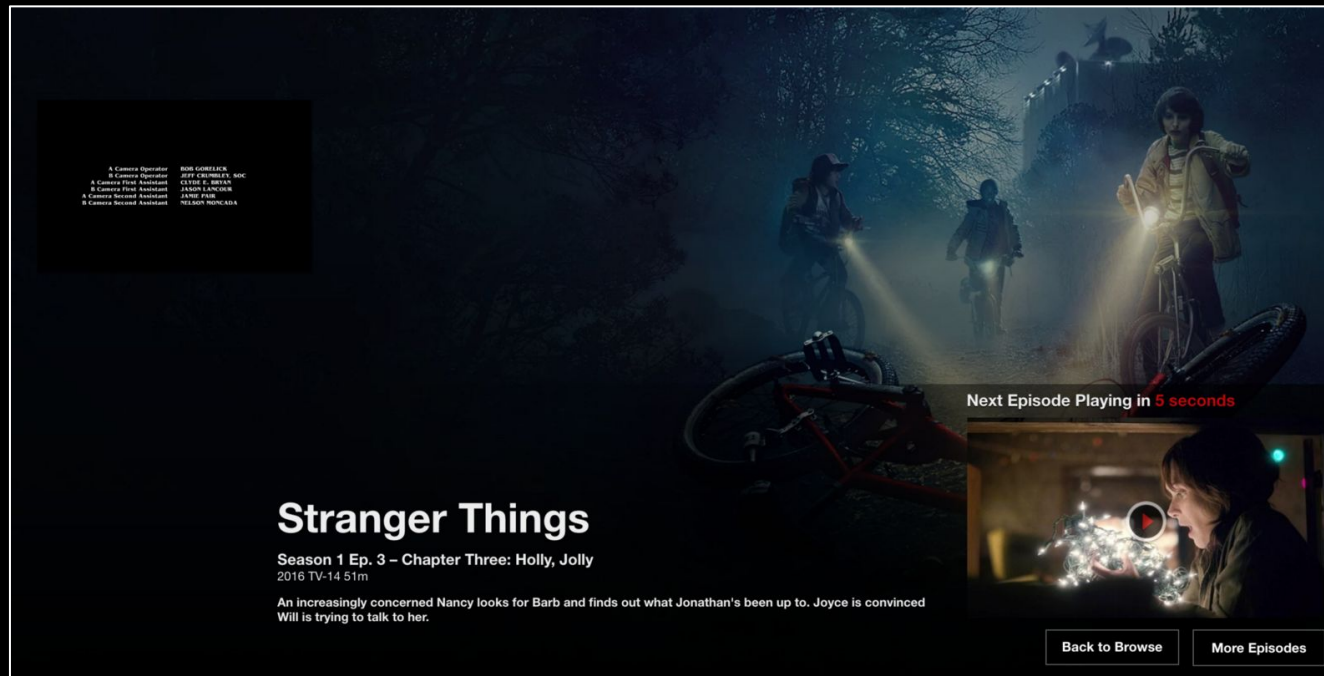
bored

apathetic

indifferent

motivated

excited



Just one more episode!

Stress

5



ticketmaster®

Please note.

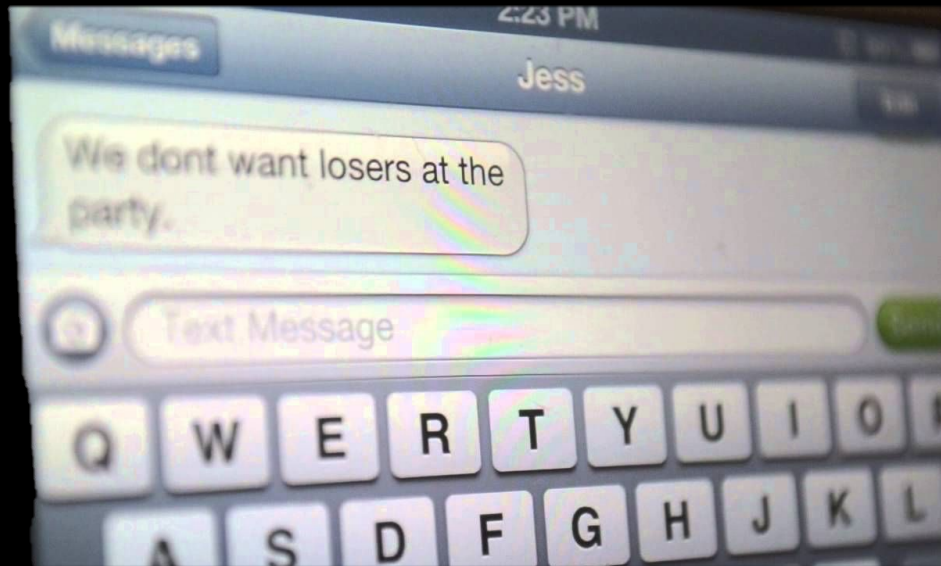
We limit the rate of web page requests that can be made by individual users in any given time period. Your web page requests have exceeded these limits and your access has been temporarily disabled. We impose these limits to protect the web site from automated programs, as part of our efforts to promote fair access to tickets. Please allow several minutes and then try again.

Back

"I was just trying to buy Beyoncé tickets."

Affect

6

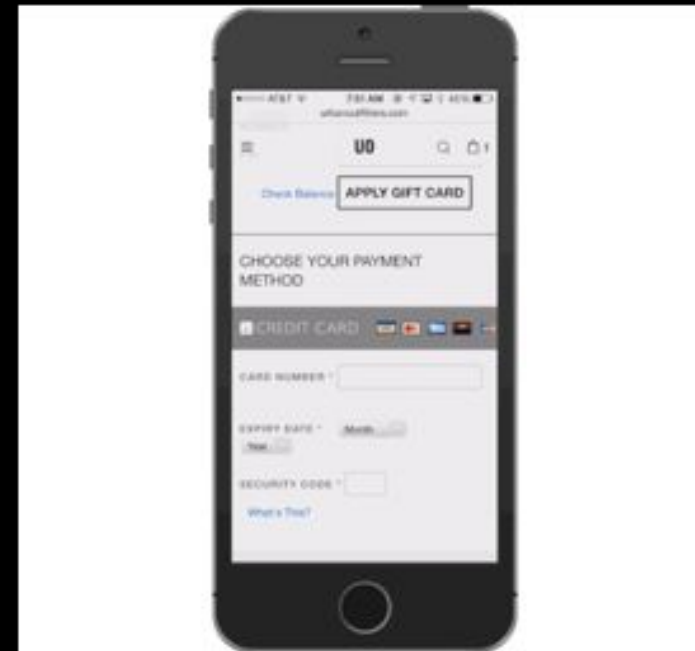


Frustration

7



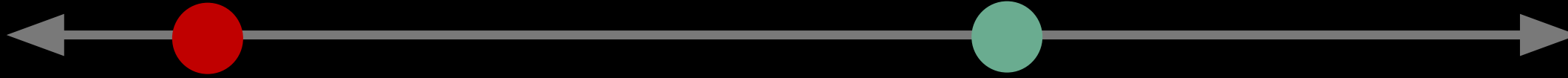
**Interrupting the buying process
to create an account**



Easy Check-Out

Trust

8



distrust

skeptical

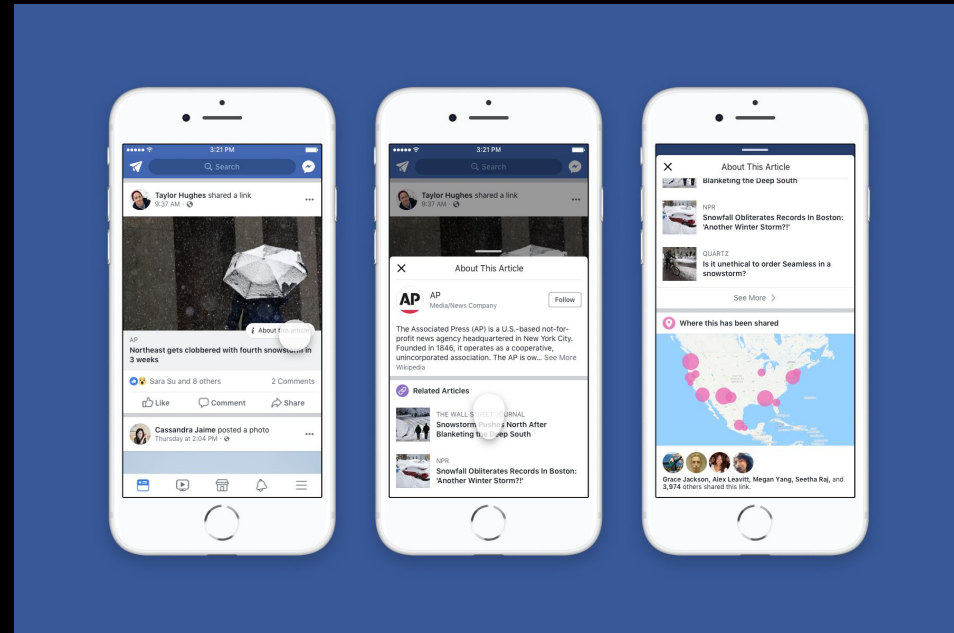
open

trust

blind faith

ORDER TOTAL	
\$391.80 USD	
Ticket price	2 x \$153.90
Service Fee	2 x \$39.50
Fulfillment Fee	2 x \$2.50
Fees help us bring you a safe, global marketplace where you can get tickets to your favorite events.	

Hidden fees at checkout



Verifying news sources on social media

Confidence

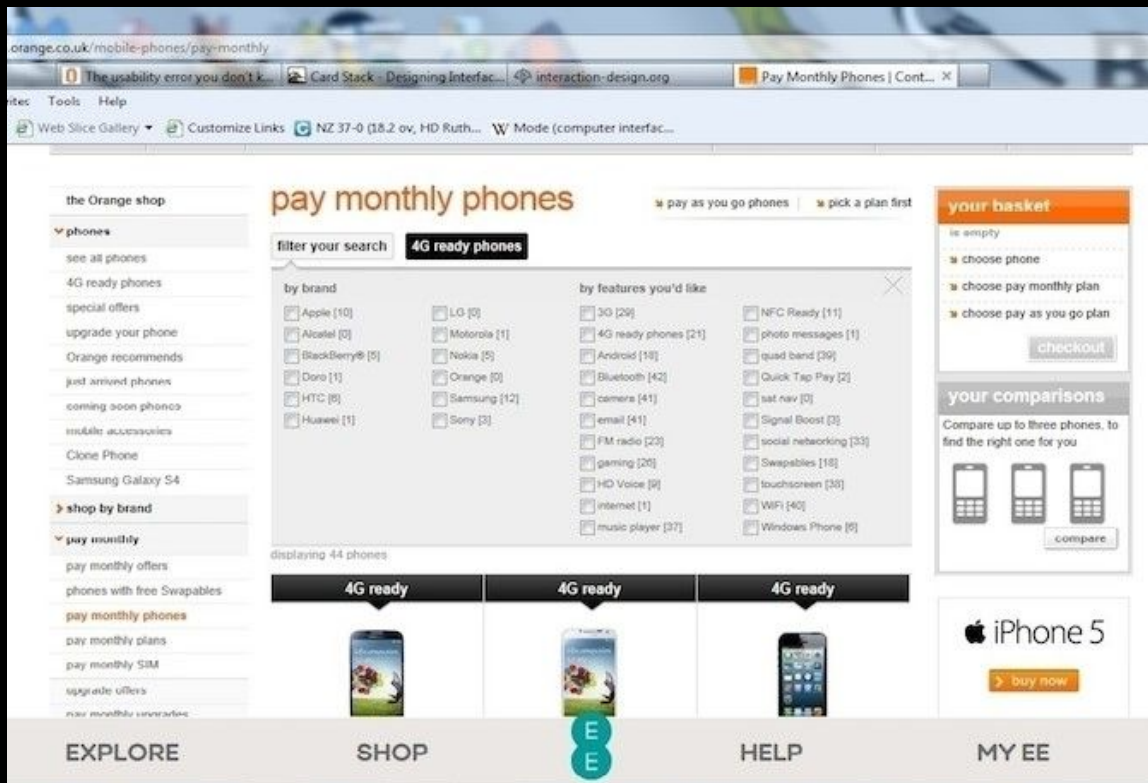
9



lack of confidence

confident

highly confident



“What am I even buying?”

“How do I know if this is what I need?”

“This makes no sense”

Arousal

Happy



calm

excited

Valence



negative

positive

Tense



calm

excited



negative

positive

Measuring Emotions

Research Method / Technology	Emotion(s)
Self-Report / Verbatim Analysis	All (trust, confidence, joy, frustration, stress, engagement, others)
Eye Tracking	Engagement (visual)
Facial Expressions	Joy, engagement, sadness, fear, anger, surprise, disgust, and contempt
GSR (Skin Conductance)	Stress (arousal w/o valence)
Behavioral Observation	Engagement, Stress

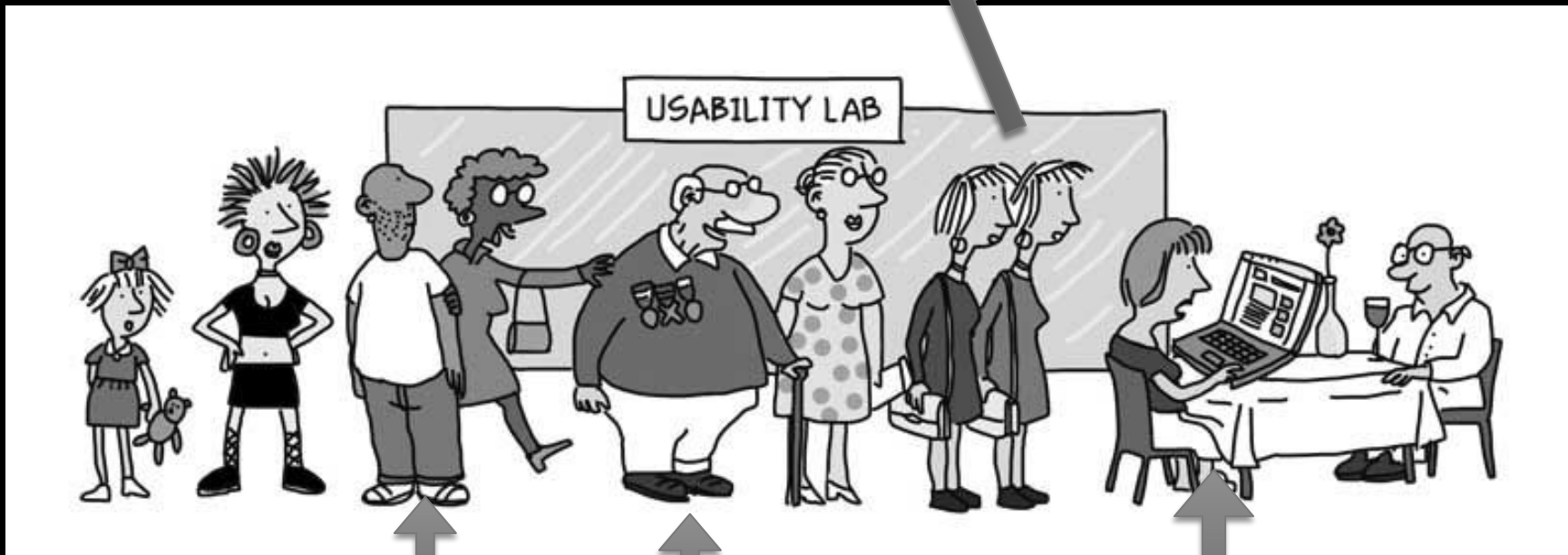
Emotions are fleeting

12



Highly contextual

"I wonder if there will be cameras in there?"



Reluctant Participant

Does not like feeling "under the microscope"

Just had a bad day at work

Weak signals

High Emotional Intensity

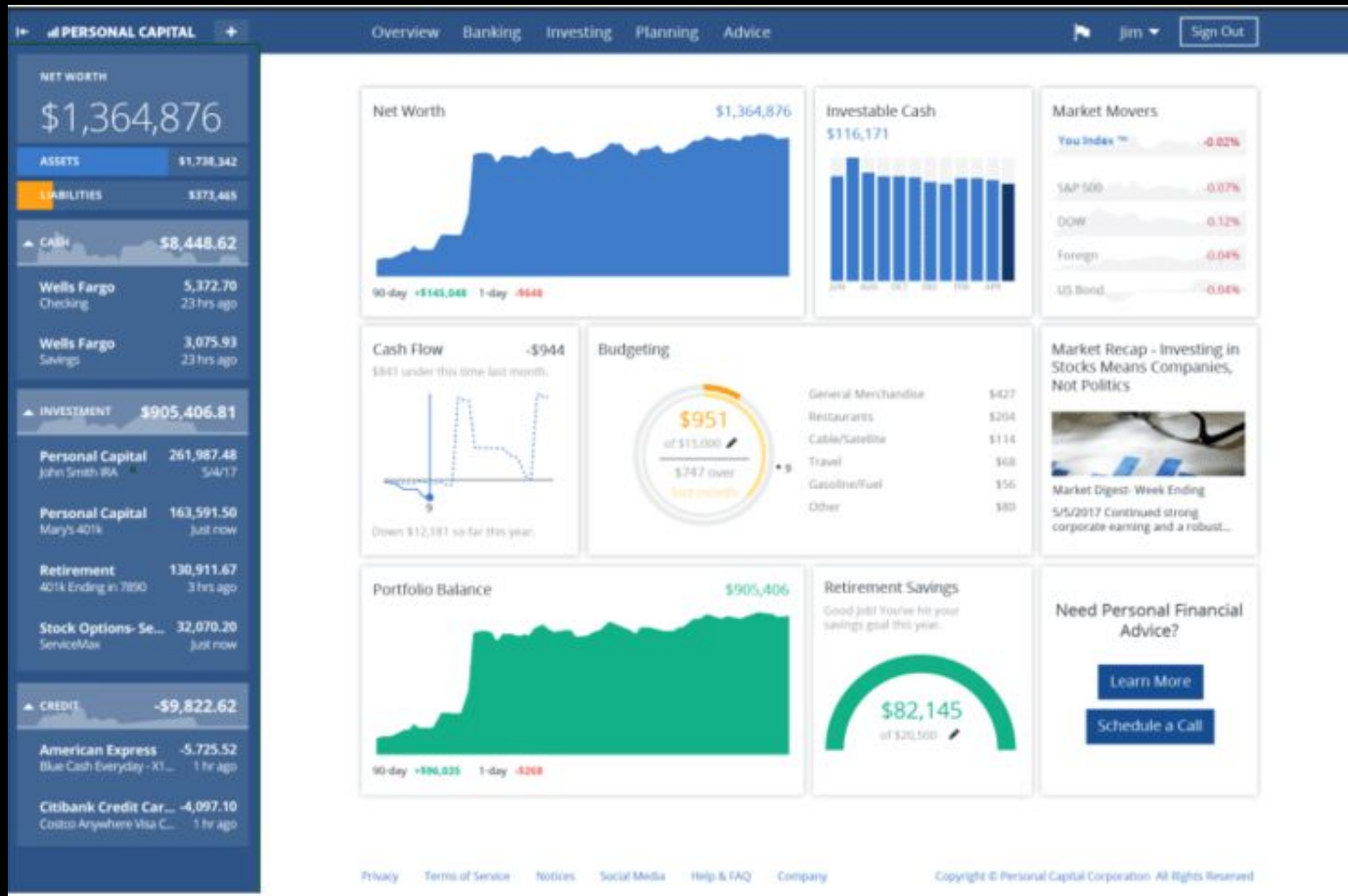
- ❑ Roller coaster ride
- ❑ Being on a great first date
- ❑ Team winning the “big game”
- ❑ Watching a scary movie
- ❑ Friend telling a funny story

Low Emotional Intensity

- ❑ Critical error on software
- ❑ Frustrated with a website
- ❑ Enjoying a new app

Driven by content

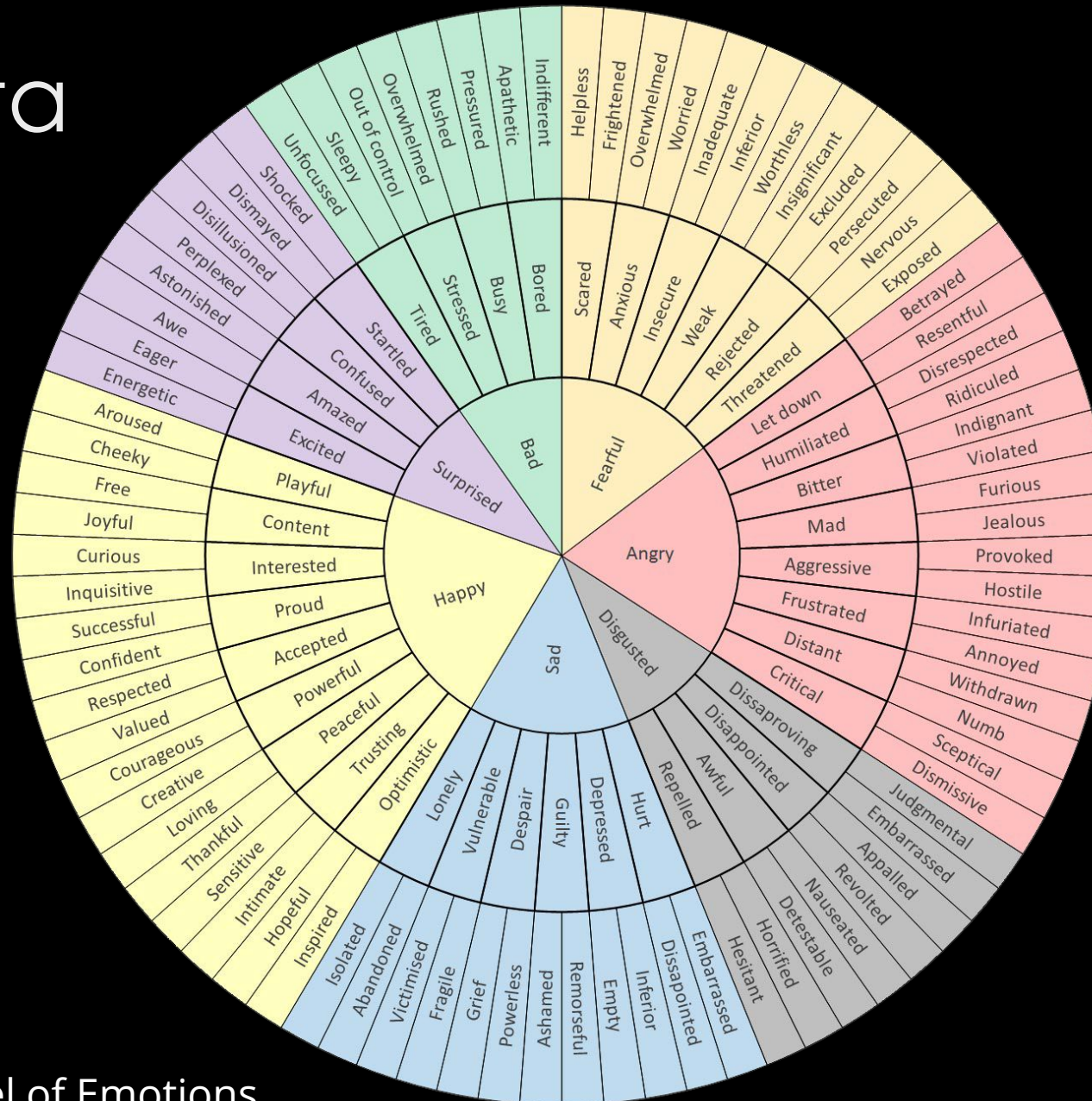
15



“\$1.3 million looks good to me, oh and the software looks great too.”

Noisy Data

16



Plutchik's Wheel of Emotions

Case Study

Goals

- Gain deeper insight into the emotional user experience
- Understand the value of biometric data, beyond traditional user research methods
- Develop best practices for collecting and analyzing biometric data

Method

- 3 virtual dressing rooms
- Scenario: Find a dress to wear for a friend's wedding
- In-person sessions with 10 participants (female only)
- iMotions software (eye tracking, facial expressions, and GSR), and survey responses

+ ADD ITEMS

FILT

Brar

Type

Size

Colo

Rang

SOR

Fe

1/4 ▶

1/4 ▶

1/4 ▶

1/2 ▶

1/3 ▶

1/2 ▶

OUTFIT

FACE

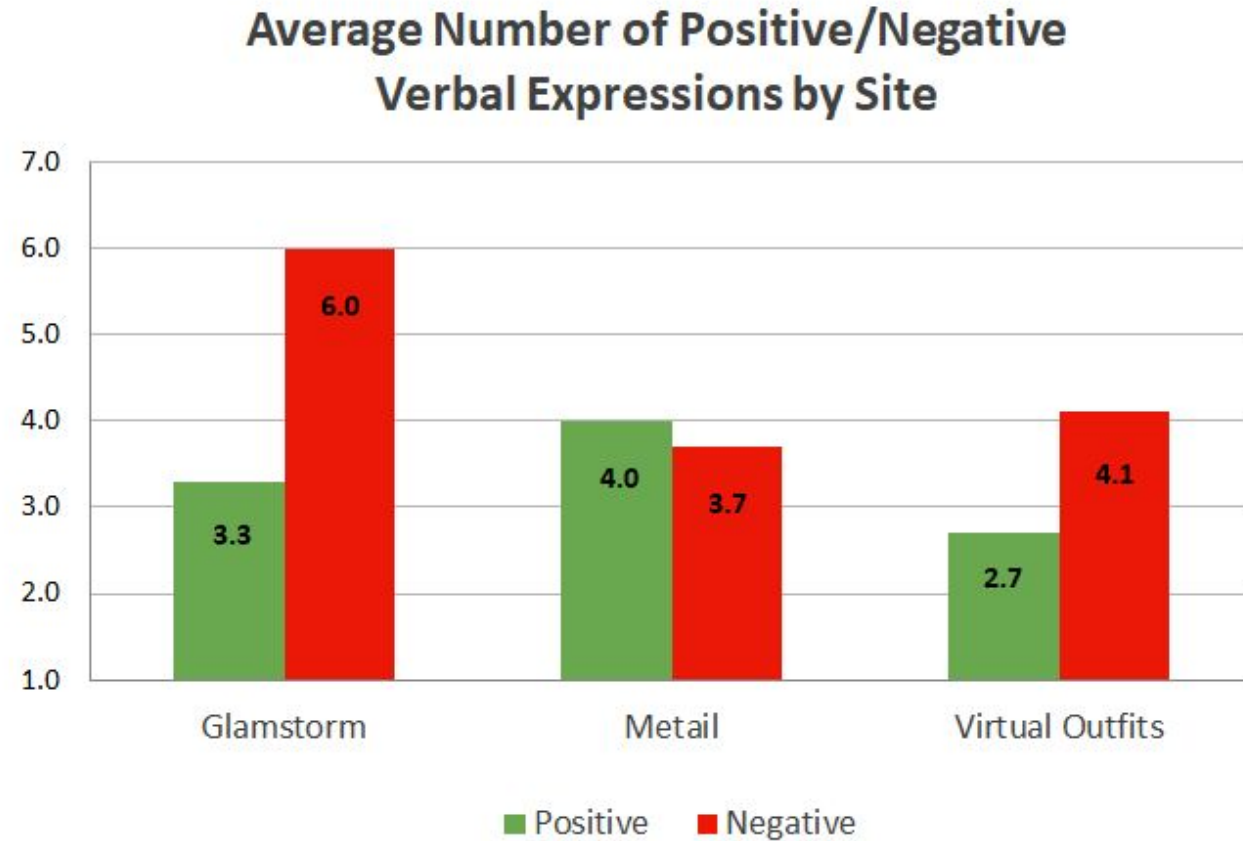
BODY

3

WALK

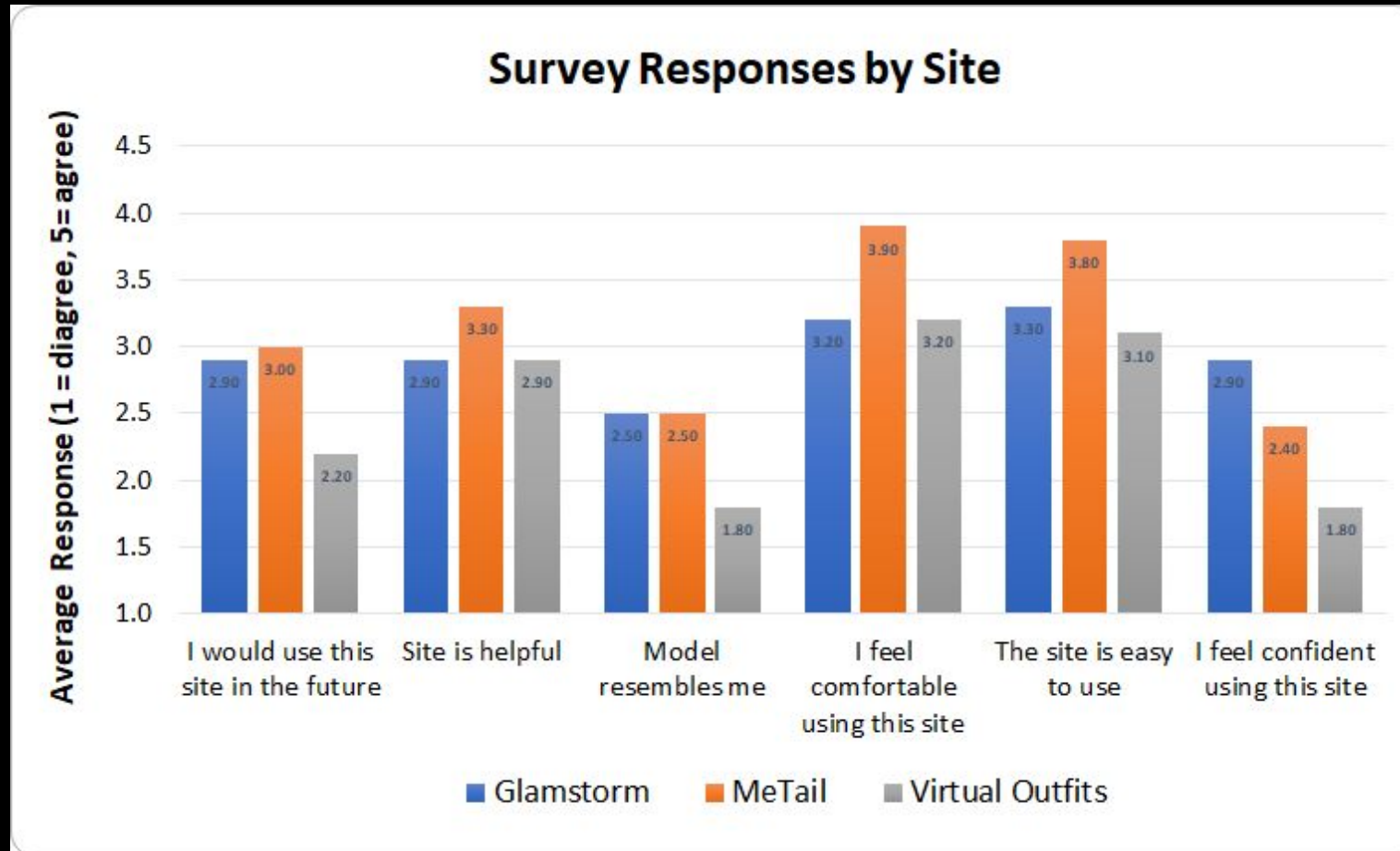
Qualitative Findings: Verbatims

- Small preference for Metail
- No statistical significance
- Glamstorm had most negative comments

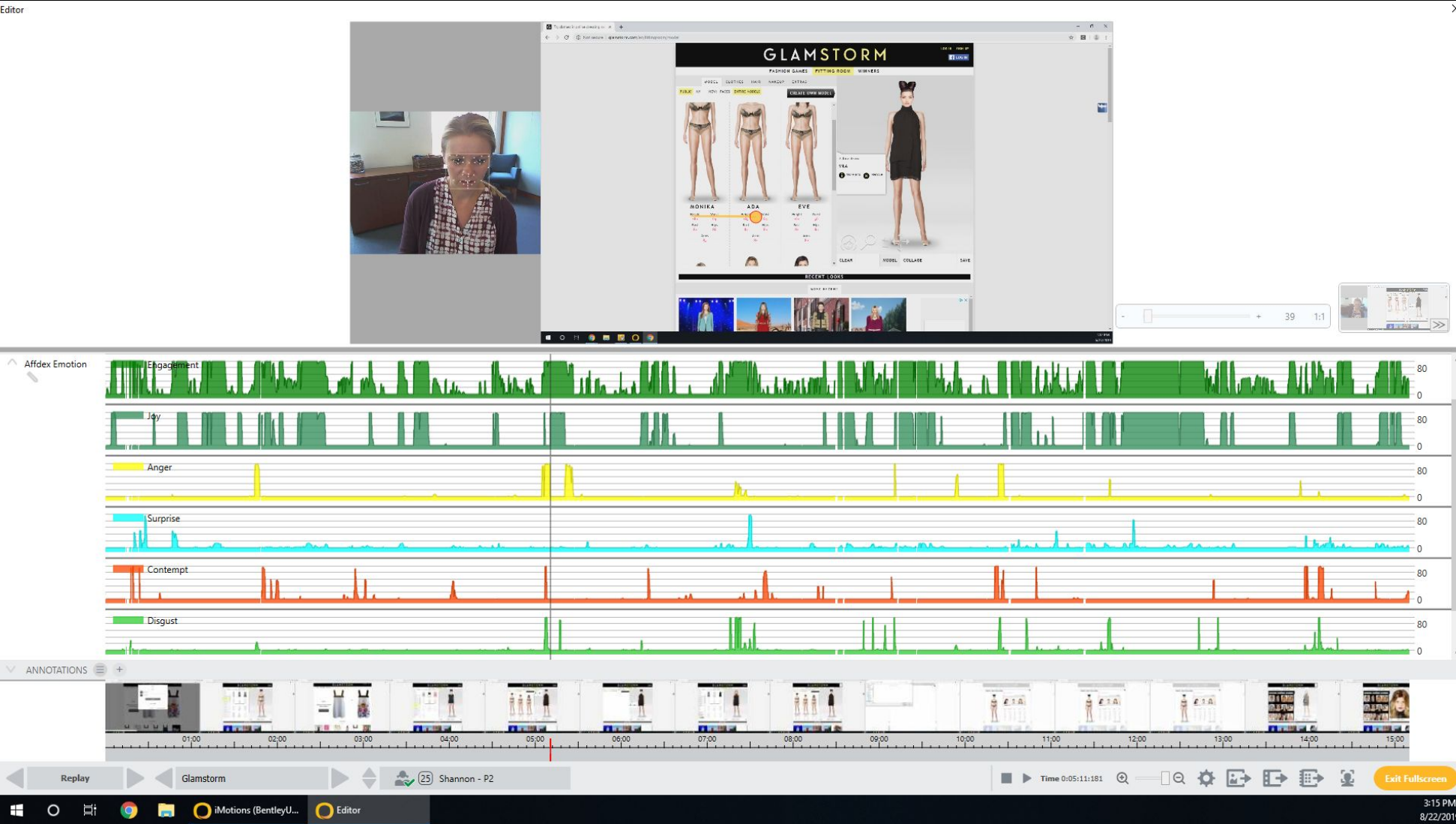


Qualitative Findings: Survey

- Overall low scores
- Metail had slightly higher scores
- No statistical significance between sites

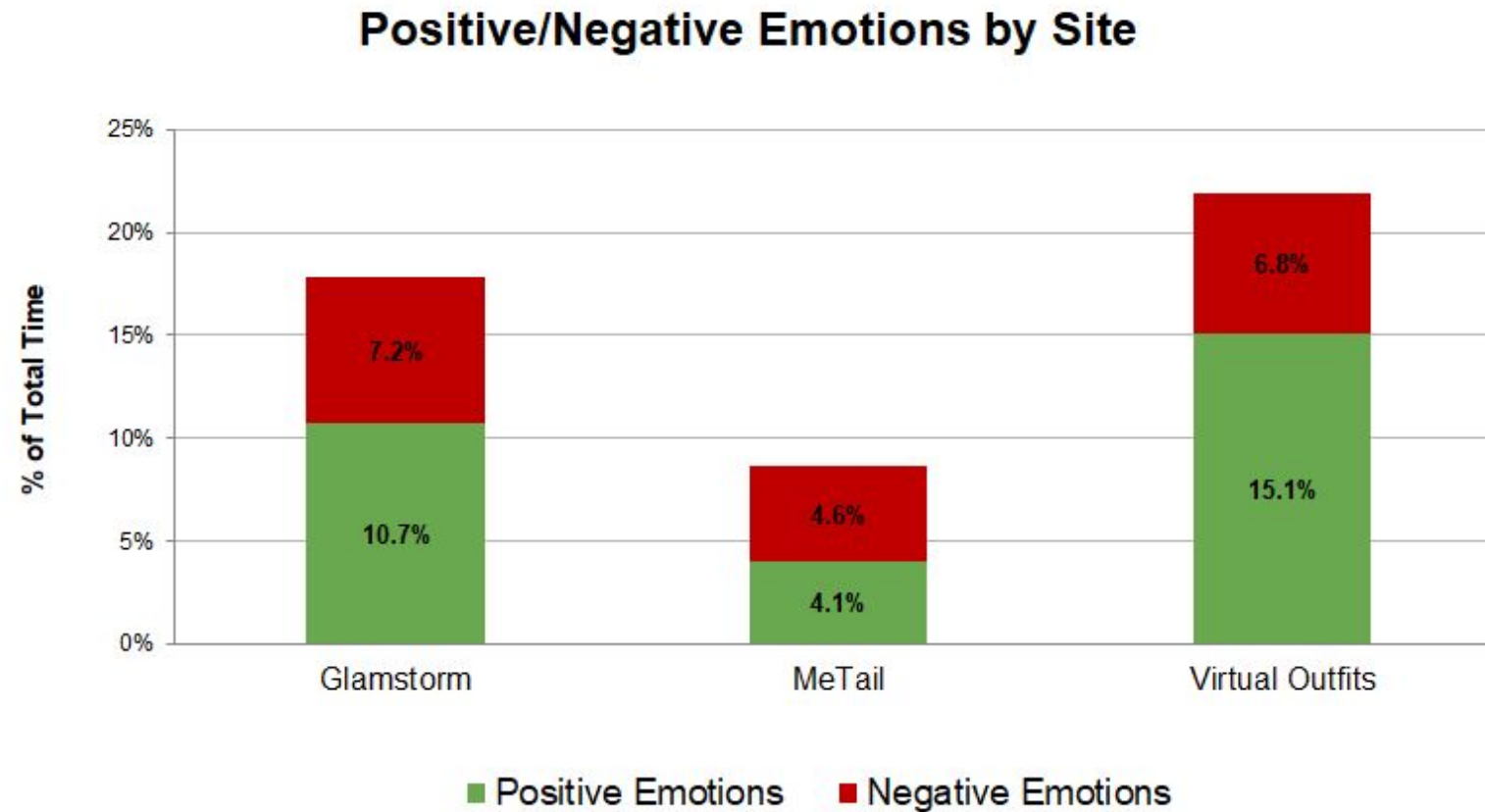


Biometric Findings



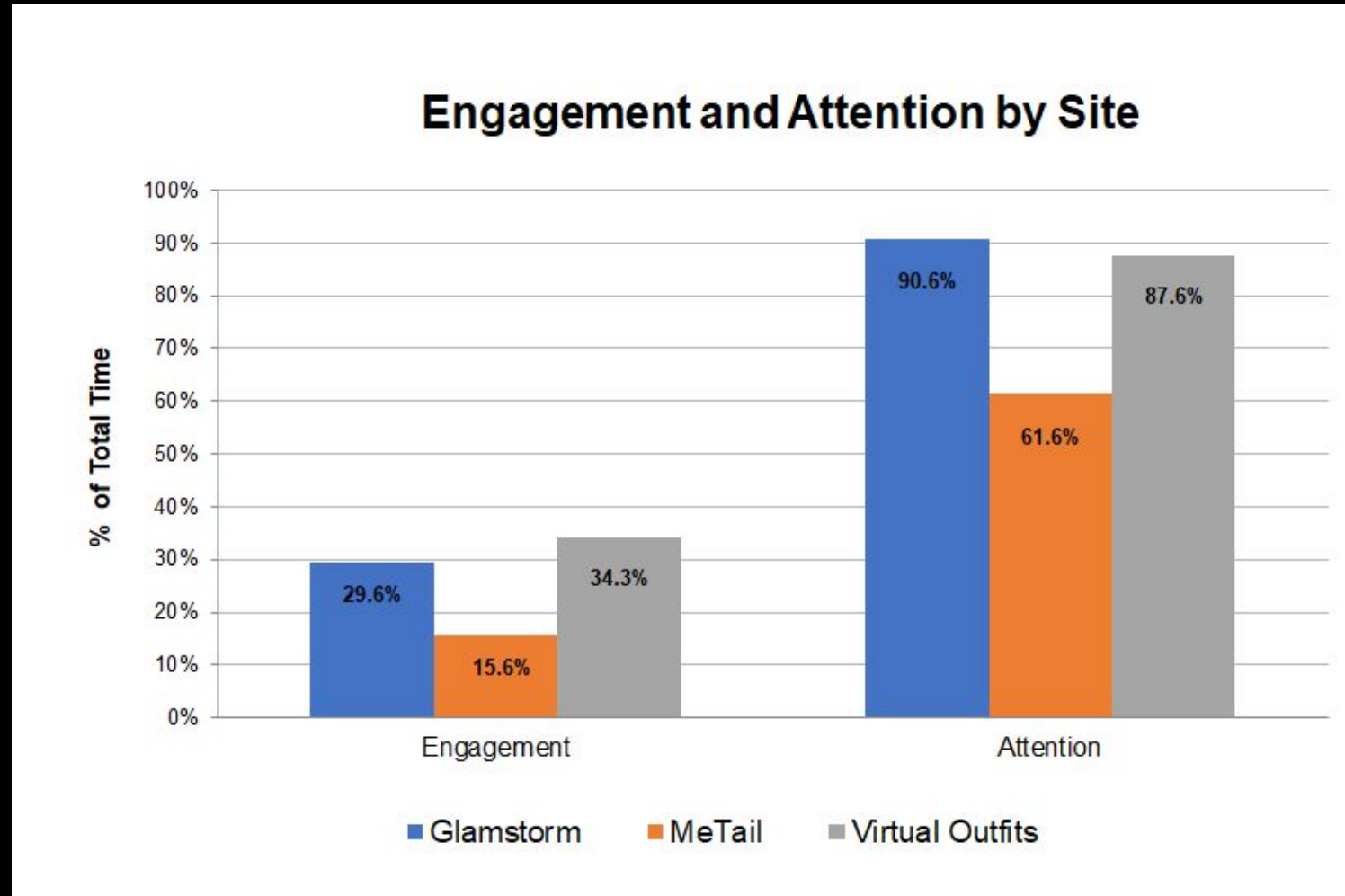
Overall - Valence

24



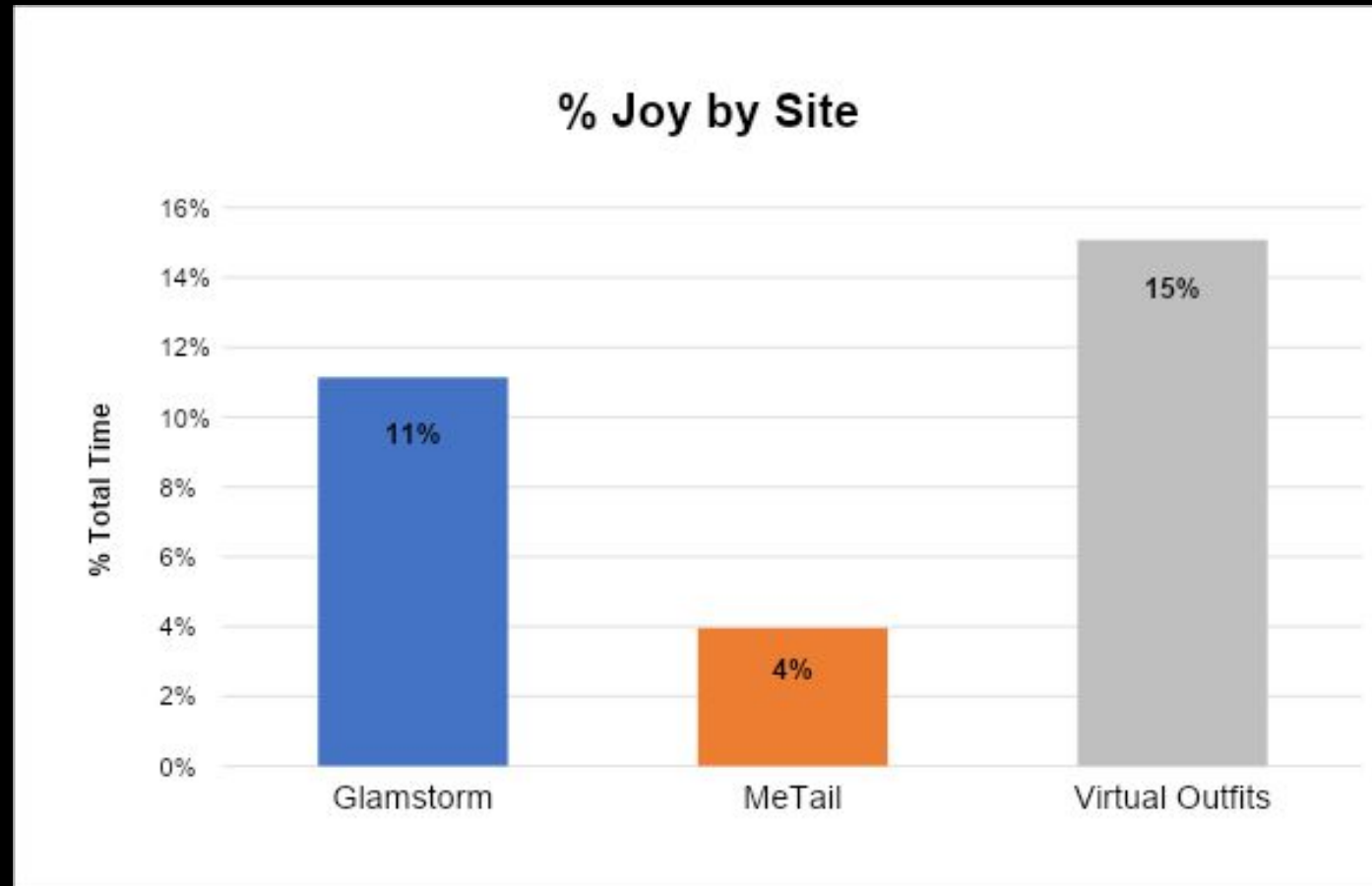
Overall - Engagement/Attention

25



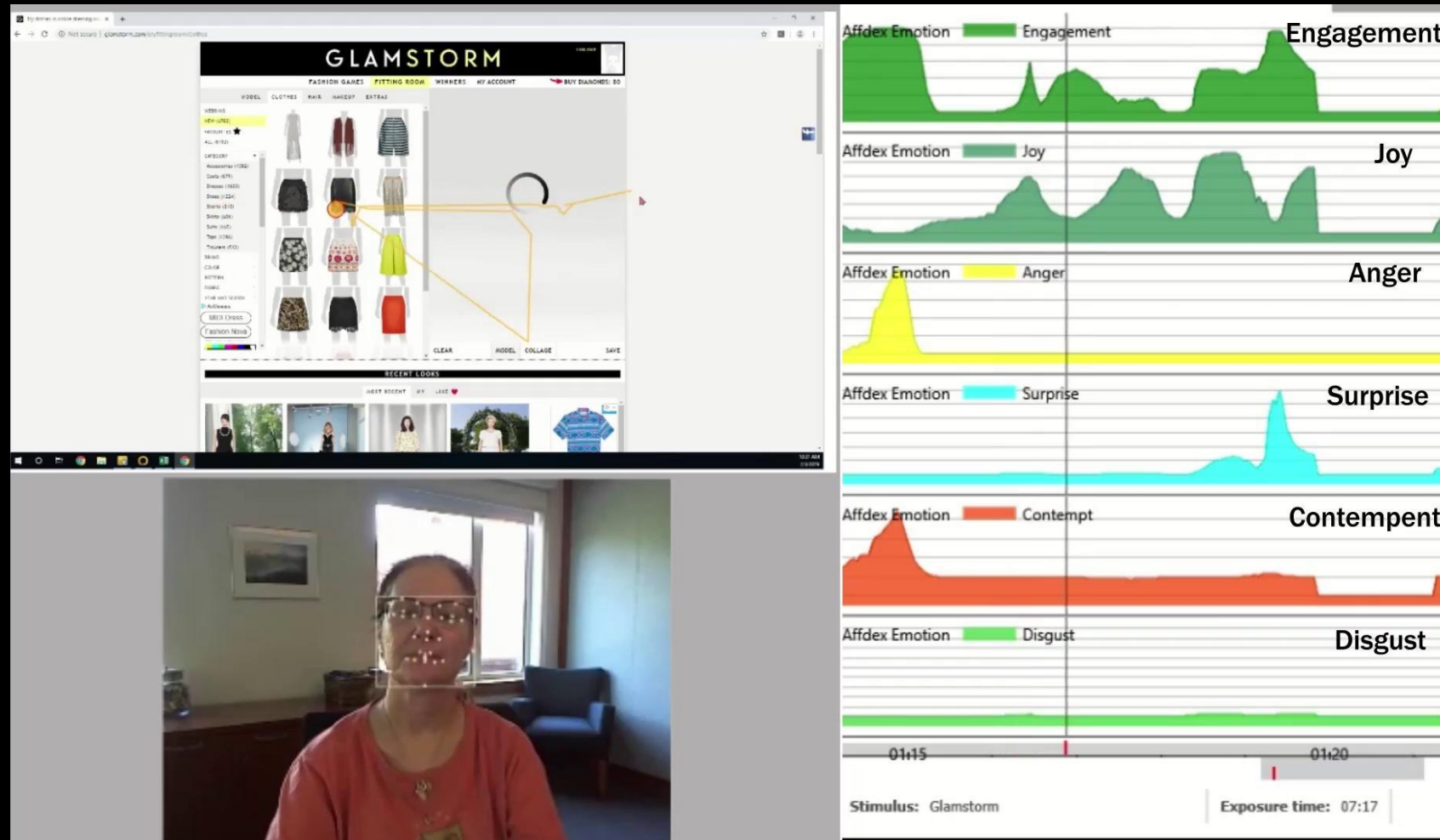
Overall - Joy

26



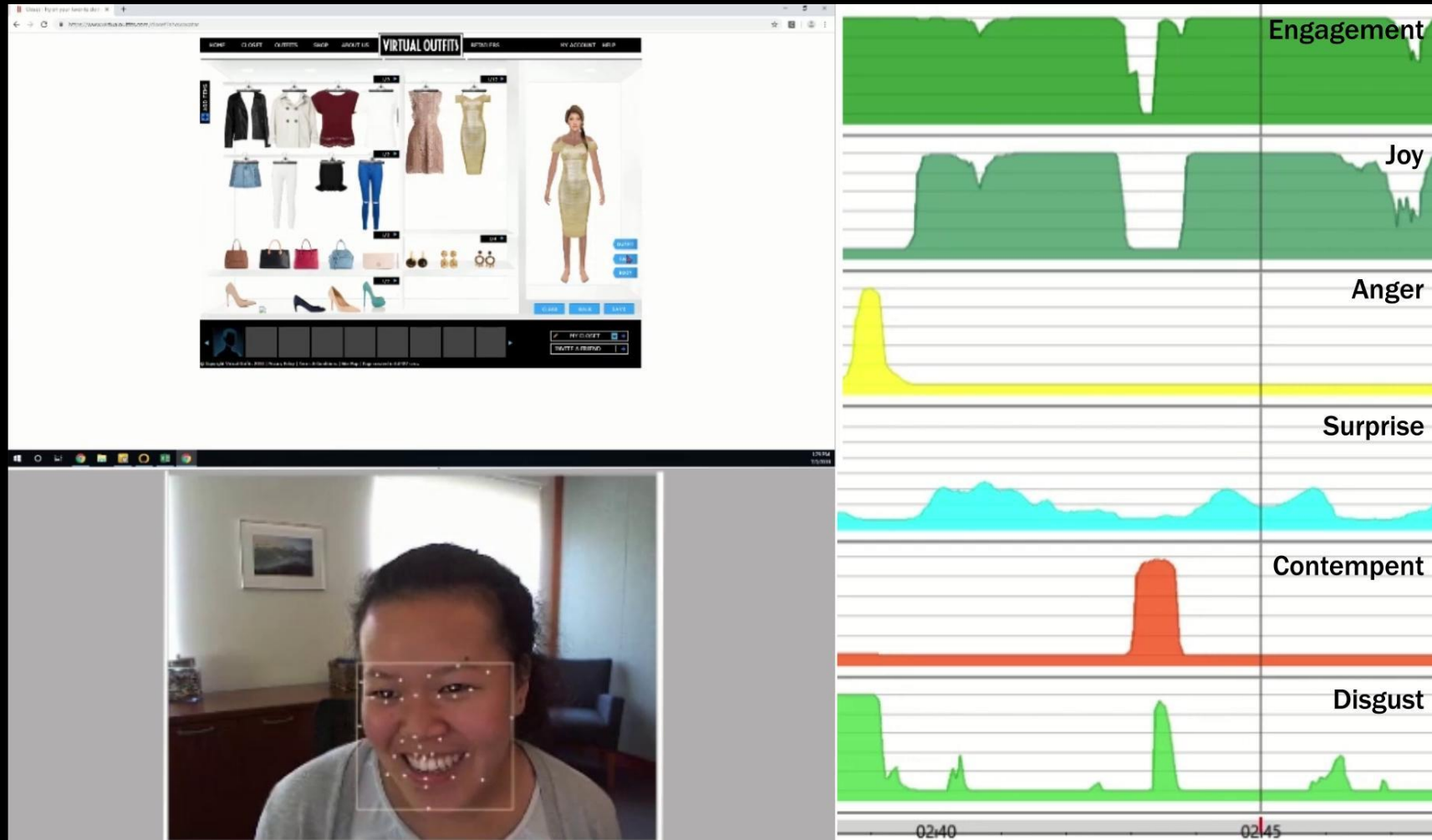
Disgust & Contempt

27



Is it really joy?

28



Segments

29

Introduction

- Engagement
- Attention

Edit

- Joy
- Disgust
- Engagement
- Attention

Try

- Contempt
- Engagement
- Attention

All metrics were significantly higher in Glamstorm and Virtual Outfits than Metail.

Eye Tracking

30

HOME CLOSET OUTFITS SHOP ABOUT US **VIRTUAL OUTFITS** RETAILERS LOGIN REGISTER HELP

BODY MEASUREMENTS

ADD ITEMS

Hourglass Inverted Triangle Rectangle Pear

Overall ☐ XS ☐ S ☒ M ☐ L ☐ XL ☐ XXL ☐ Petite

Height

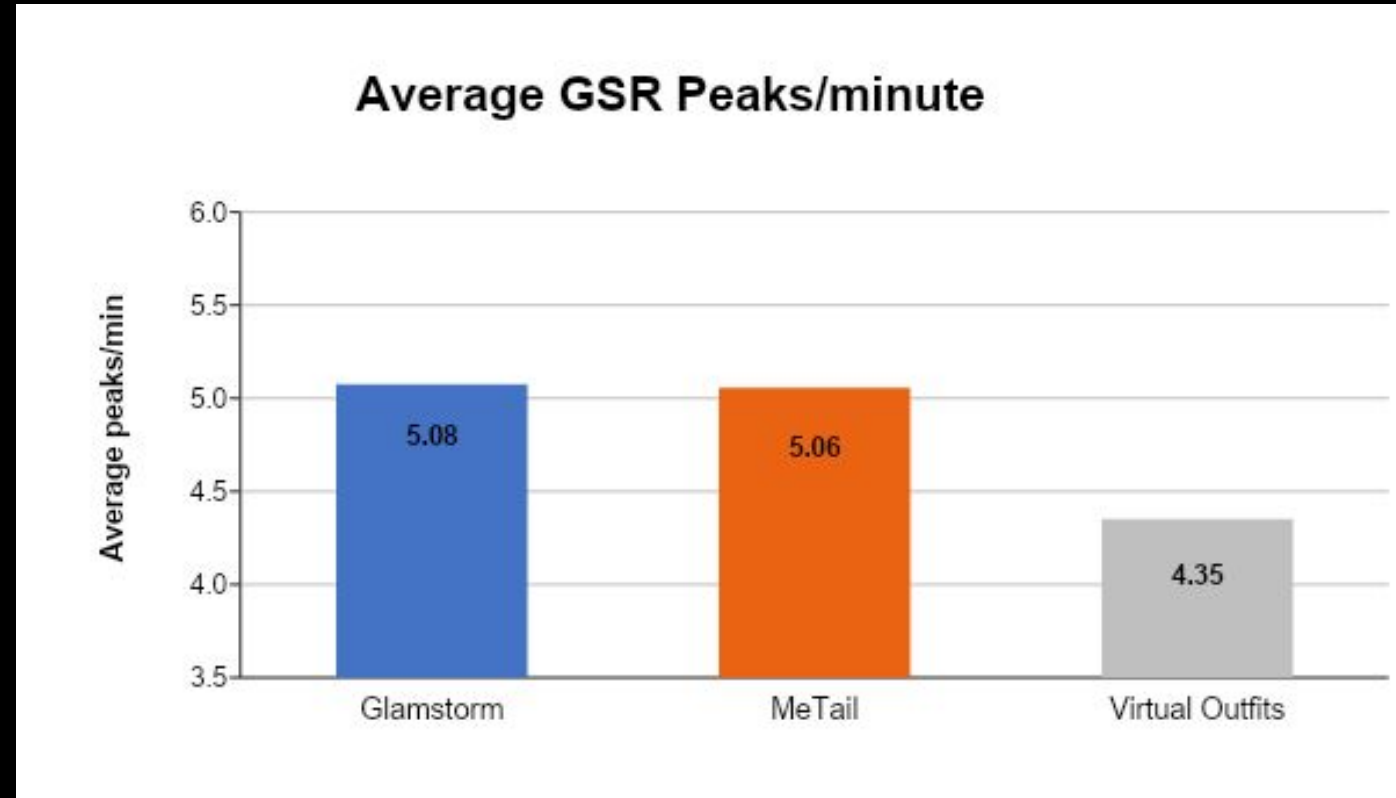
Hips ?

Waist ?

Bust ?

GSR (Galvanic Skin Response)

31



Overall Findings

Qualitative Data

- No significant difference between the sites
 - Positive/negative comments
 - Survey responses
- Slight preference for Metail
- UX not great overall

Biometric Data

- Stronger emotional experience in Glamstorm and Virtual Outfits
 - Positive emotions
 - Attention
 - Engagement
 - Joy
 - Disgust

Why?

Moving Forward

Lessons Learned

- Minimal interaction with the participant - Use retrospective think-aloud (RTA)
- Don't read too much into facial expressions - smile?
- Consistent context and control exposure time
- Still exploring the value of GSR
- Utilize other data sources - verbal expressions, survey data, etc.

Things to Consider

- What emotions are relevant for your organization?
- What methods/technologies will you use to collect data about the emotional UX?
- How will you use the data to inform your design or product strategy?

Tips for Success

- Use more than one metric to measure a single emotion
- Try to capture a variety of emotional metrics
- Don't take too thin of a slice - look at broader experience
- Try to understand “why” behind the biometrics

COVID-19 and Biometrics

- Rely on self-reported metrics in remote user research
- Embed “how does this make you feel” questions into qualitative user research
- Validated surveys include: SUPR-Q, SMEQ, and AttrakDiff
- Other options: Microsoft Product Reaction Cards, PrEmo, NEV, and EMO
- Basic Likert Ratings (5-point scales)

EMO (Emotional Metric Outcome)

38

The EMO Version 1		Strongly disagree											Strongly agree
			0	1	2	3	4	5	6	7	8	9	10
1	This company values and appreciates my business.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	This company looks out for my best interests.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	This company provides personalized service.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	This company responds to my questions and requests quickly.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	This company finds it necessary to stretch the truth when communicating with me.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	I'm apprehensive about this company's intent, actions, or outputs.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	This company cares more about selling to me than about satisfying me.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	Other people have told me they do not trust this company.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	I felt confident.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	I was content.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	I felt satisfied.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12	I was pleased.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	I felt irritated.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14	I was tense.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	I was annoyed.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16	I felt frustrated.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

James R. Lewis & Daniel K. Mayes, Development and Psychometric Evaluation of the Emotional Metric Outcomes (EMO) Questionnaire

Likert Ratings

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Engagement	Stress	Affect
This <system> is fun to use	Using this <system> makes me stressed	This <system> makes me mad/angry
I would look forward to using this <system> in the future	I feel anxious (or nervous) when I use this <system>	I like using this <system>
I would rather use this <system> than <other>	This <system> has a calm or peaceful feel to it	Using this system brings me joy/happiness
I would want to use this <system> in my free-time	My tension increases when I use this <system>	When I am finished using this <system> I feel good
I am bored when I use this <system>	I feel relief when I use this <system>	I don't like using this <system>

Frustration	Trust	Confidence
I feel frustrated when I use this <system>	I would feel comfortable sharing my personal information with this <system>	I feel confident when I use this <system>
This <system> is easy to use	I would feel comfortable giving my credit card to this <system>	I feel I am making the right choices when using this <system>
I feel annoyed when I use this <system>	I feel this company is trustworthy	I feel unsure about the terminology
I feel I am efficient when I use this <system>	I feel this company has my best interests in mind	I feel confident when I am looking for information
This <system> is delightful to use	This <system> is transparent, with nothing to hide	I feel I have to guess when I use this <system>

Thank You!

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